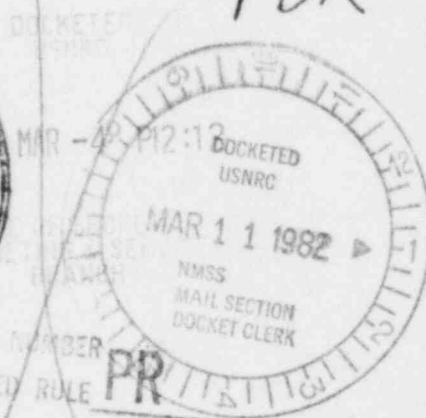
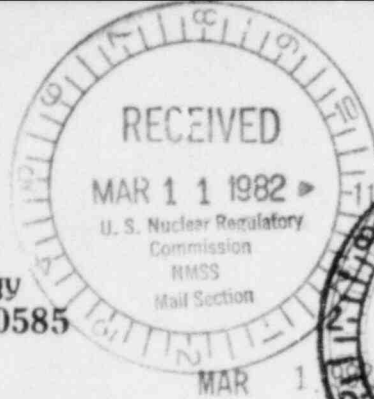




Department of Energy
Washington, D.C. 20585



40-1341
PDR

Mr. Samuel J. Chilk, Secretary
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Chilk:

NUREG-0846 entitled "Draft Environmental Statement Related to the Decommissioning of the Edgemont Uranium Mill" has been reviewed by the Department of Energy as requested.

The proposed Edgemont decommissioning action, which involves the movement of tailings, could establish a precedent for remedial actions concerning the Department's cleanup activities at inactive uranium processing sites as mandated by Public Law 95-604, the Uranium Mill Tailings Radiation Control Act of 1978, and also establish a convention for future decommissioning operations for licensed mill sites and for commingled mill tailings sites. Such a cleanup alternative would substantially increase the Department's cost/resources and the private sector's remedial action activities without resulting in significant environmental quality and health and safety benefits.

In accordance with Public Law 96-540, the Department's FY 1981-1982 Authorization for National Security Programs, the Department is currently evaluating the extent to which the Federal Government should apportion and share in the cleanup costs for commingled tailings pile sites which include the Edgemont site. Future Federal contributions to such cleanup activities could also be significantly increased if tailings piles have to be moved from their present locations. Consequently, the draft statement has been subjected to an in-depth staff review because of its potential impact on the Department's programmatic policies, remedial action implementation requirements, and cleanup activities.

One major finding is that the draft statement does not provide adequate technical justification to support the proposed action of moving the tailings from the Edgemont site. Clearer correlations between costs and benefits for the alternatives considered are needed. Comparative risk analyses should also be discussed in more detail in Section 4.9 of the statement to establish the basis for the proposed action while permitting the reader to make an informed choice among the alternatives considered. Consideration should be given to the alternative of in situ stabilization of the tailings. If the more extensive option of relocation of the tailings is selected on any basis other than health and environmental benefits, then that basis should be made unambiguously explicit in the draft statement. For completeness, the draft statement should also speak to the feasibility, environmental impacts, and cost of removal of radioactive constituents by in situ or other extraction techniques.

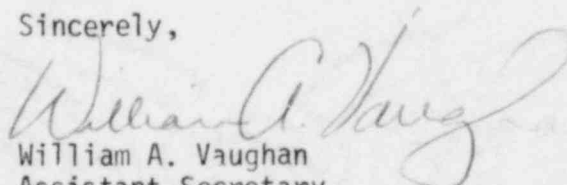
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Comments

The Department's comments, delineated in the three enclosures, were prepared by the Office of Operational Safety. Questions on this matter should be referred to Dr. William E. Mott (301-353-3016).

Sincerely,



William A. Vaughan
Assistant Secretary
Environmental Protection, Safety,
and Emergency Preparedness

3 Enclosures

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General Comments on NUREG-0846

1. The draft statement discusses the relevant issues in general terms and dwells on secondary topics in detail, e.g., microorganisms in the local waters, techniques and seeding requirements for cultivating relatively small areas of rangeland rather than addressing health benefits that will accrue to the regional public by effecting the proposed action which is the primary concern.
2. The proposed action is not substantially supported by technical data. The results of the action will be peripheral to long-term objectives. Transporting on the order of 4.1 million tons of tailings material--in addition to unspecified quantities of cover material and sediments from Cottonwood Creek and the Cheyenne River--a distance of about two miles to questionably isolate the equivalent of about 35 pounds of contained radium residues, at a cost which is not even estimated in the text, is not readily understandable. A low estimate by the staff for the proposed undertaking is about 30 million dollars based upon prior related Ford, Bacon, and Davis, Utah, Inc., estimates. The anticipated cost per perceived benefit derived is extremely high in our view, i.e., on the order of millions of dollars per health effect benefit. Costs of alternatives discussed should be presented.
3. The document should note that the estimated dose commitments involved in this project are small percentages of the average annual dose commitments normally derived from natural background radiation in the region.
4. DOE finds guidance as to whether or not the criteria are absolute upper limits, ambiguous, and unclear as to whether they can be exceeded under any circumstances. For example, a performance objective is "to locate the tailings impoundment area remote from people so that population exposures will be reduced to the maximum extent reasonably achievable." The population density of Fall River County is 1.9 persons per square kilometer (4.8 persons per square mile). Relocating the tailings a distance of two miles further away, in the same geologic setting, does not seem to reasonably achieve much benefit for the estimated cost.
5. "A major objective of the project is to remove an existing problem" (page 4-2, fifth paragraph). DOE believes that the existing problem will only be transposed to another proximate location without resolving the problem, i.e., the contained radium and other radionuclides are moved from one place to another at a substantial cost rather than being removed from the tailings by in situ extraction or by in situ stabilization of the tailings. Such alternatives were apparently not seriously considered among the alternatives evaluated.
6. The proposed decommissioning alternative discussion for this licensed site should include more detail on potential health risks and public benefits that could conceptually result in an ineffective expenditure of funds. Significant anticipated positive results are not apparent.
7. Decontamination criteria and standards for the decommissioning activity are not technically developed: criteria applied should be consistent with health risks and other characteristics that relate to the site and its environs.

20199
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8. Health risks, costs, and benefits of the decommissioning of natural low-level radioactive material have not been thoroughly analyzed considering the existing regional geology. The potential open pit mining activities and the prevalence of uraniferous lignite deposits in the area and their contribution(s) to the regional health risk need to be addressed (see page 3-11).
9. The document attaches undue importance to variations that are not significant nor meaningful from a health protection or environmental standpoint, e.g., water quality analyses of essentially unused or ephemeral surface waters, location of nearest confined aquifer at the existing and/or proposed disposal site, and the high minerals content in Edgemont's water supply.
10. A number of decommissioning action decisions appear to have been made without any basic technical data, i.e., where information was "not known" (see pages 4-5 and 4-6) or are in the "conceptual" stage (page 4-31).
11. Although "seepage is not considered to be a significant pathway of human exposure in this radiological assessment" (page 4-15), it is discussed at length as a pertinent radiological hazard that requires the removal of the tailings from their present location, and page 4-17 states "It should be pointed out that in none of the locations near to restricted areas are the MPCs expected to be exceeded under 10 CFR Part 20."
12. The NRC staff refers to the licensee as an "applicant" which can be misconstrued by a reader. For exactness, the public should be informed that the facility is licensed. What is proposed is "amending" the license to permit a license termination.
13. The UDAD code used in the dose commitment calculations are based on overly conservative assumptions or modeling methods. It does not strictly represent the physical processes they are intended to model.
14. The DES describes some of the socioeconomic consequences of the proposed action. However, much of the information is incomplete, intangible, or unknown as stated.

Specific Comments on NUREG-0846

1. Page iii, item 2, first paragraph, line 5 - Define expression "local environs."
2. Page iii, item 2, first paragraph, line 7 - In lieu of the phrase "an undetermined amount of contaminated soil..." supply a quantified estimate.
3. Page iii, item 2, second paragraph, lines 5 and 6 - Supply a quantified estimate in lieu of "an unestablished, but small, area of surficial soil in the Cottonwood Community." Provide a basis for excluding other surrounding communities, e.g., Edgemont, South Dakota, from the discussion.
4. Page iii, item 2, third paragraph - A more definitive statement including licensing requirement should be made concerning the title to the tailings disposal site.
5. Page iv, For the proposed tailings management plan, item c - Specify if approval for "final construction to prevent long-term water erosion" will be effected before initiation of the project. In view of this and subsequent staff claims of need for review and approval of detailed clay emplacement plans, dewatering system design, slurry transport system (page iii, item 2, discusses truck and/or slurry pipeline), interim stabilization program to control dusting, the value of issuing this report and the timely issuance of the FES according to NRC regulations is questioned.
6. Page v, item c, lines 4 and 5 - Clarify the expression "sediment levels in the stream will return to background levels."
7. Page v, item d, line 1 - Clarify the expression "stabilized the streambed."
8. Page vi, item 5, line 1 - Insert "concerning the licensee's proposals" after "evaluations."
9. Page vi, item 6b - The converted values of ha to acres are not consistent in some instances.
10. Page vi, item 6c - Should indicate what the ground water requirement is for.
11. Page vii, item 6e, second paragraph, line 1 - Change "will be" to "may be."
12. Page vii, item 6e, last paragraph - Should note that the values tabulated are 100-year EDC's.
13. Page 1-2, Section 1.2, Summary of Proposal, fifth paragraph - Should discuss final administrative proposal(s) for the disposal site, e.g., site ownership, custodianship, and responsibilities for continuing control.
14. Page 1-2, Section 1.3, first paragraph, line 4 - Insert "Title II" after "1978."
15. Page 1-3, third line from bottom of page - "Abandoned" should read "inactive;" and second line from bottom of page - insert "and others designated by the Secretary of the DOE" after "tailings sites."

20199
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16. Page 2-1, fifth paragraph, lines 2 and 3 - State that the tailings will be removed from the site without discussing available alternatives. This may imply that a decision was made initially and other alternatives were considered as an academic exercise.
17. Page 2-1, fifth paragraph, lines 9 and 10 and ff - The statement implies that standards/criteria for cleanup limits are not available; reference has been made to EPA regulations - 40 CFR 192.
18. Page 2-4, Figure 2.1 - Should show location of Cottonwood Community.
19. Page 2-6, Figure 2.3 - The figure should indicate the location of the Cottonwood Community.
20. Page 2-7, lines 3 through 5 - The permeability limit should be consistent with statements in last paragraph on page 2-3.
21. Page 2-13, fifth paragraph, last sentence - Requires further discussion.
22. Page 2-18, fourth paragraph, last line - Discuss the decontamination of Pond 10.
23. Page 2-21, fourth paragraph, lines 1 and 2 - Discuss basis for statement about removal of contaminated material in and around the Cottonwood Creek channel.
24. Page 2-24, sixth paragraph, line 5 - Discuss the basis for selecting a clay cap of 0.9m (3 feet), relative to the "specified" radon-222 flux and the gamma exposure level reduction.
25. Page 2-27, Alternative A3, first paragraph, lines 4 and 5 - Provide a basis for the statement "Restricted industrial use would postpone indefinitely the final decommissioning of the facility."
26. Page 2-27, last paragraph on page and page 2-28, top of page - Provide supporting technical information for the staff's conclusion of unacceptability to support conjectures.
27. Page 2-28, Alternative B2, first paragraph, lines 3 through 5 - Discuss the relative benefits of reclaiming 213 acres at the mill site while removing 258 acres from use for the proposed disposal site.
28. Page 2-30, fourth paragraph - The stated depth to ground water is 152m (500 feet); omission of the depth of the disposal area (assumed 15m) does not provide a sound basis for requiring a clay foundation area at the disposal site to attain a permeability of 1×10^{-7} cm/s to mitigate long term seepage.
29. Page 2-31, sixth paragraph - Cottonwood Community is the site of more immediate concern than Edgemont. Discuss the impacts on it rather than on Edgemont.
30. Page 2-31, second paragraph from bottom of page, last line - Provide a basis for the statement "the reclaimed site would be available for limited use."
31. Page 2-31, last paragraph, last sentence - The amount of material to be removed from the site (7.1×10^6 MT) does not coincide with the amount of tailings (2.1×10^6 MT) discussed in the summary of the proposal on page 1-2.

32. Page 2-31, last paragraph, last line - Explain why 21-ton dump trucks are proposed in this instance; 50-ton dump trucks are to be used as stated on page 2-10; 36-ton trucks are described on page 2-37 and 50-ton or 75-ton trucks are to be used on page 2-38.
33. Page 2-41, fourth paragraph - Provide a basis for the need of requiring a tailings cover that would result in a net gamma radiation from the disposal site about nine orders of magnitude below natural background and discuss the anticipated costs involved in producing such a cover.
34. Page 2-41, last sentence on page - "A detailed evaluation of the proposed plan against these technical criteria as well as any minor modifications to the plan needed to meet the criteria, will be presented in the FES." This indicates a weakness in the comprehensive evaluation of the proposed action in the DES.
35. Page 2-42, second paragraph - "The staff finds that onsite stabilization of tailings is unacceptable because of the proximity of the City of Edgemont and the probability of tailings impoundment erosion at the location over the long term." The statement requires technical substantiation based on page 4-34, second paragraph from bottom of page where it is noted that most of the existing piles and ponds on the mill site have been covered with soil and vegetated; discussion is absent about improving existing impoundment measures in situ.
36. Page 2-42, seventh paragraph - The statements made require substantial discussion and verification for acceptance by the reader considering the potential benefits that may be derived.
37. Page 2-42, last paragraph on page - The case for diverting the creek flow and decontamination of the existing creek channel requires a detailed discussion of what actual public health and environmental benefits would be derived from such activities in view of the natural dilution and dispersion of contaminants that is occurring (see first paragraph, page 2-43). Potential occupational risks in performing the proposed activity must also be factored into the discussion. The phrase "all creek contaminants" in the last sentence is too vague and too encompassing for the actual requirements that are needed and finally, the standards to be applied should be set by the EPA and the State of South Dakota for implementation by the NRC.
38. Page 3-8, Table 3.4 - Percent change data for most recent years at Edgemont, South Dakota, should be included in Table.
39. Page 3-18, first paragraph - TVA proposes to begin both underground and surface mining of uranium/vanadium ore deposits at two sites within 24 km (15 miles) of Edgemont. Provide a discussion of how the proposed decommissioning plan will result in significantly reducing potential health impacts to the regional population and to the environmental quality considering TVA's planned activities.
40. Page 3-19, Section 3.6.1.1, lines 4 and 5 - The direction of flow of the Cheyenne River, east to west, is not compatible with the last statement of the paragraph, i.e., "downstream from Edgemont...Angostura Reservoir."

41. Page 3-25, Table 3.16 - The absence of surface water quality values for S-5 and the lack of notation of some of the sampling points on Figures 3.1 through 3.5 is noted. A summary discussion of the conclusions to be drawn from the tabulated data is called for relative to the possible effect(s) resulting from performing the proposed action.
42. Page 3-34, last paragraph on page - The statements made would apply equally to all ground water in the region including the proposed disposal site area which raises a question of the benefit(s) to be derived from performing the proposed action in view of its anticipated cost(s).
43. Page 3-35, second paragraph - The statements made are not clear from the data presented and require more discussion to justify the conclusion that ground water mixed with contaminated leachates results in excessive dissolved solids concentrations.
44. Page 3-35, third paragraph - The depth of the observatory wells should be noted and comments made about the potential/practical use of this quality water. The "before" and "after" dissolved solids concentrations are both of equally unusable quality.
45. Page 3-35, Section 3.7.1, Geology, through page 3-42 - The text indicates a marked similarity in geologies between the existing site and the proposed disposal site which raises a question about the value of moving the existing tailings about two miles from its present location. This should be addressed at the end of the section at length, considering the potential efforts and costs involved relative to the benefits to be derived.
46. Page 3-43, Section 3.7.2.1, Uranium - The paragraph states that natural uranium minerals are quite prevalent in the county and at shallow depths which would indicate an above normal natural radon flux level. Provide a discussion about this and the performance objective of reducing the radon emanation rate from the impoundment to no more than $2 \text{ pCi} \cdot \text{m}^{-2} \cdot \text{s}^{-1}$.
47. Page 4-2, fourth paragraph, last sentence - "Effective measures" should be exemplified.
48. Page 4-2, eighth paragraph - Can be misleading and should be more specific as to where measurements were made and reproducibility.
49. Page 4-2, Section 4.1.2, Radiological environment - Delete; the sentence is innocuous.
50. Page 4-3, Section 4.1.3, Soils - The discussion indicates that in reclaiming 213 acres at the mill site, at least another 301 acres would be affected by the proposed project. The logic of this should be discussed.
51. Page 4-4, first paragraph - Provide a basis for stating that the reclaimed area, in the midst of an industrially zoned area would be used as pasture land.

52. Page 4-4, third paragraph - The validity of the statements are tenuous and should be elaborated upon or deleted. The statements raise a question about the value for this project.
53. Page 4-4, last paragraph on page - In the discussion of the major impacts at the mill site, items (1) and (4) are questionable as is the need for removal and ability to remove "all" contaminated material. (See first paragraph at top of page 4-5 and third paragraph, page 4-6.)
54. Page 4-6, third paragraph, first sentence - Applies to conditions prior to the present licensee's tenure. A substantial amount of tailings coverings have since been performed to mitigate suspended contaminants surface runoff. The statements relating to trace metal contamination require validation before being asserted.
55. Page 4-7, fourth paragraph, first sentence - The assertion that the ground water quality under the mill is due to past and present seepage from and through the tailings piles and ponds on the site requires justification.
56. Page 4-7, sixth paragraph, lines 1-3 - Should also include a statement of how this geology differs from existing mill site's geology to account for the variation with the statement under item 55.
57. Page 4-15, Section 4.1.9.2, first paragraph, last two lines - The source of the 5 pCi/g particulate standard should be stated.
58. Page 4-17, Section 4.1.9.4 - Discusses radiation impacts to individuals during decommissioning and post decommissioning but does not address the existing situation for comparison. This is essential to the justification for enacting the licensee's proposal and the Commission's approval of the proposal. A clarification of when the statement "It should be pointed out that in none of the locations near to restricted areas are the MPC's expected to be exceeded" applies should be made. The Section and the associated tables 4-10 through 4-12 should include radiation impacts of the prevailing site conditions. This section should also include a discussion of the "degree of improvement in the radiologic exposures expected from the proposed action on a percentage or equivalent basis relative to background estimates.
59. Page 4-19, Table 4.10, footnote C - Should provide the reference for the noted cleanup standards.
60. Page 4-20, Table 4.11 - Data should be discussed at length in the text and conclusions presented.
61. Page 4-21, Table 4.12 - Data should be discussed in detail in the text and conclusions presented.
62. Page 4-22, Table 4.13 - Same as items 60 and 61.
63. Page 4-23, first paragraph - Should discuss the incremental change(s) (both positive or negative) in radiation impacts to the population including a clear definition of "the present health hazard."

64. Page 4-23, Section 4.1.9.8, Summary of Radiological Impact - The text and data presented do not confirm the statement presented, i.e., "the long-term benefits of eliminating a chronic health hazard far outweigh the short-term impacts associated with this action."
65. Page 4-23, Section 4.2, Monitoring Programs, first paragraph - The statements made indicate that previous conclusions were based on "feelings" rather than "facts." The validity of the DES is thereby questionable.
66. Page 4-24, first paragraph, line 1 - Discuss the need for TSP monitoring rather than radon flux monitoring, a basic performance objective, considering that the piles have been covered and vegetated (4-34).
67. Page 4-25, Section 4.2.3.1, Predecommissioning - Explain why radiologic conditions, e.g., radon flux and radium content of soil were not measured.
68. Page 4-26, line 11 - EPA standards referred to should be specified. Prior discussions indicated that none of the potential water sources would comply with EPA drinking water standards.
69. Page 4-26, line 24 - Should establish whether EPA will function in a consultative or concurrence role.
70. Page 4-27, lines 7 and 8 - The meaning of "quantify water quality impacts of the decommissioning...." is not clear.
71. Page 4-27, fifth paragraph, Water Quality - Discuss the merits of this activity.
72. Page 4-27, seventh paragraph, Proposed Disposal Site - The paragraph should indicate whether such down gradient wells from this direction from the mill site have been in use previously.
73. Page 4-28, Section 4.2.7, Biota - The staff's proposed requirements appear to be excessive in view of the actual, natural conditions and should be justified. It appears that duplicative efforts between the licensee and the State agencies will occur in this activity.
74. Page 4-33, second paragraph - Comparison of accidental risks (potential deaths) from the decommissioning activities with potential health benefits from the activities should be made.
75. Page 4-34, first paragraph - Provide a figure of the estimated volume of water available from the Pahasapa aquifer to support the contention of the "minor" use of water for this project.
76. Page 4-34, last paragraph on page - Supporting data for staff's opinion should be references or furnished.
77. Page 4-36, Section 4.9 - The NRC cost/benefit summary is completely inadequate; costs involved relative to benefits anticipated are essentially ignored. No efforts have been made to quantify these elements for the reader. Supporting data should be furnished as an appendix.

Specific Editorial Comments on NUREG-0846

1. Page iii, item 3, c, line 1 - Change "shall" to "should."
2. Page iii, item 3, f - Insert "should" after "quality."
3. Page iv, item 3, g - Insert "should" after "project."
4. Page iv, item 3, h, line 2 - Insert "should" after "alternatives."
5. Page iv, item 4, d, line 1 - Change "would" to "will."
6. Page iv, item 4, e, line 4 - Change "would" to "will."
7. Page iv, item 4, e, third paragraph, line 1 - Change "would" to "will."
8. Page iv, item 4, last line - Change "would" to "will."
9. Page v, item 4, f, line 2 - Change "would" to "will."
10. Page v, item 4, g, lines 1 and 2 - Change "would" to "will."
line 3 - Change "would" to "should."
11. Page v, third paragraph, lines 2 and 3 - Delete "and that this is the preferred alternative of the staff."
12. Page vi, line 2 - Insert "will" after "applicant" and change "applicant" to "licensee."
13. Page vii, item 3, first paragraph - Requires rewording for smoother reading.
14. Page 1-2, second paragraph, line 2 - Change "highly contaminated" to "radioactively contaminated."
15. Page 1-2, second line from bottom of page - Reference Executive Orders 11988 and 11990.
16. Page 1-3, third line from bottom of page - Capitalize "act."
17. Page 1-4, sixth paragraph, line 4 - Change "to be held" to "which was held."
18. Page 1-6, item 2, first bullet, line 1 - Delete hyphen in "surface-runoff."
Page 2-10, fourth paragraph, line 1 - "Applicant" should read "licensee."
19. Page 2-13, line 3 - "Listed" should read "are shown."
20. Page 2-13, fifth paragraph, line 2 - "Hydrolasing" should be replaced by a more meaningful word.
21. Page 2-13, seventh paragraph - Delete, the paragraph is redundant.
Page 2-16, fifth line from bottom of page - "Applicant" should read "licensee."
22. Page 2-18, second paragraph, line 9 - "Applicant" should read "licensee."

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23. Page 2-18, third paragraph, lines 5, 7, and 11 - "Applicant" should read "licensee."
24. Page 2-18, third paragraph, line 11 - Delete "all."
25. Page 2-18, fourth line from bottom of page - "Applicant" should read "licensee."
26. Page 2-23, sixth paragraph, line 1 - Delete hyphens in "86-ha (213-acre)."
27. Page 2-24, fourth and second lines from bottom of page - "Applicant's" should read "licensee's."
28. Page 2-26, Section 2.2.3, Title - "Applicant's" should read "licensee's."
29. Page 2-27, last line, Alternative A2 - "Applicant" should read "licensee."
30. Page 2-27, Alternative A3, first paragraph, line 2 - "Applicant" should read "licensee."
31. Page 2-28, Alternative B2, second paragraph, last line - "Applicant" should read "licensee."
32. Page 2-28, Section 2.2.3.3, first paragraph, lines 3 and 11 - "Applicant" should read "licensee."
33. Page 2-28, Section 2.2.3.3., second paragraph, lines 2, 4, and 6 - "Applicant" should read "licensee."
34. Page 2-28, last paragraph, line 1 - "Applicant" should read "licensee."
35. Page 2-29, line 3 - "Applicant" should read "licensee."
36. Page 2-30, second paragraph, line 1 - "Applicant" should read "licensee."
fourth paragraph, line 5 - "Applicant" should read "licensee."
37. Page 2-30, last line on page - "Applicant" should read "licensee."
38. Page 2-31, fourth paragraph, line 1 - "Applicant" should read "licensee."
39. Page 2-32, first paragraph, last line - "Applicant's" should read "licensee's."
sixth paragraph, line 3 - "Applicant's" should read "licensee's."
seventh paragraph, line 6 - "Applicant's" should read "licensee's."
last paragraph, last line on page - "Applicant's" should read "licensee's."
40. Page 2-36, line 4, Alternative D4 - "Applicant" should read "licensee."
line 4, Alternative E1 - "Applicant" should read "licensee."
line 6, Alternative E2 - "Applicant" should read "licensee."
41. Page 2-37, line 3 - "Applicant" should read "licensee."
42. Page 2-38, Alternative F3, line 7 - "Applicant" should read "licensee."
43. Page 2-40, lines 4, 8, 31, 38, 47, 49 - "Applicant" should read "licensee."

44. Page 2-41, lines 4, 7, 16, 19, 23, 16, 39, 55 - "Applicant" should read "licensee."
45. Page 2-42, lines 1, 18, 26, 30, 35, and 46 - "Applicant" should read "licensee."
46. Page 2-43, lines 7, 22, 24, 41, 53, and 57 - "Applicant" should read "licensee."
47. Page 2-44, line 4, 6, and 8 - "Applicant" should read "licensee."
48. Page 2-45, Reference 8 - "Report PB-256" should read "Report PB-256, 453."
49. Page 3-3, last paragraph, line 2 - "Applicant" should read "licensee."
50. Page 3-19, fifth paragraph, line 4 - "Applicant" should read "licensee."
51. Page 3-29, footnote g - Conversion of 9.1 km to miles is incorrect.
52. Page 3-45, sixth paragraph, line 2 - "Applicant" should read "licensee."
53. Page 3-50, line 4 - "Applicant" should read "licensee."
54. Page 4-1, second paragraph, line 2, and second paragraph from bottom of page, last line - "Applicant" should read "licensee."
55. Page 4-1, third paragraph, lines 7 and 11 - "Applicant" should read "licensee."
56. Page 4-2, second paragraph, lines 1 and 2, and third paragraph, line 1 - "Applicant" should read "licensee."
57. Page 4-3, second paragraph, lines 3 and 5 - "Applicant" should read "licensee."
58. Page 44, fourth paragraph, line 2, and last paragraph, line 11 - "Applicant" should read "licensee."
59. Page 4-5, last line on page - "Applicant's" should read "licensee's."
60. Page 4-6, third paragraph, lines 1 and 3 - "Applicant" should read "licensee."
61. Page 4-9, second paragraph, lines 1 and 6, and fourth paragraph, line 4 - "Applicant's" should read "licensee's."
62. Page 4-10, first paragraph, lines 1 and 7, and second paragraph, line 6 - "Applicant" should read "licensee."
63. Page 4-11, first paragraph, line 8 - "Applicant" should read "licensee."
64. Page 4-12, first paragraph, last line 6 "year" should be plural.
65. Page 4-15, Section 4.1.9.2, first paragraph, last line - A closing parenthesis has been omitted.

66. Page 4-23, third line from bottom of page - "Applicant" should read "licensee."
67. Page 4-24, lines 3, 18, and 40 - "Applicant" should read "licensee."
68. Page 4-25, lines 5, 19, 22, 25, 30, 33, and 35 - "Applicant" should read "licensee."
69. Page 4-26, lines 1, 14, 15, 20, 22, and 36 - "Applicant" should read "licensee."
70. Page 4-26, line 39 - Delete hyphen in "water-quality."
71. Page 4-27, lines 7, 9, 14, 34 - "Applicant" should read "licensee."
72. Page 4-27, line 14 - Delete hyphens in "surface-water-monitoring."
73. Page 4-28, lines 6, 10, 13, 21, 28, 35, 37, 42, 48, and 49 - "Applicant" should read "licensee."
74. Page 4-29, lines 8, 16, 20, 33, and 45 - "Applicant" should read "licensee."
75. Page 4-30, lines 6, 16, 20, 30, and 36 - "Applicant" should read "licensee."
76. Page 4-31, lines 2, 14, 18, 19, and 24 - "Applicant" should read "licensee."
77. Page 4-33, line 5 - "Applicant" should read "licensee."
78. Page B-3, line 2 - "Applicant" should read "licensee."
79. Page C-4, fourth paragraph from bottom of page - "Shines" should read "slimes."