

**Piñon Ridge Uranium Tailings Facility and Evaporation Pond
Construction Approval
40 C.F.R. Part 61, Subpart W
EPA Response to Comments**

Definitions

ALARA – as low as reasonably achievable

CDPHE – Colorado Department of Public Health and the Environment

EPA – Environmental Protection Agency

NESHAP – National Emission Standard for Hazardous Air Pollutants

RCRA – Resource Conservation and Recovery Act

NRC – Nuclear Regulatory Commission

QA/QC – Quality Assurance/Quality Control

NEPA – National Environmental Policy Act

CFR – Code of Federal Regulations

EPA’s Response to Comments

1. **Comment:** Commenters request that EPA delay action on the construction approval request until the review/revision of 40 CFR Part 61, Subpart W is complete. Some commenters also believe that Subpart W does not meet Clean Air Act mandates and requirements.

Response: EPA has authority to issue construction approvals under the Clean Air Act and existing regulations. Therefore, EPA does not intend to delay action on this construction approval request until the review of the existing regulations in Subpart W is complete. EPA’s informal public comment announcement on this construction approval request did not seek comment on the Subpart W regulations. Subpart W itself is not at issue in this action, so the comments regarding the alleged inadequacy of the existing Subpart W regulations are not relevant to this construction approval. Commenters’ opportunity to challenge the existing Subpart W regulations was when those regulations were promulgated. *See* CAA section 307(b)(1), 42 U.S.C. § 7607(b)(1). Commenters can challenge any subsequent revisions to Subpart W when those amendments are promulgated. *Id.*

2. **Comment:** Commenters request that EPA not delay action until the review/revision of 40 CFR Part 61 is complete.

Response: EPA does not intend to delay action until the review of Subpart W is complete. EPA has an obligation under 40 CFR § 61.08 to take timely action on construction approval requests.

3. **Comment:** Commenters believe NEPA is required for this action.
Response: This Approval is an action under the Clean Air Act. Section 7(c) of the Energy Supply and Environmental Coordination Act of 1974 (15 U.S.C. 793(c)(1)) exempts actions under the Clean Air Act from the requirements of NEPA. Therefore a NEPA analysis is not required for this construction approval request.
4. **Comment:** Commenters request that EPA consider cumulative impacts from various uranium activities in the area, including the uranium mining not subject to Subpart W.
Response: EPA is not required to conduct a cumulative impact analysis for this action. The criteria used in making a decision on this action are outlined in 40 CFR § 61.07.
5. **Comment:** Commenters indicate that the Energy Fuels application ignores Tailings Cells B and C.
Response: Energy Fuels submitted a request for construction approval only for Tailings Cell A and Phase 1 Evaporation Ponds, as indicated on pages 1 and 3 of the “Piñon Ridge Mill Application for Approval of Construction of Tailings Facility.” Our Approval is only for Tailings Cell A and Phase 1 Evaporation Ponds. Energy Fuels is required to submit additional applications for approval of construction for whatever additional cells they wish to construct and operate in the future, as required by 40 CFR § 61.07(a).
6. **Comment:** Commenter believes that EPA’s administrative record does not include detailed engineering, operations, and monitoring plans and that the decision to issue a construction approval is based heavily on conceptual plans.
Response: EPA’s decision on the Energy Fuels Construction Approval Application is based on the information submitted in their application to EPA, as required by 40 CFR § 61.07, as well as their license application to CDPHE, which has volumes of detailed engineering, operation, and monitoring plans, and additional information EPA requested from the applicant subsequent to the public review period. Together, these documents provide sufficiently detailed design, engineering, operations, and monitoring plans for this approval. CDPHE is responsible for approving the final impoundment design. Additionally, Energy Fuels is required to have their final ground and surface water monitoring plan reviewed and approved by both EPA and CDPHE. See Response to Comment 10.
7. **Comment:** Commenters believe that EPA is relying on the 12/21/2010 letter from CDPHE to show that the Piñon Ridge Tailings Cell A and Phase 1 Evaporation Ponds will be in compliance with 40 CFR § 192.32(a) and that the letter references a QA/QC plan while the license requires the preparation of a QA/QC plan as a future conditions.
Response: The EPA review consisted of a review of the requirements referred to in 40 CFR § 192.32(a), which include the impoundment liner and leachate collection system

requirements in 40 CFR § 264.221. EPA did not base its approval solely on the 12/21/2010 letter from CDPHE. EPA reviewed the application materials submitted to EPA and to CDPHE as well as materials submitted to EPA by Energy Fuels subsequent to the public review period, all of which are in the Administrative Record. The decision that Tailings Cell A and Phase 1 Evaporation Ponds will be in compliance with 40 CFR § 192.32(a) is based on EPA's review of all of that information, which is included in the Administrative Record, and which is explained in the Memorandums from the RCRA Program to the Air Program sent on February 24, 2011 and July 26, 2011. The Construction QA/QC plan referenced in the 12/21/2010 letter was considered complete by CDPHE; the State-issued license requires a modification of the QA/QC plan to increase the frequency of required earthwork testing. This modification of the Construction QA/QC plan requires more frequent earthworks testing during construction to ensure that the design is appropriate for the exact soil conditions. This modification to the QA/QC plan will help to ensure compliance with 40 CFR § 192.32(a). CDPHE will approve the final impoundment design, which will be appropriate for the exact soil conditions observed.

8. **Comment:** Commenters believe that EPA is relying on the 12/21/2010 letter from CDPHE to show that the Piñon Ridge Tailings Cell A and Phase 1 Evaporation Ponds will be in compliance with 40 CFR § 192.32(a) and feels that we cannot rely on the letter because CDPHE denies that it is subject to federal laws when carrying out the Agreement State program.

Response: As stated in our previous response, EPA did not solely rely on the letter submitted by CDPHE to make a decision on compliance with 40 CFR § 192.32(a). In response to whether CDPHE is subject to federal laws, CDPHE's opinion on federal laws pertaining to the NRC Agreement State program is not relevant to EPA's analysis of whether the Mill will meet EPA regulatory requirements.

9. **Comment:** Commenters point to the application by Energy Fuels where the emissions estimate for Tailings Cell A is in excess of 20 pCi/m²-s and suggests that the record does not include information showing that radon emission will meet the Clean Air Act standards. Commenters also believe that the use of the WISE calculator used to estimate radon emissions is not supported for regulatory approval and that EPA should confirm Energy Fuels' emission estimate assumptions.

Response: The 20 pCi/m²-s "limit" referred to by the commenter does not apply to the Subpart W regulated facilities at the Piñon Ridge Uranium Mill (i.e., Tailings Cell A and Phase 1 Evaporation Ponds). That standard is for existing impoundments in existence prior to 1989, as defined in 40 CFR § 61.251(d). The basis for this action is not the radon emissions estimate calculations, but rather that the impoundments will be in compliance with the standard for new impoundments, which can be found at 40 CFR § 61.252(b) and (c).

10. **Comment:** Commenter believes that a ground water monitoring plan is required by 40 CFR § 192.32(a) and that Energy Fuels must submit one for review and approval prior to EPA issuing a Construction Approval.

Response: In promulgating Subpart W, EPA recognized the importance of protecting ground water while controlling radon emissions and required that all Subpart W impoundments built after 1989 comply with the standards in 40 CFR § 192.32(a) (see 40 CFR 61.252(c)), which require a ground water monitoring plan. A comprehensive ground water plan will be submitted to and reviewed by CDPHE and EPA prior to operation, pending CDPHE approval of the final site layout (see Colorado Radioactive Materials License Number Colo. 1170-01, Rule 20, Part E). We have provided for this in our conditions to the Approval (Condition II.d.), and are being consistent with the State license. Specific details associated with a ground water monitoring plan cannot be determined until the final construction design is complete and exact site properties are known. The exact site properties are what inform the decision on where the exact location of monitoring wells will be.

11. **Comment:** The Commenter requests that EPA conduct an independent analysis of tailings management and disposal plans once “they are actually designed and engineered.”

Response: EPA has conducted an independent analysis, and the decision that Tailings Cell A and Phase 1 Evaporation Ponds will be in compliance with 40 CFR § 192.32(a), is based on that analysis reflected in the Memorandums from the RCRA Program to the Air Program sent on February 24, 2011 and July 26, 2011. The analysis is based on documents that provide sufficiently detailed design, engineering, operations, and monitoring plans for this approval.

12. **Comment:** Commenters believe that a consultation with the U.S. Fish & Wildlife for the Endangered Species Act and the Migratory Bird Treaty Act is necessary on this action.

Response: Under Section 7 of the Endangered Species Act (ESA), consultation with the USFWS is not required because this action, which is an approval under 40 CFR § 61.08, is nondiscretionary when the regulatory criteria are met. Since the regulatory criteria for this approval have been met, EPA has no discretion to consider additional issues such as impacts on federally-listed species, and ESA section 7 consultation requirements are not triggered. See 50 CFR § 402.03. Additionally, EPA is not required to consult with FWS under the MBTA as the MBTA has no consultation requirement. Also, the construction approval itself will not result in take under the MBTA.

13. **Comment:** Commenter believes that Environmental Justice (EJ) was not considered in this action. The commenter states that it has been “widely reported” that the incomes of persons residing in the Paradox Valley are near or below poverty levels. The commenter

alleges that disparate impacts to those residents from increased levels of radon during inversion conditions have not been addressed. The commenter also alleges that there is an “active Native American site on the cliffs above the tailing cells.”

Response: EPA disagrees with this comment. We have considered EJ in this action. An analysis of the Census data for the area surrounding the proposed mill indicates a likelihood that the percentage of area residents in poverty is at or slightly above the Colorado average, and that the percentage of area minority residents is below the Colorado average. In reviewing the application, EPA determined that the impoundment and the evaporation pond at the uranium mill will not cause a violation of the subpart W standards when properly operated; therefore, the proposed approval will not have substantial adverse human health or environmental effects on surrounding communities (including low-income populations). Despite this, and in the interest of providing an opportunity for meaningful involvement in the process for all interested individuals (including low-income populations), EPA has gone beyond the regulatory requirements and allowed for an informal public comment period on our Rad NESHAPs Construction Approval Intent to Approve, in which we specifically invited commenters to identify EJ impacts. With the exception of the commenter, who only referenced unnamed reports and did not make them available, no commenter identified an EJ community in the vicinity of the proposed mill. Finally, as noted in our proposal, CDPHE solicited input from three Tribes with historic ties to the project area—the Ute Mountain Tribe of the Ute Mountain Reservation, the Southern Ute Indian Tribe of the Southern Ute Indian Reservation, and the Ute Indian Tribe of the Uintah and Ouray Reservation—and consulted with the SHPO. EPA also invited input from the three Tribes. No historic site was identified; the comment does not provide sufficient information for us to conclude otherwise.

14. **Comment:** Commenter is concerned about the likelihood of a pond liner failure resulting in the contamination of the Dolores River as well as the ponds meeting the “1,000-year isolation period.” The commenter requested a summary of “EPA’s geological considerations of the Piñon Ridge plan in light of 40 CFR sections 264.93(b)(1)i, ii, iii, vii, ix, and 40 CFR sections 264.93(b)(2)ii, iii, and viii”.

Response: According to the Energy Fuels Specification for Closure and Reclamation of Mill Facilities (<http://www.cdphe.state.co.us/hm/rad/rml/energyfuels/application/licenseapp/closure/rpt.pdf>) the evaporation ponds will be dismantled and disposed of in the tailings cells and will not be in place for 1,000 years. Upon review of the information, EPA agrees with CDPHE that the information is sufficient for CDPHE to establish ground water concentration limits and establish a ground water monitoring program protective of surface and ground water, including the Dolores River. The double liner and leak detection system required for these impoundments is state of the art and required to protect ground water from the materials contained in the impoundments.

15. **Comment:** Commenters are concerned with windblown radon and other pollutants resulting in ground water and watershed contamination.
- Response:** CDPHE is the regulatory authority for perimeter monitoring of radon and other pollutants at this facility and is the appropriate entity to respond to concerns about windblown pollutants from the mill. EPA's regulations only apply to radon emissions from the impoundments. See 40 CFR § 61.252.
16. **Comment:** Commenters believe that radon flux from Tailings Cell A will not be limited through saturation and that ALARA levels are not protective and will not limit fugitive dust emissions.
- Response:** Subpart W does not regulate fugitive dust emissions; instead, Subpart W limits radon emissions via compliance with the work practice standard, which is not a numerical radon flux standard. The radon emissions are limited by restricting the surface area and number of impoundments. See 40 CFR § 61.252(b). Dust from Tailings Cell A will be limited by the presence of water. CDPHE's license requires Energy Fuels to monitor at the perimeter and determine the radiation dose to the public.
17. **Comment:** Commenters would like EPA to condition the approval on the presence of an emergency plan and financial assurance.
- Response:** EPA does not have the authority to condition this approval on either an emergency plan or financial assurance. Emergency planning and bonding for this facility is addressed in the radioactive material license for the facility, issued by CDPHE.
18. **Comment:** Commenter would like to know if there will be monitors present to monitor radon from the ponds.
- Response:** Monitoring of these impoundments is not required by Subpart W. Evaporation Ponds and Tailings Cell A are subject to the standard present in 40 CFR § 61.252(b) and (c) which limits the size and number of impoundments and regulates the design of the liners and leachate collection system. The radioactive materials license issued by CDPHE does contain monitoring requirements for radon and other radionuclides from the milling process, which includes the evaporation ponds.
19. **Comment:** Commenters question the applicability of Subpart W to the Piñon Ridge Phase 1 evaporation ponds.
- Response:** Subpart W applies to "owners or operators of facilities licensed to manage uranium byproduct material during and following the processing of uranium ores, commonly referred to as uranium mills and their associated tailings." 40 CFR § 61.250 Subpart W defines "uranium byproduct material or tailings" as "the waste produced by the extraction or concentration of uranium from any ore processed primarily for its source material content." 40 CFR § 61.251(g) The evaporation ponds clearly fall under these

definitions. Subpart W requirements specifically apply to the structures at the uranium recovery facilities that are used to “manage” or contain the “uranium byproduct material or tailings,” including evaporation ponds.

20. **Comment:** Commenter asks EPA what the basis for the Subpart W standard is.
Response: The standards in Subpart W were based on risk assessments resulting in risk estimates between 10^{-4} and 10^{-6} . For more detailed information on the development of the Subpart W standards see “Final Rule for Radon-222 Emissions from Licensed Uranium Mill Tailings: Background Information Document” (<http://www.epa.gov/radiation/docs/neshaps/subpart-w/historical-rulemakings/final-rule-for-radon-222-emissions-from-licensed-uranium-mil.pdf>)
21. **Comment:** Commenter asks EPA what the basis for the 40 CFR Part 192 Subpart D standards is.
Response: The standards in 40 CFR § 192.32(a) were promulgated to protect public health, safety and the environment. For more information regarding 40 CFR Part 192, please see the Final Rule at 40 Fed. Reg. 45925 1983.
22. **Comment:** Commenters would like EPA to oversee the licensing activity by CDPHE.
Response: Licensing authority is granted to CDPHE by the NRC since Colorado is an NRC Agreement State. NRC oversees Agreement States. EPA has no authority to oversee the licensing actions of CDPHE.
23. **Comment:** Commenters believe that CDPHE will be able to amend the Construction Approval issued by EPA to Energy Fuels.
Response: CDPHE does not have the authority to amend EPA’s Construction Approval. EPA has not delegated authority to implement Subpart W to the State of Colorado.
24. **Comment:** Commenter believes that EPA should establish a regular inspection program for tailings impoundments and their operations.
Response: EPA’s enforcement program and oversight of State delegated programs already includes inspection of these facilities when warranted through such considerations as compliance history and potential environmental impact, etc. EPA does not agree that a separate inspection program for Subpart W regulated facilities is warranted and commenters have provided no explanation or information demonstrating why such a program would be necessary.
25. **Comment:** Commenter states that any meteorological data used by Energy Fuels to determine compliance with EPA or other state or federal regulations should come from site-specific meteorological data.
Response: Energy Fuels is not required by this action to submit meteorological data to show compliance with Subpart W.

26. **Comment:** Commenter believes that no tailings are considered to be safe.

Response: EPA's assessment of protectiveness of Subpart W regulations can be found in the "Final Rule for Radon-222 Emissions from Licensed Uranium Mill Tailings: Background Information Document" (<http://www.epa.gov/radiation/docs/neshaps/subpart-w/historical-rulemakings/final-rule-for-radon-222-emissions-from-licensed-uranium-mil.pdf>).

27. **Comment:** The commenter objects to items in the CDPHE radioactive materials license granted to Energy Fuels and claims that Energy Fuels will not meet the CDPHE requirements for a geological barrier to prevent radioactive waste infiltration to ground water.

Response: EPA has no authority over the license granted by CDPHE to Energy Fuels. Questions regarding the license should be directed to CDPHE. However, based on our review of the application submitted under the CAA, we believe that Tailings Cell A and Phase 1 Evaporation Ponds will be in compliance with the standards at 40 CFR § 192.32(a) (see 40 CFR § 61.252(c)). These standards were promulgated to prevent ground water contamination while regulating radon emissions from Subpart W impoundments. EPA has reviewed Energy Fuels' application for Tailings Cell A and Phase 1 Evaporation Ponds and has determined that they will be in compliance with the 40 CFR Part 264 requirements referenced in 40 CFR § 192.32(a), which provide design and operating requirements to prevent ground water contamination. Memoranda from the RCRA Program to the Air Program sent on February 24, 2011 and July 26, 2011 provide a summary of our review and the plans satisfy the requirements for a double liner and leak detection system, and include the need for a liner composed of appropriate materials with sufficient strength and thickness to meet the 1×10^{-7} cm/sec permeability requirement.

28. **Comment:** Commenter believes the EPA is knowingly allowing ground water contamination from the mill.

Response: As outlined in earlier responses, EPA believes Tailings Cell A and Phase 1 Evaporation Ponds will be in compliance with the standards at 40 CFR § 192.32(a) (see 40 CFR § 61.252(c)), which incorporate design requirements for liners and leak detection systems as well as ground water standards and ground water monitoring requirements. These standards were promulgated to prevent ground water contamination. See 54 FR 51580, December 15, 1989.

29. **Comment:** Commenter is concerned about the presence of volatile organic compounds and sulfur dry deposition from the Phase 1 Evaporation ponds.

Response: EPA's regulatory authority in this action is to implement the work practice standards in 40 CFR § 61.252(b), which do not regulate sulfur and volatile organic compounds. Energy Fuels is required to obtain an air permit from CDPHE for the Mill.

30. **Comment:** Commenter questions whether this project will require spending by our state government money to monitor the mill's operations.

Response: The cost associated with managing the Tailings Cell and Evaporation Ponds is paid for by Energy Fuels.

31. **Comment:** Commenter is concerned about the closure period of Subpart W regulated impoundments and would like to see more EPA oversight during closure including confirming Energy Fuels' estimates of radon flux during the closure period and addressing the time period between cessation of the placement of tailings and the placement of the final radon barrier as well as review of the reclamation plan for closure.

Response: Subpart W applies to impoundments that are considered to be operating. Once the first day of closure occurs, Subpart W no longer applies and EPA has no authority over the impoundments. The State of Colorado (an NRC Agreement State) has regulatory authority over closure requirements of Subpart W regulated impoundments.

32. **Comment:** Commenter does not think EPA should approve the construction of the tailings cell and evaporation ponds until there has been an opportunity for the public to comment on or request a hearing on the licensing of the Piñon Ridge Uranium Mill.

Response: EPA does not have the authority to oversee the licensing of the Mill by CDPHE. This is not a factor EPA can assess under our regulation when reviewing Energy Fuels' request for Construction Approval.

33. **Comment:** Commenter thinks EPA should require Energy Fuels to submit to EPA the total number of curies released into the atmosphere from the Piñon Ridge Mill.

Response: The total number of curies released from the Mill is not considered in this action.

34. **Comment:** Commenter is concerned about truck traffic resulting in windblown contamination.

Response: Windblown contamination resulting from truck traffic is not considered in this action.

35. **Comment:** Commenters are concerned that a legacy site is being created and points toward previous legacy sites as examples.

Response: Generally, legacy sites exist as a result of a lack of environmental regulations during the time of operation. Sites in operation after 1978, like this one, are required to be

licensed by the NRC or Agreement State, and must comply with 40 CFR Part 61 Subparts A and W.

36. **Comment:** Commenters encourage EPA to consider the March 2011 events in Japan in our decision making.

Response: The comment is duly acknowledged. However, EPA must follow applicable regulations in consideration of this application.

37. **Comment:** Commenters express their support of the mill due to the fact that it will increase the local economy.

Response: The comment is duly acknowledged. However, EPA must follow applicable regulations in consideration of this application.

38. **Comment:** Commenters point out that the majority of people and groups opposed to the mill are located over 60 miles away and will not be impacted.

Response: The location of commenters does not play a role in the review of Energy Fuels' request for Construction Approval.

39. **Comment:** Commenters agree with EPA's decision to approve the application.

Response: The comment is duly acknowledged.

40. **Comment:** Commenters believe that EPA should not have opened up a public review period.

Response: The above comment is duly noted. As we explained in our public announcement regarding this action, we offered an opportunity for an **informal public review** on our proposed construction approval. The Agency has discretionary authority to allow for a public input period.

41. **Comment:** Commenters believe the mill is bad for the tourist economy.

Response: The tourist economy is not a factor within EPA's authority to assess when reviewing Energy Fuels' request for Construction Approval.

42. **Comment:** Commenter cites alleged violations at nearby uranium mines.

Response: The alleged violations are not taking place at the Piñon Ridge Uranium Mill, which is the facility considered under this action.