

# **Environmental Impact Statement Scoping Process**

## **Summary Report for the Environmental Impact Statement for the Disposal of Mine Waste at the United Nuclear Corporation Church Rock Mill Site in McKinley County, New Mexico**

**December 2019**



**U.S. Nuclear Regulatory Commission  
Rockville, Maryland**

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# **A THE UNC CHURCH ROCK URANIUM MILL SITE ENVIRONMENTAL IMPACT STATEMENT PUBLIC SCOPING PERIOD**

## **A.1 Introduction**

Between February 8, 2019, and April 19, 2019, the United States (U.S.) Nuclear Regulatory Commission (NRC) conducted an environmental scoping process for the United Nuclear Corporation (UNC) application requesting authorization to amend its Source Material License (No. SUA-1475) to excavate approximately 765,000 cubic meters (m<sup>3</sup>) [1 million cubic yards (yd<sup>3</sup>)] of mine spoils from the Northeast Church Rock (NECR) Mine Site and dispose of the mine waste on top of the NRC-licensed tailings impoundment at the adjacent UNC Mill Site in Church Rock, New Mexico. This proposal is hereafter referred to as the proposed action. The NRC published a Notice of Intent (NOI) to prepare an environmental impact statement (EIS) and conduct scoping in the *Federal Register* (FR) (84 FR 2935) on February 8, 2019. The EIS will document the environmental impacts of the proposed action and reasonable alternatives. As part of the EIS development process, the NRC staff conducted a scoping process, requesting public comments on the scope and content of the EIS.

The EIS will be prepared in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Part 51, Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions, Section 51.29, which implements the National Environmental Policy Act of 1969 (NEPA), as amended, for the NRC. During the scoping process, the NRC invited potentially affected Federal, State, local, and Tribal government agencies, members of the public, interested and concerned people and organizations, and UNC, the licensee requesting the license amendment, to identify issues and provide recommendations to the agency on the scope of an EIS. The NRC's goal for conducting the scoping process was to define the scope of issues to be addressed in the EIS including, but not limited to, identifying significant issues to be analyzed in depth, eliminating from detailed study issues that are peripheral or are not significant or that have been evaluated in prior environmental reviews, identifying alternatives, and identifying other environmental review and consultation opportunities and obligations related to the proposed action. During the 70-day scoping period, members of the public, government organizations, and concerned citizen groups submitted written comments. Participants at public meetings also submitted oral statements.

This scoping summary report summarizes comments and information the NRC gathered during the scoping process. Section A provides a summary of the NRC's environmental scoping process for the EIS, an overview of the issues that were raised (Section A.7), and a summary of the NRC's initial determinations regarding the scope and content of the EIS (Section A.8). Section B contains summaries of comments received during the public scoping period and the NRC's responses. These responses contain initial conclusions on the scope of the EIS, including identification of any significant issues. Another opportunity for public input, including on the scope of the EIS, will occur when the NRC publishes the draft EIS comment. Section C contains an alphabetized table that identifies the individuals that provided comments, their affiliation (if provided), and the Agencywide Documents Access and Management System (ADAMS) Accession number that can be used to locate the comment. Section D provides references cited in this report. ADAMS is accessible from the NRC website at <http://www.nrc.gov/reading-rm/adams.html>.

## **A.2 Background**

By letter dated September 24, 2018, UNC has submitted a request to the NRC to amend its Source Materials License No. SUA-1475 for the former UNC Church Rock uranium mill (hereafter, UNC Mill Site) under the requirements specified in 10 CFR Part 40, Domestic Licensing of Source Material. Specifically, the UNC application included a license amendment request and a Supplemental Environmental Report (ER), and requested that the NRC grant a license amendment to UNC that would allow disposal of NECR mine waste on top of the tailings impoundment at the UNC Mill Site (Stantec, 2018; INTERA, 2018). UNC's application materials are available at <https://www.nrc.gov/info-finder/decommissioning/uranium/united-nuclear-corporation-unc.html>.

## **A.3 Environmental Impact Statement**

The proposed action is to amend UNC's Source Material License SUA-1475 to allow UNC to transfer and dispose approximately 765,000 m<sup>3</sup> [1 million yd<sup>3</sup>] of NECR mine waste on top of the tailings impoundment at the UNC Mill Site. UNC proposes transferring and disposing NECR mine waste within new construction on top of a portion of the existing tailings impoundment (hereafter, proposed disposal site). The amendment would also revise the NRC-approved tailings reclamation plan for the NRC-licensed mill site and revise the reclamation schedule at the UNC Mill Site in McKinley County, New Mexico. The proposed UNC schedule to complete the disposal of the NECR mine waste is approximately 4 years, if NRC grants the license amendment (Stantec, 2018).

The proposed action is also being requested to allow the licensee to comply with a U.S. Environmental Protection Agency (EPA) Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) action to protect human health and the environment from actual or threatened releases of residual mining materials from the NECR Mine Site, as documented in a 2013 EPA Record of Decision (ROD) (EPA, 2013). The EPA response action ROD describes all activities necessary to remove and dispose of the NECR mine waste under CERCLA, including NRC approval of the proposed amendment to UNC's license that would allow disposal at the UNC Mill Site, which would also amend UNC's NRC-approved decommissioning plan. The NRC's review, however, is independent of the EPA action and is performed pursuant to the Atomic Energy Act of 1954, as amended. As stated in the EPA ROD, if the NRC license amendment to address disposal of the NECR mine waste were not granted, then EPA would pursue other disposal options and continue to complete the remediation of the mine site.

UNC proposes to move the NECR mine waste to the proposed disposal site using articulated dump trucks on local roads that connect the two sites. Additionally, UNC proposes to source cover material for the disposal site from four borrow areas within the UNC Mill Site: (i) the West Borrow Area {68,045 m<sup>3</sup> [89,000 yd<sup>3</sup>]; (ii) the East Borrow Area {42,050 m<sup>3</sup> [55,000 yd<sup>3</sup>]; (iii) the South Borrow Area {[12,233 m<sup>3</sup> [160,000 yd<sup>3</sup>]; and (iv) the North Borrow Area {54,283 m<sup>3</sup> [71,000 yd<sup>3</sup>]. UNC considered two options, including (i) the use of a conveyor system to transfer the mine waste instead of hauling the waste via trucks, and (ii) sourcing cover material from the Jetty Area instead of the borrow areas. These options, and all reasonable alternatives, will be addressed in the EIS.

This scoping summary report describes the NRC staff's initial assessment of the scope and content of the EIS that the NRC will prepare to document its environmental review. A separate safety review, conducted in parallel with the environmental review, will evaluate whether the

placement of NECR mine waste on top of a portion of the existing tailings impoundment (i.e., on the North and Central Cells of the impoundment) satisfies NRC criteria in 10 CFR Part 40, Appendix A to provide assurance that isolation and containment of tailings and waste materials is adequate to maintain safety and protect the environment. This review will also evaluate the adequacy of the UNC-revised radiation protection plan. Separately, the NRC staff continues its oversight responsibilities for the ongoing UNC Mill Site reclamation activities, including the continuing implementation of an NRC-approved groundwater corrective action plan (CAP).

## **A.4 Scoping Process**

On February 8, 2019, in accordance with 10 CFR 51.26, the NRC published a NOI in the FR (84 FR 2935) to prepare an EIS and conduct scoping for this proposal. The NOI described the NRC's plan to prepare an EIS and conduct public scoping, and requested comments on the scope of the NRC EIS evaluating the UNC proposal to dispose of NECR mine waste on top of the tailings impoundment at the UNC Mill Site. Through the NOI, the NRC invited potentially affected Federal, Tribal, State, and local governments; organizations; and members of the public to provide comments on the scope of the EIS. The scoping period ended on April 19, 2019. Comments were accepted via the Federal rulemaking website (<http://www.Regulations.gov>) using Docket ID NRC–2019–0026, through email to [UNC-churchrockEIS@nrc.gov](mailto:UNC-churchrockEIS@nrc.gov), or by regular U.S. mail, or through comments at two public meetings. The public meetings are discussed in further detail in Section A.5 of this report. The scoping process provided an opportunity for members of the public to identify issues and highlight concerns related to the proposed license amendment for the UNC Mill Site. The purpose of the scoping process as described in NRC and CEQ guidance (NRC, 2003; 48 FR 34263, July 28, 1983) is to:

- ensure that important issues and concerns are identified early and are properly studied
- identify alternatives to be examined
- identify significant issues to be analyzed in depth
- eliminate unimportant issues from detailed consideration
- identify public concerns

## **A.5 Public Scoping Meetings**

During the 70-day comment period, the NRC staff hosted two public scoping meetings in Gallup, New Mexico on March 19, 2019, and March 21, 2019. The number of meeting attendees was approximately 58 people at the first meeting and 45 at the second meeting. Preceding each public scoping meeting, the NRC staff conducted an “open house” at the meeting facility. The open house provided an opportunity for members of the public to interact with the NRC staff members, to receive handouts and pamphlets, and to view informational posters that contained details of the proposed action and NRC's license amendment process. Transcripts from each meeting, along with digital versions of the handouts and the NRC presentations, can be found on the NRC website (<https://www.nrc.gov/info-finder/decommissioning/uranium/united-nuclear-corporation-unc-public-mtgs.html>). All oral comments provided in English during these meetings were transcribed. Any comments provided in another language, such as Diné, were recorded on the transcript as *Native Language Spoken*. All transcribed comments from the scoping meetings, as well as any written comments submitted in person during the scoping meetings, were considered by the NRC staff and are included in the comment summaries in this report.



To accommodate members of the public with limited English proficiency, the NRC staff provided presentation slides on the project in Diné as well as English. These materials are also available on the NRC website (<https://www.nrc.gov/info-finder/decommissioning/uranium/united-nuclear-corporation-unc-public-mtgs.html>). The NRC public meeting notices were issued in the Navajo Times, the Gallup Independent, and the Gallup Sun newspapers in English.

In advance of each of these meetings, meeting announcements were posted on the NRC's public meeting notification system website. In addition to the NOI, the NRC staff issued public meeting announcements once a day in English on AM station KTTN 660 between March 15 and March 21, 2019. In addition, the NRC's Office of Public Affairs issued a press release on February 14, 2019 and posted notice of the meetings on the NRC's Facebook and Twitter accounts to notify the public of the meetings.

## **A.6 Comments Received During the Scoping Period**

Following the conclusion of the scoping period on April 19, 2019, the NRC staff reviewed correspondence and comments received from the two transcribed public meetings, comments submitted online at <http://www.regulations.gov>, comments sent by e-mail to [UNC-churchrockEIS@nrc.gov](mailto:UNC-churchrockEIS@nrc.gov), and comments received by regular mail. The NRC staff identified the comments made by each commenter, giving each commenter and their individual comments a unique alphanumeric designation to be used for tracking and sorting both by the NRC staff and the public.

Initially, the NRC staff sorted the identified scoping comments according to subject matter and then further categorized comments within each subject matter into groups with similar specific ideas or concerns in order to capture the common issues that had been raised. With the comments thus grouped according to subject area, the NRC staff developed responses for similar comments, explaining how the comment or comments related to the scope of the EIS.

The NRC summaries of comments and responses to the comments are presented in Section B of this report. Section C contains a table that identifies all commenters and the ADAMS Accession numbers where their comments can be found.

In all, through each of the avenues for submitting comments [e.g., transcripts from the public meetings, mail, the Church Rock site on <http://www.regulations.gov> (NRC-2019-0026), and fax] the NRC received approximately 432 unique comments contained in 11 pieces of comment correspondence and the two transcripts from the public meetings.

## **A.7 Issues Raised During the Scoping Period**

As the NRC staff reviewed the meeting transcripts and comment letter submittals, comments were extracted and organized into broad categories, then within a category, they were further organized by topic area or issue. These comment categories and their major topics and issues of concern within each category are listed below. The bulleted topics and issues under each category are not exhaustive, but include the most common issues identified in the scoping comments.

### **NEPA and Public Process**

- Requests to delay the NRC's hearing process

- Requests to address Navajo fundamental law, traditional law, and natural law in the EIS process
- Requests for the NRC staff to visit the proposed project area and surrounding communities in person and to gather and accept input from the local community
- Comments about National Historic Preservation Act (NHPA) Section 106 consultation; specifically, consultation with the Navajo Nation
- Concern regarding the length of time to conduct environmental and safety reviews for this project
- Suggested improvements for scoping meeting materials and overall meeting process
- Concerns regarding public access to information
- Requests for a translator and translated materials, including the application documents

### **Assumptions and Timeframe of the Analysis**

- Timeframe and activities that the EIS would be considering

### **Alternatives**

- Moving the NECR mine waste to a location other than the UNC Mill Site
- Consolidating mine waste from the nearby Kerr-McGee site (Quivira Mines)

### **Land Use**

- Concerns regarding potential land use conflicts in the area

### **Transportation**

- Concerns about how the mine waste material will be transferred to the proposed disposal site
- Volume of trucks crossing New Mexico Highway 566 requiring frequent road closures
- Concern about rights of way through Tribal lands during transportation

### **Soils and Geology**

- Residual radionuclide-contaminated soil and tailings

### **Surface and Groundwater**

- Downstream migration of radiological waste from the potential undercutting of the tailings impoundment as a result of the lateral migration of Pipeline Arroyo

- Seepage from the tailings impoundment and the leaching of heavy metals and radioactive contaminants into the soil and groundwater

### **Ecology**

- Implementation of mitigation measures to reestablish native plants
- Concern for threatened and endangered species, including species important to the Navajo people

### **Meteorology and Air Quality**

- Airborne radiological and nonradiological contaminants that could be generated during the proposed action

### **Historical and Cultural**

- Past, present, and future impacts to the cultural resources valuable to the Navajo people

### **Socioeconomics**

- Socioeconomic implications and economic considerations of the proposed action on the local community

### **Environmental Justice**

- Concerns that the proposed action represents an environmental injustice to minority or low-income populations
- Opposition to the mine being located on Tribal land
- Calls for the NRC to consider medical and health services as mitigation measures
- Disposing of some mine waste near other communities with ongoing environmental justice impacts

### **Nonradiological Health**

- General concerns about public health and safety, with regard to the continued presence of contaminants in the environment

### **Radiological Health**

- Radiological doses that could be incurred from the proposed action
- Concerns about the past, present, and future health characteristics of the local area and region surrounding the proposed project area

## **Cumulative Impacts**

- Cumulative impacts and overlapping impacts from other uranium mines, including radiological health and surface and groundwater contamination
- Historical or legacy impacts from uranium mining in the region

## **Accidents**

- Breaching of the tailings impoundment
- Concerns about how major storm events could affect containment of the mine waste

## **Safety**

- Concerns regarding the design of the proposed tailings site and that the containment will fail
- Compliance with safety regulations and specifications

## **Other Issues**

- Relocation of nearby residents
- Past mining actions at the Church Rock site
- Cleanup of this and other sites is taking too long or does not adequately address the cleanup needed
- Political decisions, including historic decisions and actions of the U.S. and Navajo Nation that affected the health of the community and the environment

## **A.8 Scope of the Church Rock Mill Site EIS**

As a result of the scoping process, the NRC staff identified and eliminated peripheral issues that will not be addressed in the Church Rock Mill Site EIS, consistent with 10 CFR 51.29(a)(3). Section B, "Responses to Scoping Comments," provides the NRC staff responses that discuss why particular topics or concerns are outside the scope of the EIS, or indicate that these concerns or topics are in scope and will be evaluated and documented in the EIS. In many cases, the NRC cannot state the degree of specificity of analysis that will be applied to these in-scope issues. Commenters should not expect that every item identified as "in scope" for the EIS will receive the same level of review and analysis. The degree of analysis for each resource will be determined based on the scope, complexity, nature, and intensity of the potential impacts with respect to the affected environment.

The general scope of the EIS includes an evaluation of the environmental impacts that could result from the proposed disposal of the mine waste on top of the tailings impoundment and associated revisions to the NRC-approved tailings reclamation plan and schedule for the UNC Mill Site, and reasonable alternatives, including the no-action alternative. Without approval for this disposal, the NECR mine waste would remain at the NECR Mine Site until the EPA selects a different remedy under CERCLA that involves a different final disposal alternative for the

NECR mine waste. In the following discussion, the NRC staff outlines its current approach to the structure of the EIS, chapter by chapter. The EIS, which will be published for public comment, may adopt a different format than is outlined here.

Chapter 1 of the EIS will introduce the proposed action, purpose and need for the proposed action, and reasonable alternatives to the proposed action; outline the specific assumptions that informed the analyses contained in later chapters of the EIS; and list applicable regulations and related environmental documents used in the environmental review.

Chapter 2 of the EIS will describe in detail UNC's proposal to dispose of NECR mine waste on top of the existing NRC-licensed tailings impoundment at the former UNC Mill Site and activities that are associated with excavating and transferring NECR mine waste to the proposed disposal site.

Chapter 3 will contain a description of the potentially affected environment at and around the proposed project area (which includes the UNC Mill Site and NECR Mine Site), and, with Chapter 2, will form the basis for assessing the potential impacts of the proposed action in Chapter 4. The affected environment will include the following resource areas: land use, socioeconomics, environmental justice, air quality, geology and soils, water resources (surface water and groundwater), ecological resources, historic and cultural resources, noise, visual and scenic, waste management, transportation, and public and occupational health.

Chapter 4 will provide the NRC staff's evaluation of the environmental impacts associated with the proposed action, including the construction of the proposed disposal site, the transfer of the NECR mine waste from the Navajo Nation to the NRC-licensed tailings impoundment, and project closure activities (e.g., revegetation of the proposed disposal site). This chapter will also include a discussion of potential mitigation measures that could reduce or avoid adverse environmental impacts.

Chapter 5 will consider and evaluate the cumulative impacts that could occur from the incremental impacts of the proposed action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes these other actions. Other past, present, and reasonably foreseeable future actions that will be considered in the cumulative impact assessment include activities at other uranium mines in the area, previous NECR mining and UNC milling activities, reclamation of the NECR Mine Site, and long-term surveillance of the UNC Mill Site after the proposed action is completed.

Chapter 6 will include a list of the specific mitigation measures proposed by UNC and any additional requirements applicable to proposed activities that are within the EPA's authority under CERCLA, such as programs, procedures, and controls for monitoring, measuring, and documenting specific goals or targets that substantially follow local, State, and Federal agencies' requirements.

Chapter 7 will describe UNC's proposed environmental measurements and monitoring programs that were designed to address NRC safety regulations, including radiological effluent release limits, public and occupational dose limits, and reporting under in 10 CFR Part 20 and 10 CFR Part 40. Information regarding program-specific or discretionary monitoring also will be included as appropriate if the monitoring would help to limit potential environmental impacts at the UNC Mill Site. Monitoring programs provide data on operational and environmental conditions that enable implementation of prompt corrective actions if adverse conditions are

detected. Thus, these programs help to limit potential environmental impacts and therefore are relevant to the NRC staff's environmental impact analyses.

Chapter 8 will describe the societal costs and benefits associated with the proposed action, the no-action alternative, and any other reasonable alternative identified during scoping. The purpose of the cost-benefit analysis is not to exhaustively identify and quantify all of the potential costs and benefits, but to disclose major quantitative and qualitative cost to evaluate the relative merits of various alternatives. The evaluation will, in general, consider major costs associated with construction of the proposed disposal site, transfer of mine waste, and closure of project activities during the estimated 4-year proposed action.

Chapter 9 will include a summary of environmental consequences, including a comparison of environmental impacts, unavoidable adverse environmental impacts, irreversible and irretrievable commitments of resources, the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity, and the NRC's conclusions and recommendations.

Chapters 10 and 11 will list preparers of the EIS and the distribution list of agencies and organizations that received a copy of the EIS, respectively. Chapter 12 will be a document index. The EIS will also include technical appendices that support the conclusions in the main body of the report and information about correspondence with other agencies and Tribal governments associated with the preparation of the EIS.

## **A.9 Issues Outside the Scope of the Church Rock Mill Site EIS**

The Church Rock Mill Site EIS will evaluate the environmental impacts of construction of the proposed disposal site, transfer of NECR mine waste to the proposed disposal site, and project closure activities. Certain topics will not be addressed in the EIS, because they are not within the scope of this environmental review. Where practicable, responses to comments on these topics (Section B.25 of this report) discuss why these topics are outside the scope of the Church Rock Mill Site EIS. Some topics on which the NRC received comments but which are outside the scope of the EIS are:

- the economic relationship between the U.S. Government and Tribes
- political statements and objections to legacy government decisions
- actions specific to agencies other than NRC
- relocation of residents of the Red Water Pond Community

## **A.10 Consultation Requirements and Cooperating Agencies**

The NRC recognizes that there are specific government-to-government consultation responsibilities regarding interactions with Federally-recognized Tribal governments because of their status as sovereign nations. As such, the NRC offers Federally-recognized Tribes the opportunity for government-to-government consultation consistent with the principles in its Tribal Policy Statement, which was issued on January 9, 2017 (82 FR 2402). The Tribal Policy Statement promotes effective government-to-government interactions with Indian and Alaska Native Tribes, and encourages and facilitates Tribal involvement in the areas over which the NRC has jurisdiction. At the request of Tribal governments, the NRC would be willing to participate in government-to-government meetings to discuss the Church Rock Mill Site EIS development effort, and is interested in further discussions if the Tribal governments are interested in such meetings. Members of the Red Water Pond Road Community and

Navajo Nation invited the NRC staff to visit the community during the environmental review process and to visit each of the Navajo chapters. To date, the NRC staff has invited eight Federally-recognized Indian Tribes located in northern and northwestern New Mexico to participate in Section 106 consultation. The Tribes that were contacted included the Laguna Pueblo, Isleta Pueblo, Acoma Pueblo, Zuni Pueblo, Tesuque Pueblo, White Mountain Apache Tribe, Hopi Tribe, and the Navajo Nation. The EIS will include an appendix that contains correspondence related to the NRC's outreach with Indian Tribes. The NRC encourages interested Indian Tribes to participate throughout the Church Rock Mill Site EIS environmental review. The NRC will continue outreach efforts with Indian Tribes throughout the course of this environmental review.

The Department of the Interior's Bureau of Indian Affairs (BIA) requested to be a cooperating agency on the EIS in a scoping letter available at ADAMS Accession No. ML19133A315. The NRC staff discussed the request with the BIA, and NRC is awaiting a response from BIA as to how they wish to proceed (see letter dated October 16, 2019, ADAMS Accession No. ML19277E628). The NRC is working with several agencies, including the EPA, Navajo Nation EPA (NNEPA), and the U.S. Department of Energy (DOE) in the development of the EIS as consulting/coordinating agencies.

## **A.11 Future Opportunities for Public Participation**

In the upcoming year, the NRC expects to issue a draft EIS for public comment. In addition to the consultations previously discussed in Section A.10, the comment period on the Church Rock Mill Site EIS offers the next opportunity for other interested Federal, State, and local government agencies; Tribal governments; local organizations; advocacy groups; environmental organizations; and members of the public to comment on the NRC's environmental review. The NRC staff will consider comments received on the EIS in the preparation of the final EIS. Comments received on the EIS and responses to those comments (noting any edits and changes to the EIS as a result of comments), will be published with the final EIS.

## **B SUMMARY OF COMMENTS RECEIVED DURING THE PUBLIC SCOPING PERIOD**

### **B.1 Comments Concerning the NEPA Process**

#### **B.1.1 NEPA Process – Activities Under the Proposed Action**

One commenter stated that, as it appeared to them, the mine waste has been temporarily covered and that the old tailings would be removed before new waste is placed on top.

**Response:** The commenter appears to reference an EPA document that explains that a portion of the mine waste at the NECR Mine Site has been temporarily covered and stabilized. At the UNC Mill Site, UNC proposes to remove the existing erosion protection layer (above the tailings) of the tailings impoundment, consisting of rock and soil above an existing clay layer. Then, UNC proposes to place the NECR mine waste on top of the tailings impoundment. The material previously removed would then be used to cover the mine waste placed on the tailings impoundment. UNC's license amendment request document describes activities at both the NECR Mine Site and the UNC Mill Site. The EIS will assess the potential impacts of certain activities at the Mine Site (such as mine waste excavation and transfer) that are necessary for placing the waste on the UNC Mill Site. The activities that are part of the evaluated proposed action will be described clearly in the EIS.

**Comments:** (2-5-2)

#### **B.1.2 NEPA Process – Comments About Deadline for Intervention**

The NRC received comments requesting that the NRC delay the time period when the public is required to request a hearing and petition for leave to intervene until a draft EIS is available for review. Commenters expressed concern that they would not have an opportunity to review the NRC staff's safety evaluation report (SER) and EIS before filing their petitions to intervene in the hearing on the UNC license amendment application. Other commenters stated that offering a 60-day period to request a hearing and petition for leave before a draft EIS is available for review is an environmental injustice.

**Response:** Requests for hearing and petitions for leave to intervene are part of an adjudicatory process that is separate from the NRC staff's license amendment application environmental and safety review process. The Commission's rules of practice in 10 CFR Part 2 require that petitions to intervene be submitted within a specified period, 60 days in this case, after a Notice of Hearing for the license amendment request is published in the *Federal Register*. Safety and environmental contentions raised by intervenors are considered by an Atomic Safety and Licensing Board (ASLB) that decides the admissibility of the contentions and sets a hearing schedule. Under certain conditions outlined in 10 CFR 2.309, petitions to intervene may be admitted for consideration in an adjudicatory proceeding after a notice for hearing has expired. For example, if a new issue arises during the course of a license review, members of the public may be afforded an opportunity to participate in the hearing process, based on a determination of the ASLB, that the new information is material and was not available previously. These comments express opposition to the NRC's timeline for filing intervention petitions, and provide no specific information related to the scope of the NRC's environmental review; therefore, they will not be considered further in the EIS.



**Comments:** (1-13-8) (1-21-11) (4-31) (12-9)

### **B.1.3 NEPA Process – Comments Critical of the NRC**

Several commenters expressed critical views of the NRC staff, including claims that NRC staff intentionally concealed reports or are too closely tied to industry, and that the Commission is an ineffective bureaucracy. One commenter suggested that the NRC reacts more quickly to health concerns of the public if the affected individuals are not Navajo Indian.

**Response:** The NRC takes seriously its responsibility under the Atomic Energy Act to protect the health and safety of the public and the environment in regulating the U.S. nuclear industry. More information on NRC's roles and responsibilities is available on the NRC's website at <http://www.nrc.gov/what-we-do.html>. The NRC is an independent agency established in 1974, and strives to conduct its activities in an open and transparent manner, consistent with the NRC Approach to Open Government (<https://www.nrc.gov/public-involve/open.html>). As designated by the Energy Reorganization Act of 1974, the DOE, not the NRC, has responsibility for developing and promoting nuclear power. The NRC does not advocate for or endorse nuclear power or the nuclear industry. These comments regarding the NRC's activities do not concern specific information related to the scope of the NRC's environmental review; therefore, they will not be considered further in the EIS.

**Comments:** (2-2-12) (2-2-13) (2-7-5)

### **B.1.4 NEPA Process – Development of Remedial Plan**

One commenter stated that a remedial plan should be developed to assess applicable or relevant appropriate requirements (ARARs) with the participation of the impacted communities along with State and Federal regulators.

**Response:** This proposed action is a unique circumstance, in that the NRC is developing an EIS for a licensing action that is also necessary for UNC to comply with CERCLA actions (as required by EPA). EPA has already completed several prior analyses, evaluations, reviews, and approvals as part of the CERCLA process. EPA's CERCLA program eliminates the need for UNC to obtain many Federal, State, and local permits; EPA instead ensures that the substantive requirements of those permitting laws (referred to as ARARs by the EPA) will be met (EPA, 2011, 2013). The EPA developed the ARARs with the assistance of State and Tribal agencies. This EIS will address the implications of EPA's management of ARARs with the respect to the NRC's licensing action but will not revisit decisions made by EPA as part of its CERCLA process.

**Comments:** (5-12)

### **B.1.5 NEPA Process – Environmental Assessment of the Surrounding Communities**

The NRC received comments that an assessment should be conducted, including extensive door-to-door surveys, of the surrounding communities to determine the correct census on all family members, health and employment considerations, and animals.

**Response:** UNC is required by License Condition 31 to conduct an annual land use survey to identify grazing, residence distribution, well status, and other land use activities within a

3.2-kilometer (km) [2-mile (mi)] area surrounding the proposed disposal area (UNC, 2018). The information provided by UNC in the annual land use surveys, UNC's license amendment request and ER, and NRC's independent assessment of the surrounding communities will be included or referenced in the EIS, where appropriate. As explained in Section B.2 [Comments Concerning NEPA Process: NHPA Section 106 and Tribal Interactions] of this report, the NRC staff will engage in consultations with the Navajo Nation and intends to obtain additional information from the surrounding communities through continued interactions with local Navajo chapters and other affected communities. Undertaking a broader census or survey is outside the scope of the environmental review and will not be evaluated further.

**Comments:** (2-8-10) (2-8-12) (11-12)

### **B.1.6 NEPA Process – General EIS Development Comments**

The NRC received comments about the development of the EIS for the proposed action. One commenter stated that a hard look has not been conducted for the site and that a quantitative analysis is necessary. One commenter suggested that other available or new technologies be considered in the EIS for the disposal site. Another commenter expressed concern that the information provided in the application was not verified, and urged the NRC staff to independently verify information in the application and disclose significant differences between the information in the EIS compared to the application, if applicable.

**Response:** As a part of the NRC's process, the license amendment application, as well as any additional documentation provided by the licensee, is independently reviewed by the NRC staff. The NRC staff also will gather information in the scoping process and EIS development process and will review previous assessments conducted within the proposed project area. The NRC staff notes that licensees are required to submit complete and accurate information to the NRC and that failure to do so can result in significant sanctions.

**Comments:** (1-22-17) (2-6-6) (4-2)

### **B.1.7 NEPA Process – Implementation of Fundamental Law**

The NRC received several recommendations that the NRC and the EIS should address the concepts of the Navajo fundamental law, traditional law, and natural law. Commenters shared with the NRC that these concepts have been missing in general in the previous mine cleanup efforts. Some of the commenters expressed that these traditional values need to be integrated into the proposed action to successfully address the longstanding issues associated with mining projects and to bring healing to the Navajo people and broader affected community. One commenter stated that addressing fundamental law would be viewed by the community as a health and safety measure. In addition, some commenters stated that relevant Navajo Nation laws, regulations, and ordinances should be incorporated into the EIS. A couple of commenters referred to, and provided copies of, the Diné Natural Resources Protection Act of 2005.

**Response:** The EIS will include information about relevant laws, statutes, and regulatory requirements of other government agencies. The EIS will also address the affected environment from a historic and cultural perspective and will include an analysis of impacts to historic and cultural resources. The Navajo and cultural resources perspectives will be described and may be integrated into the analysis, where practicable. The NRC intends to continue to interact with Tribes throughout the development of the EIS, particularly through the

Section 106 consultation process, and information from these consultations will be incorporated in the EIS.

**Comments:** (1-3-3) (1-14-5) (2-1-3) (2-1-4) (2-1-6) (2-17-5) (2-18-2) (2-18-4) (2-18-6) (6-7) (11-9)

### **B.1.8 NEPA Process – Length of Time for Cleanup and Overall Process**

Several commenters expressed frustration regarding the length of time that it has taken for Federal agencies to conduct the evaluations necessary to remove the mine waste from the NECR Mine Site. One commenter noted that prior EPA deadlines had shifted, questioned the validity of the projected completion date of 2026, and requested that the NRC evaluate the impacts of not meeting the estimated project completion date. Some commenters advocated for a quick review and cleanup process.

**Response:** The NRC staff strives to conduct its regulatory responsibilities in a timely manner and recognizes that the EPA has evaluated options for the removal of the NECR mine waste with the community for several years. The safety review, environmental review, and adjudicatory process, if one is established, will inform a determination by the NRC on whether to grant the license amendment to allow the disposal of NECR mine waste on top of the existing tailings impoundment. The NRC's current schedule targets issuance of a licensing decision in January 2022, including consideration of other agency responsibilities, regulations, and oversight, to ensure the safety and practicability of UNC's proposal. Other elements of this cleanup action will be evaluated in the EIS, as appropriate, but are outside the NRC's regulatory authority.

**Comments:** (1-1-1) (1-1-4) (1-2-1) (1-4-1) (1-4-6) (1-5-1) (1-9-1) (2-1-1) (2-2-7) (2-2-10) (2-2-15) (2-3-5) (2-9-2) (2-13-10) (2-14-1) (2-14-3) (2-14-14) (2-16-5) (12-5) (13-6)

### **B.1.9 NEPA Process – Long-Term Surveillance of the UNC Mill Site Tailings Impoundment**

The NRC received one comment on the legacy management of the NRC-licensed UNC Mill Site tailings impoundment. The commenter stated that the DOE would fund all of the monitoring and maintenance associated with the long-term continued care of the UNC Mill Site Tailings Disposal Area (TDA); therefore, the DOE needs to know the terms [conditions] of the site (e.g., erosion resistance, vegetation management, and groundwater management).

**Response:** The commenter is referring to the custodial pathway referenced in the licensee's ER that after the implementation of the proposed action, the UNC Mill Site would be transferred to the DOE's Long-Term Surveillance and Maintenance Program under DOE's Office of Legacy Management, pursuant to Uranium Mill Tailings Radiation Control Act (UMTRCA) Title II and NRC regulations in 10 CFR 40.28. Under this DOE program, the UNC Mill Site would be maintained and managed under the DOE to provide for continued containment and protectiveness of the tailings impoundment pursuant to a general license issued and overseen by the NRC. During that time, onsite maintenance and surveillance activities would be performed, such as walk-downs and visual inspections, as well as activities such as mowing the grass, clearing brush, and general site maintenance of the UNC Mill Site.

As part of the NRC's safety review, the staff will consider whether the proposed changes to the NRC-approved reclamation plan may affect transfer to a custodial agency, such as DOE, for

long-term surveillance, or may impact the long-term performance of the tailings impoundment. The results of this review will be found in the NRC's SER. The NRC staff are in close coordination with DOE staff in the development of the EIS.

**Comments:** (1-22-9)

### **B.1.10 NEPA Process – NRC Authority Over External Organizations**

The NRC received a comment that the Navajo Pinedale Chapter requested a meeting with the licensee's contractor. The commenter noted that the NRC staff cannot enforce groups outside of the NRC to conduct meetings with stakeholders, and encouraged others to request meetings with external organizations, such as EPA and Diné Uranium Remediation Advisory Commission (DURAC), to discuss their concerns.

**Response:** The NRC strives to conduct its regulatory responsibilities in an open and transparent manner, consistent with the NRC Approach to Open Government (<https://www.nrc.gov/public-involve/open.html>), which includes receiving input from stakeholders, such as governing bodies and other agencies; however, the commenter correctly stated that NRC does not have authority over external organizations or private corporations to require that these entities conduct meetings with stakeholders. The NRC directly engages with stakeholders regarding its regulatory review process during the environmental review process and descriptions of these interactions will be included in the EIS. The NRC will continue outreach efforts with Indian Tribes and local chapters throughout the course of this review.

**Comments:** (2-11-6)

### **B.1.11 NEPA Process – Requests for NRC to Conduct a Site Visit**

Several commenters encouraged the NRC staff to visit the project area and local communities in person. One commenter thanked the NRC staff for visiting the affected community and site.

**Response:** The NRC staff acknowledge the importance of in-person visits to sites of study and affected communities. During the week of March 18, 2019, staff of the NRC and its contractor, the Center for Nuclear Waste Regulatory Analyses (CNWRA®), conducted a site visit to the Church Rock area in support of the NRC's environmental review. The objective of the site tour was to view the area in context of the proposed action and to observe the natural setting. The site visit included viewing the NRC-licensed tailings impoundment, the Jetty Area, evaporation ponds southwest of the tailings impoundment, the NECR Mine Site (including the main and secondary mine shaft locations and shaft vent holes), Red Water Pond Road, the proposed haul road location, and the location specified in the licensee's application where haul trucks would cross New Mexico Highway 566. NRC and CNWRA staff members walked various areas of the site to make close observations of drainage patterns, rock outcrops, soils, vegetation, and other natural features. A site visit report was completed for this activity and is available in the NRC's ADAMS document management system (ML19326B781). NRC staff also visited the site in June 2019. During the development of the EIS, the NRC staff will conduct further information gathering meetings and consultation with local communities.

**Comments:** (1-4-7) (1-8-2) (1-10-5) (1-17-2) (1-18-10) (1-20-9) (1-21-7) (2-13-1)

### **B.1.12 NEPA Process – Role and Involvement of Various Agencies**

The NRC received several comments regarding the involvement of other Federal, State, and local agencies including the BIA, Department of Health and Human Services, Indian Health Service (IHS), New Mexico Environment Department (NMED), New Mexico Department of Game and Fish (NMDGF), the City of Gallup, and McKinley County, as well as the NRC, EPA, and DOE. Some commenters were uncertain why representatives from a number of agencies were not present at the NRC's public meetings. Some commenters expressed the need for all of the agencies to work together. One commenter stated that NMED and the New Mexico Mining and Minerals Division should be invited to review the application and comment on the EIS. One commenter stated that no representatives from the City of Gallup or McKinley County attended the public meetings, and that there are resolutions prohibiting the transportation of high-level radioactive waste (HLW) through the city and county.

**Response:** The NRC staff notified several agencies, including the NNEPA, EPA, DOE, McKinley County, New Mexico Department of Transportation (NMDOT), NMED, and NMDGF, as well as the Office of the Mayor of Gallup, with details about the public meetings and extended the opportunity to meet directly with the NRC staff during the week of March 18, 2019. Based on responses to NRC's invitations, the NRC held information gathering meetings during the week of March 18, 2019, with EPA, DOE, NNEPA, and McKinley County.

The roles and responsibilities of the NRC, EPA, and DOE will be discussed in NRC's EIS. NNEPA, EPA, and DOE staff members attended the NRC's public meetings in Gallup, New Mexico. In addition, the NNEPA, BIA, EPA, and NMDGF submitted scoping comments that are documented in this report.

The NRC staff has received additional information provided by the EPA, NMDOT, and McKinley County for consideration in the EIS. The NRC will continue outreach efforts with agencies and Indian Tribes throughout the course of this environmental review.

Regarding the transportation of HLW, the proposed action does not include any handling or transportation of HLW, low-level radioactive waste (LLRW), or other NRC-regulated materials.

**Comments:** (1-3-11) (1-4-2) (1-11-3) (1-16-3) (1-16-4) (1-16-6) (1-19-4) (2-2-9) (2-8-7) (2-8-17) (2-13-3) (2-16-1) (2-16-4) (4-17) (6-17) (8-1) (11-8)

### **B.1.13 NEPA Process – Scope of the Application**

A commenter stated that the scope of the environmental and public health issues presented in UNC's license amendment request is too narrow, and the NRC should broaden the scope in the EIS.

**Response:** The NRC staff will carefully review the license application and supporting materials to determine whether the proposed action meets all regulatory requirements. The NRC's environmental review considers UNC's ER and other information in the application, but is an independent review. The proposed action and reasonable alternatives in the NRC's environmental evaluation are derived from, but not the same as, the license application and ER prepared by the licensee. The NRC scoping process identifies issues to be addressed in the EIS including, but not limited to, issues that may be analyzed in depth, issues that may be eliminated from detailed study that are peripheral or are not significant, or issues that have been covered by prior environmental reviews. One purpose of this scoping summary report is to

disclose the topics that are considered within the scope of the NRC's EIS early in the NRC's EIS development process.

**Comments:** (12-10)

#### **B.1.14 NEPA Process – Compliance With Tribal Treaty**

One commenter stated that the 1868 Treaty of Bosque Redondo must be included in the draft EIS and in the final EIS.

**Response:** The NRC recognizes that longstanding land ownership disputes related to the 1868 Treaty of Bosque Redondo exist between the Navajo Nation and the U.S. Government. The NRC is also generally aware of Treaty disputes that exist between Indian Tribes and the U.S. Government. As the regulatory agency with authority over civilian use of radiological materials, the NRC lacks the authority to resolve these issues. Thus, these concerns are outside the scope of the environmental review. The NRC has initiated consultation with Indian Tribes, including the Navajo Nation, through the NHPA Section 106 process. The EIS will evaluate the potential impacts to cultural and historical resources. As described in 36 CFR 800, the NRC staff will continue its efforts to engage in meaningful consultation with interested Indian Tribes to determine whether the proposed Federal undertaking (proposed action) will have an impact to historic properties.

**Comments:** (2-8-9)

#### **B.1.15 NEPA Process – Incorporating Information in the EIS**

One agency recommended that information from the technical documents referenced in previous EPA assessments be summarized and incorporated by reference into the EIS.

**Response:** The NRC recognizes that the EPA has conducted assessments at the Church Rock site previously in its role administering associated CERCLA actions that will have substantial useful information for the NRC's review. In developing the EIS for the Church Rock project, the NRC staff will review and evaluate information and analyses in previous studies conducted by the EPA and the NRC, the applicant's license amendment request and ER, and other applicable documentation. Information from these technical documents will be summarized or incorporated by reference in the EIS when appropriate.

**Comments:** (8-2)

#### **B.1.16 NEPA Process – Requests for Reparations and Cleanup of Historical Contamination**

The NRC received comments requesting that the NRC require UNC to characterize and clean up residual contamination that may be present from the dam break and significant release of mill tailings at the UNC Mill Site in July 1979. One commenter stated that UNC should be required to pay for damages, including funding for health studies and monitoring of the area affected by the 1979 release. One commenter stated that UNC and the Federal Government should pay for cleanup efforts. Another commenter requested personal reparations from health impacts that they attribute to the NECR Mine Site.

**Response:** The EIS will include a description of the affected environment that will describe the general conditions in the areas surrounding the NRC-licensed UNC Mill Site. This description will consider available information sources, such as groundwater reports and summaries of environmental conditions provided by State and Federal health agencies. The NRC staff will consider the applicability of these reports as they may relate to the potential impacts analyzed in the EIS. In describing the characteristics of the affected environment, the EIS will summarize nearby mining activities, as well as known contaminated sites that exist within the study area of the proposed action and consider the potential for cumulative effects from these activities, as applicable. This evaluation will consider, among other things, the 1979 event referenced by commenters. The EIS will be based on available information to characterize the baseline environmental conditions applicable to evaluating the proposed action.

Comments regarding requests for health studies or other analyses that are outside the scope of the proposed action and reasonable alternatives, including reparations or other damages for past events, are beyond the scope of the EIS and will not be addressed further.

**Comments:** (1-12-3) (9-2) (9-4) (13-12) (13-14) (13-17)

## **B.2 Comments Concerning NEPA Process: NHPA Section 106 and Tribal Interactions**

### **B.2.1 NEPA Process: NHPA Section 106 and Tribal Interactions – NRC Should Engage Navajo Chapters and Agencies**

Several commenters expressed the need for the NRC staff to meet with the Navajo Nation Council, the Navajo Nation President's Office, the NNEPA, the Diné Uranium Remediation Advisory Commission, the Navajo Abandoned Mine Lands/ UMTRCA Department, the Eastern Navajo Land Commission, Navajo Chapters, and the Eastern Navajo Agency. One commenter stated that the NRC staff should attend Navajo agency meetings with a professional Diné Bizaad translator to facilitate input from these groups. Some of the comments stated that the NRC should already have met with these agencies and incorporated their input prior to the NRC's scoping meetings.

**Response:** The NRC is committed to an open and transparent process that is inclusive of local and Tribal governments and community members. Prior to the NRC's public meetings, the NRC staff provided notification of the meetings and information about the NRC's action on the NRC's public website, through one AM radio station, and three newspapers. The NRC's goal for conducting the scoping process was to define the scope of issues to be addressed in the EIS. Invitations for Section 106 consultations were mailed to potentially affected Tribes after the NRC's scoping meetings at the end of April 2019. The EIS will include a discussion of government-to-government consultations and an appendix containing correspondence related to the NRC's outreach with Indian Tribes and local chapters. The NRC will continue outreach efforts with Indian Tribes throughout the course of this environmental review.

**Comments:** (1-3-2) (1-3-4) (1-3-6) (1-3-9) (1-3-14) (1-8-4) (1-12-5) (1-13-2) (1-13-10) (1-13-13) (2-2-3) (2-2-4) (2-2-5) (2-8-3) (2-8-18) (2-11-2) (2-16-2) (2-16-6) (5-10) (6-1) (13-3)

### **B.2.2 NEPA Process: NHPA Section 106 and Tribal Interactions – Involvement of Navajo Nation EPA**

Comments were received stating that the NNEPA is prepared to work with the Federal government during the environmental review process.

**Response:** The NRC staff appreciates the availability of the NNEPA and their willingness to support the EIS development process. The NRC staff has and looks forward to continuing to consult with the NNEPA throughout the NRC's review process.

**Comments:** (2-2-17) (2-18-7)

### **B.2.3 NEPA Process: NHPA Section 106 and Tribal Interactions – Previous Tribal Consultations with EPA**

One commenter noted that the EPA has previously engaged in formal consultation with the Navajo Nation, and remarked that the publicly available documents from those consultations may provide helpful information for the development of the EIS.

**Response:** The NRC staff acknowledges the comment and will review previous assessments conducted by the EPA and, if appropriate, will include and incorporate information from these in the EIS analysis, as appropriate. The EPA will also be consulted regarding previous Tribal interactions.

Additional information about the NRC's consultation process with Tribes under Section 106 of the NHPA is provided in a separate comment response in this section of the scoping report [Section B.2, Comments Concerning NEPA Process: NHPA Section 106 and Tribal Interactions].

**Comments:** (8-5)

### **B.2.4 NEPA Process: NHPA Section 106 and Tribal Interactions – Qualifications of the Environmental Review Team**

The NRC received a comment stating that the consultation process with Tribes under Section 106 of the NHPA should be conducted by entities knowledgeable in working with Tribes and in the area of traditional cultural properties (TCPs) and other historic properties.

**Response:** The NRC staff appreciates the importance of a qualified evaluation team for this review. The NRC's environmental review team includes highly-qualified professionals with extensive experience working with Tribes, TCPs, and historic properties. Additional information about the NRC's consultation process with Tribes under Section 106 of the NHPA is provided in a separate comment response in this section of the scoping report [Section B.2, Comments Concerning NEPA Process: NHPA Section 106 and Tribal Interactions].

**Comments:** (6-8)



### **B.2.5 NEPA Process: NHPA Section 106 and Tribal Interactions – U.S. Government Trust Responsibility**

One commenter stated that the U.S. Government, just like the NRC, has a trust responsibility to the Navajo people and that the health and public safety of the Navajo people will be placed in jeopardy from the proposed action.

**Response:** The Federal Government has a trust responsibility to Federally-recognized Tribes, which includes fiduciary obligations to Federally-recognized Indian Tribes, as explained in the NRC's 2017 Tribal Protocol Manual and the Tribal Policy Statement (82 FR 2402), which sets forth principles to be followed by the NRC staff in its government-to-government interactions with American Indian and Alaska Native Tribes. Section 1.D of the Tribal Protocol Manual (NRC, 2018) explains that, for Federal agencies that hold Tribal assets, the trust responsibility establishes fiduciary obligations to the Tribes, including duties to protect Tribal lands and cultural and natural resources for the benefit of Tribes and individual Tribal members/land owners. This manual also clarifies that the NRC, as an independent regulatory agency, exercises its trust responsibility through its authorizing statutes; in this case, the Atomic Energy Act, NEPA, and the NHPA of 1966, as amended. As discussed in SECY-14-0006 (NRC, 2014), "Tribal Consultation Policy Statement and Protocol," dated January 10, 2014, the NRC has demonstrated a commitment to achieve the Executive Order 13175 (65 FR 67249) objectives by implementing a case-by-case approach to interactions with Federally-recognized Tribes. In SECY-14-0006, the NRC staff further explain that this case-by-case approach has established a foundation for government-to-government relationships that respects the right for Tribal self-government and self-determination. The NRC will conduct government-to-government consultation with potentially affected Indian Tribes during development of this EIS. The EIS will provide a summary of all coordination and consultations with Tribes, the State Historic Preservation Officer and Tribal Historic Preservation Officer, and any other appropriate party. The NRC will, in coordination with development of the EIS, fulfill the NRC's obligations under the NHPA.

**Comments:** (1-3-10)

### **B.3 Comments Concerning Public Participation**

#### **B.3.1 NEPA Process: Public Participation – Improve Communications and Local Community Involvement**

The NRC received comments requesting regular, transparent communication, including in-person meetings with the community and Navajo chapters. Commenters urged the NRC staff to keep the local community informed, citing the EPA's monthly meetings with the community, and stating that the NRC's communications so far have been inadequate. A commenter suggested that digital communications may not be effective with all members of this community. One commenter suggested that the NRC staff send project materials in plain language to all Navajo chapters and all non-Navajo communities within a 161-km [100-mi] radius around the site and to those along possible transportation routes.

**Response:** The NRC staff strives to conduct its regulatory activities in an open and transparent manner and to make information as accessible as possible. The NRC directly engages with stakeholders regarding its environmental review process. All stakeholders, including government representatives, Tribal members, and members of the public, are encouraged to attend and participate in the environmental scoping process.

For this scoping process, the NRC issued public meeting notices in the Navajo Times, the Gallup Independent, and the Gallup Sun newspapers. In advance of each of these meetings, advertisements were made once a day on AM station KTTN 660 between March 15 and March 21, 2019. In addition, the NRC's Office of Public Affairs issued a press release on February 14, 2019, and posted notice of the meetings on the NRC's Facebook and Twitter accounts to notify the public of the meetings. The information available on the NRC's website includes records of the license amendment request and materials that the NRC used in its public meetings, including summaries of the project and how to comment on the scope of the EIS.

The NRC acknowledges the comments and recommendations regarding additional communication, plain-language materials, and additional meetings with the local communities and Navajo Nation (including Navajo chapters), and will take this into consideration for future meetings.

**Comments:** (1-8-6) (1-12-6) (1-13-9) (1-20-2) (2-9-10) (2-14-4) (5-9) (6-3) (11-2) (11-11) (13-2)

### **B.3.2 NEPA Process: Public Participation – NRC Responsiveness to Comments and Community Input**

The NRC received several comments requesting that the NRC staff listen to input from the community. Some commenters stated that they did not feel heard by other agencies (e.g., the EPA) or were concerned that the NRC scoping process is for show or that decisions have already been made. Some commenters felt that their input was particularly important or relevant because they are living with the consequences of the legacy issues from the mine and mill site, and because they live in and know the local area. Some of the comments included calls for compassion, respect, and fair consideration.

**Response:** The NRC staff values and actively elicits input from stakeholders in its regulatory activities. The NRC conducts the scoping process to gather information from various stakeholders, including affected Tribes and members of the public, regarding what information should be included in the EIS. All comments are carefully considered, and the NRC staff recognizes the importance of input from the local communities. At this time, no licensing decisions have been made. Based on the NRC staff's evaluation of the license application materials, supporting documentation, independent assessments, and input received during the scoping process, the NRC staff will issue a draft EIS with its preliminary conclusions regarding the potential environmental impacts of the proposed action. Stakeholders (including members of the public) will be afforded an opportunity to comment on the draft EIS prior to publication of a final EIS. The culmination of the safety review, environmental review, and adjudicatory process, if one is established, will be a determination by the NRC on whether to grant the license amendment requested by UNC, and under what conditions. A final licensing decision is currently targeted for January 2022.

**Comments:** (1-3-13) (1-7-2) (1-8-1) (1-8-9) (1-10-6) (1-11-5) (1-19-1) (1-19-9) (2-1-5) (2-5-5) (2-7-6) (2-8-4) (2-8-20) (2-13-9) (2-17-2) (2-17-7) (2-18-5)

### **B.3.3 NEPA Process: Public Participation – Support for NRC Efforts and Public Engagement**

Several comments expressed appreciation or support for the NRC's public participation and outreach efforts related to the scoping process, including holding public meetings.

**Response:** The NRC staff acknowledges the comments supporting the public participation opportunities. The NRC staff strives to conduct effective, open, and transparent public engagement.

**Comments:** (1-6-7) (1-11-1) (1-13-1) (1-16-1) (1-22-1) (2-8-1) (9-3)

#### **B.3.4 NEPA Process: Public Participation – Length of Time Allotted for Comments at Public Meetings**

The NRC received several comments noting that the length of time allotted for comments in the public meetings was too short.

**Response:** The NRC staff holds public scoping meetings to elicit comments from the public. The NRC staff has standardized practices for maintaining a safe atmosphere in which the public can provide comments and the agency can respectfully listen and receive those comments. The NRC staff process is designed to allow all of those who wish to speak an opportunity to do so by allotting approximately equal speaking time to each speaker. Nonetheless, if individuals have additional comments beyond what the allotted time allows, supplementary comments can be submitted in person at the meeting or via electronic or U.S. postal mail. The NRC staff consider all comments equally, whether received during public meetings or through U.S. postal mail or electronic mail. In addition, members of the public will have another opportunity to comment on the NRC staff's environmental review process when the draft EIS is published for public comment.

**Comments:** (2-2-2) (2-8-5) (2-17-1)

#### **B.3.5 NEPA Process: Public Participation – Other Agency and Entity Roles in NRC Public Meetings**

The NRC received several comments about public and agency participation in public meetings. Two individuals commented on the lack of participation by EPA or by UNC in the public meetings. One commenter stated that they had not received responses to their comments and questions in prior public meetings, and that they could not find their presented material (from other public meetings) among the information available online.

**Response:** There are several entities that have roles and responsibilities with respect to this action. The current NRC action under consideration is the UNC application requesting that the NRC grant a license amendment that would allow disposal of NECR mine waste on top of the tailings impoundment at the UNC Mill Site. The scoping meetings held by the NRC directly relate to the NRC's action (a decision regarding the license amendment request). Thus, the purpose of the meeting was for the NRC staff to present information regarding the start of the NRC's safety and environmental reviews and to receive comments on the scope of the forthcoming environmental review. Although EPA and UNC staff may have been present at the meetings, they did not have a formal role in the NRC's meetings on the NRC's scoping process. Regarding the reported lack of responsiveness and information missing from prior public meetings, these were not NRC-conducted meetings and therefore the NRC is unable to respond to these concerns. The concerns should be directed to the agency or entity that held the public meetings.

**Comments:** (1-15-1) (1-16-8) (11-1)

### **B.3.6 NEPA Process: Public Participation – Requests for More Meetings**

The NRC received several requests for additional public meetings, including meetings along possible transportation routes.

**Response:** The NRC is committed to ensuring an open and transparent process that allows for ample public participation. The NRC staff chose the location of the public meetings to be as accessible as possible to communities in the local area. Scoping comments were accepted through a variety of means (e-mail, letter, regulations.gov, and at public meetings) to provide several avenues through which members of the public in any location could provide information to NRC staff. The NRC staff will also provide an additional public comment period and public meetings on the draft EIS when it is published and will announce that public comment period with a *Federal Register* Notice and by other means. The NRC staff believes that these activities have provided sufficient and appropriate opportunity for the public to provide input to the NRC; the NRC received over 400 separate comments through these various comment avenues.

In addition to public scoping meetings and public meetings on the draft EIS, the NRC staff has received requests to hold additional meetings with local Navajo chapters and other affected communities. The NRC staff will offer opportunities to local Navajo chapters and other communities to provide additional information on the proposed action and alternatives.

**Comments:** (2-8-2) (2-11-7) (2-11-8) (13-11)

### **B.3.7 NEPA Process: Public Participation – Requests to Extend the Public Comment Period**

The NRC received a comment stating that the length of time for the scoping comment period was not appropriate, given the volume of background material in the license amendment request.

**Response:** The NRC appreciates the commenter's concerns that the comment period provides the public a meaningful opportunity to develop and provide input both on the scoping process and on the draft EIS, when it is published for public comment. The NRC notified UNC that it had accepted its amendment application for detailed review on January 4, 2019. The NRC published its intent to prepare an EIS and conduct scoping in a *Federal Register* Notice dated February 8, 2019, with a comment period closing on April 19, 2019 (70 days). Given that the NRC's NEPA-implementing guidelines in NUREG-1748 recommend a minimum 45-day scoping comment period, and because a significant amount of the technical information was provided to the public by EPA in advance of the NRC's announcement of its intent to prepare an EIS, the NRC determined that 70 days constituted ample time for comments to be prepared and submitted to the NRC.

In addition, the NRC will provide a public comment period on the draft EIS when it is published, and will announce that public comment period through the *Federal Register* Notice and other means as well.

**Comments:** (12-8)

### **B.3.8 NEPA Process: Public Participation – Translation Requests and Use of Diné Language**

Commenters made several requests for information about the project to be translated into the Navajo language (Diné). Commenters requested interpreters and translators to accommodate non-English speakers, including some Tribal elders, and stated the importance of clearly explaining the proposed action and path forward to the Navajo community in an understandable way. Commenters expressed concerns with efforts to translate written materials because direct translations do not exist for many pertinent words or concepts. One commenter noted that in a previous project, NRC materials were incorrectly translated to Diné. Other commenters asked the NRC to treat the native languages with respect.

**Response:** The NRC staff acknowledges the request for translated materials and will consider how to accommodate this request in future interactions with the Navajo community and in public meetings. Although the NRC does not require applicants to provide license application documents in languages other than English, NRC does implement the NRC's Limited English Proficiency Plan for activities associated with reviews such as the proposed NECR mine waste disposal request. The NRC staff is committed to working with the Navajo Nation through the NHPA Section 106 consultation process and has begun discussions with the NNEPA to determine the best ways to provide technical information to the communities. Regarding the incorrectly translated materials noted by a commenter, the NRC provided translated materials in Diné for public meetings held in Gallup and Albuquerque for a different NRC project, and the NRC staff acknowledges that there were errors in the translations of those materials.

**Comments:** (1-3-1) (1-13-5) (2-7-7) (2-8-8) (2-8-14) (2-8-16) (2-14-5) (6-2) (6-4) (11-4) (11-6) (11-10)

### **B.3.9 NEPA Process: Public Participation – Open House Posters**

One commenter provided observations about the posters that the NRC used as visual aids during the open house portion of the public scoping meetings. The commenter noted a perceived lack of technical specificity on some posters and commented on the impressions that some of the illustrations made.

**Response:** The NRC staff will consider the comments and the feedback on the posters used at the public meetings in the development of future materials. While the staff tries to make these materials as accurate as possible, these posters were intended to be illustrative in nature, and therefore did not include full technical details or specifications. The license application, available on the NRC's website at <https://www.nrc.gov/info-finder/decommissioning/uranium/united-nuclear-corporation-unc-.html>, is a good resource for more detailed information about the proposal.

**Comments:** (1-22-12)

## **B.4 Comments Concerning Assumptions**

### **B.4.1 Assumptions – Analysis Timeframe**

The NRC received comments regarding the timeframe that the EIS should consider. One commenter suggested that a timeframe of 50 to 100 years should be considered rather than the shorter timeframes of past evaluations. Another commenter suggested a timeframe of

1,000 years was needed to evaluate future impacts, noting that such an analysis would require specialized expertise. Another commenter, referring to a 1,000-year timeframe, asked about whether the cap over the mine waste would last that long and suggested a new language might need to be created, presumably to inform future generations.

**Response:** The EIS will evaluate the potential environmental impacts of the NRC action under review to amend the UNC license to allow disposal of NECR mine waste on top of the NRC-licensed tailings impoundment at the UNC Mill Site. The EIS will also evaluate the impacts of related activities from other agency actions, including excavation and transfer of the NECR mine waste, that are being conducted as part of the broader EPA-directed remediation of the NECR Mine Site under CERCLA. Potential environmental impacts associated with these activities could occur during NECR mine waste excavation, waste transfer, construction of the new disposal site, or closure activities for the proposed disposal facility (what NRC staff refer to as short-term impacts), and after the facility is closed during the long-term surveillance period (what the NRC staff refers to as long-term impacts).

The detailed technical review of whether the proposed action that will be described in the NRC's EIS addresses NRC criteria applicable to the existing tailings impoundment, including the long-term performance, is conducted by NRC safety staff under their licensing authority granted by the UMTRCA. The NRC safety review considers how the proposed disposal facility would affect the long-term performance of the NRC-licensed tailings impoundment as a whole at the UNC Mill Site out to a timeframe of 1,000 years after all reclamation activities have been completed. Additionally, the EPA, under their CERCLA authority, has evaluated and approved the design of the proposed disposal facility in accordance with applicable EPA and other requirements, taking into account the long-term performance of the proposed mine waste disposal facility. The EIS will consider, where appropriate, the long-term timeframe associated with post-closure performance-related impacts.

**Comments:** (1-16-2) (1-22-10) (2-4-6) (2-5-4) (2-8-6)

## **B.5 Comments Concerning Alternatives**

### **B.5.1 Alternatives – Comments on Relocating NECR Mine Waste**

The NRC received comments that stated that the local community prefers an alternative of having the NECR mine waste moved further away from the community than the UNC Mill Site and off Navajo land, with some of the commenters stating that they had previously provided this input to the EPA. One commenter stated that they also wanted the mine waste from the Kerr-McGee site moved away from the community at the same time that the NECR mine waste is moved to limit contamination. Another commenter stated that the Navajo residents do not support the proposed action to move the NECR mine waste to the UNC Mill Site.

**Response:** The NRC will evaluate the potential environmental impacts of the license amendment request that was submitted to the NRC for review, which is the construction and transfer of NRC mine waste onto the UNC Mill Site. The UNC Mill Site was placed on EPA's National Priorities List in 1982 after the breach of the tailings impoundment in 1979. Other projects in the region, including the Kerr-McGee site (Quivira Mines), will be considered in the cumulative impacts section of the EIS, as appropriate. In the EIS, the NRC's no-action alternative will evaluate the potential impacts of not constructing or operating the proposed disposal site and transferring NECR mine waste to an offsite facility for comparison with the proposed action. The NRC will also evaluate other reasonable alternatives, if any are identified.

Other alternatives analyzed by the EPA may be evaluated as well, as appropriate. Lastly, the staff notes that the proposal to relocate the mine waste to the UNC Mill Site would move the mine waste off the Navajo Nation land.

**Comments:** (1-19-2) (2-13-4) (2-14-10) (4-29) (5-5) (13-4) (13-5)

### **B.5.2 Alternatives – Concerns About White Mesa Uranium Mill Facility**

The NRC received comments about the possibility of moving a portion of the NECR mine waste with radium (Ra)-226 concentrations above the EPA-determined action level, called principal threat waste (PTW), to the White Mesa uranium mill facility in Blanding, Utah. One commenter stated that the Ute people do not approve of the transport and reprocessing of the PTW because reprocessing the PTW would create more waste, and the Navajo Nation has laws against the transport of radioactive materials across Navajo land, except for cleanup. Another commenter stated that, in addition to creating more waste, the transport and reprocessing of the PTW would further impact the communities around the White Mesa facility with radioactive contamination. One commenter stated that the adequacy of the White Mesa facility is not sufficiently evaluated in the license amendment request, including the environmental risk that would be shared by UNC, EPA, and the NRC if the PTW were stored at the facility. The same commenter went on to say that the EIS should consider the need for a White Mesa Mill license amendment, the risk of long-term liability, and the impact of such a licensing amendment process on the timing of the NECR remediation project.

**Response:** The scope of the EIS includes an evaluation of the environmental impacts of (i) the requested revisions to the tailings reclamation plan, which, if approved, would allow UNC to dispose of mine waste from the NECR Mine Site on top of the NRC-licensed tailings impoundment at the UNC Mill Site; (ii) the no-action alternative, and (iii) any other reasonable alternatives. The license amendment request proposes that the PTW excavated at the NECR Mine Site would be segregated from the lower activity mine waste and would be transported to an offsite, licensed facility and would not be disposed at the UNC Mill Site. EPA previously evaluated several alternatives for the removal of NECR mine waste, including the disposal of PTW at an offsite, licensed disposal facility, such as the White Mesa facility (EPA, 2009). Excavation, separation, and stockpiling of PTW from the lower-activity NECR mine waste destined for disposal at the UNC Mill Site will be evaluated as part of the proposed action in the EIS because these activities address the purpose and need for the proposed action (i.e., they are necessary for executing the NRC action that, if granted, would allow disposal of the NECR mine waste at the UNC Mill Site). The final disposition of PTW is an activity associated with the broader EPA remediation of the NECR Mine Site that does not address the purpose and need for the NRC action under review. Therefore, while the impacts associated with the mine waste excavation, separation, and stockpiling, including PTW, will be evaluated in the EIS, the broader EPA remediation of the NECR Mine Site, including the disposition of PTW, will be addressed as a separate action in the EIS analysis of cumulative impacts if the potential impacts of the proposed remediation overlap and accumulate with the potential environmental impacts of the proposed action.

**Comments:** (1-12-4) (1-22-6) (4-21) (4-22) (13-10)

### **B.5.3 Alternatives – Engineered Alternatives**

Two commenters submitted comments regarding engineered alternatives. One commenter stated that using conveyors to transfer mine material is an excellent alternative for a 5-year

project. Another commenter stated that the EIS must consider total and separate encapsulation of the uranium mill tailings as an alternative, using a primary and secondary lining system with leak detection features that can be replaced when the liner reaches the end of its useful life. The same commenter stated that groundwater must be evaluated, including the cost-effectiveness of potentially impacting drinking-water supplies. The commenter went on to say that this alternative could also encompass the consolidation and encapsulation of the NECR mine tailings with the Kerr-McGee site (Quivira Mines) mine tailings apart from the UNC mill tailings for economies of scale and cost-effectiveness.

**Response:** For the purpose of the NRC environmental review of the proposed action, only alternatives that are considered reasonable or feasible and that would meet the purpose and need for the proposed action will be analyzed in the EIS. While some suggested alternatives are innovative, only those alternatives that are currently available are considered reasonable or feasible. The current NRC action at the site is consideration of the UNC application requesting that the NRC grant a license amendment that would allow disposal of NECR mine waste on top of the tailings impoundment at the UNC Mill Site. Because the use of a conveyor to transfer NECR mine waste to the UNC Mill Site is included as an alternative in UNC's license amendment request, the EIS will likely consider using a conveyor as an option under the proposed action. In the EIS, the NRC will consider UNC's proposal to transfer and dispose of NECR mine waste on top of the existing tailings impoundment as described in the license amendment request and in EPA's 95% Design Report (MWH, 2018). Separate encapsulation of the tailings may not be a reasonable alternative to the proposed action in light of its feasibility and practicability, but will be evaluated, if appropriate.

**Comments:** (1-22-5) (5-6) (5-7)

#### **B.5.4 Alternatives – General Comments About Alternatives**

The NRC received comments regarding the alternatives for the proposed action. One commenter stated that community-supported alternatives should be considered. Another commenter stated that the no-action alternative should be considered if the mine waste cannot be moved to the proposed disposal site or encapsulated at another location. One commenter stated that over 14 alternatives were considered between 2011 and 2016 as part of EPA's CERCLA action and recommends that the prior consideration of alternative disposal options and alternative storage repository locations be summarized in the EIS. The NRC received two comments that the EIS should consider the DOE's Crescent Junction facility in Moab, Utah, as an offsite disposal alternative. Documents were provided by one commenter with references to the alternatives that EPA considered along with the rationale for their elimination from further analysis.

**Response:** The EIS will evaluate the proposed action, the no-action alternative, and other reasonable alternatives that accomplish the purpose of and need for the proposed action. Without approval for the disposal described in UNC's license amendment request, the material would temporarily remain at the NECR Mine Site until the EPA selects a different remedy under the CERCLA action that involves a different final disposal alternative for the NECR mine waste. EPA previously evaluated several alternatives for the removal of NECR mine waste including offsite locations, but did not evaluate the Crescent Junction facility (EPA, 2009). As appropriate, these suggested alternatives will be evaluated in the EIS.

**Comments:** (1-22-2) (1-12-7) (1-22-18) (4-23) (5-8) (8-3)



### **B.5.5 Alternatives – Relocation of Nearby Residents**

The NRC received several comments about relocating nearby residents in the local community as part of the proposed action. One commenter stated that the cost of relocation efforts should be considered in the EIS. Some commenters raised general questions about where the community members would be moved (e.g., Gallup, somewhere on the Navajo reservation, or further away). One commenter stated that moving community members to Gallup or other parts of the Navajo reservation would be an injustice and destroy the community. A few commenters raised concerns that the community's wishes have not been heard. Some commenters expressed their preference to move to Standing Black Tree Mesa. The Red Water Pond Road Community Association stated that permanently moving the entire community to the mesa is a culturally appropriate mitigation measure that the UNC's proposal does not address, and that the EIS must include a discussion of this mitigation measure. One commenter stated that it would cost less to move families to the mesa compared to paying for temporary housing. A document was shared with the NRC staff to review that provides plans to move the Red Water Pond Road Community to the mesa.

**Response:** The scope of the NRC EIS will include an evaluation of the environmental impacts of construction-related activities at the UNC Mill Site, transferring NECR mine waste to and placing the mine waste within the proposed disposal site, proposed disposal site closure activities, and the no-action alternative, and any reasonable alternatives. Actions related to relocation of residents are beyond the NRC's regulatory authority. The NRC staff is aware that the EPA has coordinated the relocation of nearby residents during previous remedial activities at the NECR Mine Site with the assistance of the U.S. Army Corps of Engineers. The EIS will discuss socioeconomic impacts from the proposed action and reasonable alternatives; however, a cost-benefit analysis of the impacts from relocating nearby residents to either Gallup, somewhere on the Navajo reservation, or a location farther away, are outside the scope of the EIS.

**Comments:** (1-20-3) (1-20-4) (1-20-5) (1-20-10) (1-21-10) (2-3-6) (2-8-11) (2-9-9) (2-13-6) (2-16-3) (11-13) (12-1)

### **B.5.6 Alternatives – Subsurface Disposal of NECR Mine Waste**

One commenter stated that the EIS should consider the alternative of returning NECR mine waste underground, back into the mine shafts, vent holes, or other voids. The commenter stated that this alternative would reduce the amount of material that would be moved from the NECR Mine Site, and that this alternative could affect recovering water levels and water quality.

**Response:** The scope of the NRC EIS will include an evaluation of the environmental impacts of the proposed action, the no-action alternative, and reasonable alternatives. Based upon available information, it is not clear at this phase of the NRC's environmental evaluation that interment of the waste is a reasonable alternative, but this alternative will be evaluated as appropriate.

**Comments:** (4-24)

## **B.6 Comments Concerning Accidents**

### **B.6.1 Accidents – Concerns About Another Tailings Impoundment Breach**

Commenters expressed concerns about the potential for a breach of the tailings impoundment at the UNC Mill Site and referred to the tailings dam failure of 1979. One commenter noted that if a breach were to occur, the same population along the Rio Puerco that was affected by the 1979 dam failure would be affected again. Another commenter expressed concerns about how major storm events could affect containment of the material.

**Response:** The prior breach of the tailings impoundment in 1979 occurred during mill facility operations when the impoundment was filled with a mixture of tailings solutions and tailings solids. The NRC conducted a detailed root cause analysis and subsequently made improvements to regulations and guidance to avoid recurrence of similar incidents. In addition, New Mexico (then the UNC Mill Site regulator) required UNC to apply corrective actions to its onsite storage of tailings prior to continuing operations. In 1986, New Mexico relinquished its regulatory authority over uranium milling. The subsequent surface reclamation of the UNC Mill Site including the design, construction, and closure of the tailings impoundment was conducted under NRC oversight and in accordance with an NRC-reviewed and approved reclamation plan developed in accordance with criteria provided in 10 CFR Part 40, Appendix A. The proposed design and disposal of the NECR mine waste on top of the tailings impoundment will be addressed in the NRC safety review that will occur concurrent with the NRC environmental review. This safety review will consider the same criteria provided in 10 CFR Part 40, Appendix A, as applicable. This includes consideration of the broad objective to permanently isolate tailings and associated contaminants by minimizing disturbance and dispersion by natural forces. The criteria in 10 CFR Part 40, Appendix A address factors that affect impoundment performance such as water infiltration and geotechnical stability. Additionally, the EPA, under their CERCLA authority, has reviewed the design of the proposed disposal facility to ensure that it complies with EPA regulatory and technical criteria. EPA also plans to conduct periodic post-remediation inspections of the completed facility over a long-term surveillance period. The NRC EIS for the proposed license amendment request will incorporate by reference (where necessary) the detailed analyses and conclusions of both the NRC safety review and the EPA CERCLA reviews that address long-term performance of the proposed action but will not duplicate those detailed reviews.

**Comments:** (1-6-5) (1-18-4) (1-21-4)

## **B.7 Comments Concerning Land Use**

### **B.7.1 Land Use – General Comment**

A commenter stated that there is a potential for land use conflicts in the area.

**Response:** The EIS will describe land use in the area and assess the potential impacts to land usage resulting from the proposed action. As appropriate, this may include a discussion of potential land use conflicts.

**Comments:** (6-15)

## **B.8 Comments Concerning Cost Considerations**

### **B.8.1 Cost Benefit – General Comment**

Some commenters stated concerns related to financial assurance, specifically (i) whether the EIS should disclose the amount of the financial assurance and (ii) that the EIS should evaluate the impacts that could occur if a third party contractor is forced to rely on the financial assurance to complete the proposed waste consolidation project. One commenter stated that cost is a higher priority than human lives.

**Response:** Financial assurance for the proposed action will be addressed in the NRC's safety review, which is conducted in parallel with the environmental review. The results of the safety review are documented in an SER. The safety review includes an evaluation of the licensee's financial qualifications and considers whether the licensee has provided reasonable assurance of obtaining the necessary funds to complete the proposed action in compliance with NRC's financial qualifications regulations. Although the EIS will contain a general discussion of the costs and benefits of the proposed action, specific evaluation of financial assurance is outside the scope of this EIS. The sufficiency of the financial assurance at the UNC Mill Site is evaluated annually and the application and results of the NRC's review are publicly available. The most recently approved surety amount (the NRC's approval is available at ADAMS Accession No. ML16355A482) was \$3,273,503 dollars, which includes a 15 percent contingency for a third party to perform the remediation.

**Comments:** (1-19-3) (12-7)

## **B.9 Comments Concerning Cumulative Impacts**

### **B.9.1 Cumulative Impacts – Cumulative Impacts From Nearby Mine and Mill Sites**

The NRC received comments concerning radiological exposure from nearby legacy mine and mill sites and cleanup of the Quivira Mines (also called the Kerr-McGee site). Commenters requested that the health impacts of ongoing radiation doses from legacy mine and mill sites in the area as well as the cleanup at Quivira Mines be considered as part of the cumulative analysis of the proposed action.

**Response:** The cumulative impacts section of the EIS, as required under NEPA, will include a description of past, present, and reasonably foreseeable future actions that may influence or be influenced by the proposed action. The Quivira Mines (Kerr-McGee site) and other nearby uranium mine and mill sites will, as appropriate, be included among the past actions in the NRC's resource area impact evaluations. The EIS will assess the cumulative impacts of the proposed action, which are the incremental impacts of the proposed action considered in conjunction with impacts from these past, present, and reasonably foreseeable future actions.

**Comments:** (1-22-3) (5-13) (8-4)

## **B.10 Comments Concerning Environmental Monitoring**

### **B.10.1 Environmental Monitoring – General Site Monitoring**

Two commenters stated that continued data collection and monitoring at the site are necessary, and another commenter questioned responsibility for future monitoring of the site.

**Response:** The EIS will discuss radiological, physiochemical, and ecological monitoring measures related to the NRC-licensed tailings impoundment and groundwater remediation activities. As appropriate, monitoring measures required by EPA in its role overseeing Superfund cleanup actions may also be discussed in the EIS. As part of its ongoing oversight of the UNC Mill Site, NRC requires ongoing groundwater monitoring as specified in the UNC license.

**Comments:** (1-20-7) (5-2) (13-9)

## **B.11 Comments Concerning Ecology**

### **B.11.1 Ecology – Comments Regarding Reclamation**

One commenter stated that no new native vegetation has been restored within the NECR Mine Site as a result of revegetation efforts following other reclamation actions. The NMDGF provided comments suggesting mitigation measures that would limit impacts to vegetation from the proposed action, and that these measures include: (i) using only native plant seed species, including those seeds that may be used to substitute for primary plant species that are unavailable at the time of reclamation; (ii) using certified, weed-free seed mix and mulch verified as weed-free through seed test results; and (iii) using seeds that are sourced from the same region and habitat type as the reclamation site.

**Response:** As part of the EIS, the NRC staff will review the EPA-approved revegetation plans that UNC commits to follow during the reclamation process. The NRC staff will continue consultation with NMDGF as part of the EIS development and will review the NMDGF recommendations on mitigation measures that could limit ecological impacts from the proposed action. These recommendations will be discussed as appropriate in the EIS, as well as the potential environmental impacts if these mitigation measures are not pursued.

**Comments:** (2-9-4) (3-2)

### **B.11.2 Ecology – Endangered Species Concerns**

One commenter requested that UNC conduct an endangered species survey and work with the local people to determine whether threatened or endangered species could be present within the proposed project area. Another commenter stated that the EIS should address species with special status for the Navajo Nation.

**Response:** The EIS will include an assessment of potential impacts from the proposed action and alternatives to threatened and endangered plant and animal species designated by the U.S. Fish and Wildlife Service (FWS), Navajo Nation Department of Fish and Wildlife (NNDFW), and NMDGF.

To determine the species that may potentially occur within the proposed project area or that could be impacted by the proposed action, the NRC safety and environmental staffs visited the site and will review the licensee's application and ER; conduct an independent literature review; and consult with the FWS, NMDGF, and the NNEPA. The EIS will reference and incorporate, as appropriate, recommendations made by other agencies, including the Navajo Nation, and document additional potential mitigation measures that could reduce potential impacts to ecological resources from the proposed action and alternatives.

**Comments:** (2-11-11) (6-6)

### **B.11.3 Ecology – Impacts on Ecological Resources**

One commenter stated that the impacts from the proposed action to vegetation in the area used for consumption, medicinal and ceremonial use, livestock grazing, and traditional cultural activities (e.g., dyes) should be analyzed in the EIS. In their scoping comments, the NMDGF provided recommended mitigation measures that, if implemented, would limit impact to migratory birds, including (i) avoiding ground disturbance and vegetation removal from March 1 through September 1 (annually), (ii) surveying for and avoiding active nest sites if ground-disturbing and clearing activities during the breeding season cannot be avoided, (iii) establishing adequate buffer zones around bird nests to minimize disturbance, and (iv) using qualified biologists or wildlife rehabilitators to relocate active nest sites in trees or shrubs.

**Response:** The EIS will describe the affected ecological environment at the proposed project area, based on information provided by the applicant and obtained through independent information gathering, research, and analysis. This description will include, as appropriate, discussions about the cultural values of natural resources to the Navajo people and local community. The EIS will also include a discussion of potential impacts to wildlife that could occur from the proposed action and alternatives, including the cumulative impacts from past, present, and reasonably foreseeable future actions that have affected or could affect the local ecology, including changes to native vegetation. The description of impacts will also include discussions of potential mitigation measures to reduce the impacts from the proposed action. The NRC staff welcomes NMDGF and other agency recommendations on mitigation measures that could limit ecological impacts from the proposed action and alternatives. The NRC staff will consult with FWS, NMDGF, and NNDFW as part of the EIS development.

**Comments:** (3-1) (6-12)

### **B.11.4 Ecology – Evaporation Ponds**

The NRC received a comment from NMDGF stating concern that the water quality within the two evaporation ponds on the UNC Mill Site that are under both NRC and EPA jurisdiction may pose a threat to wildlife because they are not monitored for harmful analytes and are not fenced. NMDGF further recommends that UNC conduct a risk analysis to determine the potential level of hazard to wildlife and to conduct mitigation measures if the water quality is found to be a significant threat. NMDGF also questioned why the ponds have not been reclaimed if they are no longer in use as evaporation ponds for groundwater remediation.

**Response:** The EIS will describe natural surface water resources in the area as well as the potential use of the evaporation ponds as part of the proposed action. The potential for impacts to wildlife from exposure to the water in the evaporation ponds will be addressed in the EIS. UNC plans to close the ponds based on the NRC-approved reclamation plan for the tailings

impoundment. The NRC staff will consult with NMDGF as part of the EIS development and will review the NMDGF recommendations on mitigation measures that could limit ecological impacts from the proposed action.

**Comments:** (3-3)

## **B.12 Comments Concerning Environmental Justice**

### **B.12.1 Environmental Justice – Concerns About Environmental Justice and Discrimination**

One commenter stated that they hope they are not being discriminated against and asked that they not be discriminated against. Another commenter stated that every person, regardless of ethnicity, is entitled to live in a safe environment. One commenter asked that the NRC address the environmental injustice that the local community has experienced for decades. Another commenter stated that environmental justice and socioeconomic issues should be analyzed in the EIS, and that there should be mitigation measures for these issues, including medical and health services.

**Response:** The NRC strives to conduct its regulatory responsibilities, including the scoping process, in an open and transparent manner, consistent with the NRC Approach to Open Government (<https://www.nrc.gov/public-involve/open.html>). The NRC is committed to engaging with all stakeholders fairly and ethically, without discrimination. The NRC has several Allegation Coordinators at its headquarters and at each regional office assigned to coordinate the evaluation of allegations that may cover many different concerns, including discrimination. All stakeholders, including government representatives, Tribal members, and members of the public, are encouraged to participate in the NRC's licensing actions.

The focus of the environmental justice review in the EIS will be consistent with Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," and the Commission's Policy Statement on the Treatment of Environmental Justice Matters in U.S. Nuclear Regulatory Commission Regulatory and Licensing Actions (69 FR 52040). The environmental justice review will identify and weigh any disproportionately significant and adverse environmental impacts on minority and low-income populations that may be different from the impacts on the general population. The environmental justice section in the EIS will include a description of the NRC's methodology for evaluating environmental justice issues and a description of communities within the proposed project study area. The EIS will also state the NRC's determination of whether the proposed action would result in disproportionately high and adverse human health and environmental effects upon low-income or minority populations. Cumulative environmental justice effects will also be addressed in the EIS (that is, effects of the proposed action on environmental justice communities when added to the potentially overlapping effects from other activities). The EIS and the NRC's safety evaluation will include analyses of public and occupational health and safety to determine potential radiological and nonradiological impacts on workers and the public from construction and operation of the proposed disposal site and to ensure compliance with NRC regulations. Mitigation measures that could reduce these impacts as they apply to this proposed action and alternatives will be discussed with UNC and described in the EIS, as appropriate.

**Comments:** (1-17-3) (1-20-1) (2-6-1) (2-13-7) (6-5)

## **B.13 Comments Concerning Geology and Soils Resources**

### **B.13.1 Geology and Soils Resources – Burial of Contaminated Soil and Non-soil Materials During Past Reclamation Activities**

The NRC received comments about the burial of mine waste (contaminated soil) and non-soil materials during reclamation of the NECR mine and UNC mill facility. The commenters noted that during reclamation, mine waste from the NECR Mine Site that was not able to be decontaminated was buried in the tailings impoundment at the UNC Mill Site. The commenters stated that non-soil radioactive materials (e.g., debris from dismantling facilities and infrastructure) from reclamation and decommissioning of the NECR mine and UNC mill facility are buried at various locations in both areas. One of these commenters was concerned that plans to remove topsoil during activities associated with the proposed action would expose these non-soil radioactive materials. Another commenter expressed concern that the existing buried mine waste was not compacted and there could be voids below the surface in the tailings impoundment.

**Response:** The commenters are correct that some radionuclide-contaminated soil and sand from the NECR Mine Site were disposed at the UNC Mill Site in conjunction with UNC mill decommissioning and reclamation activities. Some non-soil radioactive materials from reclamation and decommissioning of the NECR mine and UNC mill facility are also disposed or stored at several locations in both areas. The locations of the non-soil materials are documented in the Mill Decommissioning Report (UNC, 1993), the Tailings Reclamation Plan (Canonie Environmental, 1991), and the 2013 EPA ROD (EPA, 2013). Materials in the UNC Mill Site tailings impoundment were disposed in accordance with NRC regulations. Materials being stored at the NECR Mine Site are the subject of the ongoing EPA CERCLA actions to remove threats to public health and remediate the site. The proposed action includes the excavation of materials in the mine waste (as well as the mine waste itself) to protect human health and the environment from actual or threatened releases of residual mining materials from the NECR Mine Site, as documented in the 2013 EPA ROD (EPA, 2013). The EPA considered activities necessary to remove and dispose of the NECR mine waste, including the disposal of the mine waste on top of the mill tailings at the UNC Mill Site. The EIS will describe past reclamation and decommissioning activities (including disposal of contaminated soil and non-soil materials) at the location of the proposed disposal site (UNC Mill Site) and will assess the potential impacts of these activities on the proposed disposal site. In addition, the EIS will include a discussion of mitigation measures and, where appropriate, UNC commitments to address potential adverse impacts.

**Comments:** (1-19-5) (2-14-9) (10-1)

### **B.13.2 Geology and Soils Resources – General Comments**

The NRC received comments about the complexity of the geological and soil conditions. Commenters stated that geological and soil conditions at the mine site have been damaged as a result of past mining, drilling, blasting, and bulldozing. Another commenter noted that because of stratigraphic conditions (e.g., the presence of a shale bed), the mill site is a bad place to build a tailings pond. Another commenter was concerned about mine waste having contaminated geologic strata along abandoned underground mines and shafts. This commenter also noted that former underground waterways add to the complexity of the underground environment.

**Response:** The EIS will assess the potential impacts to geology and soils at the proposed disposal site (the UNC Mill Site) as well as impacts associated with excavation, transfer, and disposal of the adjacent mine waste. The EIS will address the potential impacts of site stratigraphy, local geologic structure, characteristics of the soils, past mining activities, and any other significant geological and soil conditions on the proposed disposal site. As appropriate, the environmental analysis will include a discussion of mitigation measures and, where appropriate, UNC commitments, to address potential adverse impacts.

**Comments:** (1-14-3) (1-19-7) (2-6-2)

### **B.13.3 Geology and Soils Resources – Seismicity**

The NRC received comments about seismicity at the proposed disposal site. One commenter noted that a mild earthquake is possible and wanted to know what the impacts might be. Another commenter expressed disbelief that there would be no ground motion at the site.

**Response:** The EIS will address the potential environmental impacts of ground shaking at the location of the proposed disposal site from seismic activity (earthquakes), considering local and regional seismic sources. The potential for earthquakes or any other major ground motion considerations resulting from natural geologic phenomena (e.g., faulting and volcanism) will be addressed in the NRC SER, and information from the safety review will be incorporated in the EIS as appropriate.

**Comments:** (1-18-5) (2-14-8)

### **B.13.4 Geology and Soils Resources – Stability of Pipeline Arroyo**

The NRC received comments about the long-term stability and durability of the Pipeline Arroyo. The commenter was concerned about adequate compaction of soil and fill materials in the arroyo to prevent erosion. The commenter provided detailed suggestions for managing the Pipeline Arroyo soils, including replacing soil with crushed stone or crushed concrete to prevent erosion. The commenter stated that the EIS should reevaluate the adequacy of the stream bottom and stream side installation and that the EIS should evaluate alternative techniques to strength the diversion of Pipeline Arroyo and determine if the arroyo can be prevented from degrading the tailings repository in the future.

**Response:** The EIS will address the potential impacts to the proposed disposal site from degradation (e.g., erosion) of the Pipeline Arroyo. The stability of Pipeline Arroyo and its potential to adversely impact the tailings impoundment and the associated proposed disposal site is principally an element of the NRC's safety review, but will be evaluated in appropriate detail in the EIS. The potential of storm events to degrade the arroyo will be addressed in the NRC SER, and information will be incorporated in the EIS as appropriate.

**Comments:** (4-14) (4-15)

## **B.14 Comments Concerning Nonradiological Health**

### **B.14.1 Nonradiological Health – Heavy Metals**

The NRC received a comment about the presence of heavy metals in the ore from the mine and the resulting waste. The commenter suggested the concentration of heavy metals is higher in



the waste than in the ore because the extraction method was focused on uranium content. One commenter was concerned about the generation of very fine particulates, including those less than 10 microns (micrometers) in diameter that could contain uranium and metals and therefore could be a health hazard. The commenter cited studies from other abandoned mine sites and the NECR Mine Site, and they suggested that the EIS should address these concerns.

**Response:** The EIS will evaluate the potential impacts to public and occupational health, taking into account the radiological and nonradiological hazards associated with the mine waste that will be excavated from the NECR Mine Site and transferred to the UNC Mill Site for disposal. This includes consideration of the heavy metal content of NECR mine waste and the potential impacts from fugitive dust containing fine particulates, including particulates that are 10 micrometers in diameter or smaller (PM<sub>10</sub>) and particles that are 2.5 microns (micrometers) in diameter or smaller (PM<sub>2.5</sub>.) For the EIS analysis, the NRC staff will also review the documents cited by the commenter concerning heavy metals in fine dust particles associated with uranium mines as applicable to the review of the proposed action and alternatives.

Uranium milling (further processing) of the extracted ore from the NECR Mine Site occurred at the UNC Mill Site and the wastes that resulted from the milling are the tailings that are currently disposed in the tailings impoundment at the UNC Mill Site. The NECR mine waste that UNC is currently proposing to dispose on top of the tailings impoundment is waste that resulted from conventional mining of uranium ore, but not from the concentration of uranium or other material in that ore.

**Comments:** (1-22-11) (4-30)

## **B.15        Comments Concerning Radiological Health**

### **B.15.1      Radiological Health – Concerns About Airborne Mine Waste Particulates**

The NRC received comments about the potential hazards of dust containing radiological and nonradiological contaminants that could be generated during the proposed action and questions as to how safety would be maintained. Another commenter suggested that the EIS consider an 80-km [50-mi] radius for potential impacts from dust. Another stressed the need for ensuring containment of mine waste during transfer.

**Response:** The EIS will consider UNC's proposed activities and their plans and procedures for conducting the proposed activities in a manner that limits the generation of mine waste dust. The EIS will also describe the proposed measures, including monitoring, to protect workers and the public from the potential radiological and nonradiological hazards associated with dust exposure. In addition, the NRC safety staff will review UNC's radiation protection plan, which is intended to limit the potential radiological hazards, including those from inhalation of dust containing radioactive material, to levels that are as low as reasonably achievable and meet NRC standards for protection of workers and the public in 10 CFR Part 20.

**Comments:** (1-3-5) (1-3-15) (4-30) (13-8)

### **B.15.2      Radiological Health – Exposure Pathways**

The NRC received comments stating that the EIS and safety review evaluation of risk to human health should address unique site-specific exposure pathways based on the traditional use of

natural resources and subsistence lifestyles. Examples provided included traditional medicines and inhalation (i.e., smoking tobacco usually derived from local traditional gathering locations), dermal absorption (i.e., application of charred medicinal plants over the entire body and washing hair), and ingestion. The commenter noted that due to limited public water supplies, water in uncovered stock tanks is sometimes used by households, thereby increasing exposure. The commenter also suggested that impacts to livestock grazing and use of livestock as a food staple by Tribal members should be evaluated.

**Response:** The EIS will evaluate the potential impacts to the workers and the public from the proposed activities and the potential exposure to NECR mine waste through all applicable exposure pathways. As practicable, the NRC staff will gather information from the local community, including consultation with the Navajo Nation, to understand the traditional uses of natural resources and other subsistence practices that could give rise to unique potential exposure pathways.

**Comments:** (6-13) (6-14) (6-16)

### **B.15.3 Radiological Health – NECR Mine Site Cleanup Criteria**

The NRC received a comment that the license amendment application was not clear about where the 200 picocuries (pCi) per gram (g) [230 milligrams per kilogram (mg/kg)] uranium cleanup level would be applied and what it will be applied to. The commenter noted that if the cleanup level were applied on the mine site and in adjacent offsite areas, that concentration would represent a substantial increase over local uranium-in-soil background levels. They noted that the uranium cleanup level was 85 times higher than the crustal average and that it was an unsafe level for residential areas near the site. They requested that the EIS assess the impacts of this high uranium cleanup goal or explain whether residual uranium-soil concentrations will be reduced indirectly through compliance with the Ra-226 cleanup standard of 2.24 pCi/g.

**Response:** The NECR Mine Site cleanup levels referenced by the commenter were established by EPA under the CERCLA removal action at the NECR Mine Site, as documented in the 2011 EPA memo (EPA, 2011) and also described in the 2013 ROD (EPA, 2013) for the UNC Mill Site remedial action. The 2011 EPA memo set the NECR Site cleanup level for Ra-226 as 2.24 pCi/g and the NECR cleanup level for uranium as 230 mg/kg. Therefore, the EPA cleanup level for the NECR Mine Site is far lower than that stated by the commenter. These EPA documents also provide that NECR mine waste that exceeds a concentration of 200 pCi/g Ra-226 would not be disposed at the UNC Mill Site. While the NRC action under review is whether to grant the license amendment that would allow UNC to dispose of the NECR mine waste at the UNC Mill Site, the EIS will also evaluate the impacts of related activities that support the purpose and need for the proposed NRC action (i.e., necessary for executing the NRC action under review), including waste excavation at the NECR Mine Site and the transfer of material from the NECR Mine Site to the UNC Mill Site. Because other activities associated with the remediation of the NECR Mine Site do not support the purpose and need for the proposed NRC action and would occur regardless of whether the NRC grants the amendment request, the EIS will consider the broader remediation (i.e., cleanup) of the NECR Mine Site conducted by EPA under CERCLA as a separate action that will be evaluated in the cumulative impact analysis if the potential impacts would add to the potential environmental impacts of the proposed action.

**Comments:** (4-20)

#### **B.15.4 Radiological Health – Local and Regional Health Characteristics and Hazards**

The NRC received several comments that provided information and expressed concerns about the past, present, and future health characteristics of the local area and region surrounding the proposed project area. Commenters described their understanding and provided information about health characteristics of the region, including specific ailments such as cancer, stress disorder, respiratory disease, fertility problems, birth defects, genetic effects, and kidney disease among residents, some of whom were mine workers. Some commenters suggested that the rates of cancer and these other ailments were elevated along the Rio Puerco, and some commenters mentioned a lack of related studies and information. Some suggested that the EIS should involve conducting additional health studies. Commenters also described a variety of experiences among residents and workers as related to environmental conditions at and near the NECR Mine Site and Mill Site that could have contributed to exposures to mined materials, including uranium and its decay products. This included descriptions of historical exposures of adults, children, and livestock to mining materials including dust, radon gas, and mine drainage water, and subsequent illnesses that were encountered. The commenters described how people who live near the mine site are susceptible to exposures in their daily routines, such as tending to livestock and walking to and from work or school. Commenters referred to environmental contamination, including uranium, radon, lead, arsenic, and other heavy metals. Commenters expressed frustration that little has been done historically to correct or lessen these health problems. Some commenters provided suggestions for data sources for the NRC to consider in developing the EIS, including a technical poster developed by the residents of the Red Water Pond Road community. One commenter indicated that a 2007 study involving sampling and analyzing the blood of 22 residents showed high uranium concentrations in blood. Another commenter stated that 10 percent of the student population in the local community qualifies for special education. A commenter likened placing the mine waste on the mill site to sweeping “all the trash under your bed,” while another recommended that the EIS address the benefits of shipping the NECR mine waste out of the region for disposal. This commenter also recommended that the EIS address the impacts of cumulative long-term historical exposures to mining and milling materials.

**Response:** The EIS will include a description of the affected environment that will describe the general health conditions in the areas surrounding the proposed project area. This description will consider available information sources, such as public health summaries and related statistics provided by State and Federal health agencies. This will include the poster developed by the local community and may also include published local or regional health studies, if applicable to the geographic study area of the proposed action. The NRC staff will consider the applicability of the commenter’s suggested studies to the health analysis in the EIS. The EIS will be based on available information about baseline health conditions applicable to evaluating the proposed action; no new public health research or public health assessment studies will be conducted for the EIS, however. In describing the characteristics of the affected environment, the EIS will summarize historical activities that have contributed to existing contamination, describe the areas where contamination is present, describe resource extraction activities and known contaminated sites that exist within the area of the proposed action, and consider the potential for cumulative effects from these activities, as applicable.

Regarding the commenter’s suggestion to evaluate shipping the NECR mine waste out of the region, the EIS will compare the impacts of the proposed action with the impacts of the no-action alternative and reasonable alternatives, if identified. The no-action alternative would occur if the NRC denies the request for an amendment to place the mine waste in the UNC

Mill Site. Were the NRC to deny the request, the EPA and UNC would need to identify an alternate disposal location for the mine waste.

**Comments:** (1-4-4) (1-6-6) (1-8-7) (1-11-2) (1-11-4) (1-12-1) (1-13-6) (1-16-5) (1-16-7) (1-16-9) (1-17-1) (1-18-2) (1-18-7) (1-18-11) (1-21-2) (1-21-9) (1-22-4) (2-3-2) (2-4-1) (2-9-1) (2-9-5) (2-9-7) (2-9-8) (2-12-5) (2-13-11) (2-17-6) (2-18-1) (2-18-3) (4-1) (4-27) (4-28) (5-11) (9-1) (13-13)

## **B.16 Comments Concerning Historic and Cultural Resources**

### **B.16.1 Historic and Cultural Resources – Comments Regarding Cultural Values**

The NRC received several comments from members of the community that expressed important cultural values of the Navajo people. Some commenters expressed interest in restoring the land and the reestablishing the cultural values tied to the land that have been lost as a result of mining activities. Some commenters referred to the native plants, animals, and water resources that are no longer present because of the disturbance to the land. One commenter stated that sacred sites have been uncovered.

**Response:** The EIS will characterize the existing conditions within the proposed project area, as well as past impacts that occurred from mining activities as part of the cumulative impacts (e.g., the removal of culturally important plants and grazing areas), and will discuss relevant, reasonable mitigation measures that could reduce or avoid impacts from the proposed action and alternatives. The EIS will include information from the Navajo perspective that the NRC staff will collect through consultations with the Navajo Nation and meetings with the Navajo chapters during the environmental review process in evaluating cultural resources, as well.

**Comments:** (1-2-3) (1-4-5) (1-6-1) (1-7-1) (1-11-6) (1-11-8) (1-22-8) (2-1-2) (2-9-3) (2-9-6) (2-13-2) (2-15-1) (2-17-4) (11-7)

### **B.16.2 Historic and Cultural Resources – Cultural Mitigation Measures**

The NRC received comments requesting that cultural ceremonies be conducted by medicine men before proposed activities begin.

**Response:** Although the NRC does not have the authority to enforce certain mitigation measures, the NRC staff will consider the recommendation to hold ceremonies by medicine men prior to land disturbance as a potential mitigation measure for cultural and historical resources in the EIS.

**Comments:** (1-14-4) (1-20-11) (2-8-13)

## **B.17 Comments Concerning Water Resources**

### **B.17.1 Water Resources – Groundwater Contamination**

The NRC received several comments regarding groundwater contamination from past actions and the potential of contamination from the proposed action. One commenter noted the lack of clean drinking water in the local community. Some commenters suggested that the proposed action should focus on cleaning up and containing currently contaminated groundwater;

specifically, the leaching of heavy metals and radioactive contaminants into the soil and groundwater. One commenter was concerned about the effect of placing mine spoils on top of the tailings impoundment and the impact on the migration of groundwater plumes.

**Response:** The EIS will describe current groundwater resources and conditions at the UNC Mill Site, NECR Mine Site, and the surrounding area. The EIS will evaluate the potential impacts on groundwater resulting from the proposed action, including assessing the potential for further groundwater contamination and identifying mitigation measures, as appropriate. The NRC safety review will evaluate whether the placement of NECR mine waste on top of the existing tailings impoundment satisfies NRC criteria in 10 CFR Part 40, Appendix A to provide assurance that isolation and containment of tailings and waste materials is adequate to maintain safety and protect the environment including soil and water resources. Ongoing activities to clean up groundwater contaminated from previous actions at or near the UNC Mill Site will be considered in the EIS's cumulative impacts analysis, which looks at the potential impacts of the proposed action in addition to past, present, and reasonably foreseeable future actions. Additional scoping comments concerning soil quality and contamination and NRC responses are located in Section B.13 [Comments Concerning Geology and Soils Resources].

**Comments:** (1-6-4) (1-20-8) (2-4-3) (5-1) (5-3)

#### **B.17.2 Water Resources – Infiltration of Covers and CNWRA Report**

The NRC received comments on a report published in 2015 authored by the CNWRA. The comments included statements about conclusions in the report regarding the net infiltration and the integrity of the existing tailings impoundment as well as discrepancies and gaps in the analysis. They also noted that the report had not been updated since 2015.

**Response:** The referenced CNWRA report, Modeling of Net Infiltration through Soil Covers at Selected Title II Uranium Mill Tailings Sites (Walter, G. and C. Dinwiddie, 2015), is the result of an NRC-sponsored study evaluating various computer models and their effectiveness in modeling infiltration through soil covers, and is not an evaluation of the performance of any existing tailings impoundments. The NRC safety review of the proposed license amendment request will evaluate whether the placement of NECR mine waste on top of the existing tailings impoundment satisfies NRC criteria in 10 CFR Part 40, Appendix A to provide assurance that the tailings impoundment, including the proposed disposal site and associated covers, perform as designed and provide adequate isolation and containment. Information from the NRC safety review will be incorporated in the EIS, as appropriate.

**Comments:** (1-22-7) (4-5)

#### **B.17.3 Water Resources – Downstream Contaminant Migration**

The NRC received comments expressing concern about the downstream migration of contaminants from the project area through the Pipeline Arroyo, particularly during intense rain and flash flooding events. Commenters also raised specific concerns about contaminant transport due to the presence of a floodplain, erosion, and the flow of floodwater through the Pipeline Arroyo.

**Response:** The EIS will include a description and characterization of the surface and groundwater resources at the proposed project area and will assess the potential environmental impacts of the proposed action and alternatives on water resources. The water resource

assessment will address the potential for contaminant migration and the potential for degradation of local and regional surface water and groundwater resources, including degradation, which could occur during intense rain events and flash floods. As appropriate, the EIS will identify reasonable mitigation measures to address potential adverse impacts to the environment.

Furthermore, the proposed design and disposal of the NECR mine waste on top of the NRC-licensed tailings impoundment will be addressed in the NRC safety review that will occur concurrently with the NRC environmental review. This safety review will consider the criteria provided in 10 CFR Part 40, Appendix A, as applicable. This includes consideration of the broad objective to permanently isolate tailings and associated contaminants by minimizing disturbance and dispersion by natural forces. The NRC criteria address factors that affect impoundment performance such as water infiltration and geotechnical stability. Additionally, the EPA, under their CERCLA authority, has reviewed the design of the proposed disposal facility to ensure that it complies with EPA regulatory and technical criteria. EPA also plans to conduct periodic post-remediation inspections of the completed facility over a long-term surveillance period. For additional information on flooding and the effects of heavy water flow in the Pipeline Arroyo, see Section B.17.4 [Water Resources - Flooding and Effects of Heavy Water Flow in Pipeline Arroyo]. For additional information on erosion and potential undercutting of the tailings impoundment, see Section B.17.6 [Water Resources – Concerns of Undercutting and Pipeline Arroyo Channel Conditions].

**Comments:** (2-10-1) (4-6) (13-7)

#### **B.17.4 Water Resources – Flooding and Effects of Heavy Water Flow in Pipeline Arroyo**

The NRC received several comments expressing concern over water flows and flooding in Pipeline Arroyo. Several commenters mentioned the need for rainfall studies, the uncertainty of modeling efforts, and the intensity of flooding in the Pipeline Arroyo, stating that the proposed disposal site is within a floodplain. Several commenters noted the importance of understanding precipitation events, the inadequacy of rainfall and flood modeling in the vicinity of the proposed project area, and the nature of the flow in Pipeline Arroyo. One commenter suggested that NRC and UNC should conduct public tours of Pipeline Arroyo near the existing tailings impoundment.

**Response:** The EIS will assess the potential impacts to water resources, including the Pipeline Arroyo. The NRC staff will evaluate impacts that the proposed action and alternatives would have on floodplains within the proposed project area. The NRC staff's safety review will address in detail the ability of the Pipeline Arroyo to safely convey the anticipated flood flows. The NRC safety review will also address flood modeling, Pipeline Arroyo flow calculations, the design of stormwater controls, and aspects of the Jetty Area. Information from the NRC safety review will be incorporated into the EIS, as appropriate. NRC staff visited the site in June 2019; however, requiring the applicant to conduct public tours of the proposed project area is beyond the scope of this EIS.

**Comments:** (1-10-2) (1-11-7) (1-19-6) (1-20-6) (1-21-5) (1-21-6) (1-22-15) (2-14-7) (4-8) (4-10) (4-11) (4-32)

### **B.17.5 Water Resources – General Comments**

The NRC received several comments about surface water and groundwater resources within and in the vicinity of the proposed project area. Commenters stated that currently there is groundwater contamination in the project area and requested additional detail on the impact to water resources as the result of the proposed action. Two commenters suggested that additional subsurface characterization is needed.

**Response:** Current conditions at the site will be described in the EIS, including the groundwater contamination at the UNC Mill Site and the ongoing associated cleanup actions (i.e., pump-and-treat groundwater extraction and use of evaporation ponds). Potential impacts to surface and groundwater from the proposed action and alternatives will be addressed in the EIS. The NRC's safety review will also address surface and groundwater conditions in the proposed project area consistent with NRC regulations in 10 CFR Parts 20 and 40. Reasonable mitigation measures to protect surface waters and groundwater will also be discussed, as appropriate, in the EIS. Comments and NRC staff responses regarding flooding, flow, and erosion in Pipeline Arroyo, comments concerning groundwater contamination, and comments concerning migration of contaminants via Pipeline Arroyo are discussed in other responses in this section, B.17 [Comments Concerning Water Resources].

**Comments:** (1-14-1) (2-6-3) (4-12) (6-10)

### **B.17.6 Water Resources – Concerns of Undercutting and Pipeline Arroyo Channel Conditions**

The NRC received comments concerning channel conditions in the Pipeline Arroyo, including erosion, channel migration, and undercutting of the existing tailings impoundment. Some commenters requested additional analysis on the undercutting of the existing tailings impoundment and the migration of Pipeline Arroyo back to its natural flow path. Others questioned the impact that erosion and channel migration would have on the performance of the tailings impoundment.

**Response:** The EIS will evaluate the impact of the proposed action and alternatives on local and regional surface water and groundwater resources, including the flow and channel conditions in the Pipeline Arroyo. Potential environmental impacts of surface water drainage will be evaluated in the EIS, including erosion. As appropriate, the EIS will identify reasonable mitigation measures to address potential adverse impacts to the environment. The potential for continued migration of Pipeline Arroyo towards the existing tailings impoundment and potential undercutting of the tailings impoundment will be addressed in the NRC safety review as part of the NRC's review of the proposed modifications in the Jetty Area. Furthermore, the safety analysis in the NRC SER will evaluate the disposal of NECR mine waste on top of the tailings impoundment for compliance with 10 CFR Part 40, Appendix A, as applicable. For additional information on potential contaminant migration, see Section B.17.3 [Comments Concerning Water Resources – Downstream Contaminant Migration].

**Comments:** (1-21-3) (1-21-8) (2-14-12) (4-6) (4-9)

## **B.18 Comments Concerning Meteorology and Air Quality**

### **B.18.1 Meteorology and Air Quality – Baseline Air Quality**

The NRC received a comment concerning the existing nonradiological air quality at the proposed disposal site.

**Response:** The EIS will include a characterization of the existing or baseline nonradiological air quality in the project area. The potential impacts to air quality from the proposed action will be compared to the baseline. The EIS will also include a cumulative impacts analysis of air quality. Comments concerning the EIS's consideration of radiological air emissions and exposure pathways are addressed in Section B.15 [Comments Concerning Radiological Health].

**Comments:** (1-14-2)

### **B.18.2 Meteorology and Air Quality – Impacts of Fugitive Dust**

The NRC received comments that the EIS needs to analyze the impacts of the fugitive dust generated by the proposed action's activities, such as excavating, transferring the NECR mine waste, emplacement on the NRC-licensed tailings impoundment for disposal, and reclamation.

**Response:** The EIS will characterize both the existing air quality conditions and the proposed action's air emissions, including fugitive dust, generated by activities associated with the various project stages: construction, transferring the NECR mine waste to the proposed disposal site, and closure, as well as air quality impacts from the proposed action and alternatives. The EIS will also analyze cumulative impacts of the proposed action on air quality. Lastly, the EIS will identify and discuss relevant, reasonable mitigation measures that could reduce or avoid impacts.

**Comments:** (1-10-4) (6-9) (11-5)

### **B.18.3 Meteorology and Air Quality – Site-Specific Meteorological Data**

The NRC received comments that any analysis should be based on recent, site-specific meteorological data. Reasons cited by the commenters for why this type of data was needed included (i) to accurately assess the impacts of weather (such as flash floods) on the proposed disposal site, (ii) to accurately characterize the potential impacts of the proposed disposal site to air quality and water quality, and (iii) to better inform the engineering design of the proposed disposal site and protect public health.

**Response:** The NRC's SER will assess (i) the potential effects of extreme precipitation (probable maximum precipitation) that may lead to flash floods at the site, (ii) the compliance of the proposed disposal site with regulatory requirements (e.g., radiological criteria in 10 CFR Part 20 and 10 CFR Part 40, Appendix A) for surface water and public health, and (iii) the design of the proposed disposal site. Within this context, the NRC SER will determine the meteorological data needs to support these impacts assessments.

The EIS will include a general characterization of the meteorological conditions in the project area. This characterization will be based on the available information and would be informed, as appropriate, by information from the NRC's SER. In addition, the licensee conducted air dispersion modeling to assess impacts from the proposed action's nonradiological emissions



that considered meteorological data. This data may be considered in the EIS analysis. The scope of the EIS with respect to climate change is discussed in the report in Section B.19 [Comments Concerning Climate Change].

**Comments:** (1-22-14) (4-16) (6-11) (12-6)

## **B.19 Comments Concerning Climate Change**

### **B.19.1 Climate Change – Impacts on the Proposed Action**

The NRC received comments requesting that the EIS analyze the environmental impacts of climate change on the proposed disposal site. Commenters expressed concern about the impacts of extreme weather events on the proposed disposal site and noted that climate change is likely to increase the intensity and frequency of such events.

**Response:** The EIS will analyze the contribution of the proposed action to climate change and will consider overlapping impacts of the proposed action and climate change, as well as the impacts that climate change may have on the future weather events, to which commenters refer. The NRC safety evaluation will consider the effects of credible natural hazards and phenomena, including severe weather events, on the design and performance of the proposed disposal site. NRC regulations require the applicant to consider external natural events, estimate the frequency and severity of these, and discuss the records or historical data used to determine them. The NRC safety staff will review these evaluations to confirm that the proposed disposal site adequately protects against these natural events. As appropriate, the EIS will refer to the NRC's SER and relevant climate change projections to assess potential environmental impacts of the proposed action and alternatives.

**Comments:** (2-4-5) (2-6-4) (2-6-7) (12-4)

## **B.20 Comments Concerning Safety**

### **B.20.1 Safety – Existing Impoundment, Proposed Action, and Performance**

The NRC received comments about the existing tailings impoundment at the UNC Mill Site, the proposed project, and performance concerns. One commenter was concerned about the length of the jetty and suggested that the design is focusing on cost rather than safety. Some commenters expressed concerns about containment in the unlined tailings impoundment and suggested that the performance of the existing tailings impoundment (for both metals and radionuclides) should be known before the proposed action is executed. One commenter expressed concerns about extreme temperature fluctuations and how the hot summers and cold winters would affect the stability of the mine waste on top of the present tailings. Another commenter expressed concerns about the potential long-term effects of the mass of NECR mine waste and extreme weather on the existing impoundment (which they asserted had flaws dating back to the 1979 tailings dam failure). Another commenter called for a detailed history of the tailings dam failure and documentation of the existing condition of the impoundment in the EIS. One commenter questioned whether permanent isolation could be achieved by a capped disposal site on top of an existing tailings impoundment and also called for better marking (e.g., signage) of such sites. Another commenter asserted that the tailings impoundment was constructed between 1974 and 1977, and became operational in May 1977 prior to the effective date of the New Mexico Water Quality Control Commission regulations. The commenter concluded that the site on which the impoundment was built was not vetted for long-term tailings

management nor required to be lined. The unlined impoundment, they noted, is located in a floodplain and sitting partly on unconsolidated alluvium and partly on bedrock and would not meet NRC's current siting and design standards for uranium mill tailings management. Other commenters suggested that the volume of mine waste that needed to be excavated was uncertain and that could impact the design and schedule of the proposed disposal site. Some commenters suggested that the EIS should include a discussion of alternatives if the waste volume is substantially more than the 765,000 m<sup>3</sup> [1 million yd<sup>3</sup>] that is currently estimated. Another commenter stated that a worker who had been involved in demolition of the mill suggested that mill equipment and debris and numerous waste streams - including cables, tanks, vehicles, and paperwork – were transferred to the NECR Mine Site and buried, and questioned whether such materials were accounted for in volume estimates.

**Response:** The NRC will conduct a detailed technical review of the proposed disposal of the NECR mine waste on top of the existing tailings impoundment against applicable NRC criteria in 10 CFR Part 40, Appendix A to evaluate whether the general objective of permanent isolation of tailings for 1,000 years to the extent reasonably achievable will be met. This review will consider how environmental conditions at the UNC Mill Site, including extreme weather events, could affect the long-term stability and performance of the impoundment with the addition of the NECR mine waste. The safety review will also evaluate the effect of the additional material added to the top of the existing impoundment and whether that could affect the impoundment, its performance, and potentially the underlying groundwater. The EIS will incorporate by reference the determinations made by the safety review with regard to the long-term performance of the tailings impoundment with the addition of the NECR mine waste, as appropriate.

**Comments:** (1-22-16) (2-4-2) (2-4-4) (2-6-5) (2-11-12) (2-12-7) (2-14-11) (4-3) (4-4) (4-19) (12-2) (12-3)

## **B.20.2 Safety – General Safety Concerns**

The NRC received comments expressing general concerns about the toxicity of the NECR mine waste and the safety of nearby communities. One commenter suggested that the site would not meet current NRC disposal and siting criteria.

**Response:** The EIS will describe the characteristics and hazards associated with the NECR Mine waste and will evaluate the potential occupational and public health impacts, as well as other environmental impacts, of the proposed activities and alternatives. The NRC safety review will conduct detailed technical evaluations of the proposed disposal of the NECR mine waste on top of the NRC-licensed tailings impoundment against NRC criteria at 10 CFR Part 40, Appendix A. The NRC safety staff will also review related UNC radiation safety procedures to ensure that continued regulatory compliance and safety is maintained during proposed activities. The detailed safety review will provide reasonable assurance of the safety of any approved tailings impoundment design. The EIS will incorporate these conclusions, as appropriate, in assessing the environmental impacts of the proposed action and alternatives on nearby communities.

**Comments:** (1-10-3) (1-22-19) (2-14-6)

### **B.20.3 Safety – Analysis Methods and Site Selection**

The NRC received comments about the safety analysis methods and the risk associated with the selection of the UNC Mill Site for the proposed disposal of the NECR mine waste. One commenter asked about methods the NRC has researched to evaluate the safety of land, water, wildlife, and public health. Another commenter noted the short distance between the NECR Mine Site and the UNC Mill Site and asked whether the risk reduction of moving the waste had been calculated.

**Response:** The NRC safety review will evaluate the adequacy of the proposed disposal of the NECR mine waste on top of the existing tailings impoundment against the criteria in 10 CFR Part 40, Appendix A and associated radiation protection plans and the NRC standards in 10 CFR Part 20.

Regarding the selection of the UNC Mill Site, the EPA, under their CERCLA process, previously evaluated several alternatives for disposal of the NECR mine wastes against various criteria, including implementability, effectiveness (including overall protection of human health and the environment), and cost, as documented in their 2011 memo for the removal action at the NECR Mine Site (EPA, 2011). The selected alternative (disposal at the tailings impoundment at the UNC Mill Site) satisfactorily addressed the selection criteria relative to other alternatives, and the NRC will consider this analysis in the development of its EIS.

**Comments:** (2-5-1) (2-10-2)

### **B.20.4 Safety – Cover Design and Performance**

The NRC received comments about cover design and performance applicable to disposal of uranium mill tailings. One commenter was concerned about the thickness of cover material that may be considered acceptable and recommended adding material to provide additional margin of safety to address local safety concerns.

One commenter expressed several additional concerns with the impoundment cover design, suggesting that the application cited no published literature or field experience regarding the repository cover design. They suggested that performance of covers at other reclaimed uranium mill tailings sites under the control of the DOE Office of Legacy Management would be informative. They recommended that a comparison of field experience regarding the multi-decade performance of mill tailings covers with the proposed design be incorporated into the EIS. They noted that field experience associated with reclaimed uranium mill tailings sites in the U.S. or other countries could inform the design of the cover for the mine waste repository. The commenter stated that DOE has monitored, inspected, conducted research, and modified reclaimed uranium mill tailings based on their accumulated experience. They recommended that the EIS include a review of the DOE experience as owner, inspector, and investigator of reclaimed uranium mill tailings. They offered that DOE's programs can be accessed at <https://www.energy.gov/lm/office-legacy-management>, which includes archives for all uranium mill tailings site, among other sites, under DOE control.

The commenter suggested further that the proposed design evolved from an Alternative Landfill Cover Demonstration (ALCD) (<https://www.sandia.gov/caps/ALCD.htm> and <https://prod-ng.sandia.gov/techlib-noauth/access-control.cgi/1998/982021.pdf>) constructed on a landfill at Sandia National Laboratory in Albuquerque, New Mexico more than 20 years ago. They recommended that the EIS include a thorough evaluation of the ALCD sites to assess their

performance during the 20 years since their construction to determine if real-world experience verifies the representations in the license amendment request about the protectiveness of the proposed cover. They noted the landfill covers at the ALCD site are not reported to have had any monitoring or maintenance in more than 10 years, but suggested the performance of the covers installed at the site should be valuable in the consideration of an analogous design in the SER and License Application. They recommended that the EIS include an investigation of the ALCD experimental facility to evaluate the effectiveness of the ALCD covers more than 20 years after cover construction and more than 15 years after any active monitoring or maintenance.

A commenter noted that the DOE Office of Legacy Management UMTRCA Title II Disposal Site in Bluewater, New Mexico, provides an example of why alternatives should incorporate current best practices that will address long-term seepage to groundwater from mill tailings and why cap and cover methods in unlined cells is an inadequate remedy. They described that groundwater plumes leaving the Bluewater Disposal Site from covered tailings cells have uranium concentrations exceeding the EPA and New Mexico drinking water standards of 0.03 milligrams per liter (mg/L) [0.03 parts per million] and that monitor well water levels have decreased. They described that the combined trends of water quality degradation in shallow and deeper aquifers, and water level decreases in the monitor wells are long-term impacts of uranium milling and remediation methods that require further study. The commenter asserted that the cap and cover method for isolating uranium mill tailings is becoming obsolete. They suggested the clay radon barrier that is designed to prevent radon emissions from the tailings is subject to erosion and that runoff has collected in ponds on top of the large tailings cell at the Bluewater Site, threatening the effectiveness of this remedy to protect water quality and endangering human health and the environment. The commenter also recommended that mine waste be isolated separately and should not be mixed with mill tailings that have seeped into the surrounding groundwater. They noted that best practices dictate that the two types of waste remain separate for monitoring purposes and long-term legacy management.

**Response:** The NRC safety review will evaluate in detail the proposed disposal of the NECR mine waste on top of the existing tailings impoundment against NRC criteria in 10 CFR Part 40, Appendix A. This review will evaluate the adequacy of the proposed design, including the cover proposed to be placed over the NECR mine waste. The NRC staff is aware of DOE's experience managing sites under long-term care and maintenance and is interfacing with DOE as NRC conducts its review. The EIS will incorporate the determinations of the NRC safety review regarding the proposed design and performance, as appropriate.

**Comments:** (1-19-8) (4-25) (5-4)

## **B.21 Comments Concerning Socioeconomics**

### **B.21.1 Socioeconomics – Scope of the Socioeconomic Analysis**

The NRC received a comment expressing concern about the description of the population characteristics provided in UNC's license amendment request. The commenter stated that there is no discussion of the local population at the time mining and milling were started and no discussion of historic, present, or anticipated local land uses by residents. The commenter recommended that the EIS provide the current number of people that live in each structure around the proposed project area and that this information be obtained through ground-truthing.

**Response:** The scope of the socioeconomic analysis in the EIS includes the potential impacts that could result from the proposed action. The description of the baseline (or present)

environment that supports this impact determination includes the locations of nearby residences and the current population distribution and demographics within the region of influence for the proposed action. The NRC-recommended area for evaluating census data is the census block group, which is delineated by the United States Census Bureau and is the smallest area unit for which race and poverty data are available (NRC, 2003). The NRC staff will use this information and offer the opportunity to local Navajo Chapters and the Red Water Pond Road Community to provide additional information for evaluation in the EIS.

**Comments:** (4-26)

## **B.22 Comments Concerning Transportation**

### **B.22.1 Transportation – General Concerns**

The NRC received comments expressing general concerns about transportation. One commenter referred to the location of the Church Rock site as a border town that has transportation issues. Another commenter suggested that the NRC engage the local community to understand existing conditions. They expressed that moving the waste from the NECR Mine Site to the UNC Mill Site is not sufficient. The commenter recommended shipping the waste far away and evaluating the safety of the communities, environment, and sacred sites. Another commenter suggested that the proposed transfer of NECR mine waste to the UNC Mill Site will affect the adjacent pipeline community because that community uses the same turnoff (road) to the mill site and it is located downwind from the proposed activities.

**Response:** The EIS will describe the proposed onsite transfer and offsite transportation activities and evaluate the potential radiological and nonradiological impacts from the proposed action and alternatives. This includes obtaining local descriptions of unique transportation challenges, considering the proximity of local communities to proposed activities, evaluating affected local roadways, and evaluating site-specific characteristics such as the predominant wind direction. Regarding the commenter's suggestion to ship the NECR mine waste out of the region, the EIS will compare the impacts of the proposed action with the impacts of the no-action alternative (including shipping the waste offsite for disposal). The no-action alternative would occur if the NRC denies the request for an amendment to place the mine waste in the UNC Mill Site.

**Comments:** (1-13-3) (2-11-10) (2-14-2)

### **B.22.2 Transportation – Approach and Impacts of Transferring NECR Mine Waste**

The NRC received comments about the proposed transfer of NECR mine waste to the UNC Mill Site, including questions about how the material would be transferred, how containment of the material would be achieved, risks involved, and the level of analysis that would be applied.

**Response:** The EIS will describe the proposed transfer activities in sufficient detail to allow evaluation of the potential impacts to all resources, including transportation. The UNC proposal involves the use of covered articulated dump trucks to transfer the NECR mine waste to the UNC Mill Site. An option to conduct transfer operations using a conveyor system was also evaluated in the UNC application and will be considered in the EIS, as appropriate. The EIS will describe the proposed plans and procedures for conducting safe operations and containing the NECR mine waste material during transfer. This includes a detailed description of the NECR

mine waste material and its associated hazards and the proposed measures for maintaining occupational and public radiological and nonradiological safety, including dust control measures, onsite and offsite monitoring, and traffic control. The level of analysis in the EIS will be based, in part, on the level of environmental hazard posed by the material, the proposed operations, and the potential for loss of containment.

**Comments:** (2-12-1) (2-12-3) (2-12-6) (2-12-8)

### **B.22.3      Transportation – Local Government Involvement**

The NRC received comments about the proposed transportation of radioactive materials that recommended involving the City of Gallup in the EIS process because the City has passed a resolution opposing transportation of HLW via railway through the City for the purpose of temporary consolidated storage of radioactive waste in New Mexico. The commenter noted that McKinley County and the cities of Albuquerque, Bernalillo, Belen, Las Cruces, Jal, and Lake Arthur have passed similar resolutions. The commenter expressed concerns about potential impacts to Navajo communities at these locations.

**Response:** The EIS will describe the types of materials that would be shipped to or from the proposed project area, the frequency of shipments, and the potential radiological and nonradiological impacts of this transportation. Both the NRC's EIS process and the EPA CERCLA process have provided and will continue to provide opportunities for obtaining feedback and input from stakeholders on the proposed action. The proposed action does not involve the transportation or storage of HLW.

**Comments:** (1-3-7) (1-3-8)

## **B.23      Comments Concerning Waste Management**

### **B.23.1      Waste Management – Low-Level Radioactive Waste Policy Amendments Act**

A commenter stated that the NRC should reevaluate whether the mine waste should be subject to approval under the regional Low-Level Radioactive Waste Policy Amendments Act for the disposal of LLRW.

**Response:** As described in the application, the mine waste is not LLRW under Atomic Energy Act (AEA) Section 11e.(2) because it is not waste produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content. Rather, this material is crushed rock that was not processed after being extracted from the mine and assayed. The NRC staff will evaluate any applicable disposal requirements for the subject material in both its safety and environmental reviews, as appropriate.

**Comments:** (4-18)

### **B.23.2      Waste Management – Principle Threat Waste Disposition**

Some commenters stated that the proposed action does not propose a remedy for all of the waste at the site, and that the current license does not permit waste to be stored on the UNC Mill Site.

**Response:** The scope of the EIS includes an evaluation of the potential environmental impacts of the proposed action, including the impact of the proposed disposal of the NECR mine waste on top of the tailings impoundment at the UNC Mill Site. The NECR mine waste proposed for disposal at the UNC Mill Site is only a portion of the mine waste destined for removal from the NECR Mine Site in accordance with the EPA removal action (EPA, 2011). The EPA has established criteria for segregating excavated mine waste destined for disposal at the UNC Mill Site. All NECR mine waste exceeding 200 pCi/g Ra-226 would be considered PTW and would not be disposed at the NRC-regulated UNC Mill Site. Excavation, separation, and stockpiling of PTW from the lower-activity NECR mine waste destined for disposal at the UNC Mill Site will be evaluated as part of the proposed action in the EIS because these activities address the purpose and need for the proposed action (i.e., they are necessary for executing the action proposed to the NRC because the PTW needs to be separated from the NECR lower-activity mine waste to allow for the disposal of the separated NECR mine waste at the UNC Mill Site). The final disposition of PTW is an activity associated with the broader EPA-authorized remediation of the NECR Mine Site and documents pertaining to the EPA removal action describe the preferred approach for dispositioning that waste (EPA, 2011; 2009). The removal of the PTW from the NECR Mine Site is a separate action that does not address the purpose and need for the proposed action (i.e., it is not necessary for executing the NRC action that, if granted, would allow disposal of NECR mine waste at the UNC Mill Site). Therefore, the impacts associated with the EPA remediation of the NECR Mine Site, including the disposition of PTW, will be addressed as a separate action in the EIS's cumulative impacts analysis if the potential impacts of the proposed remediation overlap and accumulate with the potential environmental impacts of the proposed action. While the NRC action under review is whether to grant the license amendment that would allow UNC to dispose the NECR mine waste at the UNC Mill Site, the EIS will also evaluate the impacts of related activities that address the purpose and need for the proposed NRC action, including waste excavation at the NECR Mine Site and transfer from the NECR Mine Site to the UNC Mill Site.

**Comments:** (1-22-13) (13-15)

## **B.24 General Comments in Opposition to the Licensing Action**

### **B.24.1 General Opposition – Comments about the State of the Site, Mining Companies, and Responsibility for Cleanup**

The NRC received several comments expressing opposition to or discontent with the mining industry, the U.S. Government, and past mining actions at the Church Rock site. The comments included statements about the effects on natural resources from the mine, the possible effects on future generations, and the value of human life compared to the profit from mining and the cost of cleaning up past activities. Some commenters questioned who is being held responsible for the past actions and how the U.S. Government makes decisions about responsibility.

**Response:** The NRC staff acknowledges the concerns about past mining practices and the current natural resource problems experienced at the site. Regarding responsibility for cleanup at the NECR Mine Site, the site is being remediated as part of the EPA's Superfund program for cleanup. UNC is currently addressing contamination at the NECR Mine Site under the oversight and at the direction of EPA under its CERCLA authority. UNC privately owns the former uranium mill site, where there is an NRC-licensed tailings impoundment. As part of its cleanup efforts, UNC has submitted an application requesting that the NRC grant a license amendment that would allow disposal of NECR mine waste on top of the tailings impoundment at the

UNC Mill Site. The NRC is committed to working closely with the EPA, other U.S. Government agencies, the State of New Mexico, and Tribal governments and government agencies involved in the cleanup efforts.

Background about the NECR site and explanation of the roles of various agencies will be addressed in the EIS. The EIS will also consider how the impacts of past mining operations may overlap with the impacts of the proposed action (cumulative impacts). Other concerns about historical practices and incidents appear to be beyond the scope of the EIS and will not be addressed further.

**Comments:** (1-1-3) (1-6-3) (1-8-5) (1-8-8) (1-10-1) (1-13-14) (1-18-1) (1-18-3) (2-3-4) (2-8-19) (2-17-3)

## **B.24.2 General Opposition – Statements Opposing the Proposed Action**

The NRC received several comments objecting to the UNC-proposed license amendment or stating that the NRC should reject the license amendment request. Some commenters objected to keeping the mine waste in the area (i.e., not moving it farther away), some stated that the proposals had not yet been fully studied, others said the plan was not adequate to protect human health and safety, and several commented that not enough community or Tribal input had been included in the UNC proposal. One commenter stated that no one spoke in favor of the plan.

**Response:** The NRC staff acknowledges public concerns about the proposal before the NRC, as well as in the prior EPA CERCLA actions. The NRC is currently reviewing the UNC license amendment request that would allow disposal of mine waste on top of the existing NRC-licensed tailings impoundment. In parallel to its environmental review under NEPA, for which this scoping process was conducted, the NRC is conducting a safety review of the license amendment request. The safety and environmental reviews will carefully assess the safety and environmental impacts of the UNC proposal, and the outcome of these reviews will be documented in the SER (for the safety review) and the EIS (for the environmental review). The environmental review and development of the EIS includes several avenues for stakeholder participation, including consultation with Tribal governments, U.S. Federal, State, and local agencies, and members of the public, especially those in affected communities. The NRC seeks stakeholder input in the development of the EIS. Information from the SER and EIS will be used by the NRC in making the decision whether to grant the license amendment request.

**Comments:** (1-12-2) (1-13-7) (2-5-3) (2-11-1) (2-11-5) (2-11-13) (7-1) (11-3) (13-1) (13-16)

## **B.25 Comments Concerning Issues Outside of Scope**

### **B.25.1 Out of Scope – Actions of Former Navajo Officials**

The NRC received a comment about actions of a former Navajo official and his reaction to the NECR Mine Site.

**Response:** The NRC staff acknowledges the environmental concerns expressed by the community about the NECR Mine Site. As noted previously, the NRC intends to engage in a transparent process and to seek public and stakeholder input throughout the EIS development process.



**Comments:** (1-18-9)

### **B.25.2 Out of Scope – Changes and Interactions within Navajo Culture**

One commenter expressed his views about changes he has seen over time within the Navajo community with respect to the relationship of the people to the land, the Navajo culture, and the interactions of various viewpoints within the Tribe. Another commenter described the differences among languages and the accompanying advantages and limitations of several languages, especially English. The commenter suggested that English-speaking people consider adding the Navajo word Hózhó to the English language, as this word pertains to handling energy.

**Response:** In the EIS, the NRC staff will, as appropriate, consider the Navajo culture and relationship with the NECR site in its impact descriptions (especially as related to environmental justice and cultural resources). The comments about differences in language do not relate to the scope of the EIS and therefore will not be addressed further. Comments about the need for translation of materials for this environmental review are located in Section B.3 [Comments Concerning Public Participation] of this scoping summary report. Comments regarding broader changes in the Navajo culture appear to be beyond the scope of the EIS and will not be addressed further.

**Comments:** (2-2-1) (2-7-3)

### **B.25.3 Out of Scope – Comments about Economic Relationship between Tribes and the U.S. Government**

A commenter made several statements about the historic and current economic relationship between the U.S. Government and American Indian Tribes, stating that the Tribes have been subjugated and taken advantage of. The commenter stated concerns about the U.S. exploiting resources on Tribal lands and stated that Tribes want economic freedom, rights, and ownership of their natural resources. The commenter also noted that these principles relate to fundamental law.

**Response:** The scope of the EIS relates to the potential environmental impacts that could result if NRC approves an amendment of the UNC license to allow disposal of mine waste on the existing tailings impoundment. Although socioeconomic and environmental justice impacts related to the execution of the proposed action will be discussed in the EIS, comments relating to the broader economic relationship between governments, including Tribal governments and U.S. Governments, are beyond the scope of the EIS and will not be addressed further. Responses to comments related to fundamental law are found in Section B.1.7 [NEPA Process – Implementation of Fundamental Law] of this scoping summary report.

**Comments:** (1-13-4) (1-13-7) (1-13-12) (1-13-15) (2-7-1) (2-7-2) (2-7-4)

### **B.25.4 Out of Scope – Governmental Actions by Other Agencies**

The NRC received comments related to interactions among Tribal and U.S. Government entities or actions by government agencies other than the NRC. One comment described qualifications of Navajo people employed by the Federal government and their terms of employment. Other comments described general problems with bureaucracy and government inefficiencies.

**Response:** The NRC is an independent regulatory agency that operates on an established statutory and regulatory framework. The NRC strives to conduct its regulatory activities in an efficient and transparent manner. While the comments refer to decisions and actions by agencies other than the NRC or to levels of decision-making that are not governed by NRC, the NRC appreciates the importance of making a sound decision on the proposed action expeditiously.

**Comments:** (2-2-6) (2-2-8) (2-2-11) (2-2-14)

#### **B.25.5 Out of Scope – Objections to Proposed Holtec Consolidated Interim Storage Facility**

One commenter objected to the siting and transporting of spent nuclear fuel to a consolidated interim storage facility (CISF) in New Mexico that has been proposed by a private company (Holtec).

**Response:** The Holtec license application for a CISF is a separate licensing action currently pending before the NRC, and the NRC is conducting a separate safety and environmental review of that application. Although both the NECR Mine Site and the proposed Holtec site are located in New Mexico, the sites are not within close proximity. Therefore, comments about the Holtec license application are beyond the scope of this EIS and will not be addressed further.

**Comments:** (2-11-9)

#### **B.25.6 Out of Scope – Political Decisions**

Several commenters discussed national and local politics. A few of the comments stated concerns about political decisions and political processes for decision making. Some comments stated concerns about political priorities that may reduce funding for the Superfund cleanup programs.

**Response:** The NRC operates on an established regulatory framework through which licensing decisions for nuclear facilities are made. This environmental review focuses on the potential impacts that could result from the proposed amendment to the UNC license for the tailings impoundment. Political processes, funding allocations, and future political decisions are not within the scope of the environmental review and will not be addressed further in the EIS.

**Comments:** (1-2-2) (1-3-12) (2-3-3) (2-8-15) (2-14-13)

#### **B.25.7 Out of Scope – Requests to Clean Up the Church Rock Site; Concerns with Extent of Cleanup**

Several commenters requested that the Church Rock site (the mine site, the mill site, or both) be cleaned up and wastes be taken elsewhere. Some commenters stated that issues at the site are causing health problems at locations both close to and distant from the site. Some commenters said that the cleanup of this and hundreds of other sites on Navajo land is taking too long or that the UNC proposal does not adequately address the cleanup needed. For example, one commenter stated that the cleanup effort should encompass the entire stretch of the Puerco River that was affected by the 1979 dam failure and spill of tailings from the UNC Mill Site. Other commenters requested that the U.S. Government monitor the workers that are doing the work and support the communities by overseeing and supervising cleanup.

**Response:** The NRC staff acknowledges the historical and current environmental concerns raised in the comments. Regarding responsibility for cleanup at the NECR Mine Site, UNC is remediating the site under the EPA's Superfund program. UNC owns the former uranium mill site, where there is an NRC-licensed tailings impoundment. As part of its cleanup efforts, UNC has submitted an application requesting that the NRC grant a license amendment that would allow disposal of NECR mine waste on top of the tailings impoundment at the UNC Mill Site. The NRC's action is to review UNC's license application, conduct a safety review and environmental review, and determine whether to grant the amendment. The staff is sensitive to the commenters' concerns about the length of time taken to implement cleanup actions and strives to conduct its reviews expeditiously. The NRC is also committed to working closely with the EPA, other U.S. Government agencies, the State of New Mexico, Tribal governments, and State and local government agencies involved in the cleanup efforts.

Chapter 7 of the EIS will describe UNC's proposed environmental measurements and monitoring programs that were designed to address NRC safety regulations, including radiological effluent release limits and public and occupational dose limits (as described in Section A.8 of this report). Information regarding program-specific or discretionary monitoring also will be included as appropriate if the monitoring helps to limit potential environmental impacts at the UNC Mill Site. Background information about the NECR Mine Site, explanations about the extent of the NRC's action, and descriptions of the oversight roles of various agencies will be provided in the EIS.

**Comments:** (1-13-11) (1-18-6) (1-18-8) (1-18-12) (2-2-16) (2-11-3) (2-11-4) (2-13-5) (2-15-2)

#### **B.25.8 Out of Scope – Site Incident**

One commenter stated that they observed improper truck loading techniques and spillage at the NECR Mine Site and stated that they reported on the incident. The commenter attributed the incident to a lack of concern on the part of the workers.

**Response:** The incident noted in the comment does not appear to have occurred on an NRC-licensed site; therefore, discussion of the specific incident is beyond the scope of the EIS. However, the EIS will address the procedures and mitigation measures that will be used to contain the NECR mine waste and minimize spillage during transportation of the mine waste.

**Comments:** (2-12-2)

#### **B.25.9 Out of Scope – Cease Licensing of Uranium Operations**

A commenter requested a moratorium on licensing uranium mills and in-situ recovery operations, citing concerns with disposition of waste products and threats to natural resources.

**Response:** This environmental review addresses the potential environmental impacts that could result from the proposed disposal of NECR mine waste on top of the NRC-licensed tailings impoundment and alternatives. The NRC has licensing authority over uranium mining (or relinquishes this authority to States through the Agreement State Program), but because the comment does not relate to the scope of the EIS, the comment will not be addressed further in the EIS.

**Comments:** (5-14)

#### **B.25.10 Out of Scope – Comments About History of the Mine Site and Historic Navajo Involvement**

The NRC received comments regarding the historic Navajo Nation involvement in allowing the NECR mine activities or participation in mining activities. Some commenters noted that the decisions were made without their consent, were based on false promises, or were the fault of Navajo Nation officials. One commenter expressed that the mine did not adequately employ qualified Navajo workers for cleanup activities. Some of the commenters expressed concern about how the historic decisions and actions affect the health of the community and the environment in which their children live.

**Response:** The comments discuss historic actions or decisions over which the NRC does not have regulatory authority. The NRC's current action is to review UNC's license amendment request to allow the disposal of mine waste on top of the NRC-licensed tailings impoundment at the former UNC Mill Site. Although the NRC acknowledges the importance of the Navajo history and connection to the lands involved, and past actions that impacted the affected environment will be evaluated in the EIS as part of the NRC's cumulative impacts assessment, the comments appear to be beyond the scope of the EIS and will not be addressed further in the EIS. Related issues such as cumulative impacts and environmental justice are within the scope of the EIS and are discussed in Sections B.9 and B.12, respectively, of this report.

**Comments:** (1-1-2) (1-4-3) (1-6-2) (1-8-3) (1-21-1) (2-3-1) (2-12-4) (2-13-8)

## C TABLE OF COMMENTER NAMES AND AFFILIATIONS

Commenter	Affiliation (if stated)	Comment Source	Document ID
Adeky, Sarah		Meeting Transcript (ML19091A160)	2-9
Anderson, Percy		Meeting Transcript (ML19092A102)	1-6
Anonymous, Bradley		Meeting Transcript (ML19091A160)	2-16
Begay Jr., Scotty		Email (ML19150A546)	10
Bell, Adonijah		Email (ML19150A561)	12
Bell, Ezekiel		Email (ML19150A561)	12
Bell, Peterson		Email (ML19150A561)	12
Bell, Peterson		Meeting Transcript (ML19092A102)	1-9
Bell, Rose		Email (ML19150A561)	12
Bell, Rose		Meeting Transcript (ML19091A160)	2-12
Bell, Silas		Email (ML19150A561)	12
Bell, Thompson		Email (ML19150A561)	12
Bell, Thompson		Meeting Transcript (ML19092A102)	1-10
Bell-Jefferson, Jacqueline		Email (ML19150A561)	12
Bell-Jefferson, Jacqueline		Meeting Transcript (ML19092A102)	1-17
Benallie, Sarah		reg.gov (ML19129A094)	9
Benally, Anna		Meeting Transcript (ML19091A160)	2-15
Benally, Anna		Meeting Transcript (ML19092A102)	1-15
Benally, Notah		Meeting Transcript (ML19092A102)	1-2
Benally, Ray		Meeting Transcript (ML19091A160)	2-3
Benally, Ray		Meeting Transcript (ML19092A102)	1-1
Brown, Denise	Nuclear Issues Study Group	Email (ML19150A575)	13
Cecchini, Rose Marie	Office of Peace, Justice & Creation Stewardship	Meeting Transcript (ML19091A160)	2-6
Clark, Lonnie		reg.gov (ML19113A090)	7
Dunning, Connell	U.S. Environmental Protection Agency	reg.gov (ML19129A093)	8
Dunning, Connell	U.S. Environmental Protection Agency	reg.gov (ML19150A585)	8
Ellison, Emily		Meeting Transcript (ML19091A160)	2-7
Ellison, Emily		Meeting Transcript (ML19092A102)	1-13

<b>Commenter</b>	<b>Affiliation (if stated)</b>	<b>Comment Source</b>	<b>Document ID</b>
Gordon, Susan		Meeting Transcript (ML19092A102)	1-20
Henio, Bradley		Email (ML19150A561)	12
Henio, Grace		Email (ML19150A561)	12
Henio, Grace		Meeting Transcript (ML19092A102)	1-18
Hood, Edith		Email (ML19150A561)	12
Hood, Edith		Meeting Transcript (ML19091A160)	2-13
Hood, Edith		Meeting Transcript (ML19092A102)	1-4
Hood, Tony		Meeting Transcript (ML19092A102)	1-14
Iyott, Kara		Email (ML19150A561)	12
Iyott, Kara		Meeting Transcript (ML19092A102)	1-7
Jantz, Eric	Red Water Pond Road Community Association	Email (ML19150A561)	12
Kavasseri, Karthik		Meeting Transcript (ML19091A160)	2-10
Keyanna Jr., Kee R.		Email (ML19150A561)	12
Keyanna, Katherine		Email (ML19150A561)	12
Keyanna, Kravin		Email (ML19150A561)	12
Keyanna, Teracita		Email (ML19150A561)	12
Keyanna, Teracita		Meeting Transcript (ML19091A160)	2-17
Keyanna, Teracita		Meeting Transcript (ML19092A102)	1-8
King, Larry		Email (ML19150A561)	12
King, Larry		Meeting Transcript (ML19091A160)	2-14
King, Larry		Meeting Transcript (ML19092A102)	1-19
King, Susan	U.S. Department of the Interior	Email (ML19133A315)	6
Morgan, Leona		Meeting Transcript (ML19091A160)	2-11
Morgan, Leona		Meeting Transcript (ML19092A102)	1-12
Morgan, Leona	Nuclear Issues Study Group	Email (ML19150A575)	13
Nez, Bertha		Email (ML19150A561)	12
Nez, Bertha		Meeting Transcript (ML19092A102)	1-11
Nez, Teddy		Meeting Transcript (ML19092A102)	1-16
Pinto, Jean		Meeting Transcript (ML19092A102)	1-5

<b>Commenter</b>	<b>Affiliation (if stated)</b>	<b>Comment Source</b>	<b>Document ID</b>
Robinson, Paul		Meeting Transcript (ML19092A102)	1-22
Robinson, Paul	Multicultural Alliance for a Safe Environment	Email (ML19133A313)	4
Sheely, Patricia		Meeting Transcript (ML19091A160)	2-4
Shuey, Chris		Meeting Transcript (ML19092A102)	1-21
Shuey, Chris	Multicultural Alliance for a Safe Environment	Email (ML19133A313)	4
Tilden, Mervyn		Meeting Transcript (ML19091A160)	2-8
Tilden, Mervyn		Meeting Transcript (ML19092A102)	1-3
Tilden, Mervyn		reg.gov (ML19113A219)	11
Watchempino, Laura		Email (ML19133A314)	5
Windsong, Mirakhel		Meeting Transcript (ML19091A160)	2-5
Wunder, Matt	New Mexico Department of Game and Fish	Email (ML19133A316)	3
Yazzie, Dariel	Navajo Nation EPA Superfund Program	Meeting Transcript (ML19091A160)	2-1
Yazzie, Dariel	Navajo Nation EPA Superfund Program	Meeting Transcript (ML19091A160)	2-18
Zah, Peterson	Navajo Nation	Meeting Transcript (ML19091A160)	2-2

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