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# Overview
# Draft Environmental Impact Statement for Disposal of Mine Waste at the United Nuclear Corporation Mill Site in McKinley County, New Mexico

October 2020

NRC ADAMS Accession Number: ML20295A709

## PROPOSED DISPOSAL OF MINE WASTE AT ADJACENT MILL SITE

On September 24, 2018, United Nuclear Corporation (UNC) submitted a request to the U.S. Nuclear Regulatory Commission (NRC) to amend its license (SUA-1475) for the former UNC Church Rock uranium mill site (UNC Mill Site). If granted, the license amendment would allow UNC to dispose of approximately 1,000,000 cubic yards of mine tailings from the former Northeast Church Rock (NECR) mine on top of the tailings impoundment at the UNC Mill Site.

## WHY IS THIS ACTION BEING PROPOSED?

UNC is requesting that the NRC amend its license for the tailings impoundment at the UNC Mill Site to allow the disposal of mine waste in a repository that would be constructed on top of the impoundment. This proposed amendment would allow for UNC to comply with an EPA remedial action planned for the NECR Mine Site that is documented in EPA's 2013 record of decision (see https://semspub.epa.gov/work/06/681353.pdf). The EPA made its remedial action decision under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), which is also known as the Superfund law. The purpose of the remedial action is to protect human health and the environment from residual mine waste, and one of the key activities supporting the remedial action is the removal of mine waste from the NECR Mine Site and its transfer to the adjacent UNC Mill Site.

**CERCLA**

The Comprehensive Environmental Response, Compensation, and Liability Act was passed in 1980 in response to the threat of hazardous waste sites. The EPA's Superfund program under CERCLA is designed to investigate and clean up contaminated sites, known as Superfund sites. Approximately 1,600 Superfund sites are prioritized on the National Priorities List (NPL). Sites on the NPL, such as the NECR Mine Site, are considered the most highly contaminated and undergo longer-term remedial investigation and action (cleanups). The EPA's public engagement activities regarding the cleanup are described in "The United Nuclear Corporation Mill Site Community Involvement Plan" (https://semspub.epa.gov/work/06/100013817.pdf).

The remediation of the NECR Mine Site is independent of the proposed UNC Mill Site license amendment. If the NRC denies UNC's license amendment request, EPA would need to pursue other disposal options for the waste on the NECR Mine Site.

In reviewing UNC's license amendment application, the NRC determined that UNC's request meets an NRC regulatory criterion for licensing actions requiring an environmental impact statement (EIS)—it is a major federal action significantly affecting the quality of the human environment. The NRC has prepared the draft EIS in accordance with the National Environmental Policy Act (NEPA) and NRC regulations in Title 10 of the Code of Federal Regulations (CFR), Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions."

## WHO HAS REGULATORY AUTHORITY FOR THE PROPOSAL?

The NRC has regulatory oversight for the UNC Mill Site and is the lead federal agency for reviewing UNC's license amendment application. The NRC staff's detailed review consists of a safety review and an environmental review that are conducted in parallel. The draft EIS

documents the staff's environmental review and the safety evaluation report documents the safety review. The NRC's review process is described further in the next section.

The EPA has regulatory oversight under CERCLA for cleanup of the NECR Mine Site. The EPA assumed this authority in 2005 in response to a request by the Navajo Nation Environmental Protection Agency (NNEPA) that the EPA act as the lead regulatory agency at the site. The EPA has the authority under CERCLA to determine what federal, state, and tribal requirements are applicable and must be followed during the CERCLA cleanup action. The requirements that the EPA determined, after consultation with other regulatory authorities and agencies, to be relevant to the cleanup action are referred to as "applicable or relevant and appropriate requirements" (ARARs). Section 1.6.2 of the draft EIS provides more information about ARARs that apply to the NECR Mine Site cleanup.

The Department of Energy (DOE), another federal agency, or the State of New Mexico may become the custodian of the UNC Mill Site after the NRC terminates UNC's license. The custodial agency would be responsible for long-term surveillance and maintenance of the UNC Mill Site and associated waste. The site custodian will be identified before license termination.

## WHAT IS THE DRAFT EIS?

The draft EIS is a detailed document describing the environmental impacts that could result from the proposed excavation, transfer, and emplacement of approximately 1,000,000 cubic yards of mine waste on top of the mill tailings impoundment at the UNC Mill Site. It also assesses alternatives to the proposed action and details the cumulative impacts that could occur when the impacts of this proposed action are combined with impacts from other activities in the area. The EIS assesses the potential impacts on a range of environmental "resource" areas. The resource areas are:

**NEPA**

The National Environmental Policy Act is a law requiring federal agencies to assess the environmental effects of of proposals under their consideration. The Act requires federal agencies to:

- use a systematic, interdisciplinary approach for decision-making about proposed actions that may impact the human environment,
- inform and involve the public in the decision-making process,
- consider significant environmental impacts associated with the proposed action, and
- consider alternatives and compare their impacts to impacts from the proposed action.

The EIS contains the information the NRC needs to provide under this law.

- Land use
- Water resources (groundwater and surface water)
- Ecology (vegetation and wildlife)
- Geology and soils
- Environmental justice
- Socioeconomics
- Historic and cultural resources
- Public and occupational health
- Noise receptors
- Air quality
- Waste management
- Visual and scenic resources
- Transportation

This document summarizes the NRC's environmental impact analysis that has been published in draft form for public review and comment.

## WHERE IS THE UNC MILL SITE LOCATED?

The UNC Mill Site is located approximately 17 miles northeast of Gallup, New Mexico, in McKinley County. The site is situated on 902 acres and includes the area of a decommissioned uranium mill facility, which occupies approximately 25 acres, and the tailings impoundment, which covers approximately 100 acres. The UNC Mill Site is privately owned and is surrounded by Navajo Nation reservation land and land held in trust for the Navajo Nation by the U.S. Government. The adjacent NECR Mine Site comprises an area of approximately 207 acres, the majority of which is Navajo Nation trust land. Exhibit A shows the location of the proposed mine waste repository within the UNC Mill Site. Four Navajo Nation chapters are located within 2 miles of the proposed project area. These are the Coyote Canyon Chapter, Standing Rock Chapter, Church Rock Chapter, and Pinedale Chapter. A community of the Coyote Canyon Chapter, the Red Water Pond Road community, is located within 0.14 mile of the northeastern boundary of the proposed project area.

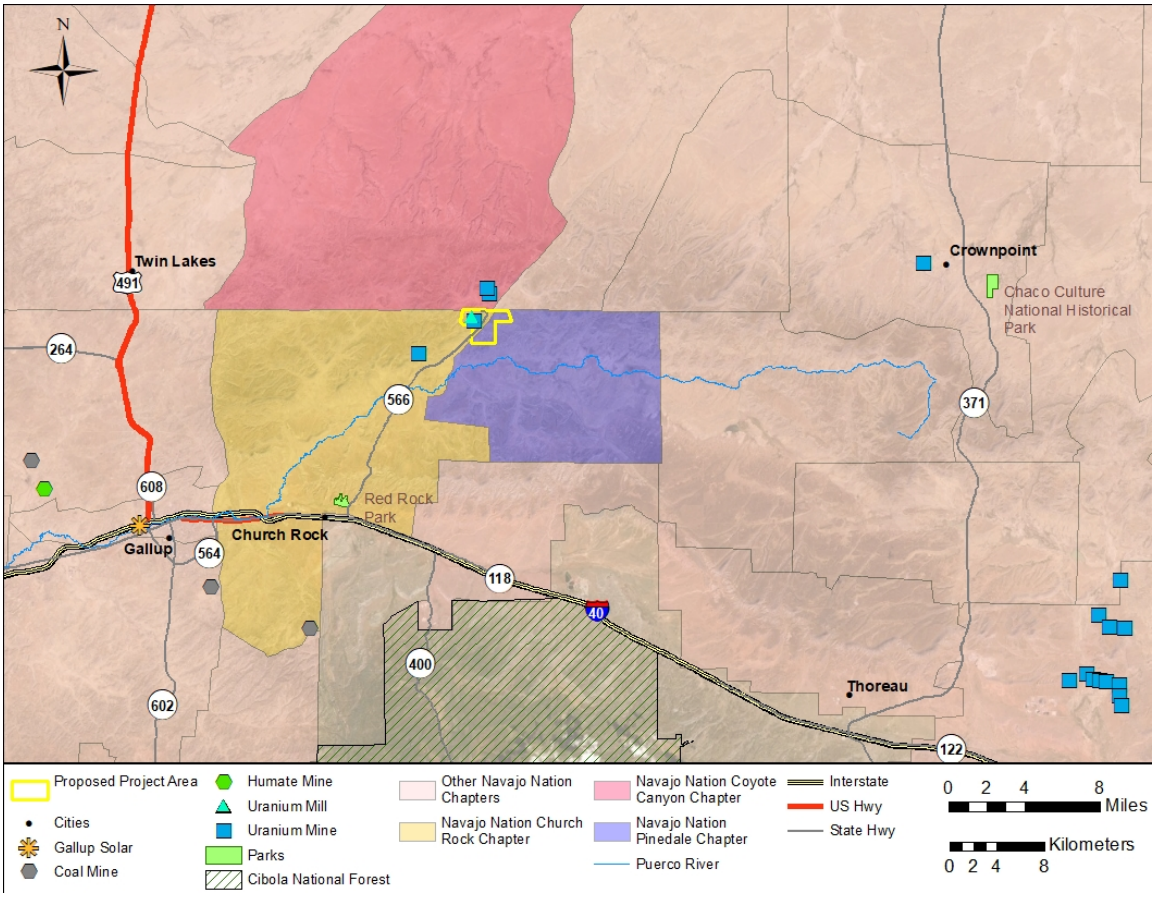


Exhibit A. Location of NECR Mine Site and Adjacent UNC Mill Site

## WHAT IS UNC'S PROPOSAL?

UNC proposes to excavate and transfer approximately 1,000,000 cubic yards of NECR mine waste to a proposed repository that would be constructed on the existing, NRC-regulated UNC Mill Site tailings impoundment. The mine waste consists of soil, waste rock, mine debris (metal, concrete, wood), and vegetation. The waste would be transferred from the mine site to the mill site using dump trucks on access and haul roads. UNC proposes to install permanent stormwater controls for the proposed disposal site using existing swales and channels constructed on the tailings impoundment, with improvements and supplemental controls where necessary. Pipeline Arroyo (an ephemeral drainage channel along the western edge of the tailings impoundment) also would be stabilized using a reconstructed rock jetty with a riprap chute. After transferring the waste, UNC would close the repository by adding cover material (soil) and revegetating the area. Exhibit B is a figure showing a cross section of the proposed repository to be placed over the existing mill tailings impoundment. Exhibit C shows the site layout. UNC has estimated that completion of disposal of the NECR mine waste would take approximately 4 years. Section 2.2.1 of the draft EIS describes the proposed action in more detail.

**MINE WASTE AND MILL TAILINGS**

The NECR mine waste, which is not under NRC regulatory authority, has radiological characteristics comparable to those of material that is regulated by the NRC, such as waste at the UNC Mill Site. The mine waste and the tailings at the UNC Mill Site are similar because both come from similar sources that contain uranium and its radioactive decay products, such as radium-226. The radium concentrations in the mine waste and in the mill tailings are in the same general range, but the mine waste has lower average radium radioactivity.

Waste from the NECR Mine Site contains varying levels of radioactivity. The EPA has established criteria, including specified levels of radioactivity, for segregating the excavated waste to ensure that waste with higher radioactivity levels is not transferred to the UNC Mill Site. Specifically, all NECR mine waste that exceeds 200 picocuries per gram of radium-226 and/or 500 milligrams per kilogram of uranium would be designated principal threat waste (PTW) and would not be disposed at the UNC Mill Site. UNC is not expected to finalize arrangements for the disposal of PTW at an EPA-approved facility until after the NRC completes its review of the current UNC license amendment request. PTW waste disposal is not proposed in the license amendment application and is not included in the NRC's review of the UNC Mill Site license amendment request. Section 2.2 of the draft EIS provides more information about PTW.

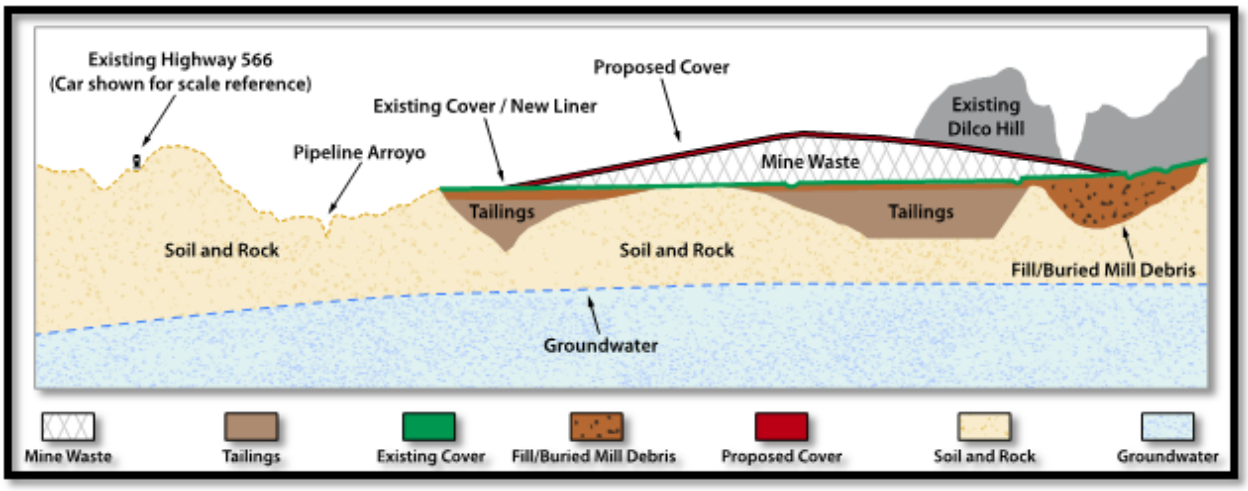


Exhibit B. Cross Section of Proposed Disposal Site Area

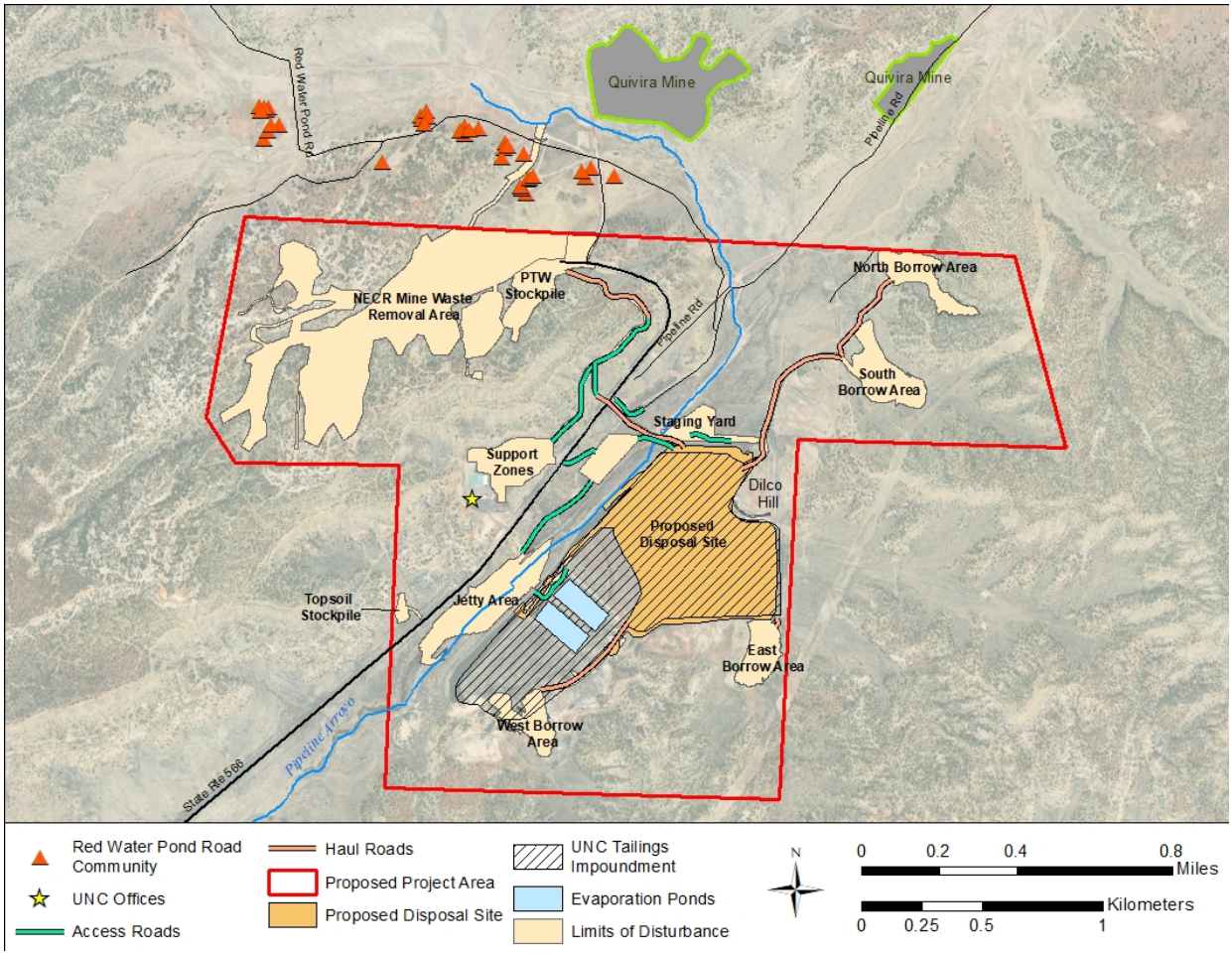


Exhibit C. Proposed Project Area Layout on the UNC Mill Site

## WHAT ALTERNATIVES WERE CONSIDERED IN THE EIS?

In addition to evaluating the potential environmental impacts from the proposed action, the EIS evaluates the potential impacts from two secondary alternatives and from the no-action alternative. Each of the secondary alternatives is substantially the same as the proposed action, but with modifications to certain activities as described below. The secondary alternatives are described in Section 2.2 of the draft EIS.

### ALTERNATIVE 1A – CONVEYOR INSTEAD OF TRUCKS

Alternative 1A is the same as the proposed action, except that UNC would transfer the mine waste from the NECR Mine Site to the UNC Mill Site with an above-grade, covered conveyor system instead of by truck. Under this alternative, UNC would avoid crossing New Mexico Highway 566 at grade and reduce the potential transportation-related impacts. The system would include a bridge to protect passing traffic from any spills or debris falls.

### ALTERNATIVE 1B – COVER MATERIAL FROM JETTY AREA

Alternative 1B is the same as the proposed action, except that the cover material for the proposed disposal area would be obtained from the jetty area rather than from the north, west, east, and south borrow areas (see Exhibit C). The area of disturbance of the jetty area under this alternative would be the same as under UNC's proposed action. However, obtaining cover material from the 23-acre area disturbed for construction of the jetty area in place of the proposed borrow areas would reduce the overall area of land disturbance associated with the proposed project by 48 acres. UNC has subsequently stated its preference is to obtain cover material from this area instead of the four borrow areas as originally proposed.

### NO-ACTION ALTERNATIVE

Under the no-action alternative, described in Section 2.2.2 of the draft EIS, the NRC would not approve the license amendment and UNC would not be allowed to dispose of the mine waste on top of the tailings impoundment at the UNC Mill Site. Without approval for this disposal, the mine waste would temporarily remain at the NECR Mine Site until the EPA selects a remedy under CERCLA that involves a different disposal alternative for the waste. This delay in removing the NECR mine waste would generate public health or related environmental impacts that are different from or additional to the impacts expected from disposal at the UNC Mill Site. For the EIS, the NRC assumes that the mine waste would remain on the NECR Mine Site for another 10 years before being disposed of at a location other than the UNC Mill Site.

### ALTERNATIVES NOT CONSIDERED IN DETAIL

Section 2.3 of the draft EIS describes alternatives to the proposed action that were considered but not evaluated in detail. The EPA previously evaluated many alternatives for removing the mine waste from the NECR Mine Site, including examining several offsite locations. These and other alternatives that did not satisfy the EPA selection criteria relating to effectiveness, implementability, and cost were not pursued further by EPA for reasons that are described in Section 2.3.1 of the EIS. They are similarly not considered in detail by the NRC in its

evaluation, largely for the same reasons. These include the following alternatives:

- No action on NECR Mine Site – not protective of public health and the environment
- Consolidating and covering mine wastes on the NECR Mine Site – unacceptable to Navajo Nation and local community
- Constructing an above-ground, capped, and lined repository on the NECR Mine Site – unacceptable to Navajo Nation and local community
- Consolidating mine wastes with a cap and liner in a different location within the UNC Mill Site – two identified areas were determined to be unacceptable because of ongoing groundwater remedial actions and inadequate capacity

## WHAT ARE THE CONCERNS OF INTERESTED PARTIES?

To learn about public concerns regarding the proposed action, the NRC provided a 70-day public scoping period. The NRC announced this opportunity to provide input through notices in the *Federal Register*, on the NRC's public website and social media pages, in news releases, in local newspapers, and in radio advertisements.

A few of the topics raised during scoping include:

- How would the project disproportionately impact minority or low-income populations, especially the adjacent Navajo Nation community?
- Would the project impact surface water flow and quality? What effects would surface water flow have on the tailings impoundment?
- Would the project affect groundwater quality?

The NRC staff responded to these and many other comments in the scoping summary report. The text box below provides more information about public participation in the development of the EIS.

### PUBLIC PARTICIPATION

- The NRC held public scoping meetings in Gallup, New Mexico on March 19 and 21, 2019.
- All scoping comments received and their corresponding responses are included in a scoping summary report posted on the NRC website and available at https://www.nrc.gov/docs/ML1933/ML19338E254.pdf.
- Public meetings for the draft EIS will be announced on the NRC's website, as well as in the *Federal Register* and in local media outlets. Comments on the draft EIS can be provided at the public meetings and by any of the other means listed on page 17 of this guide.

## HOW ARE THESE CONCERNS ADDRESSED IN THE DRAFT EIS?

The draft EIS contains an analysis of the impacts of construction, waste transfer, closure of the disposal site (capping and revegetation), and post-closure period. The draft EIS considers the potential for impacts on each resource area. Impacts on the areas noted above are summarized below and discussed in more detail in Chapter 4 of the EIS.

**ENVIRONMENTAL IMPACT LEVELS**

The Council on Environmental Quality coordinates environmental efforts between federal agencies and White House offices to develop environmental policies. The impact categories used in the EIS are based on regulations issued by the Council. These impact categories are:

*SMALL* – Environmental effects are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute of the resource.

*MODERATE* – Environmental effects are sufficient to alter noticeably, but not to destabilize, important attributes of the resource.

*LARGE* – Environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the resource.

### ENVIRONMENTAL JUSTICE IMPACTS

For environmental justice, Navajo Nation communities are adjacent to the north of the mine site (see Exhibit C) and would be disproportionately affected by factors such as project-related transportation, air quality changes (primarily from dust), increased noise levels, and visual disturbances. Section 4.12 of the draft EIS provides additional information about environmental justice impacts from the proposed action. Section 5.12 describes impacts to the Navajo people in the context of past uranium mining and milling activities at the NECR Mine Site, UNC Mill Site, and surrounding areas. While the NRC staff has attempted to accurately capture and describe the perspectives of the Navajo Nation in the EIS, members of the Navajo Nation may hold views that differ from the conclusions presented in the EIS.

### SURFACE WATER IMPACTS

The primary surface water feature at the UNC Mill Site and NECR Mine Site (the proposed project area) is the Pipeline Arroyo, a tributary to the Puerco River. Part of the proposed action involves stabilization work in Pipeline Arroyo to address concerns about the potential for undercutting near the existing impoundment. The proposed action also includes improvements to stormwater drainage at the impoundment. Impacts on surface waters and wetlands in the project area from the proposed action may result from erosion runoff, spills and leaks of fuels and lubricants, and stormwater runoff. Over the longer term, the extent of Pipeline Arroyo's floodplain would be permanently altered by the closure of the disposal site.

UNC would develop and implement stormwater and spill prevention and countermeasures plans to mitigate or prevent potential surface water quality impacts caused by erosion, sedimentation, increased stormwater flows, and spills and leaks of fuels and lubricants. To address the alteration of the Pipeline Arroyo floodplain over the longer term, UNC would revegetate disturbed areas to stabilize land surfaces and continue erosion and sedimentation controls until disturbed areas are adequately revegetated. After closure of the disposal site, the potential for long-term impacts to surface water would be addressed by the combined effect of NRC and

EPA approvals and oversight of areas that are important for the successful long-term performance of the tailings impoundment with the added mine waste disposal site.

Section 4.5.1 of the draft EIS discusses surface water quality impacts in greater detail.

### GROUNDWATER IMPACTS

Potential impacts on groundwater from the proposed action would result primarily from consumptive use to support construction activities and from potential degradation of groundwater quality in shallow (alluvial) aquifers, if water from the tailings impoundment were to reach groundwater. Other project activities could affect groundwater if stormwater comes into contact with equipment, structures, stockpiles, the tailings impoundment construction area, and other disturbed areas and is then allowed to flow into groundwater recharge areas. Groundwater impacts could also occur if mine waste loading, transport, and unloading activities require the use of groundwater for dust suppression. After closure of the disposal site, the potential for long-term impacts to groundwater would be addressed by the combined effect of NRC and EPA approvals and oversight of areas that are important for the successful long-term performance of the tailings impoundment with the added mine waste disposal site. Groundwater impacts from the proposed action are described in more detail in Section 4.5.4 of the draft EIS.

Historical operation of the NECR Mine Site and the UNC Mill Site included routine and non-routine releases of radiological materials. The most notable release occurred on July 16, 1979, when the UNC Mill Site tailings impoundment dam collapsed, releasing approximately 93 million gallons of tailings into Pipeline Arroyo and the underlying groundwater unit. These routine and non-routine releases resulted in the contamination of local groundwater. Groundwater quality is being addressed through corrective actions associated with the UNC Mill Site reclamation and an EPA remedial action under CERCLA. Section 5.5.2 of the draft EIS describes these historical groundwater impacts in more detail.

## SUMMARY OF ENVIRONMENTAL IMPACT LEVELS FOR ALL RESOURCE AREAS

For most resource areas, the impacts from the proposed action would be SMALL or MODERATE. Most of the impacts would occur only during the approximately 4-year period when the repository is constructed, waste is transferred from the NECR Mine Site to the UNC Mill Site, and the repository is capped and revegetated. Beyond the 4-year period, the permanent alteration of the Pipeline Arroyo floodplain as a result of the proposed action could result in longer-term surface water drainage effects.

Resource areas with a SMALL potential impact are land use, geology and soils, groundwater, air quality (greenhouse gases), ecology (wildlife), socioeconomics, public and occupational health, and waste management. Impacts on surface water, air quality (non-greenhouse gases), and transportation would be SMALL to MODERATE. Impacts on visual and scenic resources, noise receptors, and ecology (vegetation) would be MODERATE. The impacts on historic and cultural resources would be SMALL to LARGE, depending on the implementation of mitigation measures to reduce land-disturbing effects on these resources. The proposed action would

have disproportionately high and adverse impacts associated with several resource areas on the local communities of the Navajo Nation.

## How can the Impacts be Reduced?

Many of the SMALL impacts are considered minimal because monitoring and use of environmental practices and safeguards would reduce any negative effects on an environmental resource. However, some of the impacts greater than SMALL (such as surface water impacts as described above) can be reduced or prevented from becoming disruptive. Chapter 6 of the draft EIS discusses mitigation measures that could reduce adverse impacts from the proposed excavation, transfer, and disposition of mine waste on the UNC Mill Site. The mitigation measures include those to which UNC has committed and additional mitigation measures identified by NRC staff and by the Navajo Nation to reduce adverse impacts on the environment and the Navajo people.

## What is the Project's Relationship to Other Projects in the Area?

Cumulative impacts may result when the environmental effects associated with the proposed project are added to the temporary or permanent effects of other past, present, and reasonably foreseeable future activities. Cumulative impacts can result from the combination of effects that might have been minor by themselves, but when considered together, they amount to a more noticeable effect on the same resource over a period of time. Chapter 5 of the EIS presents an analysis of the cumulative impacts from the proposed Church Rock disposal project.

Several projects or activities near the proposed Church Rock disposal site are relevant in the analysis of cumulative impacts. These projects include uranium mining sites (including the NECR mine site), past activities on the UNC Mill Site and other uranium milling sites, mineral mining and oil and gas projects, and housing development urbanization. Section 5.1.1 of the draft EIS contains more information about these projects and Exhibit D illustrates the locations of many of the projects or activities.

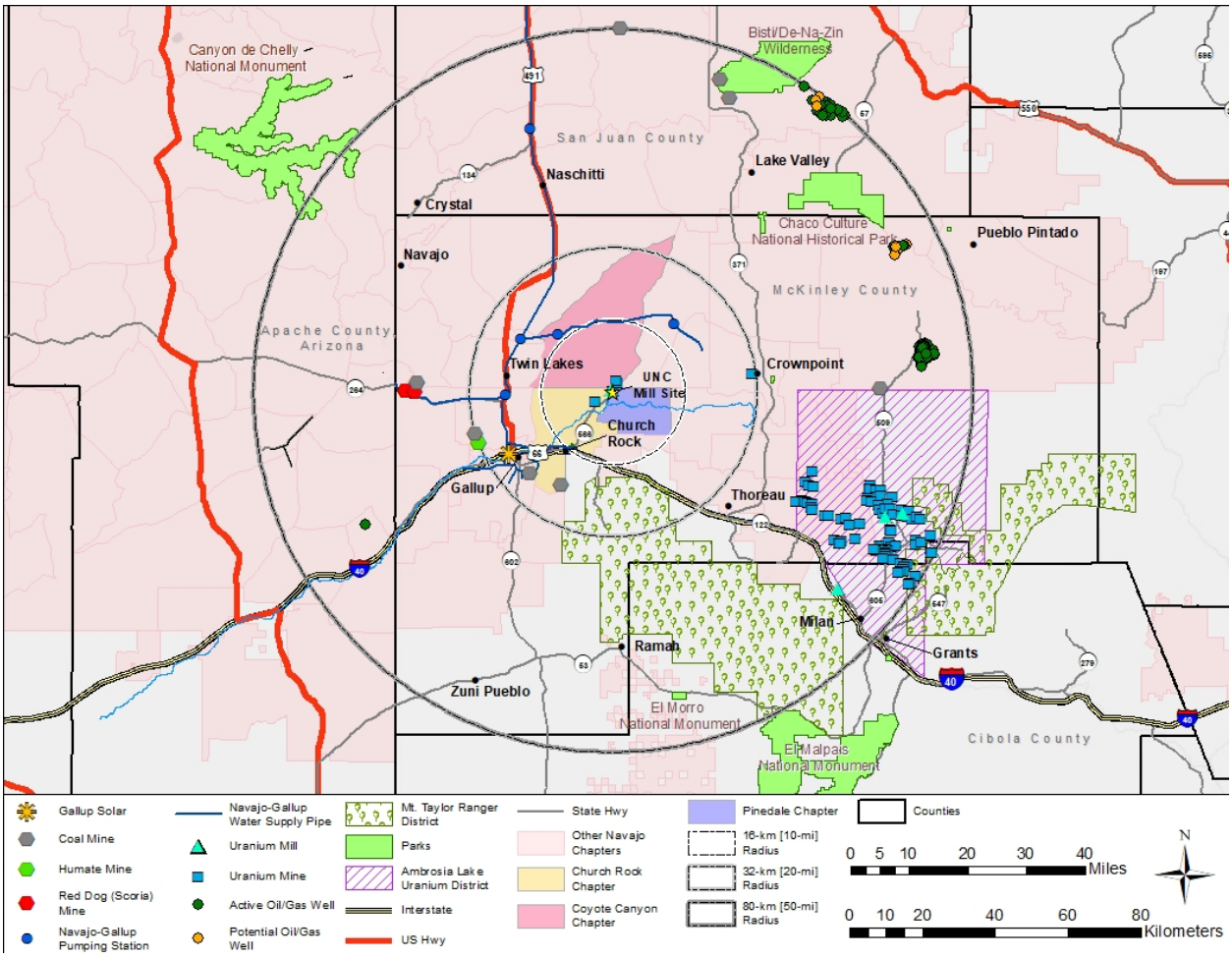


Exhibit D. Industrial and Commercial Activities Surrounding the Project Location

The NRC staff used the information about other actions along with the environmental setting discussed in Chapter 3 of the draft EIS and impacts described in Chapter 4 of the draft EIS to independently evaluate the potential cumulative impacts associated with the proposed disposal project. Exhibit E summarizes these cumulative impacts by indicating the impact level for each resource as determined in Chapter 4 (incremental impact) of the EIS for the proposed action and comparing it to the cumulative impact level (the incremental impact from the proposed action in combination with other actions). Exhibit E also accounts for cumulative impacts from the secondary alternatives, 1A (conveyor option) and 1B (cover material obtained from jetty area).

Exhibit E. Cumulative Impacts from the Proposed Action

| Resource Area | Cumulative Impact |
|---|---|
| Land Use | The SMALL incremental impacts of the proposed action, or from either of the secondary alternatives, when combined with the MODERATE impacts from other past, present, and reasonably foreseeable future actions, would result in overall MODERATE cumulative impacts to land use. |

Exhibit E. Cumulative Impacts from the Proposed Action

| Resource Area | Cumulative Impact |
|---|---|
| Transportation | The SMALL to MODERATE incremental impacts of the proposed action, or from either of the secondary alternatives, when combined with the SMALL impacts of other past, present, and reasonably foreseeable future actions, would result in overall MODERATE traffic-related impacts. The use of a conveyor system under Alternative 1A would eliminate the traffic impacts associated with proposed traffic controls at the NM 566 crossing. |
| Geology and Soils | The SMALL incremental impacts of the proposed action, or from either of the secondary alternatives, when combined with the MODERATE impacts from numerous other past, present, and reasonably foreseeable future actions, would result in overall MODERATE cumulative impacts to geology and soils. |
| Surface Water | The SMALL to MODERATE incremental impacts of the proposed action, or from either of the secondary alternatives, when combined with the MODERATE impact resulting from other past, present, and reasonably foreseeable future actions, would result in overall MODERATE cumulative impacts to surface water resources. |
| Groundwater | The SMALL incremental impacts of the proposed action, or from either of the secondary alternatives, when combined with the LARGE impacts from other past, present, and reasonably foreseeable future actions evaluated in the groundwater study area, would result in LARGE overall cumulative impacts to groundwater. The effects of past activities at the UNC Mill Site and the NECR Mine Site have most significantly impacted local groundwater within the proposed project area, and these existing impacts are currently being mitigated to meet NRC and EPA requirements. |
| Ecology | The SMALL to MODERATE incremental impacts of the proposed action, or from either of the secondary alternatives, when combined with the MODERATE impacts from other past, present, and reasonably foreseeable future actions in the study area, would result in overall MODERATE cumulative impacts to ecological resources. |
| Air Quality | The SMALL to MODERATE incremental impacts of non-greenhouse and greenhouse gas emissions from the proposed action, or from either of the secondary alternatives, when combined with the MODERATE impacts from other past, present, and reasonably foreseeable future actions, would result in MODERATE cumulative impacts to air quality. |
| Noise | The MODERATE incremental impacts of the proposed action, or from either of the secondary alternatives, when combined with the SMALL to MODERATE cumulative noise impacts from other past, present, and reasonably foreseeable future actions, would result in an overall MODERATE cumulative noise impact. |

Exhibit E. Cumulative Impacts from the Proposed Action

| Resource Area | Cumulative Impact |
|---|---|
| Historic and Cultural Resources | The SMALL incremental impacts (with mitigations) or MODERATE to LARGE incremental impacts (without mitigations) from the proposed action, or from either of the secondary alternatives, when added to the LARGE impacts to historic and cultural resources that have resulted from past mining and milling actions, would result in a LARGE cumulative impact. The programmatic agreement being developed by the NRC, EPA, Navajo Nation, and other agencies will ensure that potential future impacts to cultural and historic sites are mitigated or avoided. |
| Visual and Scenic Resources | The MODERATE incremental impact from the proposed action, or from either of the secondary alternatives, when added to the MODERATE impacts from other past, present, and reasonably foreseeable future actions, would result in a MODERATE overall cumulative impact to visual and scenic resources. |
| Socioeconomic Conditions | The SMALL incremental impacts of the proposed action, or from either of the secondary alternatives, when combined with the SMALL to MODERATE socioeconomic impacts from other past, present, and reasonably foreseeable future actions, would result in overall MODERATE cumulative impacts to socioeconomic conditions. |
| Environmental Justice | The proposed action or either of the secondary alternatives would have disproportionately high and adverse incremental impacts on environmental justice populations, especially on Navajo Nation communities. These impacts, when combined with the disproportionately high and adverse impacts to environmental justice communities from other past, present, and reasonably foreseeable future actions, would result in continued disproportionately high and adverse cumulative impacts. |
| Public and Occupational Health | The SMALL incremental impact of the proposed action, or from either of the secondary alternatives, when added to the temporary LARGE impacts of other past, present, and reasonably foreseeable future actions, would result in overall LARGE cumulative impacts. The LARGE impacts from other actions would decrease to SMALL once the remaining EPA cleanup actions in the area are completed. |
| Waste Management | The SMALL incremental impacts on waste management resources from the proposed action, or from either of the secondary alternatives, when added to the SMALL impacts from other past, present, and reasonably foreseeable future actions, would result in overall SMALL cumulative impacts on waste management resources. |

## WHAT ARE THE NRC'S CONCLUSIONS?

After considering the environmental impacts of the proposed action, the NRC staff's preliminary recommendation is that environmental considerations should not prevent the issuance of a license amendment to allow UNC to place mine waste from the NECR Mine Site on top of the uranium mill tailings pile at the UNC Mill Site. The NRC will make a decision about whether to

issue the license amendment after the safety evaluation report is complete and the final EIS has been published.

## WHAT IS THE NRC'S PROCESS FOR REVIEWING UNC'S APPLICATION?

When an applicant submits an application for a license or a license amendment, the NRC first determines if the application is sufficient to warrant a detailed review. If so, the agency "accepts" and "dockets" the application and begins parallel safety and environmental reviews for the proposed action. Exhibit F shows the NRC's process for reviewing UNC's application. The final product from the safety review is a report that assesses the safety of the proposed design of the repository that will be located on the UNC Mill Site. The final product from the environmental review is an EIS that describes the environmental effects of the proposed action.

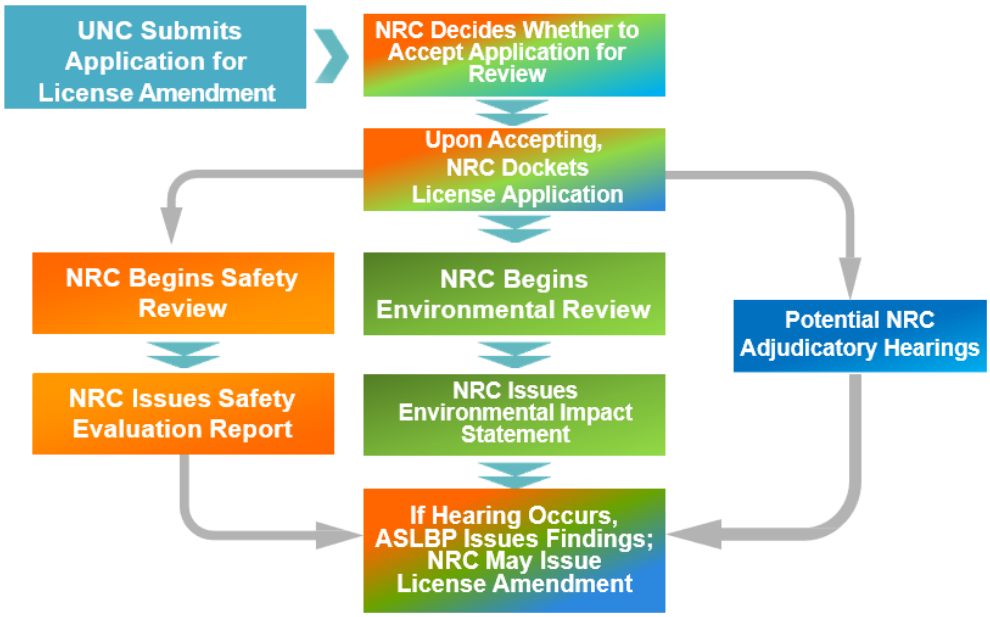


Exhibit F. License Application Review Process

### SAFETY REVIEW PROCESS

In its license amendment request, UNC proposes to modify its reclamation plan for the mill tailings impoundment to allow for placement of mine waste on top of the impoundment. The mine waste is regulated by the EPA under CERCLA and must be addressed to prevent the potential for endangerment to public health and the environment. Because the mine waste contains no source material, special nuclear material, or byproduct material, it is not NRC-regulated low-level radioactive waste as defined in 10 CFR Part 61, "Licensing Requirements for Land Disposal of Radioactive Waste." Nonetheless, the placement of this material on the NRC-regulated tailings impoundment needs to meet applicable NRC requirements, as discussed below.

The NRC's safety review verifies that the proposed design and performance of the tailings impoundment, as modified to accommodate the mine waste, will comply with NRC requirements for the protection of members of the public, workers, and the environment. The safety review assesses compliance with requirements in 10 CFR Part 40 (Domestic Licensing of Source Material) and in 10 CFR Part 20 (Standards for Protection Against Radiation) as they apply to UNC's proposed changes to its reclamation plan. The NRC staff's safety review, which is focused on these changes, includes an evaluation of the slope stability, settlement, and erosion resistance of the modified impoundment design, including how these aspects would affect or be affected by surface water drainage on and around the site. The review also includes an evaluation of the proposed engineering design for the disposal site cover. The initial results of the NRC staff's review are documented in a safety evaluation report, which is available at https://www.nrc.gov/docs/ML2021/ML20210M050.pdf.

## ENVIRONMENTAL REVIEW PROCESS

The environmental review includes a careful look at the potential environmental impacts of placing mine waste from the NECR Mine Site on top of the existing tailings impoundment at the UNC Mill Site, as well as potential mitigation measures for reducing the negative environmental effects. The NRC categorizes impacts as SMALL, MODERATE, or LARGE (see text box on page 8), or a range of these categories.

The environmental review includes consultation and coordination with representatives of local, state, and federal agencies and Tribal Nations. The NRC staff and contractor experts also conduct independent evaluations. These evaluations involve 1) review of the applicant's information about the proposal and its environment (documented in an environmental report or ER); 2) site evaluations of the NECR Mine Site and UNC Mill Site; 3) requests for further information from the applicant (requests for additional information or RAIs); 4) reviews of other published studies and reports; and, when necessary, 5) performance of additional analyses to evaluate the applicant's conclusions. The analysis of environmental impacts is documented in the EIS.

Members of the public can provide input to the environmental review during a public "scoping" period that takes place before a draft EIS is prepared and then again during a public comment period on the draft EIS. After publication of the draft EIS, another public comment period allows for members of the public to provide additional input during public meetings and through other oral or written correspondence. The final EIS will address public comments received on the draft EIS, as appropriate. Summaries of and responses to the public comments will be provided in an Appendix to the final EIS.

Exhibit G shows the process for environmental reviews leading up to a decision on the license amendment request. The blue blocks show times designated for public input. The yellow blocks are steps leading to draft EIS publication. The green blocks are steps leading to final EIS publication and the NRC licensing decision.

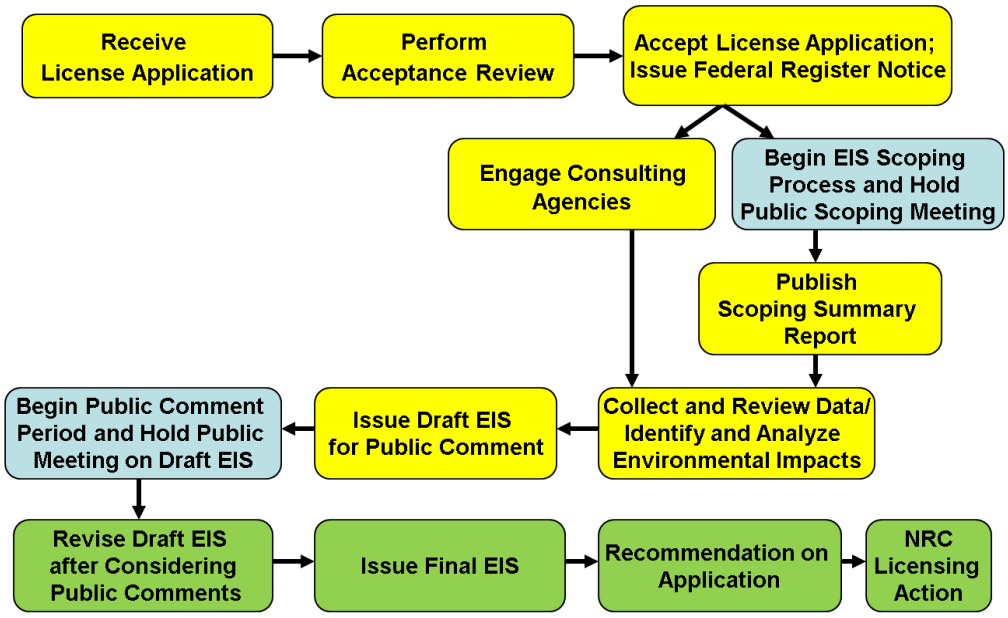


Exhibit G. NRC's Environmental Review Process

### NRC Review and Decision

In addition to safety and environmental reviews, a contested hearing may be held by a licensing board established by the NRC's Atomic Safety and Licensing Board Panel. In accordance with its hearing requirements, the NRC published a "Notice of Opportunity for Hearing" to announce an opportunity for the public to request an adjudicatory hearing on UNC's license amendment request. A hearing would occur if an individual or organization files a petition raising safety or environmental concerns about the proposed license amendment and the board accepts the issues (or contentions) into the hearing. After a hearing, the board makes a decision about the issues raised, and this decision may be appealed to the Commission. Currently, no petitions have been submitted for hearing on this project.

The NRC will make its licensing decision regarding the application only after all of the reviews (safety and environmental) have been completed.

## Who Else Did the NRC Work with on this EIS?

The NRC staff coordinated with the EPA, DOE, the Bureau of Indian Affairs (BIA), the NNEPA, the New Mexico Department of Game and Fish, the New Mexico Environment Department, and McKinley County during the development of the draft EIS. All of these agencies shared information regarding the site and surrounding area and provided input to or comments on a preliminary version of the draft EIS. The NRC also coordinated with the EPA to understand the relationship between EPA's CERCLA authority and actions on the NECR Mine Site and the NRC's license amendment review for the UNC Mill Site. Additionally, the NRC staff met with local Navajo Nation citizens to better understand how the mine and mill sites have impacted the Navajo people and how the proposed action could affect nearby communities

disproportionately. The NRC will continue coordinating with these agencies and communities through completion of the final EIS in 2021.

The EIS also describes NRC consultation activities under Section 106 of the National Historic Preservation Act (see Section 1.72. of the draft EIS). As part of this consultation process, the NRC consulted with the Advisory Council on Historic Preservation, the New Mexico State Historic Preservation Office, the Navajo Nation Heritage and Historic Preservation Department, the Hopi Cultural Preservation Office, as well as the DOI/BIA and EPA. The NRC and EPA are developing a programmatic agreement to describe agency roles and to document how UNC will ensure the protection of cultural resources during the cleanup action. Sections 3.9, 4.9, and 5.9 of the draft EIS provide more information about cultural resources, surveys, and potential impacts on the NECR Mine Site and the UNC Mill Site.

## WHAT ARE THE NEXT STEPS IN THE ENVIRONMENTAL REVIEW?

The draft EIS has been issued for public review and comment. The NRC will hold two public meetings via webinar and telephone that will be announced on the NRC's public meetings web page: https://www.nrc.gov/pmns/mtg.

You can provide comments on the draft EIS at the meetings or in any of the following additional ways:

**E-mail**: UNC-ChurchRockEIS.Resource@nrc.gov

**Online**: https://www.regulations.gov/ (search for Docket ID NRC-2019-0026)

**Voicemail**: at this toll-free number: 888-672-3425

**Mail**: Office of Administration, Mailstop T7-A60M, Attn: Program Management, Announcements and Editing Staff, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001

### FOR MORE INFORMATION

View an online version of the draft EIS at https://www.nrc.gov/info-finder/decommissioning/uranium/united-nuclear-corporation-unc-public-mtgs.html or at https://www.nrc.gov/docs/ML2028/ML20289A621.pdf

Review a printed or electronic copy of the draft EIS:
Octavia Fellin Public Library
115 West Hill Avenue
Gallup, New Mexico 87301

Scan the QR code:

Contact the NRC Environmental Project Managers:
Ashley Waldron at Ashley.Waldron@nrc.gov
Christine Pineda at Christine.Pineda@nrc.gov


UNITED STATES NUCLEAR REGULATORY COMMISSION