

**UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 9**

**IN THE MATTER OF:
Northeast Church Rock Mine Site
New Mexico**

**United Nuclear Corporation and
The General Electric Company,
Respondents**

**ADMINISTRATIVE SETTLEMENT
AGREEMENT
AND ORDER ON CONSENT
FOR TIME CRITICAL REMOVAL
ACTION AND COST RECOVERY**

**U.S. EPA Region 9
CERCLA Docket No. 2012-02**

**Proceeding Under Sections 104, 106(a), 107
and 122 of the Comprehensive Environmental
Response, Compensation, and Liability Act, as
amended, 42 U.S.C. §§ 9604, 9606(a), 9607
and 9622**

**ADMINISTRATIVE ORDER ON CONSENT
TIME CRITICAL REMOVAL ACTION
(EASTERN DRAINAGE)
FOR NORTHEAST CHURCH ROCK MINE SITE**

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I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Settlement Agreement and Order on Consent (“Settlement Agreement”) is entered into by the United States Environmental Protection Agency (“EPA”) and United Nuclear Corporation (“UNC”) and The General Electric Company (“GE”). UNC and GE shall be referred to collectively as “Respondents.” This Settlement Agreement provides for Respondents’ performance of a Time Critical Removal Action as defined in Paragraph 10 and other actions as provided herein as well as Respondents’ reimbursement of certain response costs incurred by the United States at or in connection with the Northeast Church Rock Mine site (the “Site” or “Mine Site” or “NECR Mine Site”) located northeast of Gallup, New Mexico, in Sections 34 and 35, Township 17 North, Range 16 West and Section 3, Township 16 North, Range 16 West in McKinley County, New Mexico. The Site vicinity is shown in the Maps in Appendix A. Most of the Site lies within Navajo tribal trust lands administered by the Bureau of Indian Affairs on behalf of the Eastern Agency of the Navajo Nation.

2. This Settlement Agreement is issued under the authority vested in the President of the United States by Sections 104, 106(a), 107 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9604, 9606(a), 9607 and 9622, as amended (“CERCLA”).

3. EPA has notified the Environment Department and the Mining and Minerals Division of the State of New Mexico (the “State”) and the Navajo Nation of this action pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

4. EPA and Respondents recognize that this Settlement Agreement has been negotiated in good faith and that the actions undertaken by Respondents in accordance with this Settlement Agreement do not constitute an admission of any liability. Respondents do not admit, and retain the right to controvert in any subsequent proceedings other than proceedings to implement or enforce this Settlement Agreement, the validity of the findings of facts, conclusions of law, and determinations in Sections IV and V of this Settlement Agreement. Respondents agree to comply with and be bound by the terms of this Settlement Agreement and, subject to the terms of this Settlement Agreement, agree to perform all actions required by this Settlement Agreement and any modifications thereto, and further agree that they will not contest the basis or validity of this Settlement Agreement or its terms. By entering into this Settlement Agreement, Respondents do not consent or submit to and specifically deny any claims of jurisdiction by the Navajo Nation over Respondents.

5. Under this Settlement Agreement, Respondents will perform the Time Critical Removal Action related to the Eastern Drainage Area (hereinafter the “Eastern Drainage Removal Action” or “EDRA”) as provided herein, and described in the September 26, 2011 Action Memorandum and the attached Scope of Work, provided as Appendix B and C, respectively, to this Settlement Agreement, and will reimburse EPA’s Past Response Costs and Future Response Costs as provided in this Settlement Agreement. EPA recognizes that there appears to be some commingling of contamination from the NECR Mine Site and the nearby Quivira Mine Site in several areas, including the NECR Mine Site Step Out Area No. 1, the Red Water Pond Road Area (“RWPR Area”) and the Eastern Drainage Removal Action Area (“EDRA Area”) (see

Appendix A Map of NECR Mine Site & Vicinity). It appears that UNC/GE has cleaned up commingled contamination in the area labeled "Step-Out Area No. 1," and it also appears that UNC/GE will clean up commingled contamination in the EDRA Area pursuant to this Settlement Agreement. As a result, EPA has determined that GE will not be required to clean up the RWPR Area, which includes the road bed and the shoulders of that road. It is EPA's intent to clean up and/or require parties other than UNC/GE to cleanup, as part of the RWPR Removal Action, any contamination that is released to the areas surrounding the RWPR Area, including the EDRA Area, as a result of the cleanup of the RWPR Area.

II. PARTIES BOUND

6. This Settlement Agreement applies to and is binding upon EPA and upon Respondents and their successors and assigns. Any change in ownership or corporate status of Respondents including, but not limited to, any transfer of assets or real or personal property shall not alter Respondents' responsibilities under this Settlement Agreement.
7. As between Respondents GE and UNC, Respondents are jointly and severally liable for carrying out all activities required by this Settlement Agreement. In the event of the insolvency or other failure of any one or more Respondents to implement the requirements of this Settlement Agreement, the remaining Respondent shall complete all such requirements.
8. Respondents shall ensure that their contractors, subcontractors, and representatives performing any portion of the Work as defined herein receive a copy of this Settlement Agreement and comply with this Settlement Agreement. Respondents shall be responsible for any noncompliance with this Settlement Agreement.
9. EPA intends to consult with and coordinate with the Navajo Nation throughout the performance of the Work and implementation of this Settlement Agreement, and to take Navajo Nation's comments and concerns into consideration. EPA's failure to do so, however, will not affect Respondents' rights or obligations under this Settlement Agreement.

III. DEFINITIONS

10. Unless otherwise expressly provided in this Settlement Agreement, terms used in this Settlement Agreement which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Settlement Agreement or in the appendices attached hereto and incorporated hereunder, the following definitions shall apply:

a. "Action Memorandum" or "Action Memo" shall mean the EPA Action Memorandum relating to the Site signed on September 26, 2011, by the Assistant Director of the Partnership, Land Revitalization and Cleanup Branch, Superfund Division, Region IX, and all attachments thereto. The Action Memorandum is attached as Appendix B.

b. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. § 9601, *et seq.*

c. "Day" shall mean a calendar day. In computing any period of time under this Settlement Agreement, where the last day would fall on a Saturday, Sunday, or Federal holiday, the period shall run until the close of business of the next working day.

d. "Eastern Drainage Removal Action" or "EDRA" shall mean the response action described in the Action Memorandum provided as Attachment B.

e. "EDRA Area" shall mean the areas of the Site where additional investigation and excavation will be performed, as described in the attached Action Memorandum, provided as Appendix B, and in the Scope of Work, provided as Appendix C.

f. "Effective Date" shall be the effective date of this Settlement Agreement as provided in Section XXXI.

g. "EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

h. "Future Response Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that EPA Region 9 incurs beginning on October 1, 2011 through December 31, 2012 (with the exception of costs incurred in connection with the Technical Assistance Services for Communities ("TASC") contract for the Red Water Pond Road Community Association), in reviewing or developing plans, reports and other items for the Eastern Drainage Removal Action, including pursuant to this Settlement Agreement, verifying the Work, or otherwise implementing, overseeing, or enforcing this Settlement Agreement, including but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, the costs incurred to prepare decision documents, the costs incurred pursuant to Section IX (Site Access), including all costs, attorneys fees, monies paid to secure access and any payment of just compensation, as well as NECR Mine Site Housing Costs (as defined in Paragraph 10.m), and costs associated with Section XIII (Emergency Response), and Paragraph 71 (Work Takeover). Future Response Costs shall also include all Interest, including but not limited to Interest that accrues pursuant to 42 U.S.C. § 9607(a) on Past Response Costs under this Settlement Agreement. Future Response Costs shall not include RWPR Area Costs (as defined in Paragraph 10.t). With the exception of RWPR Area Costs, the United States reserves the right to recover all response costs incurred by the United States in connection with the Site during this Future Response Costs time-period, including all costs that are excluded by this definition, and there is no waiver of the United States' right to seek recovery of such costs either express or implied by this subparagraph.

i. "Interest" shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year.

j. "NECR Mine" shall mean the Northeast Church Rock Mine, a former uranium mine, and associated structures and lands, collectively encompassing approximately 125 acres, located approximately 16 miles northeast of Gallup, New Mexico near the intersection of State Highway 566 and Red Water Pond Road and located largely on Navajo tribal trust lands within the Eastern Agency of the Navajo Nation.

k. "National Contingency Plan" or "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

l. "Navajo Nation EPA" or "NNEPA" shall mean the Navajo Nation Environmental Protection Agency and any successor departments or agencies of the Navajo Nation.

m. "NECR Mine Site Housing Costs" shall mean that portion of the costs associated with providing voluntary alternative housing, as described in Paragraph 17 of this Settlement Agreement, that EPA has attributed to the EDRA. For purposes of this Settlement Agreement only, EPA has attributed 67 percent of the total costs of providing voluntary alternative housing to the EDRA, if the RWPR Area cleanup is completed during or directly following the period of time in which affected residents are out of their homes for the EDRA, resulting in a single alternative housing effort. In the event that the EDRA work is completed during a single alternative housing effort and no work is done on the RWPR Area cleanup during that period, then GE will pay 100% of the costs of that single period of alternative housing. In the event that residents need to be moved to alternative housing a second time, to accommodate completion of either the EDRA and/or the RWPR Area cleanup, the costs of the second alternative housing effort will be shared as follows: (a) if need for additional alternative housing is due solely to the need to complete the RWPR Area cleanup, UNC/GE will not be required to share in the funding of that effort, (b) if need for additional alternative housing is due solely to the need to complete the EDRA, then 100% of those costs will be paid by UNC/GE, and (c) if the need for additional alternative housing is due to the need to complete both the EDRA and RWPR Area cleanup then GE will pay 67 percent of that second period of alternative housing.

n. "Paragraph" shall mean a portion of this Settlement Agreement identified by an Arabic numeral.

o. "Parties" shall mean EPA and Respondents.

p. "Past Response Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that the United States paid at or in connection with the Site from August 1, 2010 through September 30, 2011.

q. "RCRA" shall mean the Solid Waste Disposal Act, as amended, 42 U.S.C. §§ 6901, *et seq.* (also known as the Resource Conservation and Recovery Act).

r. "Respondents" shall mean the United Nuclear Corporation ("UNC") and the General Electric Company ("GE").

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s. "RWPR Area" shall mean the roadbed and shoulders of Red Water Pond Road running from Highway 566 to the turn-off to the Quivira Mines.

t. "RWPR Area Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that EPA Region 9 incurs relating to response actions at the RWPR Area. For purposes of this Settlement Agreement only, the RWPR Area Costs include 33 percent of the total costs of providing alternative housing, as described in Paragraph 17 of this Settlement Agreement, that EPA has attributed to the removal actions at the RWPR Area. However, consistent with paragraph 10.m. above, this 33 percent allocation only applies if the RWPR Area cleanup is completed during or directly following the period of time in which affected residents are out of their homes for the EDRA, resulting in a single alternative housing effort. In the event that residents need alternative housing for a second time period, the provisions of paragraph 10 m will apply.

u. "Section" shall mean a portion of this Settlement Agreement identified by a Roman numeral.

v. "Settlement Agreement" shall mean this Administrative Settlement Agreement and Order on Consent and all appendices attached hereto, which are listed in Section XXX (Severability, Integration and Appendices). In the event of conflict between this Settlement Agreement and any appendix, this Settlement Agreement shall control.

w. "Site" shall mean the NECR Mine and other areas where hazardous substances associated with the Northeast Church Rock Mine have been deposited, stored, disposed of, placed, or otherwise come to be located.

x. "State" shall mean the State of New Mexico.

y. "Time Critical Removal Action" shall mean the EDRA and the Work, as defined herein.

z. "Waste Material" shall mean 1) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); 2) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); and 3) any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27).

aa. "Work" shall mean all activities Respondents are required to perform under this Settlement Agreement.

IV. FINDINGS OF FACT

EPA hereby finds the following facts, which Respondents do not admit:

11. The NECR Mine is a mining area of approximately 125 acres. The NECR Mine was operated by Respondent UNC under the terms of a mineral lease with the predecessors of what is now Newmont Mining Corporation as owner of the mineral estate. The surface estate of this

portion is owned by the United States in trust for the Navajo Nation.

12. The NECR Mine is adjacent to the UNC National Priorities List (“NPL”) site (“the Mill Site”). Respondent UNC currently owns and is remediating the Mill Site under the oversight of the Nuclear Regulatory Commission (“NRC”) and Region 6 of the EPA. The Mine Permit Area was one of the sources of uranium ore for the adjacent Mill site. Respondent UNC operated the mine from approximately 1967 to 1982. The mining operations consisted of two underground mine shafts, a series of vent holes, and support facilities. The Site currently includes uranium mine waste piles, several former ponds and former sand fill (mill tailings) storage areas, a debris pile and other prior support activities areas. The conditions at the Site present a risk of potential releases of hazardous substances to the air, surrounding soils, sediments, surface water, and ground water. Kerr McGee Corporation operated other former uranium mines, including the Quivira Mine Site, which is situated in close proximity to the Site. Materials from the Kerr-McGee operations reportedly were dispersed on Red Water Pond Road by the haul trucks on their way to the Kerr McGee mill. In addition, the road bed may be constructed of waste ore.

13. The State’s Mining and Minerals Division asserted jurisdiction over the mine under the New Mexico Mining Act in 1994. In August 2004, the New Mexico Environment Department issued a letter requiring a groundwater abatement plan to Respondent UNC. In January 2005, the Navajo Nation communicated to the State the Nation’s determination that the majority of the NECR Mine is on lands that were assigned to the Navajo Nation in the 1880s.

14. Under a 1991 Memorandum of Agreement between the Navajo Nation and EPA Regions 6, 8 and 9, EPA Region 9 has the lead on any EPA response action on lands within the Navajo Nation. On March 11, 2005, the Navajo Nation requested that EPA take the jurisdictional lead on overseeing the reclamation and remediation of the Site, pursuant to the Memorandum of Agreement. The State has agreed to defer to EPA Region 9 enforcement with respect to the Site.

15. The NECR Mine is subject to a National Pollutant Discharge Elimination System (“NPDES”) General Storm Water Permit, effective September 29, 2008, issued by EPA.

16. Portions of the NECR Mine were subject to a source materials license from the NRC. In 1987, NRC issued a memorandum stating the following: “Based on the equilibrium ratio data, UNC concluded that remaining Ra-226 levels in excess of the Criterion 5 limit result from low grade ore or mine waste. In addition, staff review of the data for areas exceeding 7 pCi/g indicates the U-nat values are significantly higher than the low values which would be expected from tailings. Based on the equilibrium ration and U-nat data provided by the licensee, the staff concludes that UNC has adequately removed remaining byproduct material from the mine site. No further action is therefore necessary.”

17. Residences to the northeast of the NECR Mine and west and southwest of the former Kerr-McGee Mine may have been impacted by releases of hazardous substances and contaminants transported by wind, historic dewatering of mining operations, and runoff during snow, rain and flood events. In addition, some residents located in proximity to the activities to be performed as part of the EDRA as well as activities related to removal actions at the RWPR NE Church Rock EDRA AOC July 2012

Area, pursuant to this Settlement Agreement, will be affected by these activities to a degree that EPA has determined justifies offering voluntary alternative housing options.

18. EPA has detected elevated levels of alpha radiation at the Site and radium-226 in the surface soils of the Eastern Drainage Area shown in the Maps provided in Appendix A. Radium is a "hazardous substance" as defined by section 101(14) of CERCLA.

19. This Settlement Agreement reserves and does not address investigation and cleanup of groundwater, among other items. Drinking water from the Mariano Lake Chapter public water supply is available to residents to the northeast of the NECR Mine.

V. CONCLUSIONS OF LAW AND DETERMINATIONS

20. Based on the Findings of Fact set forth above, and the Administrative Record supporting this removal action, EPA has determined that:

a. The Northeast Church Rock Mine is a "facility" as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

b. The contamination found at the Site, as identified in the Findings of Fact above, includes "hazardous substances" as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

c. Each of the Respondents is a "person" as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

d. Respondent UNC is a responsible party under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), and is liable for performance of response actions and for response costs incurred and to be incurred at the Site.

i. Respondent UNC was the "operator" of the facility at the time of disposal of hazardous substances at the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2).

ii. In 1997, Respondent UNC became a wholly-owned, indirect, subsidiary of Respondent GE. Respondent GE is providing financial assurance for the Work and, as a Respondent, guarantees performance of the Work.

e. The conditions described in the Findings of Fact above constitute an actual or threatened "release" of a hazardous substance from the facility as defined by Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

f. The EDRA required by this Settlement Agreement is necessary to protect the public health, welfare, or the environment and, if carried out in compliance with the terms of this Settlement Agreement, will be considered consistent with the NCP, as provided in Section 300.700(c)(3)(ii) of the NCP.

g. The EDRA required by this Settlement Agreement meets the criteria for a removal action under Section 300.415(b) of the NCP.

h. EPA has determined that the actions required by this Settlement Agreement justify EPA offering residents who will be significantly impacted by disruptions associated with the EDRA the opportunity to participate in voluntary alternative housing.

VI. SETTLEMENT AGREEMENT AND ORDER

21. Based upon the foregoing Findings of Fact, Conclusions of Law, Determinations, and the Administrative Record for this Site, it is hereby Ordered and Agreed that Respondents shall comply with all provisions of this Settlement Agreement, including, but not limited to, all attachments to this Settlement Agreement and all documents incorporated by reference into this Settlement Agreement.

VII. DESIGNATION OF CONTRACTOR, PROJECT COORDINATOR, AND ON-SCENE COORDINATOR

22. Respondents shall retain one or more contractors to perform the Work and shall notify EPA of the name(s) and qualifications of such contractor(s) within thirty (30) days of the Effective Date. Respondents shall also notify EPA of the name(s) and qualification(s) of any other contractor(s) or subcontractor(s) retained to perform the Work at least seven (7) days prior to commencement of such Work. EPA retains the right to disapprove of any or all of the contractors and/or subcontractors retained by Respondents. If EPA disapproves of a selected contractor, Respondents shall retain a different contractor and shall notify EPA of that contractor's name and qualifications within thirty (30) days of EPA's disapproval. The proposed contractor(s) must demonstrate compliance with ANSI/ASQC E-4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs" (American National Standard, January 5, 1995), by submitting a copy of the proposed contractor's Quality Management Plan ("QMP"). The QMP should be prepared in accordance with "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B0-1/002), or equivalent documentation as required by EPA. EPA hereby approves the use of Respondents' existing contractors MACTEC Development Corporation and MWH Americas.

23. Respondents have designated a Project Coordinator for this Project:

Lance Hauer, Project Manager
Corporate Environmental Programs
The General Electric Company
640 Freedom Business Center
King of Prussia, PA 19406
(610) 992-7972
Email: "Lance Hauer" lance.hauer@ge.com
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If Respondents' Project Coordinator will be away from the Site during Work at the Site, he may notify EPA that he has designated an Alternate Project Coordinator and provide all appropriate contact information for the Alternate Project Coordinator. To the greatest extent possible, the Project Coordinator or the Alternate Project Coordinator shall be present on Site or readily available during Site work. EPA retains the right to disapprove of the designated Project Coordinator or Alternate Project Coordinator. If EPA disapproves of the designated Project Coordinator or Alternate Project Coordinator, Respondents shall retain a different Project Coordinator and/or Alternate Project Coordinator and shall notify EPA of that person's name, address, telephone number, and qualifications within fifteen (15) days following EPA's disapproval. Receipt by Respondents' Project Coordinator or Alternate Project Coordinator of any notice or communication from EPA relating to this Settlement Agreement shall constitute receipt by the Respondents.

24. EPA has designated Sara Jacobs and Mark Ripperda, Remedial Project Managers in the Region 9 Superfund Division as its On-Scene Coordinators ("OSCs"). Except as otherwise provided in this Settlement Agreement, Respondents shall direct all submissions required by this Settlement Agreement to both OSCs and to the Navajo Nation, by U.S. Mail, overnight mail, facsimile, or email, as follows:

Sara Jacobs
U.S. EPA, Mail Code SFD-6-2
75 Hawthorne St.
San Francisco, CA 94105
Telephone 415-972-3564
Facsimile 415-947-3528
Email Jacobs.Sara@epa.gov

and

Mark Ripperda
U.S. EPA, Mail Code SFD-6-2
75 Hawthorne St.
San Francisco, CA 94105
Telephone 415-972-3028
Facsimile 415-947-3528
Email ripperda.mark@epa.gov

and

Michele Dineyazhe
NNEPA Superfund
PO Box 2946
Window Rock, AZ 86511
Telephone 928-871-7820
Facsimile 928-871-7333
Email dineyazhe.michele@epa.gov

Two hard copies of all submittals pursuant to the Scope of Work shall be provided to Mark Ripperda, EPA Project Manager, at the address above, and one hard copy of all submittals pursuant to the Scope of Work shall be provided to Michele Dineyazhe of NNEPA at P.O. Box 2946, Window Rock, Navajo Nation, Arizona, 86515. In addition, in all cases where a non-email submission is required or selected, an email shall also be sent with the same information, including an email to Michele Dineyazhe of NNEPA at dineyazhe.michele@epa.gov. If, however, sending the materials by email is impractical due to the size of the file, then the email shall provide notice that hard copies of the submission have been sent.

25. EPA and Respondents shall have the right, subject to the requirements of this Section, to change their respective designated OSC(s) or Project Coordinator. Respondents shall notify EPA fifteen (15) days before such a change is made. The initial notification may be made orally, but shall be promptly followed by a written notice. The Navajo Nation may change its contact person by written notice to EPA and Respondents.

VIII. WORK TO BE PERFORMED

Respondents shall perform, at a minimum, all actions necessary to implement the Eastern Drainage Removal Action, as described in the attached Scope of Work, Appendix C.

All Work will be conducted in compliance with all applicable regulatory requirements and with the Applicable, Relevant and Appropriate Requirements (“ARARs”) identified in EPA’s Action Memo for the EDRA, provided as Appendix B, as well as in accordance with the Health and Safety Plan developed pursuant to this Settlement Agreement.

26. Work Plan Approval. Respondents shall submit to EPA a Work Plan, consistent with the requirements of the Scope of Work provided as Appendix C.

27. Submittals, Approvals and Implementation. EPA, after consultation with NNEPA, will approve, disapprove, require revisions to, or modify, in whole or in part, all documents submitted under this Settlement Agreement (collectively, “Submittals”), provided such revisions or modifications do not materially expand the Scope of Work. EPA has agreed to make best efforts to provide its review of and responses to all submittals within 4-weeks time and within 2-weeks time for submittals related to Site activities while they are in progress. If EPA requires revisions, Respondents shall submit a revised Submittal within thirty (30) days of receipt of EPA's notification of the required revisions, unless EPA requires a shorter period for these revisions. Respondents shall implement the Submittal as approved in writing by EPA in accordance with the schedule approved by EPA. Once approved, or approved with modifications, the Submittal, the Schedule, and any subsequent modifications shall be deemed incorporated into and become fully enforceable under this Settlement Agreement. All Work under this Settlement Agreement and/or any approved Work Plan(s) shall be conducted in accordance with the provisions of this Order, CERCLA, the NCP and relevant EPA guidance. Respondents shall not commence any Work, except in conformance with the terms of this Settlement Agreement. Respondents shall

not commence implementation of any Work Plan developed hereunder until receiving EPA approval.

28. Quality Assurance and Sampling.

a. All sampling and analyses performed pursuant to this Settlement Agreement shall conform to EPA direction, approval, and guidance, after consultation with NNEPA, regarding sampling, quality assurance/quality control ("QA/QC"), data validation, and chain of custody procedures. Respondents shall ensure that the laboratory used to perform the analyses participates in a QA/QC program that complies with the appropriate EPA guidance. Respondents shall follow, as appropriate, "Quality Assurance/Quality Control Guidance for Removal Activities: Sampling QA/QC Plan and Data Validation Procedures" (OSWER Directive No. 9360.4-01, April 1, 1990), as guidance for QA/QC and sampling. Respondents shall only use laboratories that have a documented Quality System that complies with ANSI/ASQC E-4 1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs" (American National Standard, January 5, 1995), and "EPA Requirements for Quality Management Plans (QA/R-2) (EPA/240/B-01/002, March 2001)," or equivalent documentation as determined by EPA. EPA may consider laboratories accredited under the National Environmental Laboratory Accreditation Program ("NELAP") as meeting the Quality System requirements.

b. Upon request by EPA, Respondents shall have such a laboratory analyze samples submitted by EPA for QA monitoring. Respondents shall provide to EPA the QA/QC procedures followed by all sampling teams and laboratories performing data collection and/or analysis.

c. Upon request by EPA and/or the NNEPA, Respondents shall allow EPA and/or the NNEPA, or their authorized representatives, to take split and/or duplicate samples. Respondents shall notify EPA not less than fifteen (15) days in advance of any sample collection activity, unless shorter notice is agreed to by EPA. EPA shall have the right to take any additional samples that EPA deems necessary. Upon request, EPA shall allow Respondents to take split or duplicate samples of any samples it takes as part of its oversight of Respondents' implementation of the Work.

d. Respondents shall submit validated data to EPA electronically (MS Office compatible) within two (2) business days of its receipt by Respondents.

29. In accordance with the Scope of Work and any approved Work Plan schedule, or as otherwise directed by EPA, Respondents shall submit a proposal for post-removal site control consistent with Section 300.415(l) of the NCP and OSWER Directive No. 9360.2-02. Upon EPA approval, Respondents shall implement such controls and shall provide EPA with documentation of all post-removal site control arrangements.

30. Reporting. Unless otherwise directed in writing by the OSC, Respondents shall submit a written progress report to EPA and NNEPA concerning actions undertaken pursuant to this Settlement Agreement every month after the Effective Date of this Settlement Agreement until

termination of this Settlement Agreement. These reports shall describe all significant developments during the preceding period, including the actions performed and any problems encountered, analytical data received during the reporting period, and the developments anticipated during the next reporting period, including a schedule of actions to be performed, anticipated problems, and planned resolutions of past or anticipated problems.

a. Respondents shall submit three (3) copies of all plans, reports or other submissions required by this Settlement Agreement or any approved work plan, with two copies to be sent to US EPA and one copy to be sent to NNEPA. Upon request by EPA, Respondents shall submit such documents in electronic form whenever feasible.

b. Any Respondent who owns or controls real property at the Site shall, at least thirty (30) days prior to the conveyance of any interest in real property at the Site, give written notice to the transferee that the property is subject to this Settlement Agreement and written notice to EPA and the Navajo Nation of the proposed conveyance, including the name and address of the transferee. Any Respondent who owns or controls real property at the Site also agrees to require that its successors comply with the immediately preceding sentence and Sections IX (Site Access) and X (Access to Information).

31. **Final Report.** Within ninety (90) days after receipt of analytical results, Respondents shall submit for EPA review and EPA approval after EPA consultation with NNEPA, a final report (the Eastern Drainage Removal Action Report) summarizing the actions taken to comply with this Settlement Agreement. The final report shall conform, to the extent applicable, with the requirements set forth in Section 300.165 of the NCP entitled "OSC Reports," and with "Superfund Removal Procedures: Removal Response Reporting – POLREPS and OSC Reports" (OSWER Directive No. 9360.3-03, June 1, 1994). The final report shall include a good faith estimate of total costs or a statement of actual costs incurred in complying with the Settlement Agreement, a listing of quantities and types of materials removed off-Site or handled on-Site, a discussion of removal and disposal options considered for those materials, a listing of the ultimate destination(s) of those materials, a presentation of the analytical results of all sampling and analyses performed, and all manifests and permits generated during the removal action. The final report shall also include the following certification signed by a person who supervised or directed the preparation of that report:

"Under penalty of law, I certify that to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of the report, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

32. **Off-Site Shipments**

a. Respondents shall, prior to any off-Site shipment of Waste Material from the Site to an out-of-state waste management facility, provide written notification of such shipment of Waste Material to the appropriate state environmental official in the receiving facility's state and to the

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On-Scene Coordinator. However, this notification requirement shall not apply to any off-Site shipments when the total volume of all such shipments will not exceed 10 cubic yards.

i. Respondents shall include in the written notification the following information: 1) the name and location of the facility to which the Waste Material is to be shipped; 2) the type and quantity of the Waste Material to be shipped; 3) the expected schedule for the shipment of the Waste Material; and 4) the method of transportation. Respondents shall notify the state in which the planned receiving facility is located of major changes in the shipment plan, such as a decision to ship the Waste Material to another facility within the same state, or to a facility in another state.

ii. The identity of the receiving facility and state will be determined by Respondents following the award of the contract for the removal action. Respondents shall provide the information required by subparagraphs a. and b. of this Paragraph, as soon as practicable after the award of the contract and before the Waste Material is actually shipped.

b. Before shipping any hazardous substances, pollutants, or contaminants from the Site to an off-site location, Respondents shall obtain EPA's certification that the proposed receiving facility is operating in compliance with the requirements of CERCLA Section 121(d)(3), 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. Respondents shall only send hazardous substances, pollutants, or contaminants from the Site to an off-site facility that complies with the requirements of the statutory provision and regulation cited in the preceding sentence. Off-site transfers of laboratory samples and wastes pursuant to 40 C.F.R. § 300.440(a)(5) are not subject to the requirements of this subparagraph.

IX. SITE ACCESS

33. If the Site, or any other property where access is needed to implement this Settlement Agreement, is owned or controlled by Respondents, Respondents shall, commencing on the Effective Date: (1) provide EPA and its representatives, including contractors, with access at all reasonable times to the Site, or such other property, for the purpose of conducting any activity related to this Settlement Agreement, and (2) provide the NNEPA and its designated representatives, including technical contractors, with access at all reasonable times to the Site, or such other property, for the purpose of overseeing, observing, monitoring, and taking split samples, during any EPA activities related to this Settlement Agreement.

34. With regard to access to the residences and residential yards affected by the Work, Respondents shall consult with EPA and NNEPA on a coordinated access approach, which will include EPA and NNEPA making the initial effort to obtain necessary access agreements. Where any action under this Settlement Agreement is to be performed in areas owned by or in possession of someone other than Respondents, Respondents shall use their best efforts to obtain all necessary access agreements within fifteen (15) days after the Effective Date, or as otherwise specified in writing by the OSC. Respondents shall immediately notify EPA and the Navajo Nation if, after using their best efforts, Respondents are unable to obtain such agreements. For purposes of this Paragraph, "best efforts" includes the payment of reasonable sums of money in consideration of access. Respondents shall describe in writing Respondents' efforts to obtain

access. EPA may then assist Respondents in gaining access, to the extent necessary to effectuate the response actions described herein, using such means as EPA deems appropriate. Respondents shall reimburse EPA for all costs and attorney's fees incurred by the United States in obtaining such access, in accordance with the procedures in Section XV (Payment of Response Costs). EPA is informed that NNEPA will provide the Navajo Nation's authorization to access Navajo lands in the form of an appropriately executed authorization letter.

35. Commencing on the Effective Date of this Settlement Agreement, Respondents shall refrain from using the EDRA Area in any manner that would interfere with or adversely affect the implementation, integrity, or protectiveness of the response measures to be implemented pursuant to this Settlement Agreement. Such restricted or prohibited activities in the EDRA Area include, but are not limited to disturbance of any soils in any manner in such areas that might cause a release of wastes, except as provided for under this Settlement Agreement or any other Orders under CERCLA EPA has issued to or entered into with UNC with respect to the NECR Mine Site. Should Respondents be required to take any action under a storm water permit that Respondents believe may conflict with this Paragraph, Respondents shall consult with EPA prior to taking such action, and shall work with EPA, after EPA consultation with NNEPA, to minimize soil disturbance or other adverse consequences of such action.

36. Notwithstanding any provision of this Settlement Agreement, EPA retains all of its access authorities and rights, as well as all of its rights to require land/water use restrictions, including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

X. ACCESS TO INFORMATION

37. Respondents shall provide to EPA, upon request, copies of all documents and information within their possession or control or that of their contractors or agents relating to activities at the Site or to the implementation of this Settlement Agreement, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information related to the Work. Respondents shall also make reasonably available to EPA, for purposes of investigation or information gathering, their employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

38. Respondents may assert business confidentiality claims covering part or all of the documents or information submitted to EPA under this Settlement Agreement to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Documents or information determined to be confidential by EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies documents or information when they are submitted to EPA, or if EPA has notified Respondents that the documents or information are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public and the Navajo Nation may be given access to such documents or information without further notice to Respondents, as provided in 40 C.F.R. Part 2 Subpart B.

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39. Respondents may assert that certain documents, records and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If the Respondents assert such a privilege in lieu of providing documents, they shall provide EPA with the following: 1) the title of the document, record, or information; 2) the date of the document, record, or information; 3) the name and title of the author of the document, record, or information; 4) the name and title of each addressee and recipient; 5) a description of the contents of the document, record, or information; and 6) the privilege asserted by Respondents. However, no documents, reports or other information required to be submitted under this Settlement Agreement shall be withheld on the grounds that they are privileged.

40. No claim of confidentiality shall be made with respect to any data, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, or engineering data, or any other documents or information evidencing conditions at or around the Site generated on or after January 1, 2005.

XI. RECORD RETENTION

41. Until seven (7) years after Respondents' receipt of EPA's notification pursuant to Section XXIX (Notice of Completion of Work), Respondents shall preserve and retain all non-identical copies of records and documents (including records or documents in electronic form) now in their possession or control or which come into their possession or control that relate in any manner to the performance of the Work or the liability of any person under CERCLA with respect to the Site, regardless of any corporate retention policy to the contrary. Until seven (7) years after Respondents' receipt of EPA's notification pursuant to Section XXIX (Notice of Completion of Work), Respondents shall also instruct their contractors and agents to preserve all documents, records, and information of whatever kind, nature or description relating to performance of the Work.

42. At the conclusion of this document retention period, Respondents shall notify EPA and the Navajo Nation at least ninety (90) days prior to the destruction of any such records or documents, and, upon request by EPA or the Navajo Nation, Respondents shall deliver any such records or documents to EPA or the Navajo Nation. Respondents may assert that certain documents, records and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Respondents asserts such a privilege, they shall provide EPA with the following: 1) the title of the document, record, or information; 2) the date of the document, record, or information; 3) the name and title of the author of the document, record, or information; 4) the name and title of each addressee and recipient; 5) a description of the subject of the document, record, or information; and 6) the privilege asserted by Respondents. However, no final documents, reports or other information created or generated under this Settlement Agreement shall be withheld on the grounds that they are privileged.

43. Respondents hereby certify that to the best of their knowledge and belief, after thorough inquiry, they have not altered, mutilated, discarded, destroyed or otherwise disposed of any records, documents or other information (other than identical copies) relating to their potential liability regarding the Site since May 23, 2006 and that they have fully complied with any and all

EPA requests for information regarding the Site pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. § 6927.

XII. COMPLIANCE WITH OTHER LAWS

44. a. Respondents shall perform all actions required pursuant to this Settlement Agreement in accordance with all applicable local, state, tribal, and federal laws and regulations except as provided in Section 121(e) of CERCLA, 42 U.S.C. § 9621(e), and 40 C.F.R. §§ 300.400(e) and 300.415(j). In accordance with 40 C.F.R. § 300.415(j), all on-Site actions required pursuant to this Settlement Agreement shall, to the extent practicable, as determined by EPA, considering the exigencies of the situation, attain applicable or relevant and appropriate requirements (“ARARs”) under federal environmental or state environmental or facility siting laws.

b. By entering into this Settlement Agreement, Respondents do not admit, and specifically deny (1) that Respondents are subject to tribal jurisdiction with regard to any matter addressed in this Settlement Agreement, and (2) that anything in this Settlement Agreement creates a contractual relationship, express or implied, between Respondents and the Navajo Nation. Respondents expressly reserve all rights, defenses and arguments related to the issues addressed in this subparagraph (b).

XIII. EMERGENCY RESPONSE AND NOTIFICATION OF RELEASES

45. In the event of any action or occurrence during performance of the Work which causes or threatens a release of Waste Material from the Site that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Respondents shall immediately take all appropriate action. Respondents shall take these actions in accordance with all applicable provisions of this Settlement Agreement, including, but not limited to, the Health and Safety Plan, in order to prevent, abate or minimize such release or endangerment caused or threatened by the release. Respondents shall also immediately notify the OSCs or, in the event of their unavailability, the on-call OSC for the Emergency Response Section, of the Region 9 Superfund Division, 415-947-4400, of the incident or Site conditions. In the event that Respondents fail to take appropriate response action as required by this Paragraph, and EPA takes such action instead, Respondents shall reimburse EPA all costs of the response action not inconsistent with the NCP pursuant to Section XV (Payment of Response Costs).

46. In addition, in the event of any release of a hazardous substance from the Site in excess of reportable quantities, Respondents shall immediately notify the OSCs either in person or by phone at (415) 972-3167 and (415) 972-3063, the Region 9 Spill Response Center at 415-947-4400, and the National Response Center at (800) 424-8802. Respondents shall submit a written report to EPA within seven (7) days after each release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. This reporting requirement is in addition to, and not in lieu of, reporting under Section 103(c) of CERCLA, 42 U.S.C. § 9603(c),

and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. § 11004, *et seq.*

XIV. AUTHORITY OF ON-SCENE COORDINATOR

47. The OSCs, in consultation with NNEPA, shall be responsible for overseeing Respondents' implementation of this Settlement Agreement. Each OSC shall have the authority vested in an OSC by the NCP, including the authority to halt, conduct, or direct any Work required by this Settlement Agreement, or to direct any other removal action undertaken at the Site. Absence of the OSCs from the Site shall not be cause for stoppage of work unless specifically directed by the OSC. The lead OSC is Mark Ripperda; Sara Jacobs is the alternate.

XV. PAYMENT OF RESPONSE COSTS

48. **Payments for Past Response Costs.**

a. Respondents shall pay EPA all Past Response Costs not inconsistent with the NCP that EPA has incurred with respect to the Site within forty-five (45) days of EPA's presentation of a bill with a cost summary for such costs. However, Respondents may contest such costs to the extent permitted by, and consistent with the procedures set forth in Paragraph 53 and Section XVI (Dispute Resolution).

b. Payment shall be made to EPA by mailing a certified or cashier's check to the following address:

US Environmental Protection Agency
Superfund Payments
Cincinnati Finance Center
PO Box 979076
St. Louis, MO 63197-9000

All payments shall be accompanied by a statement identifying the name and address of the party making payment, the Site name, the EPA Region and Site/Spill ID Number 09PM, and the EPA docket number for this action. Respondents shall also provide the specific reason for the payment, including that the payment is for Past Response Costs in response to a billing on a specified date.

If Respondents prefer to pay by Electronic Fund Transfer ("EFT"), they may request that EPA provide EFT instructions for making payments pursuant to this Settlement Agreement.

c. At the time of payment, Respondents shall send notice that such payment has been made by email to acctreceivable.cinwd@epa.gov, and to:

EPA Cincinnati Finance Office
26 Martin Luther King Drive
Cincinnati, Ohio 45268

Sara Jacobs (Mail Code: SFD-6-2)
U.S. EPA Region 9
75 Hawthorne St.

San Francisco, CA 94105

d. The total amount(s) to be paid by Respondents pursuant to subparagraph a. of this Paragraph shall be deposited by EPA in the Northeast Church Rock Special Account within the EPA Hazardous Substance Superfund to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by EPA to the EPA Hazardous Substance Superfund.

49. Payments for Future Response Costs, Including Interest.

a. Respondents shall pay EPA all Future Response Costs not inconsistent with the NCP. After December 31, 2012, EPA will send Respondents one or more bills requiring payment of Future Response Costs that includes a cost summary, which includes direct and indirect costs incurred by EPA and its contractors. Respondents shall make all payments within thirty (30) days of receipt of any bill requiring payment. In the event that Respondents do not make timely payment, Interest and Stipulated Penalties may accrue.

b. Respondents' Future Response Costs payments to EPA shall be made by mailing a certified or cashier's check to the following address:

US Environmental Protection Agency
Superfund Payments
Cincinnati Finance Center
PO Box 979076
St. Louis, MO 63197-9000

If Respondents prefer to pay by EFT, they may request that EPA provide EFT instructions for making payments pursuant to this Settlement Agreement.

c. All payments shall be accompanied by a statement identifying the name and address of the party making payment, the Site name, the EPA Region and Site/Spill ID Number 09PM, and the EPA docket number for this action. Respondents shall also specify that the payment is for Future Response Costs and/or Interest, in response to a billing on a specified date.

d. At the time of payment, Respondents shall send notice that payment has been made to:

EPA Cincinnati Finance Office
26 Martin Luther King Drive
Cincinnati, Ohio 45268

Mark Ripperda (Mail Code: SFD-6-2)
U.S. EPA Region 9
75 Hawthorne St.
San Francisco, CA 94105

e. The total amount(s) to be paid by Respondents pursuant to subparagraph a. of this Paragraph shall be deposited in the Northeast Church Rock Special Account within the EPA Hazardous Substance Superfund to be retained and used to conduct or finance response actions at

or in connection with the Site, or to be transferred by EPA to the EPA Hazardous Substance Superfund.

50. In the event that payments for Future Response Costs are not made within thirty (30) days of Respondents' receipt of a bill, Respondents shall pay Interest on the unpaid balance. Interest on Past Response Costs shall begin to accrue on the Effective Date and shall continue to accrue until the date of the bill for those costs. In the event of a failure to pay Past Response Costs or Future Response Costs within thirty (30) days of Respondents' receipt of a bill, Interest on Future Response Costs and additional interest on Past Response Costs shall begin to accrue on the date of the bill and shall continue to accrue until the date of payment. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondents' failure to make timely payments under this Section, including but not limited to, payment of stipulated penalties pursuant to Section XVIII.

51. Respondents may dispute all or part of a bill for Past Response Costs or Future Response Costs submitted under this Settlement Agreement, if Respondents allege that EPA has made an accounting error, or if Respondents allege that a cost item is inconsistent with the NCP. If any dispute over costs is resolved before payment is due, the amount due will be adjusted as agreed by the Parties. If the dispute is not resolved before payment is due, Respondents shall pay the full amount of the uncontested costs to EPA as specified in Paragraphs 48 and/or 49 on or before the due date. Within the same time period, Respondents shall pay the full amount of the contested costs into an interest-bearing escrow account. Respondents shall simultaneously transmit a copy of both checks to the persons listed in Paragraphs 48.c. and/or 49.d. above. Respondents shall ensure that the prevailing party or parties in the dispute shall receive the amount upon which they prevailed from the escrow funds plus interest within ten (10) days after the dispute is resolved.

XVI. DISPUTE RESOLUTION

52. Unless otherwise expressly provided for in this Settlement Agreement, the dispute resolution procedures of this Section shall be the exclusive mechanism for resolving disputes arising under this Settlement Agreement. The Parties shall attempt in good faith to resolve any disagreements concerning this Settlement Agreement expeditiously and informally.

53. If Respondents object to any EPA action taken pursuant to this Settlement Agreement, including billings for Past or Future Response Costs, they shall notify EPA in writing of their objection(s) within thirty (30) days of such action, unless the objection(s) has/have been resolved informally. EPA and Respondents shall have thirty (30) days from EPA's receipt of Respondents' written objection(s) to resolve the dispute through formal negotiations (the "Negotiation Period"). The Negotiation Period may be extended at the sole discretion of EPA.

54. Any agreement reached by the parties pursuant to this Section shall be in writing and shall, upon signature by both parties, be incorporated into and become an enforceable part of this Settlement Agreement. If the Parties are unable to reach an agreement within the Negotiation Period, an EPA management official at the Division Director level will issue a written decision

on the dispute to Respondents. EPA's decision shall be incorporated into and become an enforceable part of this Settlement Agreement. Respondents' obligations under this Settlement Agreement shall not be tolled by submission of any objection for dispute resolution under this Section. Following resolution of the dispute, as provided by this Section, Respondents shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with EPA's decision, whichever occurs.

XVII. FORCE MAJEURE

55. Respondents agree to perform all requirements of this Settlement Agreement within the time limits established under this Settlement Agreement, unless the performance is delayed by a *force majeure*. For purposes of this Settlement Agreement, a *force majeure* is defined as any event arising from causes beyond the control of Respondents, or of any entity controlled by Respondents, including but not limited to their contractors and subcontractors, which delays or prevents performance of any obligation under this Settlement Agreement despite Respondents' best efforts to fulfill the obligation. *Force majeure* does not include financial inability to complete the Work, increased cost of performance, or failure to attain performance standards or action levels set forth in the Action Memorandum.

56. If any event occurs or has occurred that may delay the performance of any obligation under this Settlement Agreement, whether or not caused by a *force majeure* event, Respondents shall notify EPA orally within forty-eight (48) hours of when Respondents first knew that the event might cause a delay. Within seven (7) days thereafter, Respondents shall provide to EPA in writing an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Respondents' rationale for attributing such delay to a *force majeure* event if they intend to assert such a claim; and a statement as to whether, in the opinion of Respondents, such event may cause or contribute to an endangerment to public health, welfare or the environment. Failure to comply with the above requirements shall preclude Respondents from asserting any claim of *force majeure* for that event for the period of time of such failure to comply and for any additional delay caused by such failure.

57. If EPA agrees that the delay or anticipated delay is attributable to a *force majeure* event, the time for performance of the obligations under this Settlement Agreement that are affected by the *force majeure* event will be extended by EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the *force majeure* event shall not, of itself, extend the time for performance of any other obligation. If EPA does not agree that the delay or anticipated delay has been or will be caused by a *force majeure* event, EPA will notify Respondents in writing of its decision. If EPA agrees that the delay is attributable to a *force majeure* event, EPA will notify Respondents in writing of the length of the extension, if any, for performance of the obligations affected by the *force majeure* event.

XVIII. STIPULATED PENALTIES

58. Respondents shall be liable to EPA for stipulated penalties in the amounts set forth in Paragraphs 59 and 60, below, for failure to comply with the requirements of this Settlement Agreement specified below, unless excused under Section XVII (*Force Majeure*). "Compliance" by Respondents shall include completion of the activities under this Settlement Agreement or any work plan or other plan approved under this Settlement Agreement identified below in accordance with all applicable requirements of law, this Settlement Agreement, and any plans or other documents approved by EPA pursuant to this Settlement Agreement and within the specified time schedules established by and approved under this Settlement Agreement.

59. Stipulated Penalty Amounts - Major.

a. The following stipulated penalties shall accrue per violation per day for any noncompliance identified in Paragraph 59.b:

| <u>Penalty Per Violation Per Day</u> | <u>Period of Noncompliance</u> |
|--------------------------------------|--------------------------------|
| \$1,000 | 1st through 14th day |
| \$1,500 | 15th through 30th day |
| \$2,000 | 31st day and beyond |

b. Compliance Milestones

- i. Failure to timely submit a final report meeting the requirements of Paragraph 31;
- ii. Failure to make a payment when due.

60. Stipulated Penalty Amounts - Other. The following stipulated penalties shall accrue per violation per day for failure to submit timely or adequate reports or other written documents, failure to timely perform actions pursuant to this Settlement Agreement, or other noncompliance other than those specified in the preceding Paragraph:

| <u>Penalty Per Violation Per Day</u> | <u>Period of Noncompliance</u> |
|--------------------------------------|--------------------------------|
| \$500 | 1st through 14th day |
| \$1,000 | 15th through 30th day |
| \$2,000 | 31st day and beyond |

61. In the event that EPA assumes performance of a portion or all of the Work pursuant to Paragraph 71 of Section XX (Reservation of Rights), Respondents shall be liable for a stipulated penalty in the amount of \$250,000.

62. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. However, stipulated penalties shall not accrue: 1) with respect to a deficient submission under Section VIII (Work to be Performed), during the period, if any, beginning on the thirty-first (31st) day after EPA's receipt of such submission until the date that EPA notifies Respondents of any deficiency; and 2) with respect to a decision

by the EPA Management Official at the Division Director level, under Section XVI (Dispute Resolution), during the period, if any, beginning on the twenty-first (21st) day after the Negotiation Period begins until the date that the EPA management official issues a final decision regarding such dispute. Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Settlement Agreement.

63. Following EPA's determination that Respondents have failed to comply with a requirement of this Settlement Agreement, EPA may give Respondents written notification of the failure and describe the noncompliance. EPA may send Respondents a written demand for payment of the penalties. However, penalties shall accrue as provided in the preceding Paragraph regardless of whether EPA has notified Respondents of a violation.

64. All penalties accruing under this Section shall be due and payable to EPA within thirty (30) days of Respondents' receipt from EPA of a demand for payment of the penalties, unless Respondents invoke the dispute resolution procedures under Section XVI (Dispute Resolution). All payments to EPA under this Section shall be paid by certified or cashier's check(s) made payable to "EPA Hazardous Substances Superfund," shall be mailed to:

US Environmental Protection Agency
Fines and Penalties
Cincinnati Finance Center
PO Box 979077
St. Louis, MO 63197-9000

A memo accompanying the payment shall indicate that the payment is for stipulated penalties, and shall reference the EPA Region and Site/Spill ID Number 09PM, the EPA docket number for this action, and the name and address of the party making payment. Copies of check(s) paid pursuant to this Section, and any accompanying transmittal letter(s), shall be sent to EPA as provided in Paragraph 24.

65. The payment of penalties shall not alter in any way Respondents' obligation to complete performance of the Work required under this Settlement Agreement.

66. Penalties shall continue to accrue during any dispute resolution period, but need not be paid until fifteen (15) days after the dispute is resolved by agreement or by receipt of EPA's decision.

67. If Respondents fail to pay stipulated penalties when due, EPA may institute proceedings to collect the penalties, as well as Interest. Respondents shall pay Interest on the unpaid balance, which shall begin to accrue on the date of demand made pursuant to Paragraphs 63 or 64. Nothing in this Settlement Agreement shall be construed as prohibiting, altering, or in any way limiting the ability of EPA to seek any other remedies or sanctions available by virtue of Respondents' violation of this Settlement Agreement or of the statutes and regulations upon which it is based, including, but not limited to, penalties pursuant to Sections 106(b) and 122(I) of CERCLA, 42 U.S.C. §§ 9606(b) and 9622(I), and punitive damages pursuant to Section NE Church Rock EDRA AOC July 2012

107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Provided, however, that EPA shall not seek civil penalties pursuant to Section 106(b) or 122(I) of CERCLA or punitive damages pursuant to Section 107(c)(3) of CERCLA for any violation for which a stipulated penalty is provided herein, except in the case of a willful violation of this Settlement Agreement or in the event that EPA assumes performance of a portion or all of the Work pursuant to Section XX, Paragraph 71 (Work Takeover). Notwithstanding any other provision of this Section, EPA may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to this Settlement Agreement.

XIX. COVENANT NOT TO SUE BY EPA

68. In consideration of the actions that will be performed and the payments that will be made by Respondents under the terms of this Settlement Agreement, and except as otherwise specifically provided in this Settlement Agreement, EPA covenants not to sue or to take administrative action against Respondents pursuant to Sections 106 and 107(a) of CERCLA, 42 U.S.C. §§ 9606 and 9607(a), for the Work, (b) for recovery of Past Response Costs and Future Response Costs addressed in this settlement, and (c) the RWPR Area and RWPR Area Costs. This covenant not to sue shall take effect upon receipt by EPA of the Past Response Costs due under Section XV of this Settlement Agreement and any Interest or Stipulated Penalties due for failure to pay Past Response Costs as required by Sections XV and XVIII of this Settlement Agreement. This covenant not to sue is conditioned upon the complete and satisfactory performance by Respondents of their obligations under this Settlement Agreement, including, but not limited to, payment of Future Response Costs pursuant to Section XV. This covenant not to sue extends only to Respondents and does not extend to any other person.

XX. RESERVATIONS OF RIGHTS BY EPA

69. Except as specifically provided in this Settlement Agreement, nothing herein shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing herein shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Settlement Agreement, from taking other legal or equitable action as it deems appropriate and necessary, or from requiring Respondents in the future to perform additional activities pursuant to CERCLA or any other applicable law.

70. The covenant not to sue set forth in Section XIX above does not pertain to any matters other than those expressly identified therein. EPA reserves, and this Settlement Agreement is without prejudice to, all rights against Respondents with respect to all other matters, including, but not limited to:

a. claims based on a failure by Respondents to meet a requirement of this Settlement Agreement;

b. liability for costs not included within the definitions of Past Response Costs or Future

Response Costs;

- c. liability for performance of any response action other than the Work;
- d. criminal liability;
- e. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments;
- f. liability arising from the past, present, or future disposal, release or threat of release of Waste Materials outside of the Site; and
- g. liability for costs incurred or to be incurred by the Agency for Toxic Substances and Disease Registry, or other Federal agencies, related to the Site.

71. Work Takeover.

a. In the event EPA determines that Respondents have (i) ceased implementation of any portion of the Work, or (ii) are seriously or repeatedly deficient or late in their performance of the Work, or (iii) are implementing the Work in a manner which may cause an endangerment to human health or the environment, EPA may issue a written notice ("Work Takeover Notice") to the Respondents. Any Work Takeover Notice issued by EPA will specify the grounds upon which such notice was issued and will provide Respondents a period of ten (10) days within which to remedy the circumstances giving rise to EPA's issuance of such notice.

b. If, after expiration of the 10-day notice period specified in subparagraph a. of this Paragraph, Respondents have not remedied to EPA's satisfaction the circumstances giving rise to EPA's issuance of the relevant Work Takeover Notice, EPA may at any time thereafter assume the performance of all or any portions of the Work as EPA deems necessary ("Work Takeover"). EPA shall notify Respondents in writing (which writing may be electronic) if EPA determines that implementation of a Work Takeover is warranted under this subparagraph b.

c. Respondents may invoke the procedures set forth in Section XVI (Dispute Resolution), Paragraphs 52 through 54, to dispute EPA's implementation of a Work Takeover under subparagraph b. of this Paragraph. However, notwithstanding Respondents' invocation of such dispute resolution procedures, and during the pendency of any such dispute, EPA may in its sole discretion, commence and continue a Work Takeover under subparagraph b. of this Paragraph until the earlier of (i) the date that Respondents remedy, to EPA's satisfaction, the circumstances giving rise to EPA's issuance of the relevant Work Takeover Notice or (ii) the date that a final decision is rendered in accordance with Section XVI (Dispute Resolution), requiring EPA to terminate such Work Takeover.

d. After commencement and for the duration of any Work Takeover, EPA shall have immediate access to and benefit of any performance guarantee(s) provided pursuant to Section XXVI (Performance Guarantee) of this Settlement Agreement in accordance with the provisions

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of that Section. If and to the extent that EPA is unable to secure the resources guaranteed under any such performance guarantee(s) and the Respondents fail to remit a cash amount up to but not exceeding the estimated cost of the remaining Work to be performed, all in accordance with the provisions of Paragraph 86, any unreimbursed costs incurred by EPA in performing Work under the Work Takeover shall be considered Future Response Costs that Respondents shall pay pursuant to Section XV (Payment of Response Costs).

XXI. COVENANT NOT TO SUE BY RESPONDENTS

72. Except as provided in Section XXII (Relationship to Prior Consent Decree), Respondents covenant not to sue and agree not to assert any claims or causes of action against the United States, or its response action contractors or employees, with respect to the Work, Future Response Costs, Past Response Costs or this Settlement Agreement, including, but not limited to:

a. any direct or indirect claim for reimbursement from the Hazardous Substance Superfund established by 26 U.S.C. § 9507, based on Sections 106(b)(2), 107, 111, 112, or 113 of CERCLA, 42 U.S.C. §§ 9606(b)(2), 9607, 9611, 9612, or 9613, or any other provision of law;

b. any claim arising out of response actions at or in connection with the Site, including any claim under the United States Constitution, the New Mexico State Constitution, the Navajo Nation Code or the common law of the Navajo Nation, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28 U.S.C. § 2412, as amended, or at common law; or

c. any claim against the United States pursuant to Sections 107 and 113 of CERCLA, 42 U.S.C. §§ 9607 and 9613, relating to the Site.

73. These covenants not to sue shall not apply in the event the United States brings a cause of action or issues an order pursuant to one or more of the reservations set forth in Paragraphs 70(b), (c), and (e) - (g), but only to the extent that Respondents' claims arise from the same response action, response costs, or damages that the United States is seeking pursuant to the applicable reservation.

74. Nothing in this Agreement shall be deemed to constitute approval or preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or 40 C.F.R. § 300.700(d).

XXII. RELATIONSHIP TO PRIOR CONSENT DECREE

75. Notwithstanding EPA's reservation of rights in Section XX, nothing in this Settlement Agreement shall be interpreted as waiving, abrogating, or superseding any claims, rights and obligations that the Parties may have pursuant to the Consent Decrees entered on September 6, 2011 and January 11, 2012 in *The General Electric Company and United Nuclear Corporation v. United States of America*, Case No. 1:10-CV-00404-MCA-RHS (District of New Mexico).

XXIII. OTHER CLAIMS

76. By issuance of this Settlement Agreement, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondent. The United States or EPA shall not be deemed a party to any contract entered into by Respondents or their directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Settlement Agreement.

77. Except as expressly provided in Section XIX (Covenant Not to Sue by EPA), nothing in this Settlement Agreement constitutes a satisfaction of or release from any claim or cause of action against Respondents or any person not a party to this Settlement Agreement, for any liability such person may have under CERCLA, other statutes, or common law, including but not limited to any claims of the United States for costs, damages and interest under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.

78. No action or decision by EPA pursuant to this Settlement Agreement shall give rise to any right to judicial review, except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

XXIV. CONTRIBUTION

79. The Parties agree that this Settlement Agreement constitutes an administrative settlement for purposes of Section 113(f)(2) of CERCLA, 42 U.S.C. § 9613(f)(2), and that Respondents are entitled, as of the Effective Date, to protection from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), or as may be otherwise provided by law, for "matters addressed" in this Settlement Agreement. For purposes of this Section XXIV. Contribution, the "matters addressed" in this Settlement Agreement are (a) the Work, and (b) the Past Response Costs and Future Response Costs; the "matters addressed" in this Settlement Agreement do not include the RWPR Area and the RWPR Area Costs.

80. The Parties agree that this Settlement Agreement constitutes an administrative settlement for purposes of Section 113(f)(3)(B) of CERCLA, 42 U.S.C. § 9613(f)(3)(B), pursuant to which Respondents have, as of the Effective Date, agreed to resolve their liability to the United States for the Work, Past Response Costs and Future Response Costs.

81. Nothing in this Settlement Agreement precludes the United States or Respondents from asserting any claims, causes of action, or demands for indemnification, contribution, or cost recovery against any persons not parties to this Settlement Agreement. Nothing herein diminishes the right of the United States, pursuant to Sections 113(f)(2) and (3) of CERCLA, 42 U.S.C. § 9613(f)(2)-(3), to pursue any such persons to obtain additional response costs or response action and to enter into any settlements that give rise to contribution protection pursuant to Section 113(f)(2).

XXV. INDEMNIFICATION

82. Respondents shall indemnify, save and hold harmless the United States, its officials, agents, contractors, subcontractors, employees and representatives from any and all claims or causes of action arising from, or on account of, negligent or other wrongful acts or omissions of Respondents, their officers, directors, employees, agents, contractors, or subcontractors, in carrying out actions pursuant to this Settlement Agreement. In addition, Respondents agree to pay the United States all costs incurred by the United States, including but not limited to attorneys fees and other expenses of litigation and settlement, arising from or on account of claims made against the United States based on negligent or other wrongful acts or omissions of Respondents, their officers, directors, employees, agents, contractors, subcontractors and any persons acting on their behalf or under their control, in carrying out activities pursuant to this Settlement Agreement. The United States shall not be held out as a party to any contract entered into by or on behalf of Respondents in carrying out activities pursuant to this Settlement Agreement. Neither Respondents nor any such contractor shall be considered an agent of the United States.

83. The United States shall give Respondents notice of any claim for which the United States plans to seek indemnification pursuant to this Section and shall consult with Respondents prior to settling such claim.

84. Respondents waive all claims against the United States for damages or reimbursement or for set-off of any payments made or to be made to the United States arising from or on account of any contract, agreement, or arrangement between Respondents and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays. In addition, Respondents shall indemnify and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between Respondents and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays.

XXVI. INSURANCE

85. At least seven (7) days prior to commencing any on-Site work under this Settlement Agreement, Respondents shall secure, and shall maintain for the duration of this Settlement Agreement, comprehensive general liability insurance and automobile insurance with limits of one million dollars, combined single limit. Within the same time period, Respondents shall provide EPA with certificates of such insurance and a copy of each insurance policy. In addition, for the duration of the Settlement Agreement, Respondents shall satisfy, or shall ensure that their contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Respondents in furtherance of this Settlement Agreement. If Respondents demonstrate by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in an equal or lesser amount, then Respondents need provide only that portion of the insurance described above

which is not maintained by such contractor or subcontractor.

XXVII. PERFORMANCE GUARANTEE

86. In order to ensure the full and final completion of the Work, Respondents shall establish and maintain a Performance Guarantee for the benefit of EPA in the amount of \$3,200,000 (hereinafter "Estimated Cost of the Work") in one or more of the following forms, which must be satisfactory in form and substance to EPA:

a. A surety bond unconditionally guaranteeing payment and/or performance of the Work that is issued by a surety company among those listed as acceptable sureties on Federal bonds as set forth in Circular 570 of the U.S. Department of the Treasury;

b. One or more irrevocable letters of credit, payable to or at the direction of EPA, that is issued by one or more financial institution(s) (i) that has the authority to issue letters of credit and (ii) whose letter-of-credit operations are regulated and examined by a U.S. Federal or State agency;

c. A trust fund established for the benefit of EPA that is administered by a trustee (i) that has the authority to act as a trustee and (ii) whose trust operations are regulated and examined by a U.S. Federal or State agency;

d. A policy of insurance that (i) provides EPA with acceptable rights as a beneficiary thereof; and (ii) is issued by an insurance carrier (a) that has the authority to issue insurance policies in the applicable jurisdiction(s) and (b) whose insurance operations are regulated and examined by a State agency;

e. A demonstration by Respondents that Respondents meet the financial test criteria of 40 C.F.R. § 264.143(f) with respect to the Estimated Cost of the Work, provided that all other requirements of 40 C.F.R. § 264.143(f) are satisfied; or

f. A written guarantee to fund or perform the Work executed in favor of EPA by Respondent GE.

87. If at any time during the effective period of this Settlement Agreement, the Respondents provide a Performance Guarantee for completion of the Work by means of a demonstration or guarantee pursuant to Paragraph 86(e) above, Respondents shall also comply with the other relevant requirements of 40 C.F.R. § 264.143(f), 40 C.F.R. § 264.151(f), and 40 C.F.R. § 264.151(h)(1) relating to these methods unless otherwise provided in this Settlement Agreement, including but not limited to (i) the initial submission of required financial reports and statements from the relevant entity's responsible corporate official and independent certified public accountant; (ii) the annual re-submission of such reports and statements within ninety days after the close of each such entity's fiscal year; and (iii) the notification of EPA within ninety (90) days after the close of any fiscal year in which such entity no longer satisfies the financial test requirements set forth at 40 C.F.R. § 264.143(f)(1). For purposes of the Performance Guarantee

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methods specified in this Section, references in 40 C.F.R. Part 264, Subpart H, to “closure,” “post-closure,” and “plugging and abandonment” shall be deemed to refer to the Work required under this Settlement Agreement, and the terms “current closure cost estimate” “current post-closure cost estimate,” and “current plugging and abandonment cost estimate” shall be deemed to refer to the Estimated Cost of the Work.

88. In the event that EPA determines at any time that a Performance Guarantee provided by Respondents pursuant to this Section is inadequate or otherwise no longer satisfies the requirements set forth in this Section, whether due to an increase in the estimated cost of completing the Work or for any other reason, or in the event that Respondents become aware of information indicating that a Performance Guarantee provided pursuant to this Section is inadequate or otherwise no longer satisfies the requirements set forth in this Section, whether due to an increase in the estimated cost of completing the Work or for any other reason, Respondents, within thirty (30) days of receipt of notice of EPA's determination or, as the case may be, within thirty (30) days of Respondents becoming aware of such information, shall obtain and present to EPA for approval a proposal for a revised or alternative form of Performance Guarantee listed in Paragraph 86 of this Settlement Agreement that satisfies all requirements set forth in this Section XXVII. In seeking approval for a revised or alternative form of Performance Guarantee, Respondents shall follow the procedures set forth in Paragraph 90(b)(ii) of this Settlement Agreement. Respondents' inability to post a Performance Guarantee for completion of the Work shall in no way excuse performance of any other requirements of this Settlement Agreement, including, without limitation, the obligation of Respondents to complete the Work in strict accordance with the terms hereof.

89. The commencement of any Work Takeover pursuant to Paragraph 71 of this Settlement Agreement shall trigger EPA's right to receive the benefit of any Performance Guarantee(s) provided pursuant to Paragraph 86, and at such time EPA shall have immediate access to resources guaranteed under any such Performance Guarantee(s), whether in cash or in kind, as needed to continue and complete the Work assumed by EPA under the Work Takeover. If for any reason EPA is unable to promptly secure the resources guaranteed under any such Performance Guarantee(s), whether in cash or in kind, necessary to continue and complete the Work assumed by EPA under the Work Takeover, or in the event that the Performance Guarantee involves a demonstration of satisfaction of the financial test criteria pursuant to Paragraph 86(e), or the written guarantee provided in Paragraph 86(f), Respondents shall immediately upon written demand from EPA deposit into an account specified by EPA, in immediately available funds and without setoff, counterclaim, or condition of any kind, a cash amount up to but not exceeding the estimated cost of the remaining Work to be performed as of such date, as determined by EPA.

90. Modification of Amount and/or Form of Performance Guarantee

a. Reduction of Amount of Performance Guarantee. If Respondents believe that the estimated cost to complete the remaining Work has diminished below the amount set forth in Paragraph 86 above, Respondents may, on any anniversary date of entry of this Settlement Agreement, or at any other time agreed to by the Parties, petition EPA in writing to request a reduction in the amount of the Performance Guarantee provided pursuant to this Section so that

the amount of the Performance Guarantee is equal to the estimated cost of the remaining Work to be performed. Respondents shall submit a written proposal for such reduction to EPA that shall specify, at a minimum, the cost of the remaining Work to be performed and the basis upon which such cost was calculated. In seeking approval for a revised or alternative form of Performance Guarantee, Respondents shall follow the procedures set forth in Paragraph 92(b)(ii) of this Settlement Agreement. If EPA decides to accept such a proposal, EPA shall notify the petitioning Respondents of such decision in writing. After receiving EPA's written acceptance, Respondents may reduce the amount of the Performance Guarantee in accordance with and to the extent permitted by such written acceptance. In the event of a dispute, Respondents may reduce the amount of the Performance Guarantee required hereunder only in accordance with a final administrative decision resolving such dispute. No change to the form or terms of any Performance Guarantee provided under this Section, other than a reduction in amount, is authorized except as provided in Paragraphs 86 or 88 of this Settlement Agreement.

b. Change of Form of Performance Guarantee.

i. If, after entry of this Settlement Agreement, Respondents desire to change the form or terms of any Performance Guarantee(s) provided pursuant to this Section, Respondents may, on any anniversary date of entry of this Settlement Agreement, or at any other time agreed to by the Parties, petition EPA in writing to request a change in the form of the Performance Guarantee provided hereunder. The submission of such proposed revised or alternative form of Performance Guarantee shall be as provided in subparagraph (b)(ii) of this Paragraph. Any decision made by EPA on a petition submitted under this subparagraph (b)(i) shall be made in EPA's sole and unreviewable discretion, and such decision shall not be subject to challenge by Respondents pursuant to the dispute resolution provisions of this Settlement Agreement or in any other forum.

ii. Respondents shall submit a written proposal for a revised or alternative form of Performance Guarantee to EPA which shall specify, at a minimum, the estimated cost of the remaining Work to be performed, the basis upon which such cost was calculated, and the proposed revised form of Performance Guarantee, including all proposed instruments or other documents required in order to make the proposed Performance Guarantee legally binding. The proposed revised or alternative form of Performance Guarantee must satisfy all requirements set forth or incorporated by reference in this Section. Respondents shall submit such proposed revised or alternative form of Performance Guarantee to the OSCs in accordance with Paragraph 24 of this Settlement Agreement, with a copy to Laurie Williams, Assistant Regional Counsel, USEPA Region 9, Mail Code ORC-3, 75 Hawthorne St., San Francisco CA 94105. EPA shall notify Respondents in writing of its decision to accept or reject a revised or alternative Performance Guarantee submitted pursuant to this subparagraph. Within ten (10) days after receiving a written decision approving the proposed revised or alternative Performance Guarantee, Respondents shall execute and/or otherwise finalize all instruments or other documents required in order to make the selected Performance Guarantee(s) legally binding in a form substantially identical to the documents submitted to EPA as part of the proposal, and such Performance Guarantee(s) shall thereupon be fully effective. Respondents shall submit all executed and/or otherwise finalized instruments or other documents required in order to make

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the selected Performance Guarantee(s) legally binding to the EPA Regional Financial Management Officer within thirty (30) days of receiving a written decision approving the proposed revised or alternative Performance Guarantee in accordance with Paragraph 24 of this Settlement Agreement, with a copy to Laurie Williams, Assistant Regional Counsel, USEPA Region 9, Mail Code ORC-3, 75 Hawthorne St., San Francisco CA 94105.

c. Release of Performance Guarantee. If Respondents receive written notice from EPA in accordance with Section XXIX (Notice of Completion of Work) that the Work has been fully and finally completed in accordance with the terms of this Settlement Agreement, or if EPA otherwise so notifies Respondents in writing, Respondents may thereafter release, cancel, or discontinue the Performance Guarantee(s) provided pursuant to this Section. Respondents shall not release, cancel, or discontinue any Performance Guarantee provided pursuant to this Section except as provided in this subparagraph. In the event of a dispute, Respondents may release, cancel, or discontinue the Performance Guarantee(s) required hereunder only in accordance with a final administrative or judicial decision resolving such dispute.

XXVIII. MODIFICATIONS

91. The OSC may make modifications to any plan or schedule in writing or by oral direction, provided such modifications do not materially expand the scope of the Scope of Work. Any oral modification will be memorialized in writing by EPA promptly and provided to Respondents and the Navajo Nation, but shall have as its effective date the date of the OSCs oral direction to Respondents' representative. Any other requirements of this Settlement Agreement may be modified in writing by mutual agreement of the parties. EPA and Respondents may agree to modify the Scope of Work to include additional response actions.

92. If Respondents seek permission to deviate from any approved work plan or schedule Respondents' Project Coordinator shall submit a written request to EPA for approval outlining the proposed modification and its basis. Respondents may not proceed with the requested deviation until receiving oral or written approval from the OSC pursuant to Paragraph 91.

93. No informal advice, guidance, suggestion, or comment by the OSC or other EPA representatives regarding reports, plans, specifications, schedules, or any other writing submitted by Respondents shall relieve Respondents of their obligation to obtain any formal approval required by this Settlement Agreement, or to comply with all requirements of this Settlement Agreement, unless it is formally modified.+

XXIX. NOTICE OF COMPLETION OF WORK

94. When EPA determines, after consultation with NNEPA, and after EPA's review of the Final Report, that all Work has been fully performed in accordance with this Settlement Agreement, with the exception of any continuing obligations required by this Settlement Agreement, including payment of Future Response Costs or record retention, EPA will provide written notice to Respondents. If EPA determines, after consultation with NNEPA, that any such Work has not been completed in accordance with this Settlement Agreement, EPA will notify

Respondents, provide a list of the deficiencies, and require that Respondents correct such deficiencies. Respondents shall correct the deficiencies and shall submit a modified Final Report in accordance with the EPA notice. Failure by Respondents to correct the deficiencies as directed by EPA shall be a violation of this Settlement Agreement.

XXX. SEVERABILITY, INTEGRATION and APPENDICES

95. If a court issues an order that invalidates any provision of this Settlement Agreement or finds that Respondents have sufficient cause not to comply with one or more provisions of this Settlement Agreement, Respondents shall remain bound to comply with all provisions of this Settlement Agreement not invalidated or determined to be subject to a sufficient cause defense by the court's order.

96. This Settlement Agreement and its appendices constitute the final, complete and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Settlement Agreement. The parties acknowledge that there are no representations, agreements or understandings relating to the settlement other than those expressly contained in this Settlement Agreement. The following appendices are attached to and incorporated into this Settlement Agreement:

Appendix A: Maps of Site and Vicinity

Appendix B: Action Memorandum dated September 26, 2011 ("Action Memo")

Appendix C: Scope of Work

XXXI. EFFECTIVE DATE

97. This Settlement Agreement shall be effective upon signature by the Assistant Director of the Superfund Division, U.S. EPA Region 9 or her delegatee.

The undersigned representative(s) of Respondents and each of them certify that s/he are fully authorized to enter into the terms and conditions of this Settlement Agreement and to bind the party s/he represents to this document.

Agreed this ____ day of _____, 2012

For Respondent United Nuclear Corporation

BY: _____

(Print/Type Name) _____

(Title) _____

Agreed this 25th day of July, 2012.

For Respondent The General Electric Company

BY: A R K L

(Print/Type Name) Vice President, Corp. ENV. Programs

↙ (Title) ANN R. Klee

The undersigned representative(s) of Respondents and each of them certify that s/he are fully authorized to enter into the terms and conditions of this Settlement Agreement and to bind the party s/he represents to this document.

Agreed this 27th day of July, 2012

For Respondent United Nuclear Corporation

BY: 

(Print/Type Name) Stephen D. Hill

(Title) President, United Nuclear Corporation

Agreed this ___ day of _____, 2012.

For Respondent The General Electric Company

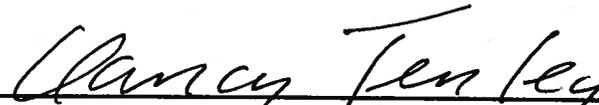
BY: _____

(Print/Type Name) _____

(Title) _____

It is so ORDERED and Agreed this 27 day of July, 2012.

BY:



Assistant Director, Superfund Division
Partnerships, Land Revitalization & Cleanup Branch
U.S. Environmental Protection Agency, Region 9

APPENDIX A

Map of Site and Vicinity

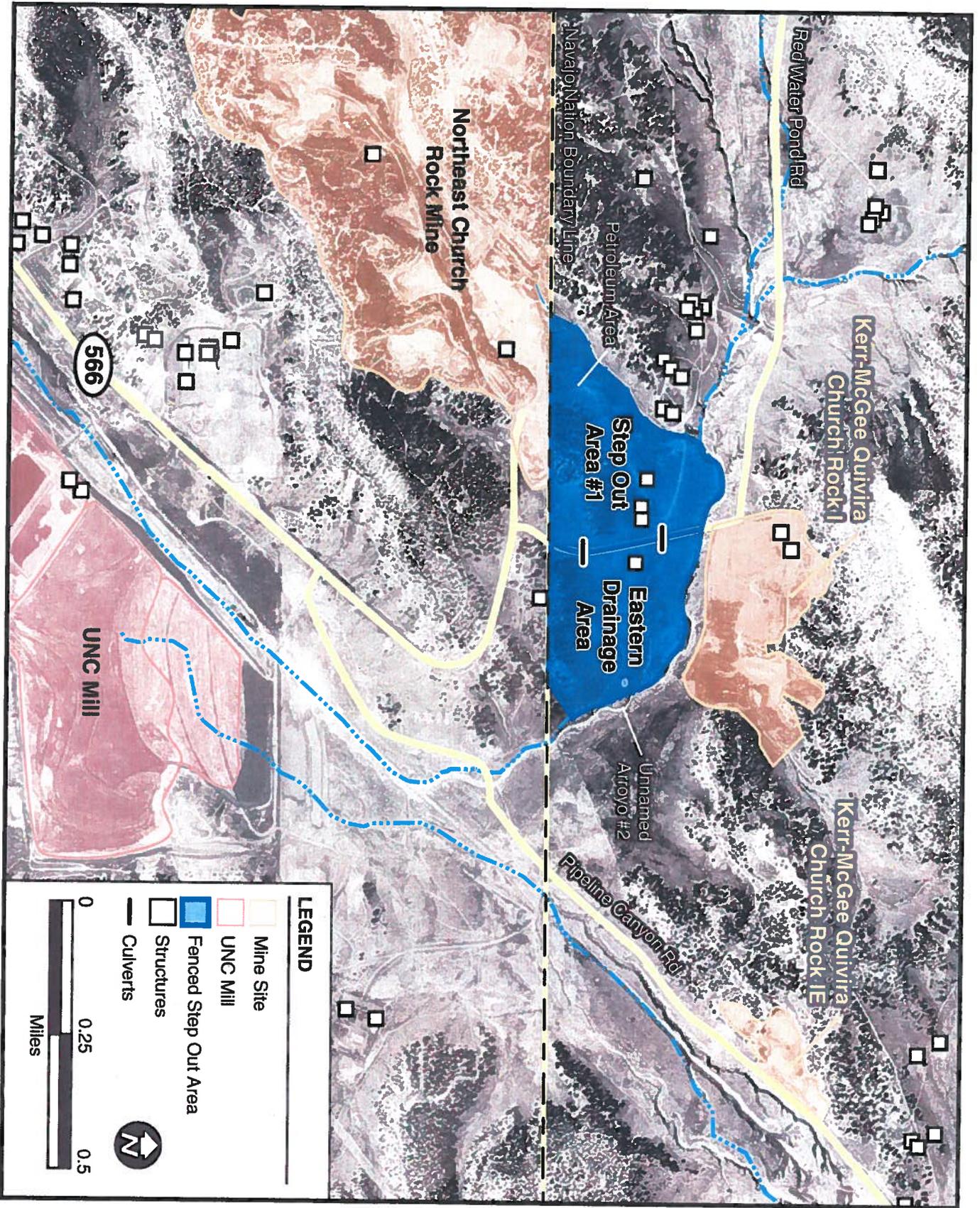


Figure 1: Northeast Church Rock Mine and Step Out Areas

APPENDIX B

Action Memorandum dated September 26, 2011



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

MEMORANDUM

DATE: September 26, 2011

SUBJECT: Request for a Time-Critical Removal Action at the Northeast Church Rock Site Drainage East of Red Water Pond Road (Step Out Area #2), McKinley County, New Mexico, Coyote Canyon Chapter of the Navajo Nation Indian Reservation

FROM: Sara Jacobs, Remedial Project Manager
Arizona & Navajo Sites Section (SFD-6-2)
Laurie Williams, Assistant Regional Counsel
Office of Regional Counsel (ORC-3)

Sara Jacobs 9/26/11
JW 9/26/11

THROUGH: Claire Trombadore, Section Chief
Arizona & Navajo Sites Section (SFD-6-2)
Harrison Karr, Section Chief
Office of Regional Counsel (ORC-3)

Claire Trombadore 9/26/11

TO: Clancy Tenley, Assistant Director
Superfund Division (SFD-6)

I. PURPOSE

The purpose of this Action Memorandum is to obtain and document United States Environmental Protection Agency (U.S. EPA) approval of the proposed time-critical removal action described herein. If approved, the removal action described herein would result in excavation of approximately 30,000 cubic yards of waste material from the Northeast Church Rock Mine (NECR) drainage area east of Red Water Pond Road and disposal of this waste on the NECR mine site. This waste would later be disposed with other NECR mine waste at a location or a facility that U.S.EPA has determined to be acceptable for the receipt of CERCLA waste under applicable laws. The location is selected in a separate concurrent Action Memorandum and determined to be suitable in the Engineering Evaluation and Cost Analysis ("EE/CA") issued by U.S. EPA Region 9 on May 30, 2009, is the nearby United Nuclear Corporation ("UNC") Mill Site.

Disposal at the UNC Mill Site is contingent upon both modification of the license issued by the U.S. Nuclear Regulatory Commission ("NRC") for the UNC site, and issuance of an appropriate decision document by U.S. EPA Region 6 consistent with the NCP, 40 CFR Part 300. Contingent upon both actions, the NECR Mine wastes will be disposed of within the footprint of the existing tailings disposal cells at the UNC Mill Site.

The purpose of this action is to mitigate threats to human health and the environment posed by the presence of hazardous substances in the drainage area east of Red Water Pond Road (Step Out Area #2). The proposed removal of hazardous substances would be undertaken pursuant to Section 104(a)(1) of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9604(a)(1), and Section 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), 40 CFR § 300.415.

Step Out Area #2 (Figure 1) is located on the Navajo Nation Reservation immediately east of Red Water Pond Road in Coyote Canyon Chapter, McKinley County, New Mexico.

II. SITE CONDITIONS AND BACKGROUND

Site Status: Non-NPL
Category of Removal: Time-Critical
CERCLIS ID: NNN000906132
SITE ID: 09PM

A. Site Description

1. Physical Location

The Site is located within Sections 35 and 36 of Township 17 North, Range 16 West, east of Red Water Pond Road near the intersection with State Highway 566. The site is approximately 15-20 acres and is situated approximately 16 miles northeast of Gallup, McKinley County, New Mexico

2. Site Characteristics

The NECR mine is a former uranium mine and is considered to be a contributing source of the soil contamination east of Red Water Pond Road at the time-critical removal site. The mine was operated by the United Nuclear Corporation ("UNC"). The mine operated from 1968-1982, serving as the principal mineral source for the UNC uranium mill facility, located east of Highway 566. UNC is now an indirect subsidiary of General Electric Corporation ("GE").

Originally, the workplan for this investigation only addressed a linear portion of the drainage area between the first culvert under Red Water Pond Road and the Unnamed Arroyo #2 (See Figure #1). However, it became apparent during the investigation that

the extent of contamination went beyond this limited area as the water also flowed out of the narrow and relatively shallow linear path across an open field in a sheet flow. Similarly, it became apparent that the contamination also intermingled with other paths of migration from the mine site where a second culvert to the north brings water running from the minesite through Step Out Area #1, under Red Water Pond Road and through Step Out Area #2. The drainage area east of Red Water Pond Road that is the subject of this action is primarily a flat wide field with little vegetation other than grasses. The edge of the field that runs along the Unnamed Arroyo #2 is quite steep in some places.

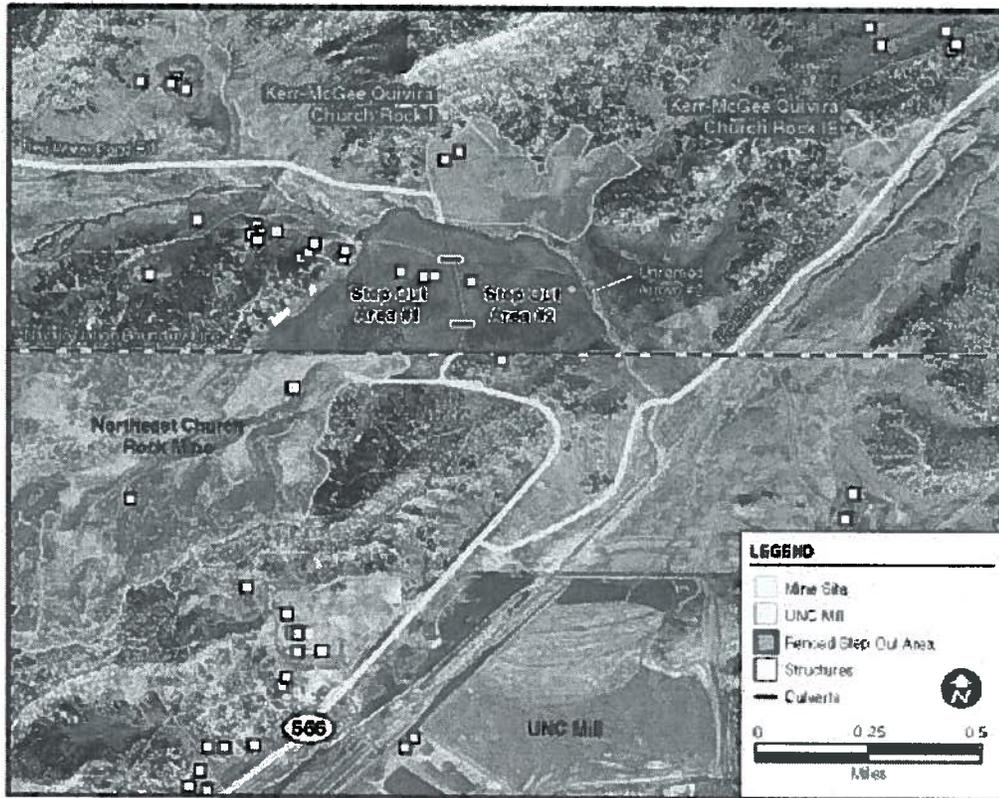


Figure 1: Northeast Church Rock Mine and Step Out Areas

The east drainage area is downgradient and downwind (based on the prevailing wind direction) from the NECR mine; however, contamination at this Site may be partially the result of another nearby former uranium mine (operated by Kerr-McGee) resulting from similar contaminant transport forces attributed to the NECR area (i.e., contaminant migration due to wind and runoff). It is believed that the haul road for the Kerr-McGee Quivira mine was situated in close proximity to the Site. One residence is located off Red Water Pond Road within the Step Out Area #2, however, this homesite was the subject of a residential removal action in 2007 and is therefore not part of this current action.

According to the Red Water Pond Road Community Association, there are eleven households or home sites in the immediate vicinity of the NECR Mine Site and Step Out Areas, including 48 families and 110 people. Approximately 25 families reside along Pipeline Road north of the UNC Mill Site and approximately 12 families reside along State Rt. 566 south of the UNC Mill Site (Navajo DOJ, December 2008). Several Navajo families have stated they collect herbs and plants from the NECR Mine Site and surrounding area for ceremonial purposes. Apart from the residential areas, the primary land use in the area is grazing for sheep, cattle, and horses.

3. Removal Site Evaluation (RSE)

Overall, the RSE investigation included sampling on the Mine Site as well as in areas adjacent to the Mine Site ("Step-Out Areas") both east and west of Red Water Pond Road. The primary RSE investigation of the mine site and Step Out Area #1, West of Red Water Pond Road, occurred in 2006. Samples were collected under U.S. EPA oversight in accordance with a U.S. EPA approved RSE Work Plan. The work plan was developed and executed pursuant to an Administrative Order on Consent (AOC) between U.S. EPA and UNC, dated September 27, 2006. Contamination identified west of Red Water Pond Road was removed in two removal actions, including a removal immediately around the residences in 2007 and a larger removal, that included the Unnamed Arroyo #1 in 2009/2010. These removals are described in more detail in Section II.B.3. Contamination on the mine site is addressed under a concurrent non-time-critical action memo.

In 2010, the Potentially Responsible Party ("PRP"), UNC, conducted a supplemental RSE investigation in the drainage area East of Red Water Pond Road with U.S. EPA and Navajo Nation EPA ("NNEPA") oversight under the same AOC and a supplemental work plan. When preliminary field results indicated that the Step Out Area #2 was contaminated, UNC/GE immediately installed fencing around the Step Out Area to prevent exposure to people or livestock while waiting for laboratory confirmation of these results. The NECR Mine is considered to be a contributing source of the radiological soil contamination east of Red Water Pond Road. However, due to the proximity of the contamination east of Red Water Pond Road to residents and the potential for migration of the contamination, U.S. EPA decided to address this step-out area as a separate time-critical action as the subject of this action memo.

Surface Soil Results

Surface soil samples were collected from 51 locations within the East Drainage and East Drainage flats areas (collectively Step Out Area #2) and were analyzed for Ra-226. All but eleven samples were above the action level of 2.24 pCi/g. Ra-226 concentrations along the downstream section of the East Drainage channel were generally lower (0.8 to 7.3 pCi/g). Within the East Drainage flats area, Ra-226 concentrations were generally higher near the central portion (between the East Drainage channel and the secondary channel to the north), with a maximum Ra-226 concentration of 93 pCi/g.

Subsurface Soil Results

Twenty-six subsurface soil samples were collected from 19 test pit locations in the East Drainage Step Out Area and were analyzed for Ra-226. Subsurface soil analytical results for Ra-226 ranged from <0.3 (non-detect) to 2.4 pCi/g with an average in the East Drainage channel area of 1.9 pCi/g. Twelve subsurface samples collected for field analysis in the flats indicated two locations where contamination extended below a depth of one foot. No contamination was evident at 2.5 feet at these locations indicating relatively shallow contamination in the flats.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

Under U.S. EPA supervision, UNC/GE performed a human health risk assessment (“HHRA”), including a conceptual site model, screening level HHRA, and a baseline HHRA. Cancer is the major effect of concern from radionuclides. Radium is known to cause bone, head, and nasal passage tumors in humans, and radon, via inhalation exposure, causes lung cancer in humans. Uranium may cause lung cancer and tumors of the lymphatic and hematopoietic tissue.

The Action Level for the Contaminant of Concern is based on the PRG for residential exposure. The Action Level for Ra-226 is 2.24 pCi/g (1.24 pCi/g above the mean of the Ra-226 background concentration, which is 1.0 pCi/g) and corresponds to an acceptable risk range of 2×10^{-4} for residential scenarios.

Table 4.1 Selected Action Level

| Contaminant of Concern | Action Level | Basis for Action Level |
|-------------------------------|---------------------|-------------------------------|
| Radium-226 | 2.24 pCi/g | 10^{-4} risk + background |

Based on the sampling data in the RSE, US EPA has estimated that approximately 30,000 cubic yards of radiological waste exist in Step Out Area #2

Current conditions in Step Out Area #2 present risks due to the lack of an engineered containment system for the waste and the wind and water transport mechanisms that have previously contaminated the surrounding areas.

5. National Priorities List status

Neither the NECR Step Out Areas nor the NECR Mine Site is on the National Priorities List (NPL). In 2006, Navajo Superfund Program conducted a pre-CERCLIS site screening of the NECR Mine Site (CERCLIS ID No. NNN000906132). The RSE Work Plan determined the need for investigation of the east drainage area and ultimately expanded the Site definition to include Step Out Area #2.

Current conditions at the Site pose an imminent and substantial endangerment (see Sections III and IV) in Step Out Area #2. The proposed Removal Action will complete all work in Step Out Area #2 but will not complete work at the balance of the NECR Mine Site or other potential Sites.

B. Other Actions to Date

U.S. EPA ordered three time-critical removal actions related to the NECR Mine Site in the past five years. These actions, which were performed by UNC and U.S. EPA, are described below.

1. 2006 Removal Site Evaluation

In September 2006, U.S. EPA entered into an administrative order on consent ("2006 AOC") with UNC, under which UNC performed a removal site evaluation, at the NECR Mine Site, under oversight of U.S. EPA and Navajo Nation EPA.

2. 2007 Residential Removal Action

A time-critical removal action was taken for three home sites where NECR Mine-related contamination was found. U.S. EPA signed the NECR Residential Removal Action Memo on April 18, 2007 and issued a Unilateral Administrative Order on May 4, 2007 ordering UNC to undertake transportation and disposal, while U.S. EPA conducted excavation and sampling components of the removal action.

Beginning on May 7, 2007 and continuing for approximately four weeks, U.S. EPA representatives and the United State Coast Guard ("USCG") Pacific Strike Team performed the NECR home site investigation and cleanup. Using the U.S. EPA-established soil cleanup goal of 2.24 pCi/g radium-226 for surface soil sampling, removals were conducted for half-acre areas around three home sites. Consistent with the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) guidance, excavated areas were 100% scanned. All radon levels were below 4.0 pCi/L in the homes and the average soil concentrations were below 2.24 pCi/g consistent with MARSSIM procedures after the removals were completed.

3. 2009/2010 Step-Out Interim Removal Action

U.S. EPA signed the NECR Step-Out Area Interim Removal Action Memorandum on July 23, 2009. In a July 24, 2009 Administrative Order on Consent ("2009" AOC), UNC and GE (collectively "UNC/GE") agreed to undertake the removal action with U.S. EPA oversight. The 2009 removal action used the same soil cleanup goal as the one selected for the 2007 Removal Action, i.e. of 2.24 pCi/g radium-226.

The Interim Removal Action ("IRA") activities were performed from approximately August 17, 2009 through May 21, 2010. The work included demolition of

existing mine buildings and associated concrete slabs located within the NECR-1 footprint. It also included excavation and placement onto the NECR-1 pile of approximately 109,800 cubic yards (cy) of soil from the Step Out Area, including approximately 33,000 cy from the Unnamed Arroyo; excavation and stockpiling of approximately 4,000 cy of petroleum impacted soil (TPH soil); backfilling and restoration of depressions, culverts, and roads with new imported materials; characterization of Red Water Pond Road from Hwy 566 to the bridge by the Quivira Mine Site; and fencing, seeding and other restoration activities.

In general, all soils with an activity concentration for Ra-226 above 3.0 pCi/g were removed from the Unnamed Arroyo and 4 Zones in the Step Out area until the average residual activity concentrations were less than 2.24 pCi/g. Removal soils were placed on the NECR-1 pile, which was capped with 6 to 12 inches of clean imported fill. Areas that were excavated to a depth of more than about 1-foot (including the Unnamed Arroyo) were backfilled with imported material.

During this work, in close coordination with U.S. EPA Community Involvement Coordinators, UNC/GE arranged for temporary housing for three households for approximately five months. U.S. EPA also temporarily moved residents from four additional households for approximately two months. UNC/GE retained contractors to carry out temporary housing, construction, transportation and sampling activities.

C. State and Local Authorities Roles

1. State and local actions to date

Consultations with the Navajo Nation and the State of New Mexico in 2005 resulted in Region 9 taking the lead on the NECR site. NN EPA sent a letter to U.S. EPA Region 9 dated March 22, 2005 formally requesting that U.S. EPA become the lead agency, per a Memorandum of Understanding between Region 9 and the Navajo Nation. Region 9 issued a letter formally accepting Site lead on November 7, 2005. U.S. EPA will continue to coordinate closely with the Navajo Nation EPA throughout the cleanup process.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Current Site conditions pose the threat of potential future releases of a hazardous substance, namely radium-226. The likelihood of direct human exposure, via ingestion and/or inhalation of hazardous substances, and the threat of potential future releases and migration of those substances, pose an imminent and substantial endangerment to public health, and/or welfare, or the environment based on the factors set forth in the NCP, 40 CFR § 300.415(b)(2). These factors include:

1. Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby populations or the food chain

As described in Section II.A.3, high concentrations of radium-226 have been detected in samples at the Mine Site. Radium is a daughter product formed when uranium and thorium decay. Two of the main radium isotopes found in the environment are radium-226 and radium-228. During the decay process, alpha, beta, and gamma radiation are released. Radium may be found in air, water and soil. Radium in the soil may be absorbed by plants.

Analytical results indicate that concentrations of radium-226 identified in these media exceed background and U.S. EPA's PRGs. Acute inhalation exposure to high levels of radium can cause adverse effects to the blood (anemia) and eyes (cataracts). Radium-226 also has been shown to affect the teeth, causing an increase in broken teeth and cavities. Exposure to high levels of radium results in an increased incidence of bone, liver, and breast cancer. The U.S. EPA and the National Academy of Sciences, Committee on Biological Effects of Ionizing Radiation, has stated that radium is a known human carcinogen (ATSDR, 1999). Inhalation of radium contaminated particulates is of particular concern. Radium emits alpha radiation, which, when inhaled, becomes a source of ionizing radiation in the lung and throat, possibly leading to toxic effects.

Much of the contaminated material in the NECR Residential Site is fine-grained and therefore likely to result in human exposure via inhalation or ingestion. Contamination is readily accessible to on-site full-time residents and potentially nearby part-time and/or full-time residents. Persons occupying or traversing the Site may be exposed to contaminated dust by inhalation or ingestion of contamination sorbed to particulate matter. Incidences of direct contact with natural and mechanically generated dust during these activities account for known contamination exposure scenarios faced at the Site. Radium-226 may be entrained in naturally and mechanically generated dust and/or transported on shoes and clothing of residents passing over contaminated areas.

Activities that occur in contaminated areas that may put persons at risk include walking or hiking, livestock grazing, gardening and yard work, and modes of transportation including all-terrain vehicle, motorcycle, or horseback. Persons may drive their vehicles over contaminated areas as well. This activity may also contribute to exposure pathways via dust generation.

Rainfall events may lead to transport of the contamination from the Mine Site. High soil erosion rates may indicate transport of contamination from the Site constituting a release of hazardous substances and resulting in secondary contamination sources. In addition, contaminants may migrate during high wind events, due to the propensity for contaminants to adhere to windborne dust particles.

Contaminated soils from the Site may continue to migrate off-site via wind and water transport mechanisms including mechanical dust generation. It is believed that the source of radium in soils in the Step Out Areas was the upgradient NECR Mine Site.

Some of the radium daughter particles, such as radon, also have a specific tendency to adhere to dust particles and migrate and have traveled off-site in historic surface water flows.

IV. ENDANGERMENT DETERMINATION

Actual and threatened releases of hazardous substances from this site, if not addressed by implementing a Time-Critical Removal Action, may continue to present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

U.S. EPA proposes to mitigate the imminent and substantial threats to human health, welfare, or the environment by taking steps to prevent the release of radium-226. The removal action will include the following objectives to prevent direct human contact with environmental radium-226:

- Conduct any additional baseline sampling necessary to assess current site conditions prior to construction and waste disposal.
- Remove contamination by excavating soil within Step Out Area #2 based on historical sampling results and real-time field gamma scans. (Similar to the 2009/2010 Interim Removal Action in Step Out Area #1, this action does not include a Final Status Survey. A Final Status Survey will be conducted for the entire NECR Mine Site, including the IRA Area, according to MARSSIM guidance at the conclusion of the response actions selected pursuant to the concurrent non-time-critical removal action memo.)
- Conduct confirmation scanning, sampling and analysis.
- Transport and consolidate excavated material at the NECR mine site and cover with clean soil.
- Restore site to pre-removal conditions including backfilling and re-grading of excavation areas for erosion and storm water control. These areas will also be re-vegetated with native species.
- Requested funding will include payment for voluntary alternative housing options to residents significantly impacted by disruptions associated with the removal action. The housing payments will be calculated consistent with EPA's April 2002 Superfund Response Actions: Temporary Relocations Implementation Guidance (OSWER Directive 9230.0-97) and the Uniform Relocation Assistance and Real Property Acquisitions Act ("URA"), 42 U.S.C. §§ 4601 et seq., and its implementing regulations, 49 C.F.R. Part 24.

2. Contribution to remedial performance

This removal action would address surface soil contamination within Step Out Area #2. U.S. EPA has recently worked to assess groundwater for the NECR Mine Site and surrounding facilities, including historic releases from these facilities; however, the removal action that is the subject of this memorandum does not address groundwater.

The long-term cleanup plan for the site:

It is expected that this removal action will eliminate any threat of direct or indirect contact with or inhalation of hazardous substances in Step Out Area #2. As discussed above, U.S. EPA is issuing a separate and concurrent non-time-critical action memo which addresses soil contamination at the NECR Mine Site. The non-time-critical action memo also does not address groundwater.

Consistency with the long-term remedy:

The Time-Critical Removal proposed for Step Out Area #2 is consistent with addressing the larger issue of potential exposures posed by the NECR Mine Site.

3. Applicable or relevant and appropriate requirements (ARARs)

A complete list of Applicable or Relevant and Appropriate Requirements (“ARARs”) are provided as Attachment II.

Section 300.415(j) of the NCP provides that removal actions must attain ARARs to the extent practicable, considering the exigencies of the situation.

Section 300.5 of the NCP defines applicable requirements as cleanup standards, standards of control, and other substantive environmental protection requirements, criteria or limitations promulgated under Federal environmental or State environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location or other circumstances at a CERCLA site.

Section 300.5 of the NCP defines relevant and appropriate requirements as cleanup standards, standards of control and other substantive requirements, criteria, or limitations promulgated under Federal environmental or State environmental or facility siting laws that, while not “applicable” to a hazardous substance, pollutant, or contaminant, remedial action, location, or other circumstances at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site and are well-suited to the particular site.

Because CERCLA on-site response actions do not require permitting, only substantive requirements are considered as possible ARARs. Administrative requirements such as approval of, or consultation with administrative bodies, issuance of

permits, documentation, reporting, record keeping, and enforcement are not ARARs for on-site CERCLA actions.

4. Project schedule

It is estimated that removal activities will take approximately three months to complete excavation and disposal of the contaminated material plus revegetation activities. However, with confirmation sampling, analysis, reporting and any additional work that may be necessary, the action may take up to six months to completion. It is anticipated that this removal action will be completed in 2012.

B. Estimated Costs

The total cost for the removal action is estimated to be \$2,000,000 based on the estimated volume of 30,000 cubic yards and the reported associated costs for Step Out Area #1. US EPA expects UNC to pay for removal and disposal of contaminated soils under a settlement or a unilateral order. In addition, the U.S. anticipates the following extramural costs, which will be eligible for cost recovery:

Cost of the Removal Action paid by the Responsible Party: \$2,000,000

U.S. EPA Extramural Cost Summary

Housing: \$600,000

START Contractor: \$100,000

TOTAL: \$700,000

U.S. EPA plans to use extramural funding sources to fund housing and oversight work prior to pursuing cost recovery.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Given the site conditions, the nature of the hazardous substances documented on site, and the potential exposure pathways to nearby populations described in Sections III and IV above, actual or threatened releases of hazardous substances from the Mine Site, if not addressed by implementing the response actions selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

VII. OUTSTANDING POLICY ISSUES

Outstanding policy issues related to the consolidation of mine wastes on the UNC Mill Site are addressed in the concurrent non-time critical action memorandum for the NECR Mine Site removal action.

There are no other outstanding policy issues that have been identified at this time.

VIII. ENFORCEMENT

U.S. EPA expects UNC to pay for removal and disposal of contaminated soils under a settlement or a unilateral order, and to reimburse U.S. EPA for the costs incurred in oversight of the PRP's work. The following intramural and extramural costs are also recoverable:

Intramural Costs¹:

| | |
|---|-----------|
| U.S. EPA Direct Costs: | \$50,000 |
| U.S. EPA Indirect Costs (47.71% of Extramural ² and Intramural costs) | \$357,825 |

Total Intramural Costs: \$407,825

The total U.S. EPA extramural and intramural costs for this removal action, based on full-cost accounting practices, that will be eligible for cost recovery are estimated to be \$1,107,825.

U.S. EPA expects UNC/GE to pay for removal and disposal of contaminated soils under a settlement or a unilateral order, and to reimburse U.S. EPA for the costs incurred in oversight of the PRP's work and other costs per section V. B.

IX. RECOMMENDATION

We recommend that you approve this removal action memorandum and the decision incorporated therein. This Action Memorandum documents the selected removal action for Step Out Area #2, McKinley County, New Mexico, developed in accordance with CERCLA as amended, and is not inconsistent with the NCP. This decision is based on the Administrative Record for the NECR Eastern Drainage Step Out Area #2.

Conditions at the NECR Step Out Area #2 meet the NCP criteria for a Time-Critical Removal Action. The total project ceiling for this time critical removal action if approved will be \$1,107,825, of which \$700,000 would come from U.S. EPA extramural

¹ Direct costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual costs from this estimate will affect the United States' right to cost recovery

² See section V.B.

funding sources.

Approve: Clancy Tenley
Clancy Tenley, Assistant Director
Superfund Division

Date 9/26/2011

Disapprove: _____
Clancy Tenley, Assistant Director
Superfund Division

Date

cc: Sherry Fielding, U.S. EPA, OERR, HQ
Steven Etsitty, Navajo Nation Environmental Protection Agency
David Taylor, Navajo Nation Department of Justice
Steven Spencer, U.S. Department of Interior
Katrina Coltrain, U.S. EPA Region 6
Yolanda Norman, NRC
Deborah Steckley, DOE

LIST OF ATTACHMENTS

Attachment I – Index to Administrative Record

Attachment II – Applicable or Relevant and Appropriate Requirements

Attachment I

INDEX TO THE ADMINISTRATIVE RECORD

Northeast Churchrock Mine Superfund Site Drainage East of Red Water Pond, Rd Removal Administrative Record Index
9/27/11

| Doc ID | Doc Date | Title/Subject | Author | Addressee | Access Code |
|---------|-----------|--|--|--|-------------|
| 2240724 | 6/11/2009 | Northeast Churchrock Mine Engineering Evaluation/Cost Analysis (EE/CA) for Non-Time Critical Removal Administrative Record Index | Environmental Protection Agency - Region 9 | | REL |
| 1128301 | 1/7/2011 | Ltr: Supplemental removal site evaluation workplan - E drainage, w/attchs | Toby Leeson / M W H Americas, Inc | Sara Jacobs / Environmental Protection Agency - Region 9 | REL |
| 1128449 | 3/24/2011 | Supplemental removal site evaluation (RSE), east drainage area - figures 1-2, revision 0 | M W H Americas, Inc | United Nuclear Corp | REL |
| 1128306 | 4/5/2011 | Ltr: Response to supplemental removal site evaluation workplan, East drainage, NECR site, MWH, dated 1/7/11 | Sara Jacobs / Environmental Protection Agency - Region 9 | Lance Hauer / General Electric Co | REL |
| 2240722 | 4/8/2011 | Northeast Churchrock Mine Superfund Site, Residential Site #1 Removal Administrative Record Index | Environmental Protection Agency - Region 9 | | REL |
| 2240723 | 4/8/2011 | NE Churchrock Quivira Mines Superfund Site, Residential Site #2 Removal Administrative Record Index | Environmental Protection Agency - Region 9 | | REL |
| 1128448 | 4/14/2011 | Ltr: Revised supplemental removal site evaluation (RSE) workplan, east drainage area (red-line revision) | Toby Leeson / M W H Americas, Inc | Sara Jacobs / Environmental Protection Agency - Region 9 | REL |
| 1128444 | 4/15/2011 | Email: Discusses Churchrock mine archaeological survey, w/history | Lance Hauer / General Electric Co | Sara Jacobs / Environmental Protection Agency - Region 9 | REL |
| 1128445 | 4/18/2011 | Ltr: Approval of revised supplemental removal site evaluation (RSE) workplan, east drainage area | Sara Jacobs / Environmental Protection Agency - Region 9 | Lance Hauer / General Electric Co | REL |
| 1128442 | 5/10/2011 | Supplemental removal site evaluation (RSE) rpt, east drainage area - figures 1-3 (draft) | M W H Americas, Inc | United Nuclear Corp | REL |
| 1128326 | 5/13/2011 | Maps (8): Supplemental removal site evaluation rpt, figures 3-1, 3-2.1, 3-2.2, 3-2.3, 3-2.4, 3-4 (2 versions) | Montgomery Watson Harza | | REL |

Northeast Churchrock Mine Superfund Site Drainage East of Red Water Pond Rd Removal Administrative Record Index
9/27/11

| | | | | | |
|---------|-----------|--|---|--|-----|
| 1128446 | 5/23/2011 | NECR east drainage area, figure 1 - fencing plan | M W H Americas, Inc | United Nuclear Corp General Electric Co | REL |
| 1128447 | 9/2/2011 | Supplemental removal site evaluation (RSE) rpt, east drainage area, w/apps A & B, w/o app A figures | M W H Americas, Inc | General Electric Co United Nuclear Corp | REL |
| 2237959 | 9/2/2011 | Compact disc: Supplemental removal site evaluation (RSE) rpt, east drainage area (app B only - static gamma radiation survey field forms) | M W H Americas, Inc | United Nuclear Corp General Electric Co | REL |
| 2240727 | 9/16/2011 | Northeast Churchrock Mine Superfund Site Step-Out Interim Removal Administrative Record Index | Environmental Protection Agency Region 9 | | REL |
| 2240728 | 9/16/2011 | NE Churchrock Quivira Mines Superfund Site Removal Administrative Record Index | Environmental Protection Agency Region 9 | | REL |
| 2240732 | 9/26/2011 | Action Memo: Request for time-critical removal action at NECR site Drainage East of Red Water Pond (Step-Out Area #2) | Environmental Protection Agency Region 9 | | REL |
| 2240737 | 9/27/2011 | Northeast Churchrock Mine Superfund Site Engineering Evaluation/Cost Analysis (EE/CA) Non-Time-Critical Update 1 Removal Administrative Record Index | Environmental Protection Agency Region 9 | | REL |
| 1128443 | | Supplemental removal site evaluation (RSE) rpt, east drainage area - tables 1-3 (draft) | M W H Americas, Inc | United Nuclear Corp | REL |

Attachment II

APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARs) TABLE

In the Engineering Evaluation and Cost Analysis (“EE/CA”), U.S.EPA addressed the Applicable or Relevant and Appropriate Requirements (“ARARs”) for the proposed Actions at the Site. This attachment contains a discussion of how the ARARs are selected, and lists the ARARs laid out in the EE/CA as well as the additional ARARs identified as a result of comments received by U.S. EPA during the Public Comment Period on the EE/CA.

Applicable or relevant and appropriate requirements (ARARs) cover both federal and state environmental requirements and are used to: (1) evaluate the appropriate extent of Site cleanup; (2) scope and formulate alternatives; and (3) guide the implementation and operation of a selected action. Section 300.415(j) of the NCP requires that “removal actions pursuant to CERCLA Section 106, shall "to the extent practicable, considering the exigencies of the situation, attain ARARs under federal or state environmental or facility siting laws.” The U.S. EPA Region 9 requested and received ARARs from the State of New Mexico and the Navajo Nation EPA for consideration in this EE/CA (see table provided as Attachment II for a complete list of the ARARs for this removal action).

Terms and Definitions

The following are explanations of the terms and definitions used throughout this ARARs discussion. Applicable requirements are clean-up standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site (52 Federal Register [FR] 32496, August 27, 1987). Relevant and appropriate requirements are clean-up standards, standards of control, or other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that, while not applicable to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well-suited to the particular site (52 FR 32496). Portions of a requirement may be relevant and appropriate even if the entire requirement is not. Information to be considered includes non-promulgated advisories or guidance issued by federal or state government that are not legally binding and do not have the status of potential ARARs. They are considered in the absence of federal or state ARARs, or when such ARARs are

not sufficiently protective. An example of information to be considered is the U.S. EPA Region 9 PRGs that provide guidance to assess human health implications during a removal action.

Under the description of ARARs set forth in the NCP, state and federal ARARs are organized under the following three categories:

Chemical-specific ARARs are usually health- or risk-based standards that limit concentrations of chemicals found in or discharged to the environment. They govern the extent of site remediation by providing either actual clean-up levels or the basis for calculating such levels. Chemical-specific ARARs may also be used to indicate acceptable levels of discharge in determining treatment and disposal requirements and to assess the effectiveness of future remedial alternatives. For example, state water quality standards apply to a site where treatment effluent is discharged to a surface water body.

Location-specific ARARs set restrictions on chemical concentrations or the conduct of activities solely because they are in special locations (53 FR 51394). In determining the use of location-specific ARARs for selected remedial actions at CERCLA sites, the jurisdictional prerequisites of each of the regulations must be investigated. In addition, basic definitions and exemptions must be analyzed on a site-specific basis to confirm the correct application of the requirements. For example, federal and state regulations concerning groundwater may apply at a site where a removal action may impact groundwater quality.

Action-specific ARARs set controls or restrictions on particular kinds of activities related to the management of particular wastes or materials (53 FR 51437). Selection of a particular response action at a site will invoke the appropriate action-specific ARARs that may specify particular performance standards or technologies as well as specific environmental levels for discharged or residual chemicals. For example, the federal noise regulations apply at a site where construction and heavy equipment activities are occurring.

Identification and evaluation of ARARs is an iterative process that continues throughout the response process. As a better understanding is gained of Site conditions, contaminants, and response alternatives, the lists of ARARs and their relevance to the removal action may change.

Other Considerations and Assumptions

The following additional considerations and assumptions were made during the ARAR identification process.

Occupational Safety and Health Administration (OSHA)

OSHA has promulgated standards for protection of workers who may be exposed to hazardous substances at Resource Conservation and Recovery Act (RCRA) or CERCLA sites (29 CFR Parts 1910.120 and 1926.65). The U.S. EPA requires compliance with

OSHA standards in the NCP (40 Code of Federal Regulations [CFR] 300.150), but not through the ARAR process. Therefore, OSHA standards are not considered ARARs. Although the requirements, standards, and regulations of OSHA are not ARARs, they will be complied with during the removal action.

Uranium Mill Tailing Radiation Control Act (UMTRCA)

UMTRCA programs are categorized under Title I and Title II. Title I addresses specific inactive Uranium processing sites and Title II addresses active sites that are required to have a license from NRC. Under UMTRCA, the U.S.EPA was directed to devise standards for both the control Engineering Evaluation/Cost Analysis and cleanup remedial actions. The NECR mine site is not a listed site under Title I of UMTRCA nor would NECR mine wastes be classified under Title II. However, UMTRCA requirements may be ARARs under certain circumstances, as reflected in the ARARs table attached as an Appendix to this Attachment.

Acronyms

| | |
|---------|---|
| BMP | Best Management Practice |
| CAA | Clean Air Act |
| CFR | Code of Federal Regulations |
| CWA | Clean Water Act |
| ESA | Endangered Species Act |
| Mrem/yr | Milli-Roentgen-Equivalent-Man/Year |
| NESHAP | National Emissions Standards for Hazardous Air Pollutants |
| NMAC | New Mexico Administrative Code |
| NMSA | New Mexico Statutes Annotated |
| NN | Navajo Nation |
| NPDES | National Pollutant Discharge Elimination System |
| NRC | Nuclear Regulatory Commission |
| RCRA | Resource Conservation and Recovery Act |
| SMCRA | Surface Mining Control and Reclamation Act |
| TBC | To Be Considered |
| UMTRCA | Uranium Mill Tailings Radiation Control Act |
| USC | United States Code |

**Table A-1
Chemical-Specific ARARs and TBC Information**

| Media | Requirement | Requirement Synopsis | Status and Rationale |
|---------------------|--|--|---|
| Solid Wastes | FEDERAL Resource Conservation and Recovery Act (RCRA) of 1976, as amended – Subtitle D, 42 USC 6901 et seq. | Regulates disposal of solid waste. Per 42 USC 6903(27), RCRA does not regulate "source, special nuclear, or byproduct material" as defined in the Atomic Energy Act, but may apply to other wastes, including ores containing uranium in concentrations less than 500 ppm. | Substantive requirements may be applicable to wastes that are subject to the Act |
| Hazardous Wastes | FEDERAL Resource Conservation and Recovery Act (RCRA) of 1976, as amended – Subtitle C, 42 USC 6901 et seq. | Provides for "cradle-to-grave" regulation of hazardous wastes. Per 42 USC 6903(27), RCRA does not regulate "source, special nuclear, or byproduct material" as defined in the Atomic Energy Act. Per 40 CFR 261.4(b)(7), wastes derived from the extraction, beneficiation and processing of ores are not hazardous wastes. EPA does not anticipate encountering RCRA hazardous wastes during this removal action. However, if hazardous wastes (e.g., buried drums containing solvents) are discovered, RCRA hazardous waste requirements would be ARARs. | Substantive requirements may be applicable if wastes that are subject to the Act are encountered |
| Soils | FEDERAL Surface Mining Control and Reclamation Act of 1977 (SMCRA), as amended – And regulations at 30 CFR Parts 816 and 817 | Establishes a program for regulating surface coal mining and reclamation (mandatory uniform standards). Includes minimization of impacts on fish, wildlife, and related environmental values. Revegetation requirements (e.g., 30 CFR 816.111) may be relevant & appropriate to protect against erosion. | Substantive requirements may be relevant and appropriate |
| Hazardous Materials | FEDERAL Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA), as amended – And regulations at 40 CFR Part 192, Subparts A-E | Protect the public and the environment from uranium mill tailings. Some requirements (e.g., 40 CFR 192.02, 192.12, 192.32) may be ARARs. | Substantive requirements may be applicable to activities involving uranium mill tailings, and/or activities on UNC NPL site, if any, may be relevant and appropriate to other activities |
| Other | FEDERAL Code of Federal Regulations (CFR), Title 10, Part 20 NRC Regulations – Standards for Protection Against Radiation; Subpart D – Radiation Dose Limits | Establishes standards for protection against ionizing radiation resulting from activities conducted under licenses issued by the NRC | Substantive requirements may be applicable or relevant and appropriate if source, byproduct or special nuclear material is encountered |
| Air | FEDERAL Clean Air Act (CAA) – National Emission Standards for Hazardous Air Pollutants (NESHAPs) that apply to radionuclides, Title 40 CFR Part 61, Subpart H. | Regulates airborne emissions of radionuclides to nearest off site receptor during cleanup of Federal facilities and licensed U.S. NRC facilities. Emissions of radionuclides cannot exceed 10 milli-Roentgen-Equivalent-Man per year (mrem/yr) | Substantive requirements may be relevant and appropriate to activities during the removal action. These requirements may become applicable if DOE takes over long-term maintenance of the facility in the future. |

**Table A-1
Chemical-Specific ARARs and TBC Information**

| Media | Requirement | Requirement Synopsis | Status and Rationale |
|-----------------|--|---|--|
| Other | FEDERAL EPA Directive on Protective Cleanup Levels for Radioactive Contamination at CERCLA sites. OSWER Directive 9200.4-18 | Provides guidance for cleanup levels for CERCLA sites with radioactive contamination. Cleanup of radionuclides are governed by risk established in the NCP when ARARS are not available or sufficiently protective. | TBC |
| Water | NAVAJO NATION Navajo Nation Pollutant Discharge Elimination System Program – applicable regulations | Protection of NN watershed from discharges of pollutants from any point source | Substantive requirements may be applicable to activities on reservation and tribal trust land |
| Solid Wastes | NAVAJO NATION Navajo Nation Solid Waste Act – Subchapter 2 – Prohibited Act Subchapter 5 – Enforcement | Protect the health, safety, and preserve the resources of the NN. Regulates solid waste but exempts mine tailings and waste rock. Some requirements are applicable to salts. | Substantive requirements may be relevant and appropriate if regulated salts are encountered during removal action |
| Air | NAVAJO NATION Navajo Nation Air Pollution Prevention and Prevention Act – Air Quality Control Programs – Permits, 2004; Code of Regulations for air emissions, Rules and Regulations. | Outlines Best Management Practices (BMPs) to control dust that would be generated during earth moving activities. Details the BMPs to control excessive amounts of particulates. | Substantive requirements may be applicable to activities on reservation and tribal trust land |
| Water | NAVAJO NATION Navajo Nation Clean Water Act – Title 4 Navajo Nation Code. | Establishes water quality standards; prevention of pollutant discharges. Standards protect fish, wildlife, and domestic, cultural, agricultural, and recreational uses of water. | Substantive requirements may be applicable to activities on reservation and tribal trust land |
| Hazardous Waste | STATE Hazardous Waste Act 20.4 NMAC – Hazardous Waste Regulations | Establishes criteria for the classification of hazardous waste and for the treatment, storage, and disposal of hazardous waste. The state Act incorporates most Federal RCRA regulations, including the definition of solid waste, which excludes “source, byproduct or special nuclear material.” New Mexico’s definition of hazardous waste also excludes wastes from the extraction, beneficiation, and processing of ores and minerals. | Substantive requirements may be applicable or relevant and appropriate, if wastes that are subject to the Act are encountered. |
| Solid Waste | STATE Solids Waste Act 20.9 NMAC – Solid Waste Regulations | Establishes criteria for the handling of solid waste . The state Act incorporates most Federal RCRA regulations, including, as noted above, the definition of solid waste, which excludes “source, byproduct or special nuclear material.” | Substantive requirements may be applicable or relevant and appropriate, if wastes that are subject to the Act are encountered. |
| Water | STATE 20.6.2 NMAC – New Mexico Water Quality Ground and Surface Water Protections | Establishes water quality standards and regulations to prevent or abate water pollution from discharges, including surface water and groundwater. | Substantive requirements may be relevant and appropriate to surface runoff on reservation or tribal trust land, and may be applicable to protecting groundwater and surface runoff on non-tribal lands |

**Table A-1
Chemical-Specific ARARs and TBC Information**

| Media | Requirement | Requirement Synopsis | Status and Rationale |
|--------------|---|--|---|
| Water | STATE 20.6.4 NMAC – New Mexico Standards for Interstate and Intrastate Surface Waters | Establishes water quality standards that consist of the designated use or uses of surface waters, water quality criteria necessary to protect the use or uses, and an anti-degradation policy. | Substantive requirements may be relevant and appropriate to surface runoff on reservation or tribal trust land, and may be applicable to surface runoff on non-tribal lands |
| Other | STATE 20.3.14 NMAC – New Mexico Standards for Protection Against Radiation | Establishes standards for protection against radiation resulting from extraction, transport, transfer and storage of naturally occurring radioactive materials in the oil and gas industry. | Substantive requirements may be relevant and appropriate |
| Other | STATE 20.3.4 NMAC – Standards for Protection Against Radiation | Establishes standards for protection against ionizing radiation resulting from activities conducted pursuant to licenses or registrations issued by the Department | Substantive requirements may be relevant and appropriate |

**Table A-2
Location-Specific ARARs and TBC Information**

| Media | Requirement | Requirement Synopsis | Status and Rationale |
|--------------------|--|---|---|
| Cultural Resources | FEDERAL The Native American Graves Protection And Repatriation Act – 25 United States Code (USC) Section 3001 <i>et seq</i> and its regulations Title 43 CFR Part 10. | Protects Native American graves from desecration through the removal and trafficking of human remains and cultural items including funerary and sacred objects | Substantive requirements applicable if Native American burials or cultural items are identified within area to be disturbed |
| Cultural Resources | FEDERAL National Historic Preservation Act – 16 USC 470 <i>et seq</i> ; 36 CFR Part 800 | Provides for the protection of sites with historic places and structures | Substantive requirements applicable if eligible resources identified within area to be disturbed |
| Cultural Resources | FEDERAL Archeological Resources Protection Act of 1979 – 16 USC Sections 47000-47011; 43 CFR Part 7 | Prohibits removal of or damage to archaeological resources unless by permit or exception | Substantive requirements applicable if eligible resources are identified within area to be disturbed |
| Cultural Resources | FEDERAL American Indian Religious Freedom Act – 42 USC Section 1996 <i>et seq</i> . | Protects religious, ceremonial, and burial sites, and the free practice of religions by Native American groups | Substantive requirements applicable if Native American sacred sites are identified within area to be disturbed |
| Wildlife | FEDERAL ESA – 7 USC Section 136; 16 USC Sections 15331-1548, Title 50 CFR Parts 17 and 402 | Regulates the protection of threatened and endangered species or critical habitat of such species | Substantive requirements applicable if protected species are identified within area to be disturbed |
| Wildlife | NAVAJO NATION Navajo Nation Endangered Species List – Resource Committee Resolution RCAU-103-05 | Regulates the protection of Navajo Nation threatened and endangered species or critical habitat of such species | Substantive requirements applicable if protected species are identified within area to be disturbed on reservation or tribal trust land |
| Cultural Resources | STATE NMSA 1978 – New Mexico Cultural Properties Act | Requires the identification of cultural resources, assessment of impact on those resources that may be caused by the proposed remedy, and consultation with the State Historic Preservation Officer | Substantive requirements applicable to response actions on non-tribal lands in New Mexico |

**Table A-3
Action-Specific ARARs and TBC Information**

| Media/ Activity | Requirement | Requirement Synopsis | Status and Rationale |
|----------------------------|--|--|---|
| Hazardous Materials | FEDERAL Federal Hazardous Materials Transportation Law (formerly Hazardous Materials Transportation Act) – 49 CFR Parts 171, 172, 173 | Provides protection against the risks to life, property, and the environment that are inherent in transportation of hazardous materials in commerce | Substantive requirements applicable to transportation of materials subject to the Act, including radionuclides |
| Water | FEDERAL EPA Guidance for Developing Best Management Practices for Storm Water – Publication EPA/832/R-92006 | Guidance for developing stormwater BMPs for industrial facilities | TBC |
| Water | FEDERAL CWA – Section 402, National Pollutant Discharge Elimination System (NPDES) Stormwater discharges (40 CFR parts 122, 125). | On-site and off-site discharges from site are required to meet the substantive CWA requirements, including discharge limitations, monitoring and best management practices | Substantive requirements may be applicable |
| Water | FEDERAL CWA – Section 404, dredged or fill material, 33 CFR parts 320–330, 40 CFR 230. | Regulates discharge of dredge or fill material into waters of the U.S. | Substantive requirements may be applicable to activities impacting waters of the U.S. |
| Air | STATE 20.2 NMAC – Air Quality | Establishes ambient air quality standards, performance standards for specific sources of air pollutants, and specifies monitoring methods | Substantive requirements may be relevant and appropriate to sources on reservation or tribal trust land; may be applicable to sources on non-tribal lands in New Mexico |
| Mining | STATE 19.10 NMAC – Regulation of Non-Coal Mining | Establishes requirements for mine reclamation and close-out plans | Substantive requirements may be relevant and appropriate |
| Wildlife | STATE 19.21.2 NMAC – New Mexico Wildlife Conservation Act NMSA 178 Sections 17-2-37 thru 17-2-46 | Regulates taking of endangered plant species | Substantive requirements may be applicable if protected species are identified within area to be disturbed on non-tribal lands; may be relevant and appropriate on reservation or tribal trust land |

APPENDIX C
Scope of Work

Northeast Church Rock Mine Site
Scope of Work for Time-Critical Eastern Drainage Removal Action AOC
Cleanup of Drainage East of Red Water Pond Road
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APPENDIX C
SCOPE OF WORK
FOR ADMINISTRATIVE ORDER ON CONSENT
EASTERN DRAINAGE REMOVAL ACTION
NORTHEAST CHURCH ROCK MINE SITE

1.0 Introduction

The Eastern Drainage Removal Action for the Northeast Church Rock (NECR) Mine Site (“Site” or “Mine Site”) is a time-critical removal action to mitigate actual or threatened releases of hazardous substances. There are two primary components to this removal action: (1) Excavating and transporting soil contaminated with Ra-226 from the Eastern Drainage Area to the Mine Site for temporary storage and (2) Excavating and transporting and installing and operating an active bio-venting system to treat areas containing diesel fuel constituents commingled with Ra-226 on lands within the Navajo Reservation (see Figure 1). The decision to take this removal action is documented in an Action Memorandum signed September 26, 2011. This Scope of Work (“SOW”) specifies actions required to be completed by the United Nuclear Corporation Inc. (UNC) and the General Electric Company (GE), (collectively “Respondents”), pursuant to the May, 2012 Administrative Order on Consent (“AOC”) CERCLA Docket No. 2012-02. All terms used in this SOW shall be interpreted in a manner consistent with the definitions provided in the AOC. In the event of any conflict between this SOW and the AOC, the AOC shall control.

2.0 Description of the Site

A. Physical Location

The NECR Mine Site is located within Sections 34 and 35 of Township 17 North (T17N), Range 16 West (R16W) and Section 3 of T16N, R16W (MWH, 2004) at the termination of State Highway 566. The NECR Mine Site is situated approximately 16 miles northeast of Gallup, McKinley County, New Mexico. The NECR Mine Site covers approximately 125 acres.

The area contaminated with Ra-226 that is the subject of the Eastern Drainage Removal Action (“EDRA Area” or “Step Out Area #2”) is located immediately east of the NECR Mine Site. This drainage area is east of Red Water Pond Road near the intersection with State Highway 566 and covers approximately 15-20 acres. The area contaminated with diesel fuel constituents commingled with Ra-226 on lands within the Navajo Reservation is located along the northern edge of the Mine Site and covers approximately 3.5 acres.

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B. Site Characteristics

The NECR Mine is a former uranium mine and is considered by the United States Environmental Protection Agency (US EPA) to be a contributing source of the soil contamination east of Red Water Pond Road at the EDRA Area. The mine was operated by UNC. The mine operated from 1968-1982, serving as the principal mineral source for the UNC uranium mill facility, located east of Highway 566. UNC is now a wholly owned indirect subsidiary of GE.

Originally, the work plan for investigation of the eastern drainage area only addressed a linear drainage channel between the first culvert under Red Water Pond Road and the Unnamed Arroyo #2 (See Figure #1). However, it became apparent during the investigation that the extent of contamination went beyond this limited drainage channel as the water also flowed out of the narrow and relatively shallow channel across an open field in a sheet flow. Similarly, it appears that the contamination also intermingled with other paths of migration from the NECR and potentially from the Quivira Mine Sites, including where a second culvert to the north brings water running from the NECR Mine Site through Step Out Area #1, under Red Water Pond Road and through the EDRA Area (Step Out Area #2) and from Red Water Pond Road. The EDRA Area is primarily a flat wide field with little vegetation other than grasses. The edge of the field that runs along the Unnamed Arroyo #2 is quite steep in some places.

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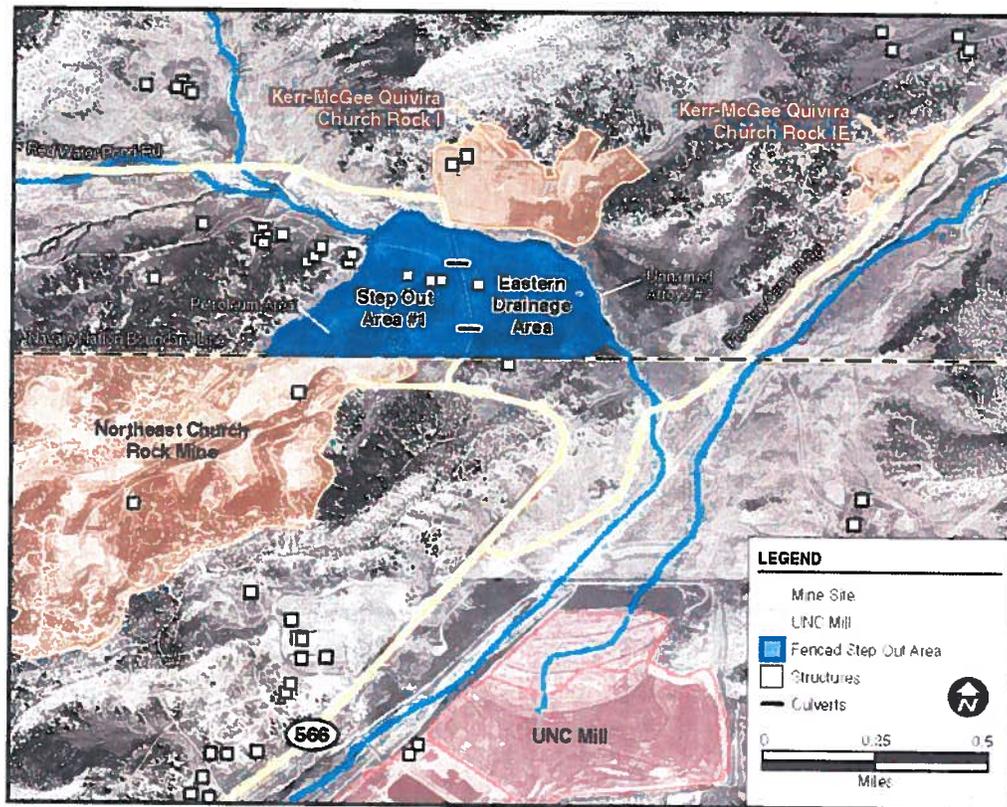


Figure 1: Northeast Church Rock Mine and Step Out Areas

The EDRA Area is downgradient and downwind (based on the prevailing wind direction) from the NECR mine; however, contamination at this Area may be partially the result of the nearby former Quivira uranium mine (operated by Kerr-McGee) resulting from similar contaminant transport forces attributed to the NECR area (i.e., contaminant migration due to wind and runoff and vehicle and livestock transport). Red Water Pond Road (RWPR), the haul road for the Quivira Mine Site was situated in close proximity to the NECR Mine Site. The highest levels of contamination on RWPR and the 50 foot shoulder on each side of the road are located on the northern portion of the road closest to the Quivira Mine Site. One residence is located off Red Water Pond Road within the EDRA Area and this homesite was the subject of a residential removal action in 2007. The ongoing protectiveness of the previous removal at this homesite will be evaluated at the beginning and the end of this Eastern Drainage Removal Action to ensure that no cross-contamination has occurred. Corrective action will be required if cross-contamination of the homesite occurs.

C. Removal Site Evaluation (RSE)

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The RSE investigation included sampling on the NECR Mine Site as well as in areas adjacent to the Mine Site ("Step-Out Areas") both east and west of RWPR. The primary RSE investigation of the mine site and Step Out Area #1, West of Red Water Pond Road, occurred in 2006. Samples were collected under US EPA oversight in accordance with a US EPA approved RSE Work Plan. The work plan was developed and executed pursuant to an Administrative Order on Consent (AOC) between US EPA and UNC, dated September 27, 2006. Contamination identified west of Red Water Pond Road was removed in two removal actions, including a removal immediately around the residences in 2007 and a larger removal that included the Unnamed Arroyo #1 in 2009 and 2010. Remaining contamination on the NECR Mine Site other than the EDRA Area is addressed under a separate concurrent non-time-critical action memo signed on September 29, 2011 and will have a separate scope of work and enforcement mechanism.

In 2010, Respondents conducted a supplemental RSE investigation in the drainage area East of Red Water Pond Road with US EPA and Navajo Nation EPA ("NNEPA") oversight under the same AOC and a supplemental work plan. When preliminary field results indicated that the EDRA Area was contaminated (see Figures 2-5), Respondents promptly installed fencing around the EDRA Area to prevent exposure to people or livestock while waiting for laboratory confirmation of these results. The NECR Mine is considered to be a contributing source of the radiological soil contamination east of Red Water Pond Road. However, due to the proximity of the contamination east of Red Water Pond Road to some residents and the potential for migration of the contamination, US EPA decided to address this area as a separate time-critical action (see September 26, 2011 Action Memorandum, provided as Appendix B to the AOC).

Surface Soil Results

Surface soil samples were collected from 51 locations within the East Drainage and East Drainage flats areas and were analyzed for Ra-226. All but eleven samples were above the action level of 2.24 pCi/g. Ra-226 concentrations along the downstream section of the East Drainage channel (shown in blue and labeled as "natural drainage" in Figures 2 through 5) were generally lower (0.8 to 7.3 pCi/g). Within the East Drainage flats area (all areas not part of the drainage channel identified in the above referenced Figures), Ra-226 concentrations were generally higher near the central portion (between the East Drainage channel and the secondary channel to the north), with a maximum Ra-226 concentration of 93 pCi/g.

Subsurface Soil Results

Twenty-six subsurface soil samples were collected from 19 test pit locations in the East Drainage Area and were analyzed for Ra-226. Subsurface soil analytical laboratory results for Ra-226 ranged from <0.3 (non-detect) to 3.4 pCi/g with an average in the East Drainage channel area of 1.9 pCi/g. Twelve subsurface samples collected for field analysis in the flats indicated

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two locations where contamination extended below a depth of one foot. No contamination was evident at 2.5 feet at these locations indicating relatively shallow contamination in the flats. However, contamination in the channel area was found at depths up to five feet below the surface.

D. Diesel Fuel Constituents Area - Characteristics and Investigation

During the 2009 Interim Removal Action (IRA) conducted adjacent to the NECR mine site, hydrocarbon impacts were observed in soils and bedrock along the southern edge of the IRA excavation area, adjacent to the north side of the NECR-1 pad (MWH, 2010). Analytical testing of soil samples determined that the hydrocarbon impacts were predominantly diesel range organics (DRO) (C10-C28). With only one exception, none of the soil samples analyzed contained detectable levels of benzene, toluene, ethylbenzene, and xylenes (collectively referred to as BTEX). Hydrocarbons at the Site were chromatographically identified as diesel fuel and appear to be highly weathered given the absence of BTEX and lighter end hydrocarbon constituents (MWH, 2010). In addition, analytical testing also confirmed commingling of DRO impacts with radium impacts adjacent to the north side of the NECR-1 pad.

In April 2010, Respondents conducted an investigation to evaluate the nature and extent of diesel fuel impacts. A total of 22 soil borings were advanced to depths between 16 and 78 feet below ground surface (bgs). The results of the investigation were presented in the document titled: Petroleum Investigation Results and Bioventing Pilot Study Plan, Northeast Church Rock Mine Site (MWH, 2010). TPH DRO concentrations ranged from non-detect to a maximum concentration of 18,900 mg/kg. The investigation revealed that TPH DRO levels are highly sporadic and dispersed within interbedded siltstone/claystone and sandstone units. The vertical extent of TPH greater than 1,000 mg/kg was found to extend approximately 15 feet to over 30 feet below ground surface (bgs) almost entirely within bedrock, and the lateral extent of TPH DRO greater than 1,000 mg/kg was confined to an area within approximately 400 feet of the NECR-1 pad. Groundwater was not encountered during the investigation and the first groundwater bearing zone is estimated to be a few hundred feet below the ground surface.

A bioventing pilot study was performed in October and November 2010 at the site (MWH, 2011). The pilot study was conducted in order to evaluate and confirm the feasibility of utilizing bioventing to degrade petroleum hydrocarbon impacts. The results of the bioventing study were summarized in the document titled: Bioventing Pilot Study Results Northeast Church Rock Mine Site (MWH, 2011). Analytical results on soil samples collected during the bioventing pilot study were consistent with the results of the 2010 petroleum investigation (MWH, 2010b).

3.0 Work - Overview

The overall scope of work specific to this interim removal action includes the removal of Radium 226 contaminated soil with an action level for the cleanup of 2.24 pCi/g. Verification

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for achieving the action level will be done statistically, consistent with the Multi-Agency Radiation Survey & Site Investigation Manual (US EPA, 2000) (MARSSIM). Contaminated soil from the Eastern Drainage Area will be placed on the NECR mine site with a cover of clean soil. Based on sampling and scanning data collected in the supplemental RSE described above and included in Attachment 1, it is estimated a volume of approximately 30,000 cubic yards will be removed from an area of approximately 15-20 acres. Based on the RSE results, the contamination over most of the area in the flats is assumed to be shallow (estimated at approximately six-inches for the purposes of calculating volume), while contamination depths in the channel average approximately three feet. Confirmation sampling and scanning, grading, backfilling of excavations greater than one-foot deep, surface soil amendment and revegetation will be conducted for all disturbed areas.

Proposed action description

Radium-226 in the Eastern Drainage

US EPA proposes to mitigate any imminent and substantial threats to human health, welfare, or the environment by taking steps to minimize exposure to radium-226. The removal action will include the following objectives to minimize direct human contact with radium-226 in the soil in the Eastern Drainage Area:

- Conduct any additional baseline surveying and sampling necessary to assess current site conditions prior to soil removal and placement on the mine site.
- Remove contamination by excavating soil within the EDRA Area based on historical sampling and gamma scan results and the new information provided by additional baseline sampling.
- Conduct confirmation scanning, sampling and analysis.
- Continue excavations until confirmation scanning, sampling, and analysis confirms that the release criterion has been achieved consistent with MARSSIM.
- Transport excavated material to the NECR mine site and cover it with one-foot of clean soil on slopes and six inches of clean soil on top.
- Restore site to pre-removal conditions including backfilling excavations greater than one-foot deep, re-grading, amending surface soils, and reseeded with native species of excavation areas. Implement structural (e.g. fiber rolls, erosion control blankets, sediment basins, etc) and non-structural (e.g. inspection and monitoring plan) best management practices for erosion and storm water control until the area achieves final stabilization.
- Provide site security to restrict access 24 hours/day to the Eastern Drainage Removal Area during field operations and drive by vacated homes twice per day and notify US EPA and law enforcement authorities of any irregularities or suspicious activity.

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Additional Work in Area North of NECR-1

- Remove and transport commingled ^{226}Ra and diesel fuel in impacted soil area north of NECR-1 pad to the NECR mine and cover with six inches of clean soil.
- Install and operate an active bio-venting system and perform monitored natural attenuation to reduce total petroleum hydrocarbon concentrations in the subsurface on lands within the Navajo Reservation
- Conduct confirmation sampling and analysis.
- Restore site to pre-removal conditions.

4.0 Requirements for Radium-226 in the Eastern Drainage

- 4.1 Priority Media:** Priority media to be addressed at this Site include soils, sediments, and dust, which present the greatest potential risks to human health and the environment.
- 4.2 Contaminants of Concern:** The Contaminant of Concern (COC) is radium 226 (^{226}Ra), the primary risk driver associated with uranium ore extraction. Confirmation samples from the Area shall be analyzed for ^{226}Ra activity at a certified laboratory.
- 4.3 Action Level:** For the purposes of this Action, US EPA has selected an action level for ^{226}Ra , of 2.24 pCi/g (1.24 pCi/g above background concentrations), consistent with previous actions associated with the NECR Mine Site. This action level is based on US EPA's preliminary remediation goal ("PRG") for ^{226}Ra plus daughters for a residential risk scenario.
- 4.4 Multi-Agency Radiation Survey & Site Investigation Manual ("MARSSIM"):** A site survey consistent with MARSSIM will be conducted to confirm that the removal action has achieved the Action Level.
- 4.5 Notice of Fieldwork and Sampling:** Respondents shall provide US EPA and Navajo Nation EPA (collectively "the Agencies") with at least 14 calendar days notice prior to conducting any on-site activities related to the EDRA. This will assist the Agencies in providing appropriate oversight and notice to potentially affected residents.
- 4.6 Split Samples:** Upon request from US EPA, Respondents shall provide split samples for analysis by US EPA.
- 4.7 Data Reports:** Respondents shall provide all data in both electronic form and hard copy. Data should be provided in Excel files. Maps should be provided both as pdf and Arc GIS shape files. Electronic copies may be uploaded to an ftp or similar share site.
- 4.8 Cultural Survey:** Prior to any ground disturbing activity, appropriate cultural resource surveys must occur in the areas proposed for excavation. The results of the survey must be

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submitted to the Navajo Nation Historic Preservation Society and the US EPA a minimum of 14 calendar days prior to any ground disturbing activity. Should significant cultural resources be identified, appropriate measures must be discussed and implemented prior to beginning excavation work.

5.0 Requirements for Additional Work in Area North of NECR-1

5.1 Priority Media: The priority media is surface and subsurface soil contaminated with petroleum and ²²⁶Ra.

5.2 Contaminants of Concern: The contaminants of concern are ²²⁶Ra, TPH DRO and any hazardous constituents, including Poly-Aromatic Hydrocarbons (PAHs) and Benzene, Toluene, Ethyl-Benzene, and Xylene (BTEX).

5.3 Action Levels: The removal action shall be designed to actively biovent areas on the Navajo Reservation with TPH DRO concentrations at or above 1,000 mg/kg and perform monitored natural attenuation of areas on the Navajo Reservation with TPH DRO less than 1,000 mg/kg. The action level for RA-226 shall be the same as that for the Eastern Drainage. The action level for shallow TPH DRO shall be 500 mg/kg.

5.4 Notice of Fieldwork and Sampling: Respondents shall provide US EPA and Navajo Nation EPA (collectively "the Agencies") with at least 14 calendar days notice prior to conducting any on-site activities related to the EDRA. This will assist the Agencies in providing appropriate oversight and notice to potentially affected residents.

5.5 Split Samples: Upon request from US EPA, Respondents shall provide split samples for analysis by US EPA.

5.6 Data Reports: Respondents shall provide all data in both electronic form and hard copy. Data should be provided in Excel files. Maps should be provided both as pdf and Arc GIS shape files. Electronic copies may be uploaded to an ftp or similar share site.

5.7 Cultural Survey: Prior to any ground disturbing activity, appropriate cultural resource surveys must occur in the areas proposed for excavation. The results of the survey must be submitted to the Navajo Nation Historic Preservation Society and the US EPA a minimum of 14 calendar days prior to any ground disturbing activity. Should significant cultural resources be identified, appropriate measures must be discussed and implemented prior to beginning excavation work.

6.0 Work Plans

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Respondents are required to develop or update the following work plans and to submit them for US EPA review and approval or approval with modifications, consistent with the AOC. Respondents shall utilize the UNC/GE NECR Interim Removal Action (“IRA”) Work Plan (July 2009) as a guide to all work plan elements. All Work Plans shall be submitted no later than 60 calendar days after the Effective Date of the AOC, unless a different schedule is approved by US EPA. Each work plan will include a one to two page abstract highlighting the key aspects of the document in plain language, with a bullet format.

- 6.1 Removal Action Construction Work Plan:** Respondents shall develop an overall Removal Action Construction Work Plan for addressing the Ra-226 impacted soils which will incorporate the components listed in the subsections below (6.2 – 6.12). This Work Plan shall include a table that lists the Applicable or Relevant and Appropriate Requirements (“ARARs”) for the Action and summarizes how these ARARs will be complied with during the EDRA.
- 6.2 Construction Oversight Health & Safety Plan:** Respondents shall update the UNC/GE IRA Health and Safety Plan from 2009 and submit it to US EPA for review and approval, in consultation with the Navajo Nation EPA. This plan shall identify all hazards and include both directives and specific operating procedures that will be used to mitigate those hazards. The HASP shall be designed to protect non-construction on-site personnel as well as off-site workers, tenants and residents from physical, chemical, and other hazards posed by the construction, operation and maintenance activities of the RA. The construction contractor will be responsible for preparing their own HASP that covers construction activities and personnel and will incorporate at a minimum the elements included in the Construction Oversight HASP.
- 6.3 Quality Assurance Project Plan:** With respect to soils and sediments, Respondents shall update the UNC/GE QAPP that was included in the RSE Work Plan 2006 and any standard operating procedures developed subsequent to submitting the RSE Work Plan, as needed. The QAPP will be revised and submitted as a separate document.
- 6.4 Sampling and Analysis Plan:** A Sampling and Analysis Plan shall be included in the IRA Construction Work Plan and shall consist of descriptions of the methods and standard operating procedures that will be used for radiation excavation control surveying and the interim status survey (e.g., gamma surveys, field screening methods, and soil sampling and analysis). An approach consistent with MARSSIM should be used.
- 6.5 Vegetation Baseline Survey Plan:** Respondents shall develop a work plan for conducting baseline vegetation sampling. The results of the baseline sampling will be used to develop a Revegetation Plan that will be submitted subsequent to completion of the Baseline Sampling.
- 6.6 Site Access and Security Plan:** The Respondents shall prepare and submit to US EPA for review and approval, in consultation with the Navajo Nation EPA, a Site Access and Security

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Plan. This plan should describe activities the Respondents will undertake to monitor and control access to the Property during implementation of the response actions and period of work performance.

- 6.7 Storm Water Pollution Prevention Plan:** The Respondents shall prepare and submit to US EPA for review and approval in consultation with the Navajo Nation EPA, a Storm Water Pollution Prevention Plan (SWPPP) and related monitoring and reporting activities. The plan shall include measures for temporarily managing storm water to limit erosion and prevent the offsite migration of impacted sediments during construction, and measures to stabilize the site, and minimize erosion and sediment transport until the site achieves final stabilization. The plan shall include measures to control erosion and sedimentation.
- 6.8 Construction Quality Assurance Plan:** The Respondents shall prepare and submit a Construction Quality Assurance Plan (CQAP) for review and approval by US EPA in consultation with the Navajo Nation EPA. The CQAP is a document that specifies procedures to ensure that the completed RA works meets or exceeds all design criteria and specifications. The CQAP should discuss: (1) roles and responsibility of those completing the construction; (2) qualifications of personnel completing the construction; (3) inspection activities; (4) sampling requirements and (5) documentation for the construction.
- 6.9 Dust Control Plan:** The Respondents shall prepare and submit a Dust Control Plan (DCP) for review and approval by US EPA in consultation with the Navajo Nation EPA. A Dust Control Plan identifies the measures that will be taken to reduce particulate emissions during the Work. The DCP should include procedures to minimize exposure of onsite construction workers and the surrounding community to dust containing Chemicals of Concern (COCs) and to minimize generation of nuisance dust. An air monitoring plan will be included in the Dust Control Plan or as a stand-alone document.
- 6.10 Confirmation Surveys and Sampling:** The Respondents shall prepare and submit a Survey Design for the radiological status survey for review and approval by US EPA in consultation with Navajo Nation EPA.
- 6.11 Area of North of NECR-1 Remediation Work Plan:** The Respondents shall prepare and submit a remediation work plan for review and approval by US EPA in consultation with the Navajo Nation EPA. The plan shall describe the procedures, methods and design details of the remediation system and provide a schedule for implementation. The plan shall include a Construction Quality Assurance Plan (CQAP) that specifies the procedures to ensure that the completed remediation system meets or exceeds all design criteria and specifications. The CQAP should discuss: (1) roles and responsibility of those completing the construction; (2) qualifications of personnel completing the construction; (3) inspection activities; (4) sampling requirements and (5) documentation for the system installation.

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6.12 Area North of NECR-1 Remediation Operation and Maintenance Plan: The plan shall include procedures for operating and maintaining the bioventing system and monitoring the effectiveness of the bioventing and attenuation remedies.

Approved Work Plans and Schedules: Respondents shall complete all work in accordance with the work plans and schedules approved by US EPA pursuant to the AOC.

7.0 Schedules

The Work to be performed pursuant to the AOC and this SOW shall be performed in compliance with the following schedule, unless otherwise agreed by the parties or excused by a Force Majeure:

- a. Sign/Finalize AOC - May 2012
- b. Submit Work Plans to US EPA – Within 60 days after signature of the AOC
- c. Submit Cultural Resources Survey to US EPA and to the Navajo Nation Historic Preservation Society at least 14 days prior to any field work.
- d. Begin EDRA Field Work – August/September 2012
- e. Submit Draft Final Reports to US EPA – Within 90 days after completion of construction and receipt of all validated analytical results for the EDRA and the Petroleum Area remedy.

8.0 Reporting

8.1 Weekly Technical Calls: During implementation of the removal action and installation of the TPH DRO remedy, Respondents shall participate in weekly technical conference calls with US EPA's project manager, US EPA's consultants and Navajo Nation representatives. On the weekly call, Respondents' representatives shall provide updates on all tasks and raise issues that may need to be resolved in order to maintain the schedule for completion of the Work.

8.2 Monthly Reporting – For the EDRA and during installation of the TPH DRO remedy, Respondents shall provide a Monthly Report to the EPA Region 9 OSC/RPM via email, each month, no later than the last day of each month, beginning the first full month following the Effective Date of the AOC, until submittal of the Draft Final Report. Each report shall include a complete update on all field, analytic, and planning activities.

8.3 Petroleum Area Remedy Reports – During the first year of operation of the bioventing remedy, Respondents shall provide a Quarterly Report to the OSC/RPM via email, no later than the last day of the first full quarter following startup of the system. After the first year of operation, Respondents shall provide a Semi-annual Report to the OSC/RPM via email, no later than the last day of the six month period following the first year of operation, until

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completion of the remedy and submittal of the Draft Final Report. Each report shall include a complete update on all field, analytic, and planning activities.

8.4 Laboratory Results: A copy of all laboratory results shall be provided to US EPA within 5 days of Respondents or Respondents' consultant's receipt of such results. Laboratory results need not be validated for this submittal.

8.5 Final Report: Respondents shall provide comprehensive Final Reports no later than 90 days after all field work has been completed and all validated analytical results have been received for the EDRA and the Petroleum Area Remedy. The Final Reports shall integrate all data used, both existing and newly collected, into a single, coherent report deliverable. This report shall be submitted as specified in the AOC (see Section VIII, Work to be Performed, para. 33 Final Report).