

**MEMORANDUM OF UNDERSTANDING
BETWEEN
THE UNITED STATES NUCLEAR REGULATORY COMMISSION
AND
THE WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY
TO ESTABLISH A PROCESS FOR THE COMPLETION OF DECOMMISSIONING OF FIVE
URANIUM MILL TAILING SITES AND THE TERMINATION OF THE ASSOCIATED URANIUM
MILLING LICENSES LOCATED WITHIN THE STATE OF WYOMING**

SEPTEMBER 30, 2018

ARTICLE I – PURPOSE, AUTHORITY, AND SCOPE

A. Purpose

This Memorandum of Understanding (MOU) is entered into by and between the U.S. Nuclear Regulatory Commission (NRC or the Commission) and the Wyoming Department of Environmental Quality (WYDEQ) (collectively referred to herein as the Agencies), for the purpose of establishing a regulatory process for the completion of decommissioning of five uranium mill tailing sites and the termination of the associated uranium milling licenses located within the State of Wyoming that are listed in Section C. of this document. The ownership of the byproduct material and area described within the long-term surveillance plan will be transferred to the United States Department of Energy (DOE) for long-term custody and care prior to license termination.

The NRC and WYDEQ will cooperate fully with each other to carry out this MOU and its intent of ensuring protection of public health, safety, and the environment in accordance with all governing laws and regulations.

B. Authority

1. The authorities of the NRC to enter into and engage in the activities described in this MOU include, but are not limited to:
 - a. The Atomic Energy Act § 274 (42 U.S.C. § 2021);
 - b. The Uranium Mill Tailings Radiation Control Act (UMTRCA)(42 U.S.C. § 7901 *et seq.*); and
 - c. NRC regulations (Title 10, *Code of Federal Regulations*, Chapter 1).
2. The authorities of WYDEQ to enter into and engage in the activities described in this MOU include, but are not limited to:
 - a. The Wyoming Environmental Quality Act (Wyo. Stat. § 35-11-101 *et seq.*); and
 - b. WYDEQ Uranium Recovery rules, Chapters 1-9.

C. Scope

This MOU pertains to the Agencies' roles in the decommissioning and eventual termination of the license for the following five uranium mill tailing sites:

1. Anadarko Bear Creek located in Converse County, Wyoming (NRC License No. SUA-1310, Docket No. 040-08452)
2. Pathfinder Lucky Mc located in Fremont County, Wyoming (NRC License No. SUA-672, Docket No. 040-02259)
3. Western Nuclear Split Rock located approximately 2 miles from Jeffrey City, Wyoming (NRC License No. SUA-56, Docket No. 040-01162)
4. Umetco Minerals Corporation Gas Hills East located in Natrona County, Wyoming (NRC License No. SUA-648, Docket No. 040-00299)
5. ExxonMobil Highlands located approximately 25 miles north of Douglas, Wyoming (NRC License No. SUA-1139, Docket No. 040-08102)

ARTICLE II – INTERAGENCY COMMUNICATION

In this MOU, the NRC and WYDEQ designate a primary point of contact for day-to-day communications (i.e., holding coordination discussions and discussing other typical project management activities) pertaining to sites covered under this MOU. All notices and requests required by this MOU must be made in writing and sent, using e-mail, facsimile, or postal mail, by or to the point of contact identified herein.

The Primary Points of Contact are:

For the NRC: Branch Chief, Agreement State Programs Branch
Office of Nuclear Materials Safety and Safeguards
United States Nuclear Regulatory Commission
11545 Rockville Pike
Rockville, MD 20852-2738
Mailstop: T5-B60

For WYDEQ: Land Quality Administrator
Wyoming Department of Environmental Quality
200W. 17th St., Suite 10
Cheyenne WY, 82002

Identification of these contacts is not intended to restrict communication between NRC and WYDEQ staff members on technical and other day-to-day activities.

ARTICLE III – ROLES AND RESPONSIBILITIES

Upon transfer of regulatory authority from the NRC to the State of Wyoming, WYDEQ will be responsible for the regulatory oversight of the five uranium mill tailing sites to complete decommissioning activities at the sites and terminate the associated licenses. Where the NRC has completed a regulatory activity related to the decommissioning of a site prior to the

discontinuance of the NRC's regulatory authority, WYDEQ will identify the NRC's activities in the Completion Review Report submitted to the NRC for review pursuant to Office of Nuclear Material Safety and Safeguards Procedure SA-900 "Termination of Uranium Milling Licenses in Agreement States."

Where the NRC is actively working on such a regulatory activity, but does not complete the activity prior to the transfer of regulatory authority over the site to WYDEQ, the NRC will provide WYDEQ with all data and findings related to that activity. WYDEQ will complete the activity in accordance with the requirements of the State's agreement program.

The NRC will review the Completion Review Report for each site in making its determination as to whether all applicable standards and requirements have been met prior to Wyoming's termination of the site's license. As stipulated in this MOU, any decision made by the NRC for the five uranium mill tailings sites prior to the discontinuation of NRC's regulatory authority in the State of Wyoming will be appropriately recognized by the NRC as meeting all applicable standards and requirements when reviewing the Completion Review Report for each site to adequately ensure public health and safety.

A description of completed, in progress, and future activities necessary to the decommissioning of the sites and subsequent license termination is found in Annex 1. The NRC will provide an updated and final list of completed and remaining activities for each site no later than 30 days after the effective date of "An Agreement Between the United States Nuclear Regulatory Commission and the State of Wyoming for the Discontinuance of Certain Commission Regulatory Authority and Responsibility within the State Pursuant to Section 274 of the Atomic Energy Act of 1954, As Amended" (274b. Agreement).

ARTICLE IV – OTHER PROVISIONS

A. Authorities Not Altered

Nothing in this MOU alters, amends, affects, limits, or supersedes the statutory or regulatory authorities and responsibilities of WYDEQ or the NRC. Nothing in this MOU shall require either WYDEQ or the NRC to take any action that is beyond its statutory authority.

B. Financial Obligations

Nothing in this MOU may be interpreted to require either WYDEQ or the NRC to assume any obligation or expend any sum in excess of authorization and appropriations available.

C. Legal Effect

This MOU is intended solely as an aspirational document and is not legally binding. This MOU does not create any right or benefit, substantive or procedural, or trust responsibility, enforceable by law or equity, by persons who are not party to this agreement, against WYDEQ or the NRC or any other agency of the State of Wyoming or the Federal Government, their officers or employees, or any other person. This MOU does not direct or apply to any person outside WYDEQ or the NRC. Nothing in this MOU may be interpreted to be a regulation or to require the promulgation of a regulation by either WYDEQ or the NRC.

D. Immunity and Defenses Retained

Each Agency retains all immunities and defenses provided by law with respect to any action based on or occurring as a result of this MOU.

E. Liability

The NRC and WYDEQ agree to assume liability for their own risks arising from or related to activities under this MOU.

F. Dispute Resolution

The Agencies will make every effort to resolve any disputes that arise related to the subject matter of this MOU at the project or program manager level through informal consultation. If the Agencies are unable to resolve the dispute at that level, either the NRC or WYDEQ may elevate the dispute in writing to successively higher and generally equivalent levels of management in each of the Agencies, up to the level of the officials who are signatories to this MOU. Any issue that is elevated will be the subject of a written statement of position by the disputing Agency, and the other Agency will respond in writing. The Agency officials at each level will confer with one another in a timely and cooperative manner to attempt to resolve the dispute.

If the Agencies cannot resolve the dispute, each Agency reserves any and all rights it may have to take any and all action available to it under any law, regulation, Executive Order, or agreement to seek review and resolution of the matter. The NRC specifically reserves any authority it has to take administrative or other actions against WYDEQ with regard to an unresolved dispute. WYDEQ reserves any authority and defenses available to it to respond to any assertion by the NRC.

ARTICLE V – ADMINISTRATION OF THE MOU

A. Approval

This MOU is effective when authorized officials of both WYDEQ and the NRC sign this MOU and once the 274b. Agreement between the NRC and the State of Wyoming becomes effective.

B. Duration

This MOU will remain in effect until completion of the decommissioning and termination of the associated licenses at the five sites, termination of this MOU pursuant to Article V. D, or termination of the 274b. Agreement.

C. Amendment

This MOU may be amended through written agreement of both WYDEQ and the NRC.

D. Termination

This MOU will remain in effect unless it is amended or terminated. This MOU may be terminated by either Agency by providing the other Agency written notice at least 60 days prior to the day on which the Agency intends to terminate the MOU. Upon termination, the responsibilities of all parties under this MOU will cease. Termination will not relieve any party of its obligation to comply with applicable laws and regulations, and to take necessary actions that are its responsibility under the law for the protection of the public health and safety.

E. Entirety of Agreement

This MOU may be supplemented by site-specific attachments that will be negotiated between WYDEQ and the NRC.

ARTICLE VI – EFFECTIVE DATE

Once signed by the authorized officials of both WYDEQ and the NRC, this MOU becomes effective on the effective day of the 274b. Agreement between the NRC and State of Wyoming.

**On Behalf of the
U.S. NUCLEAR REGULATORY COMMISSION**

Original signed by Marc L. Dapas

Marc L. Dapas, Director
Office of Nuclear Material Safety and Safeguards

Date 9/11/2018

**On Behalf of the
WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY**

Original signed by Todd Parfitt

Todd Parfitt, Director
Wyoming Department of Environmental Quality

Date 9/14/2018

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**ANNEX 1:
Status of Completed, In Progress, and Future Activities Necessary for Decommissioning
and License Termination by Site**

September 30, 2018

A. Anadarko Bear Creek

1. The U.S. Nuclear Regulatory Commission (NRC) has completed the following tasks and will accept them as complete and final during its review of the Completion Review Report for this site.
 - a. NRC's 2001 decision on surface reclamation (Agencywide Documents Access and Management System (ADAMS) Accession Number ML011910515).
 - b. NRC's 2013 decision on groundwater monitoring requirements (ADAMS Accession Number ML14310A124).
2. The following tasks are in progress, and will be completed by Wyoming Department of Environmental Quality (WYDEQ): none
3. The following uninitiated tasks will be completed by the NRC:
 - a. Review the Completion Review Report in accordance with the Office of Nuclear Material Safety and Safeguards (NMSS) Procedure SA-900 and Article III of this Memorandum of Understanding (MOU).
 - b. Collaborate with the Department of Energy (DOE) to finalize the long-term surveillance plan and boundary and the long-term care fee.
4. The following uninitiated tasks will be completed by WYDEQ:
 - a. Prepare a Completion Review Report in accordance with NMSS Procedure SA-900 and Article III of this MOU.
 - b. Terminate the license after the NRC determines that all applicable standards and requirements have been met at the site, and the NRC and DOE have finalized the long-term surveillance plan and boundary and the long-term care fee.
 - c. Terminate the financial assurance for the long-term custody and care.
 - d. Transfer the site to the DOE.

B. Pathfinder Lucky Mc

1. The NRC has completed the following tasks and will accept them as complete and final during its review of the Completion Review Report for this site:

- a. NRC's 2006 decision on surface reclamation (ADAMS Accession Number ML062680391).
2. The following tasks are in progress, and will be completed by WYDEQ:
 - a. Determine whether the 2011 Alternate Concentration Limit exceedances indicate any of the following: a deterioration of cell performance; legacy contamination at the site; or an isolated or transient occurrence. This task was initiated with a DOE letter dated February 29, 2012 (ADAMS Accession Number ML12065A005) requesting that the NRC resolve any regulatory concerns regarding uranium concentrations reported above the Alternate Concentration Limit in a monitoring well at the Lucky Mc site.
 - b. Based on the outcome in 2a., determine that the groundwater meets standards based upon prior NRC decisions or develop a process for establishing a new Alternate Concentration Limit.
 3. The following uninitiated tasks will be completed by the NRC:
 - a. Review the Completion Review Report in accordance with NMSS Procedure SA-900 and Article III of this MOU.
 - b. Collaborate with the DOE to finalize the long-term surveillance plan and boundary and the long-term care fee.
 4. The following uninitiated tasks will be completed by WYDEQ:
 - a. Prepare a Completion Review Report in accordance with NMSS Procedure SA-900 and Article III of this MOU.
 - b. Terminate the license after the NRC determines that all applicable standards and requirements have been met at the site, and the NRC and DOE have finalized the long-term surveillance plan and boundary and the long-term care fee.
 - c. Terminate the financial assurance for the long-term custody and care.
 - d. Transfer the site to the DOE.

C. Western Nuclear Split Rock

1. The NRC has completed the following tasks and will accept them as complete and final during its review of the Completion Review Report for this site:
 - a. NRC's 2000 decision on surface reclamation (ADAMS Accession Number ML010160187).
2. The following tasks are in progress, and will be completed by WYDEQ:
 - a. Finish the review of the October 25, 2016 alternate groundwater modeling approach submitted by the licensee in its amendment request (ADAMS Accession Number ML16328A410) and, if necessary, set a new Alternate Concentration Limit.
3. The following uninitiated tasks will be completed by the NRC:
 - a. Review the Completion Review Report in accordance with NMSS Procedure SA-900 and Article III of this MOU.
 - b. Collaborate with the DOE to finalize the long-term surveillance plan and boundary and the long-term care fee.

4. The following uninitiated tasks will be completed by WYDEQ:
 - a. Prepare a Completion Review Report in accordance with NMSS Procedure SA-900 and Article III of this MOU.
 - b. Terminate the license after the NRC determines that all applicable standards and requirements have been met at the site, and the NRC and DOE have finalized the long-term surveillance plan and boundary and the long-term care fee.
 - c. Terminate the financial assurance for the long-term custody and care.
 - d. Transfer the site to the DOE.

D. Umetco Minerals Corporation Gas Hills East

1. The NRC has completed the following tasks and will accept them as complete and final during its review of the Completion Review Report for this site:
 - a. NRC's 2012 decisions on surface reclamation (ADAMS Accession Numbers ML120790259 and ML120790266).
2. The following tasks are in progress, and will be completed by WYDEQ:
 - a. Review monitoring data from the 2017 groundwater monitoring plan and determine stability (ADAMS Accession Numbers ML15211A329, ML15211A325, and ML15211A327). This task was initiated by letters dated January 22, 2015, April 8, 2015, and November 17, 2016 (ADAMS Accession Numbers ML15027A095, ML15103A024, and ML16326A406) requesting that the NRC amend Umetco's radioactive materials license by revising the groundwater monitoring program at Umetco's Gas Hills East Wyoming site.
 - b. Based on the evaluation in 2a., approve a new groundwater model and set a new Alternate Concentration Limit if necessary.
3. The following uninitiated tasks will be completed by the NRC:
 - a. Review the Completion Review Report in accordance with NMSS Procedure SA-900 and Article III of this MOU.
 - b. Collaborate with the DOE to finalize the long-term surveillance plan and boundary and the long-term care fee.
4. The following uninitiated tasks will be completed by WYDEQ:
 - a. Prepare a Completion Review Report in accordance with NMSS Procedure SA-900 and Article III of this MOU.
 - b. Terminate the license after the NRC determines that all applicable standards and requirements have been met at the site, and the NRC and DOE have finalized the long-term surveillance plan and boundary and the long-term care fee.
 - c. Terminate the financial assurance for the long-term custody and care.
 - d. Transfer the site to the DOE.

E. ExxonMobil Highlands

1. The NRC has completed the following tasks and will accept them as complete and final during its review of the Completion Review Report for this site:
 - a. NRC's 2004 decision on surface reclamation (ADAMS Accession Number ML040580375).

2. The following tasks are in progress, and will be completed by WYDEQ:
 - a. Finish the evaluation of whether the pit lake contains 11e.(2) byproduct material as defined by the Atomic Energy Act of 1954, as amended. This task was initiated by a letter dated May 12, 2011, requesting a new proposed Alternate Concentration Limit for a portion of the site, and that a mine pit lake and lands immediately surrounding the lake be included in the proposed long-term surveillance boundary that defines the portions of the site that will eventually transfer to the DOE for long-term surveillance and monitoring. This license amendment request was submitted by ExxonMobil Highland (ADAMS Accession Number ML11136A199) and supplemented on June 15, 2017 (ADAMS Accession No. ML17174A016) with additional information and request to modify the groundwater monitoring program.
 - b. Review and evaluate the groundwater monitoring results and related supplemental hydrological and geochemical characterization reports. This task was initiated by an NRC letter dated February 20, 2014 (ADAMS Accession Number ML14029A152) requesting that additional monitoring wells be installed and additional geochemical characterization of the groundwater be conducted.
 - c. Finish the evaluation of the February 2016 well installation and regolith report submitted by the licensee in a letter dated February 25, 2016 (ADAMS Accession Number ML16067A196) for confirmation of the pit lake inclusion.

3. The following uninitiated tasks will be completed by the NRC:
 - a. Review the Completion Review Report in accordance with NMSS Procedure SA-900 and Article III of this MOU.
 - b. Collaborate with the DOE to finalize the long-term surveillance plan and boundary and the long-term care fee.

4. The following uninitiated tasks will be completed by WYDEQ:
 - a. Prepare a Completion Review Report in accordance with NMSS Procedure SA-900 and Article III of this MOU.
 - b. Terminate the license after the NRC determines that all applicable standards and requirements have been met at the site, and the NRC and DOE have finalized the long-term surveillance plan and boundary and long-term care fee.
 - c. Terminate the financial assurance for the long-term custody and care.
 - d. Transfer the site to the DOE.