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Chairman Ho K. Nieh
Timothy Mossman
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
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Via electronic submission and email

Re: Multicultural Alliance for a Safe Environment Comments on Proposed *In Situ Recovery Monitoring and Decommissioning Timeliness* Rule, ID NRC-2025-1204; RIN 3150-AL48

Dear Chairman Nieh and Mr. Mossman:

Pursuant to the United States Nuclear Regulatory Commission's (NRC) Notice of Rulemaking, please accept these comments from the Multicultural Alliance for a Safe Environment (MASE), including from its constituent groups. *See, In Situ Recovery Monitoring and Decommissioning Timelines*, 91 Fed. Reg. 57,728 - 57,757 (Sept. 10, 2026). MASE is a non-profit coalition of organizations from uranium impacted communities working to protect their communities from further damage from uranium mining and milling and to ensure clean-up of legacy uranium waste. MASE is comprised of a core group of organizations (and their members) that include: (1) Bluewater Valley Downstream Alliance, a citizens group made up largely of residents and property owners directly affected by groundwater pollution and radiation releases from uranium mining and milling in northwest New Mexico; (2) Eastern Navajo Diné Against Uranium Mining (ENDAUM), a grassroots group opposing construction of uranium mines in and near the Eastern Navajo Agency due to the significant threats to human

health and environmental resources; (3) Laguna-Acoma Coalition for a Safe Environment, a group of residents of Laguna and Acoma Pueblos dedicated to assessing community and environmental health from impacts of past uranium development and protecting sacred cultural sites and areas, including Mt. Taylor, a mountain sacred to Indigenous peoples of New Mexico; and (4) Red Water Pond Road Community Association, an organization of Diné families who have experienced and lived with the impacts of uranium mining and milling in the region since the 1960s. MASE's mission is to restore the land and water contaminated by uranium mining and milling, improve the health of community members, and protect and preserve the natural and cultural environment in which we live. Because the proposed rule violates the National Environmental Policy Act, conflicts with the Safe Drinking Water Act and sovereign state authority to protect water resources, and is riddled with meaningless standards, MASE urges the NRC to rescind the proposed rule.

I. General Comments

In addition to its comments on specific provisions of the proposed regulation in Section II, MASE submits the following general comments.

A. *The NRC's Rulemaking Violates National Environmental Policy Act*

The National Environmental Policy Act (NEPA) requires an Environmental Impact Statement (EIS) or Environmental Assessment (EA) whenever a federal agency undertakes a major federal action that will have a significant impact on the environment. 42 U.S.C. § 4332(2)(C). Although NEPA's default is that some environmental analysis should be done for government actions significantly affecting the environment, NEPA permits federal agencies to exclude certain categories of their activities from NEPA review. 40 C.F.R. § 1501.4(a). Categorical exclusions (CEs) encompass routine agency activities that have little or no environmental impact. *Id*.

In the Federal Register notice of the proposed rule, the NRC states that the rulemaking falls under a categorical exclusion, precluding the need for an environmental analysis. 91 Fed. Reg. at 57,744. The NRC claims that because the proposed rules were previously described in guidance, were established through practice and enforced through license conditions, the rulemaking fell under the categorical exclusion in 10

C.F.R. § 51.22(a)(1), which excludes activities that are administrative, procedural or purely financial in nature.[1] *Id*.

In no way can the NRC's proposed rulemaking be interpreted to be a routine administrative, procedural or financial undertaking. Instead, the proposed rule represents an entirely new regulatory framework and significant modification of 10

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[1] 10 C.F.R. § 51.22(a)(1) provides:

> (a) The following categories of NRC actions are excluded from the requirement to prepare an environmental assessment or environmental impact statement:
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> (1) Actions that are administrative, procedural, or solely financial in nature, including, for example:
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> (i) Issuance of or changes to procedures for filing and reviewing applications;
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> (ii) Issuance of or changes to recordkeeping or reporting requirements;
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> (iii) Issuance of or changes to surety, insurance, or indemnity requirements;
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> (iv) Issuance of or changes to administrative procedures or requirements;
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> (v) Actions on petitions for rulemaking, but not including rulemakings in response to a petition for rulemaking;
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> (vi) Amendments to the regulations in this chapter that are corrective or of a minor or nonpolicy nature and do not substantially modify existing regulations;
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> (vii) Issuance of or changes to guidance for the implementation of regulations in this chapter and other informational and procedural documents that do not impose any legal requirements;
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> (viii) Changes to a person or organization's name, position, or title;
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> (ix) Revisions that are editorial, corrective, or otherwise minor, including the updating of NRC-approved references, or changes to formatting of a document;
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> (x) Changes to contact information;
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> (xi) Personnel or managerial actions;
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> (xii) Actions on or changes to requirements for decommissioning funding under parts 30, 40, 50, 70, or 72 of this chapter; or
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> (xiii) Termination of licenses that were issued but for which no construction activities have begun or where all decommissioning activities have been completed and approved and license termination is a final administrative step.

C.F.R. Part 40 Appendix A. Moreover, as explained in more detail below, the NRC's proposed rules will certainly have a significant impact on the environment.

Federal courts are clear that agencies may not sidestep their obligation under NEPA to conduct an environmental analysis for actions that will have a significant effect on the environment by invoking CEs. For example, in *Public Employees for Environmental Responsibility v. National Park Service*, the District Court for the District of Columbia held that a rule changing the definition of electric bicycles and where electric bicycles were permitted in national parks was not appropriately subject to a CE excluding decisions that are financial, procedural, or administrative in nature. *Id*., 605 F. Supp. 3d 28, 56-57 (D.D.C. 2022). Importantly, the Park Service's rule was predicated on and codified a policy directive the Park Service Director previously issued without environmental review. *Id*. at 35-36. Indeed, the court noted that framing the Park Service's action - which was much more modest than the NRC's current rulemaking - as subject to a CE excluding administrative or procedural actions "strains credibility." *Id*. at 57. *See also*, *Solar Industries Assn't v. Federal Energy Regulatory Comm'n*, 80 F.4th 956, 992 (9th Cir., 2024) ("when an agency adopts broad, transformative, and substantive changes to its regulations, it cannot sidestep NEPA's requirements by claiming that it was motivated by its desire to better conform to the statute and then applying a 'corrective' label.").

Like the rulemaking in *Public Employees for Environmental Responsibility v. National Park Service,* the NRC's claim that its proposed rule is excluded from NEPA's requirements because it simply codifies existing ad hoc practices and guidance strains credibility. The NRC is proposing a wholesale revision of 10 C.F.R. Part 40, Appendix A, including significantly changing the definition of "byproduct material" and adding an **entirely new** regulatory framework specific to ISR. 91 Fed. Reg. 57,733. Neither the proposed rule, nor the ad hoc practices and guidance documents upon which it is allegedly predicated have undergone any environmental review pursuant to NEPA.

The proposed rule is not benign - it will have far-reaching environmental consequences. Unmentioned and unconsidered in the NRC's notice of rulemaking and supporting documents is the incontrovertible fact that no commercial ISR operation in the United States has restored groundwater to pre-mining standards or standards that would support domestic use and, very often, agricultural use. Further, the NRC has failed to

take into account the operational reality that excursions, spills and leaks are routine and the effect these routine contamination events would have on the environment. *See, e.g.*, NUREG-1910, *Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities* at 2-44 (noting 80 spills at the Smith-Highland ISR project over a 19 year period). The environmental effects of groundwater contamination aside, an environmental review would force the NRC to consider the economic and social costs of contaminating large areas of groundwater in arid parts of the country that anticipate less precipitation and hotter temperatures due to global warming. *See, e.g.* New Mexico 50-Year Water Plan Dashboard, https://water-dashboard.nm.gov/ (last viewed 10/12/2026).

Additionally, because the NRC failed to conduct the required NEPA environmental review, it did not consider any reasonable alternatives to the proposed rule. *Greater Yellowstone Coal. v. Flowers*, 359 F.3d 1257, 1277 (10th Cir. 2004) ("The obligation to consider alternatives to the proposed action is at the heart of the NEPA process, and is 'operative even if the agency finds no significant environmental impact.'"). Alternatives could range from no action to adopting the ISR groundwater protection rules the U.S. EPA proposed in 2017. *See*, *Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings*, EPA-HQ-OAR-2012-0788-0277 (Oct. 2017). The NRC's rulemaking must undergo an environmental review pursuant to NEPA.

B. *The Proposed Rules Conflict with The Safe Drinking Water Act and New Mexico's Sovereign Authority Over Groundwaters of the State*

In 1983, the U.S. EPA granted New Mexico primacy to enforce the Safe Drinking Water Act (SDWA) Underground Injection Control (UIC) requirements for Class I, III, IV and V injection wells. 48 Fed. Reg. 133 at 31,640 - 31,641 (July 11, 1983). Ground and surface water protection in New Mexico is governed by the New Mexico Water Quality Act. NMSA 1978, §§ 74-6-1 *et seq*. The Water Quality Act's primary purpose is to prevent and abate water pollution and protect public health and welfare. *Id*. at § 74-6-4(D),(E). To that end, the New Mexico Water Quality Control Commission promulgated regulations and standards protecting groundwater containing concentrations of total dissolved solids (TDS) of 10,000 milligrams per liter (mg/l) or less. 20.6.2.3103 NMAC. Those regulations include protecting groundwater with concentrations of 10,000 mg/l or

less TDS from discharges from underground injection control wells for current or reasonably foreseeable future use as domestic or agricultural water supplies. 20.6.2.5001 NMAC.

Significantly, in determining the best way to protect scarce and diminishing groundwater resources, New Mexico requires operators of Class III underground injection wells to restore groundwater to state groundwater standards (which typically track U.S. EPA's maximum contaminant levels (MCLs)) except in very limited circumstances. 20.6.2.5101.C.(2).[2] A Class III injection well operator may apply for an "aquifer designation" if they will be discharging into an aquifer or portion of an aquifer with TDS concentrations between 5000 and 10,000 mg/l[3] and can show that the area to be designated is not currently being used for domestic or agricultural purposes and it is economically infeasible to access the area or treat existing contamination to meet standards for domestic or agricultural use. 20.6.2.5103.A.(2) and C. While New Mexico's regulations track the U.S. EPA's underground injection control regulations under the Safe Drinking Water Act, New Mexico's regulations are substantially more stringent, as provided by the Safe Drinking Water Act.

The proposed rule will likely conflict with New Mexico laws and regulations protecting groundwater for domestic and agricultural uses. The NRC explicitly relies, in part, on aquifer exemptions to justify its ISR rule, thus assuming that an aquifer or portion thereof subjected to ISR will be forever off limits as an underground source of drinking water. 91 Fed. Reg. 57,736.

However, New Mexico law does not provide for aquifer exemptions and allows for permanent aquifer designations only in very limited circumstances. 20.6.2.5103.A.(2)

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[2] Section 20.6.2.5101.C.(2) grants **temporary** aquifer designations for ISR in aquifers with TDS concentrations of less than 5000 mg/; however, operations with temporary aquifer designations must restore groundwater to New Mexico groundwater standards.

[3] Many, if not most, uranium deposits in New Mexico are located in aquifers or portions of aquifers with TDS concentrations well below 5000 mg/l and with good quality water outside immediate ore zones. *See, e.g.*, NUREG-1508, *Final Environmental Impact Statement to Construct and Operate the Crownpoint Uranium Solution Mining Project, Crownpoint, New Mexico* at 3-35 - 3-36 and Table 3.19 (Feb. 1997); NUREG-1910, *Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities* at 3.5-21 ("Groundwater in the Northwestern New Mexico Uranium Milling Region area is in general suitable for drinking.") (May, 2009).

and C. The assumption that an aquifer or portion thereof will be forever sacrificed for uranium milling presents a potential, and in all likelihood, probable, conflict between the NRC's proposed rule and New Mexico groundwater protection regulations. The NRC's rule, which appears to assume the federal requirements under the SDWA are a ceiling, rather than a floor, pit the ISR industry's demonstrated inability to restore groundwater to pre-mining conditions and for many key constituents such as uranium, radium and selenium, to EPA MCLs, against a state regulatory framework that requires groundwater restoration to state standards, ie., EPA MCLs. The NRC should reconsider its rulemaking to explicitly insure that its proposed ISR rules do not conflict with state laws protecting state resources.

II. Specific Comments

In addition to the general comments, above, MASE submits the following comments on specific provisions of the NRC's proposed rule.

A. *The NRC Should Have Specific Requirements in its Groundwater Protection Standards*

One of the NRC's primary rationales for its new proposed regulatory framework is to make the ISR permitting process more predictable and consistent for the NRC, licensees and the public. 91 Fed. Reg. 174 at 57,732. However, the NRC's use of imprecise, vague and occasionally meaningless standards undermines this objective.

For example, proposed Criterion 14(a)(1) requires that the applicant provide an "adequate" characterization of the location of the ore bodies, hydrostratigraphy and hydraulic parameters for the unit and all "appropriate" aquifers and aquitards. U.S. Nuclear Regulatory Commission, *Unofficial Redline Rule Language for the Proposed Rule: In Situ Recovery Monitoring and Decommissioning Timeliness* at 11. This characterization must include all "pertinent" geologic structures such as fractures and "nearby" wells, mines or other infrastructure that have the potential to influence site hydrogeology. *Id*.

Terms like "adequate," "appropriate," and "pertinent" are vague and provide no predictability or consistency with respect to mine licensing. What is an "adequate"

characterization of "appropriate" aquifers and aquitards? Whatever the licensee submits? Whatever the license and NRC agree upon? Will states or tribes whose groundwater is affected by ISR have any input on what is "adequate" or "appropriate"? In order to achieve predictability and consistency, the NRC should employ meaningful and concrete requirements. *See, e.g.*, 20.6.2.5202 NMAC (New Mexico regulation providing specific instructions regarding calculation of "area of review" for Class III wells).

Similarly, the incredibly important task of determining background concentrations of contaminants is left to effectively meaningless standards such as requiring samples to be from a number and locations of wells that are shown to provide a "sufficient" "representative" sample of background groundwater contamination concentrations. The background concentrations of contaminants must be determined using "generally accepted" statistical techniques. Rather than relying on meaningless terms, the NRC should require applicants to determine background contaminant concentrations using established regulatory guidance; for example, NRC should require applicants to use established regulatory methods (either state or federal) to determine background contaminant concentrations. *See, e.g.*, U.S. EPA, *Data Quality Assessment: Statistical Methods for Practitioners,* EPA QA/G-92, EPA/240/B-06/003 (Feb. 2006); Ravenscroft, Peter and Lytton, Lucy, *Practical Manual on Groundwater Quality Monitoring*, World Bank Group (2022); *see also*, Khadra, Wisam, *et al*., *A Systematic Approach to Derive Natural Background Levels in Groundwater: Application to an Aquifer in Northern Lebanon Perturbed by Various Pollution Sources*, 847 Science of the Total Environment 157586 (July 24, 2022).

B. *The NRC's Proposed Post-Restoration Groundwater Monitoring Period is Scientifically Unsupported and Unreasonably Short*

Finally, proposed Criterion 14(f) contains requirements for restoration and post-restoration wellfield monitoring. The proposed rule would require one year of post-restoration wellfield monitoring. *Unofficial Redline Rule Language for the Proposed Rule: In Situ Recovery Monitoring and Decommissioning Timeliness* at 17. However, based on existing post-restoration data, this monitoring period is far too short.

For example, in an application for alternative concentration limits for its Smith Ranch/Highland ISR Mine, Mine Unit B, Cameco Resources indicated that seven years after it had "completed" Mine Unit B restoration to "stability" conditions, concentrations of Radium, Uranium and Selenium had all increased. Intera, *Application for Alternate Concentration Limits for the Smith Ranch-Highland Mine Unit-B In Situ Uranium Recovery Facility at 22-23*, Table 2 (May 22, 2013). At the same site, a study of Mine Unit A revealed that eight years after mining ceased, concentrations of selenium, uranium and radium increased 7000%, 7060%, and 171% respectively. Borch, Thomas, *et al*., *Determination of Contaminant Levels and Remediation Efficacy in Groundwater at a Former In Situ Recovery Uranium Mine*, 14 Jnl of Envt'l Monitoring 1814, 1818, Table 1 (2012). These data indicate that a single year of post-reclamation monitoring is woefully inadequate. MASE suggests that the NRC require a **minimum** post-stability groundwater monitoring period of ten years, to adequately insure that post-stability contaminant rebound is accounted for.

III. Conclusion

The NRC's proposed ISR rule, despite the many lines of text dedicated to justifying reasons of efficiency, predictability and consistency, seem to be exclusively a framework to save license applicants and the NRC time and money. While economic efficiency is a legitimate concern, it cannot be the NRC's *only* concern. Rather than ram through a rule that has significant shortcomings with respect to environmental, human health and regulatory conflict, the NRC should rescind the proposed rule, engage in broader state, tribal and community consultations and issue a new rule that addresses fundamental weaknesses in the process and substance of the current rulemaking.

Sincerely,

Ava Curtis
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Multicultural Alliance for a Safe Environment