

# Uranium Watch

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RE: Draft Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities: 73 Fed. Reg. 54435, September 19, 2008. Extension of comment period: 73 Fed. Reg. 57687, October 3, 2008.

Below please find comments on the Draft Generic Environmental Impact Statement for In-Situ Leach (ISL) Uranium Milling Facilities (draft GEIS) submitted on behalf of Uranium Watch, Greenaction for Health and Environmental Justice, and the Glen Canyon Group of the Sierra Club.

## **I. Executive Summary**

1. Purpose and Need (p. xxxiii)

**COMMENT:** The Nuclear Regulatory Commission (NRC) should acknowledge the other purposes for the GEIS:

a) To spread part of the costs for site-specific uranium recovery National Environmental Protection Act (NEPA) reviews to all NRC licensees. The GEIS will be paid for by charging each NRC licensee a fee. Normally, the costs for a site-specific uranium recovery EIS or EA would be borne by the licensee. Under this process a large portion of these costs for site-specific ISL uranium recovery reviews will be spread out to all NRC licensees.

b) To allow the NRC to issue an Environmental Assessment (EA) for any proposed ISL uranium recovery operation, using the GEIS as a basis for a limited site-specific NEPA review.

2. The Proposed Federal Action and Alternatives (p. xxxiv)

**COMMENT:**

A. The last sentence of this section, the draft GEIS states: NRC has made a policy decision to prepare site-specific EISs for applications for a new, or restart of a former, conventional or heap leach facility, as required under 10 C.F.R. 51.20(b)(8). Section 51.20(b)(8) states:

(b) The following types of actions require an environmental impact statement or a supplement to an environmental impact statement:

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(8) Issuance of a license to possess and use source material for uranium milling or production of uranium hexafluoride pursuant to part 40 of this chapter.

Clearly, NRC regulation requires the preparation of site-specific EISs for applications for any new or restart of uranium milling operation—whether conventional milling, heap leaching, or ISL uranium recovery. This is a matter of a regulatory requirement, not just NRC policy. The NRC should clarify that this regulation also applies to ISL uranium recovery operations, that in situ operations also come under the NRC's Part 40 regulations, that NRC regulation considers such operations to be "uranium milling," and they are subject to the 10 C.F.R. 51.20(b)(8) provision. Any other position is contrary to NRC regulation.

B. To the best of my knowledge there is no statute or regulation applicable to the NRC that permits the NRC to rely on a "policy" to reinterpret or alter the plain language of an NRC regulation. I know of no publicly available interpretation of 10 C.F.R. 51.20(b)(8) by the NRC General Counsel that states that ISL uranium recovery is not "uranium milling" under the Atomic Energy Act and NRC regulation. If there is, then the NRC should make it publicly available and reference it in the GEIS.

**II. Introduction**

1. 1.1 Purpose of GEIS (p. 1-1)

**COMMENT:**

A. A licensee or prospective licensee is required to submit an Environmental Report in support of a license application. Here, the GEIS does not mention this report and how it would fit into a NEPA review process that may rely, in part, on the GEIS. Would the applicant be able to refer to the GEIS in their Environmental Report for a new license application rather than on their own environmental investigation and supporting documentation?

B. The NRC does not explain what happens if information submitted by the applicant in their Environmental Report differs in any substantive way from the information contained in the GEIS. The NRC should clarify this process.

C. Section 1.1 (lines 32-37) states, in part: "NRC's research indicates that uranium recovery is relatively standardized throughout the industry and therefore appropriate for

programmatic evaluation in a GEIS."

Just because ISL uranium recovery may be relatively standardized, it does not follow that the environmental impacts can or should be evaluated on a programmatic basis. This is because it is the site-specific geologic, hydrogeologic, and other characteristics that largely determine the environmental impacts.

## 2. Section 1.8.1 Acceptance Review of the License Application and Environmental Report (p. 1-25)

This section (lines 48-49) states that, after an application has been accepted and docketed, the NRC publishes a notice of availability of the application and opportunity for a hearing.

**COMMENT:** According to the GEIS, the opportunity to request a hearing comes before all response to requests for additional information have been received by the NRC and before the NRC has completed the NEPA review and issued a NEPA document. Therefore, there is information that might constitute a basis for a hearing request that would not have been available during the time frame for the initial hearing opportunity. For example, the NRC might issue an inadequate technical review or issue an EA/FONSI that a member of the public feels should be challenged. The NRC should clarify under what circumstances new information (not available at the time of the opportunity for a hearing) could become the basis for a subsequent, but timely, hearing request.

## 3. Section 1.8.3 NRC's Site-Specific Environmental Review (p. 1-26)

### **COMMENT:**

A. In this section, the GEIS makes no mention of initiating the formal interagency consultation process demanded by the EIS process. Nor is there mention of a scoping process in order to obtain public input on the potential environmental impacts of the proposed ISL uranium milling facility. As commented upon at I.1. (above), NRC regulation demands an EIS process for ISL uranium milling, pursuant to 10 C.F.R. 51.20(b)(8). In the NEPA process for an ISL operation, it is important that the NRC conduct a scoping process and involve local, state, tribal, and federal agencies in the EIS consultation process. The consultation process described by the GEIS is not specifically an EIS consultation process, which must include all relevant stakeholders. Those agencies were not significantly involved, over all, in the current GEIS process, leaving out an important sector of the consultation process for future NEPA reviews if there is no site-specific EIS.

## 4. Section 1.8.3 NRC's Site-Specific Environmental Review (p. 1-26, lines 39-40)

The GEIS states (lines 39-41): "With respect to the GEIS, the purpose of the NRC staff's site-specific impacts assessment is to evaluate whether the conclusions concerning the potential environmental impacts identified in the GEIS for that resource area can be adopted in the site-specific document.

### **COMMENT:**

The GEIS fails to discuss what criteria the NRC staff will use in evaluating whether the conclusions in the GEIS can be adopted in a site-specific document. The GEIS should discuss what, exactly, the criteria is, how it was developed (or will be developed), what public input there was (or will be) in developing the criteria, and where the criteria

are (or will be) found.

5. Section 1.8.3 NRC's Site-Specific Environmental Review (p. 1-26, lines 43-45).

The GEIS states (lines 43-45): "For those cases in which the GEIS conclusions can be adopted only in part or not at all, the NRC staff will determine whether development of a site-specific EA or EIS is appropriate due to the significance of the differing environmental impacts."

**COMMENT:**

A. NRC regulation (10 C.F.R. 51.20(b)(8)) states that a source material license for uranium milling requires a site-specific Environmental Impact Statement, not an Environmental Assessment. Therefore, the NRC has no choice but to issue an EIS, and not an EA, for a new or restarted ISL operation. There is nothing in NRC regulation that exempts ISL operations from the issuance of a uranium-milling source material license.

B. Further, the GEIS makes no mention of what criteria the NRC might use to determine whether a site-specific EIS or EA is most appropriate, if, in fact, it is legal to issue an EA.

6. Section 1.8.4 Public Participation Activities (p. 1-27, lines 4-5).

Section 1.8.4 (lines 4-5) states: "As discussed previously, the NRC staff may prepare either an EA or an EIS for the site-specific license application (see Figure 1.7-1)."

**COMMENT:**

As discussed above, 10 C.F.R. 51.20(b)(8) requires an EIS for uranium milling source material licenses. The environmental impacts from uranium milling are largely future impacts and potential future impacts, which the NRC often will not be able to control. That is why all possible environmental impacts must be identified at the beginning of the regulatory process and not years after the impacts have occurred or discovered. By definition, uranium milling (including ISL uranium recovery) has the potential for significant impacts, which is why NRC regulation demands an EIS process.

7. Section 1.8.4 Public Participation Activities (p. 1-27, lines 5-9).

Section 1.8.4 (lines 4-5) states: "If the NRC staff concludes that it needs to prepare a site-specific EIS, a notice of intent will be published in the *Federal Register*. Then, the NRC staff will follow the public participation procedures outlined in 10 C.F.R. Part 51, which include requests for public input on the scope of the EIS and for public comment on the draft EIS for ISL applications."

**COMMENT:**

Apparently the NRC feels that staff will be able to first determine whether there are significant impacts for a proposed or restarted ISL operation, and then (if applicable) start a NEPA scoping, consultation, and comment process involving the public and relevant local, state, tribal, and federal agencies in order to determine what the environmental impacts are or could be. This is a process that is backwards, disregards the public interest, and is contrary to NRC regulation at Section 51.20(b)(8). There must be public input within an EIS process before the NRC determines the site-specific environmental impacts and their significance.

8. Section 1.8.5 (NRC's Final Environmental Review Document and Findings) (p. 1-27). Section 1.8.5 (lines 24-25, 27-29) states: "The NRC staff will issue a final EIS or final EA/FONSI as part of the licensing review for each site-specific license application.... The final environmental document and the site-specific Safety Evaluation Report together form the basis for the NRC's decision on whether to issue a 10 C.F.R. Part 40 source material license to the applicant.

**COMMENT:**

A. The issuance of an EA/FONSI for a site-specific license application for an ISL uranium milling operation does not conform to the requirements of 10 C.F.R. 51.20(b)(8), which states that source material licenses for uranium milling require an EIS. There is no NRC regulation or statute that exempts ISL uranium recovery operations from the definition of uranium milling and the regulations applicable to uranium milling found at 10 C.F.R. Part 40."

B. The GEIS should explain here the mechanism for questioning or challenging the issuance of an EA/FONSI for a site-specific ISL operation. Such an issuance would not be available during the time period to request a hearing noticed upon the docketing of an acceptable application for a new ISL facility or a restart.

**III. In-Situ Uranium Recovery and Alternatives**

1. Section 2.6 (Decontamination, Decommissioning, and Reclamation) (p. 2-30)  
Section 2.6 (lines 35-36) states: Contaminated items are decontaminated if they are to be released for offsite, unrestricted use; otherwise, they are disposed of as 11e.(2) byproduct material in a licensed disposal facility.

**COMMENT:**

The GEIS should identify the available disposal facilities that are licensed to receive and dispose of 11e.(2) byproduct material from ISL operations; there are only a few. Also, the GEIS should include information regarding the amount of such material that each of these facilities is permitted to receive from any one ISL facility and potential environmental impacts (including transportation and Environmental Justice considerations) of disposal of ISL wastes at such facilities. For example, one of the licensed facilities that disposes of ISL waste, the Denison Mines, Inc., uranium mill in San Juan County, Utah, has a limit on the amount of waste from any one ISL operation and uniquely impacts a low-income tribal community.

2. Section 2.7.1 Gaseous or Airborne Particulate Emissions (p. 2-32 to 2-35)

This section and tables describe the sources and amounts of gaseous or airborne particulate emissions, based on an Environmental Assessment for one facility and a proposed facility.

**COMMENT:**

This section should also address the emissions from the transportation and disposal of the sludges and decommissioning wastes to landfills and to licensed 11e.(2) byproduct material disposal sites. The transportation and disposal of the wastes are part of the operational and decommissioning processes.

3. Section 2.7.2 Liquid Wastes (p. 2-36 to 2-37)

Section 2.7.2 describes the use of barium chloride to reduce the amount of radium in liquid waste streams, resulting in a sludge that "is sent to a licensed disposal facility."

**COMMENT:**

The GEIS should identify the types of licensed disposal facilities that the radium/barium chloride sludges may be disposed at, identify those facilities, and discuss the environmental impacts of the transportation to and disposal at such facilities. Some material with high concentrations of radium may not be appropriate for 11e.(2) byproduct material impoundments.

4. Section 2.7.3 Solid Wastes (p. 2-36)

**COMMENT:**

This section should also identify the licensed facilities where solid ISL waste may be disposed of.

5. Section 2.10 Financial Surety

**COMMENT:**

A. In describing the financial surety mechanism, the GEIS fails to acknowledge that there is nothing in NRC statute or regulation that requires that the financial guarantee, once the surety funds are called in, be spent on the decommissioning and reclamation of the site. In the case of the bankruptcy of the owners of the Atlas Uranium Mill, a large percentage of the very inadequate surety funds were spent on administrative and legal costs, and not on the reclamation of the site. Money was wasted, as-built plans for work done were not provided to the NRC, required semi-annual reports were not submitted by the trustee, and who knows what other failures were part of this so-called financial assurance mechanism. The NRC staff has not demonstrated that they are capable of seeing that a uranium recovery site is properly decommissioned and reclaimed when a licensee seeks bankruptcy protection and is unable to complete the required work. There are no rules or guidance for this process. Until there are, the NRC is fooling itself and the public when it claims that a financial guarantee will assure proper site reclamation and will protect the public's interest.

B. The GEIS does not describe what exactly happens when a licensee is unable to complete the decommissioning and reclamation as required, how the NRC chooses a trustee, what is expected of a trustee, who has oversight over the reclamation process, and other aspects of the process. There needs to be rules and guidance for this process, not the current catch-as-catch-can situation.

#### **IV. Description of Affected Environment**

1. Section 3.1

**COMMENT:**

This section describes a wide area where uranium milling (conventional, heap leach, and ISL recovery) has occurred. In order for the NRC staff, other government entities, and the public to adequately assess the past and potential impacts for these operations and the pertinence of those impacts to the new and restarted ISL operations, the NRC should make past licensing documents publicly available through its electronic reading room (ADAMS). And, the NRC should put back on ADAMS all those Part 40 licensing

documents that were placed on ADAMS since November 1999 and then were subsequently removed. The public should not be asked to pay \$ 0.30 a page to obtain them.

1. Section 3.4.11 Nebraska-South Dakota-Wyoming Milling Region:  
Background Radiological Conditions (p. 3.4-89 to 3.4-90)

**COMMENT:**

A. The information on background radiological conditions fails to discuss how the NRC will evaluate the radiological conditions caused by past uranium industry activities in the Wyoming, Nebraska, and South Dakota areas. These activities include open pit and underground uranium mining, conventional milling, ISL uranium recovery, burning of lignite ores for their uranium content, drilling, shipping, and other activities related to the recovery of uranium. Some of these operations underwent decommissioning and cleanup activities; some did not. Surface and underground wastes and contamination remain from some of these operations. Some of these activities were licensed, permitted, and documented; many were not. The GEIS must discuss how the radioactivity that remains from these past operations will be considered when determining background radiological conditions on a site-specific basis.

B. The GEIS should also discuss how the cumulative radiological impacts of these activities should be identified and considered in the assessment of cumulative radiological impacts in the areas of new ISL operations.

2. Section 3.5.11.1 Northwestern New Mexico Uranium Milling Region:  
Background Radiological Conditions (p. 3.5-77)

**COMMENT:**

A. The information on background radiological conditions fails to discuss how the NRC will evaluate the radiological conditions caused by past uranium industry activities in the New Mexico Uranium Milling Region. These activities include open pit and underground uranium mining, conventional milling, ISL uranium recovery, heap-leaching, old-stope leaching, backfilling of uranium mines with 11e.(2) byproduct material, drilling, transportation, and other activities related to the recovery of uranium. Some of these activities were licensed, permitted, and documented; some were not. Some of these operations underwent decommissioning and cleanup activities; some did not. Only one uranium mine that was backfilled with 11e(2) byproduct material was decommissioned (the Johnny M Mine). Mines where enhanced water was used for old-stope leaching operations were not licensed and decommissioned. Surface and underground wastes and contamination remain from many of these operations.

The GEIS must discuss how the radioactivity that remains from these past operations will be considered when determining background radiological conditions on a site-specific basis.

B. The GEIS should also discuss how the cumulative radiological impacts of these activities should be identified and considered in the assessment of cumulative radiological impacts in areas of new ISL operations.

**V. Environmental Impacts of Construction, Operation, Aquifer Restoration, and Decommissioning Activities**

**COMMENT:**

A. The environmental impacts included in this section are, for the most part, generalizations and descriptive in nature. They are not based on data for any site-specific situation. The GEIS describes the various kinds of environmental impacts and provides a rating based on expected generic significance of those impacts. Missing is any real data and information that would be applicable any specific site or operation.

B. The GEIS erroneously evaluates the significance of some impacts based on the extent to which the environmental impacts would meet or not meet various existing environmental and performance regulations. Compliance or non-compliance with shifting air and water quality standards and regulations should not define the impact.

C. All of the information contained in this section will still have to be considered and evaluated on a site-specific basis, after a full EIS NEPA process, which would include a public scoping process; consultation with appropriate local, tribal, state, and federal entities and agencies; and an opportunity to comment on a draft EIS and the EIS's supporting data and information.

Thank you for providing this opportunity to comment.

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