

Responses to Comments on the Policy Regarding Submittal of Amendments for Processing of Equivalent Feed at Licensed Uranium Recovery Facilities			
#	Comment	Commenter	Response
1	Strongly supports the Equivalent Feed RIS.	Wyoming Mining Association Water Remediation Technology (WRT) Kennecott Uranium Company Texas Mining and Reclamation Association (TMRA) American Water Works Association Philip Egidi ¹ National Mining Association (NMA)	The NRC noted the comment. No change was made to the RIS.
2	Request that the term “conventional mills with ion exchange circuits” should be changed to read “conventional mills with ion exchange resin elution circuits” because an entire ion exchange circuit is not required to elute resin. All that is required is an ion exchange resin elution circuit.	Wyoming Mining Association Kennecott Uranium Company	The NRC disagrees with the comment. The NRC will keep the existing language. Conventional mills may use existing ion exchange circuits (i.e. loading and elution). Therefore, the term “ion exchange circuits” is broader and more inclusive. No change was made to the RIS.
3	Request that the document include language specifically permitting transfers of uranium laden ion exchange resin from one licensed uranium recovery facility to another for elution without the need for a license amendment - The proposed document is silent on this request.	Wyoming Mining Association Kennecott Uranium Company	The NRC agrees with the comment. The RIS has been revised to specifically state that ULR from other uranium recovery facilities can qualify as equivalent feed.
4	Clarify or expand the scope of the definition of equivalent feed to apply to any uranium water treatment in general and any secondary or byproduct recovery process that captures uranium on resin (e.g., non-primary mineral processing)	Water Remediation Technology (WRT) National Mining Association (NMA) Texas Mining and Reclamation Association (TMRA)	The NRC disagrees with the comment. At this time the staff has not analyzed any information from side-stream uranium recovery operations that coincide with other mineral extraction operations. Therefore, the definition of equivalent feed

¹ Representing himself and no other organization

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			will remain, as stated in the draft. No change was made to the RIS.
5	<p>“radiological content” of equivalent feed: -If the staff means that the equivalent feed resin has captured and collected essentially the same types of radionuclides (primarily uranium) as the source material that is normally processed at a uranium recovery facility, then we are in agreement, however -If the staff’s intent is that the equivalent feed resin have essentially the same uranium concentration or loading (as in, mg U/kg resin, or lb U/cu ft resin, then we disagree with this criteria.</p>	<p>Water Remediation Technology (WRT) National Mining Association (NMA) Texas Mining and Reclamation Association (TMRA)</p>	<p>The staff’s intent is to define “equivalent feed” as to essentially contain the same types of radionuclides as that which is normally processed at the receiving UR facility. The equivalent feed criteria do not require the URL to have essentially the same uranium concentrations as those processed at the receiving UR facility. No change was made to the RIS.</p>
6	<p>Since it may not be economically feasible for a UR facility to sign and maintain contracts with individual water districts, commenter suggests expanding the RIS to provide guidance for waste handlers or waste brokers who may serve as middle men between the smaller water utilities and the uranium recovery facilities.</p>	Philip Egidi	<p>The NRC determined that this is out of scope for this RIS. The Equivalent Feed RIS only provides guidance on when a licensed UR facility can process ULR resin meeting the equivalent feed criteria without a license amendment. Other parties that possess or transport ULR are currently covered under the 10 CFR 40 or under U.S. Department of Transportation Regulations. No change was made to the RIS.</p>
7	<p>It should be made clear that the RIS is specific to ion exchange circuits at in-situ and convention facilities so as to not expand to other processes under the rubric of physically and chemically similar.</p>	Philip Egidi	<p>The NRC agrees with the comment. The staff revised the RIS to more clearly articulate that it addresses IX resins generated by water treatment facilities, mine dewatering operations, licensed uranium recovery facilities, or other sources of ULR that meet the equivalent feed criteria.</p>

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8	RIS does not specifically mention satellite ISR wellfields owned and operated by licensees other than the receiving facility licensee. These operations, while different in concept, are identical in that they generate the exact same uranium-loaded resins. Comment suggests that these satellite ISR wellfields be identified by NRC as a potential source of uranium-loaded resins for receipt and processing by a receiving facility under this draft-RIS.	National Mining Association (NMA) Texas Mining and Reclamation Association (TMRA)	The NRC agrees with the comment. The RIS has been revised to specifically state that other uranium recovery facility ULR can qualify as equivalent feed.
9	Request that the NRC suspend the development of an RIS based on the following comments:	Uranium Watch	The NRC disagrees with the commenter's request to suspend the development of the Equivalent Feed RIS based on the following responses.
9.1	1.1-1.18 Comments regarding the original alternate feed guidance RIS 00-23.	Uranium Watch	<p>The comments relating to the original alternative feed guidance in RIS 2000-23 are beyond the scope of the Equivalent Feed RIS. The alternative feed guidance in RIS 2000-23 has been applied by NRC for over a decade and is not the subject of this RIS. The Equivalent Feed RIS provides guidance to determine if the processing of certain alternative feed materials requires a license amendment.</p> <p>The NRC required the additional analysis and license amendment requirements for alternative feed in the 2000-23 RIS to reduce the risk of a facility processing material that would contain other hazardous substances that are not addressed in the receiving facility's safety</p>

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			and environmental review. In comparison, the NRC analysis of ULR from CWS, mine dewatering and other UR facilities concludes that if the ULR and receiving UR facility meets the equivalent feed criteria there are no additional public health or safety risks requiring a license amendment.
9.2	2.1 The AEA and NRC and EPA regulation do not have a definition of "equivalent feed." Again, this is a term that the NRC has made up to circumvent the intent of Congress and NRC and EPA regulation with respect uranium processing facilities and the disposal of tailings at those sites.	Uranium Watch	While the NRC staff acknowledges that the AEA, as amended; UMTRCA; and NRC and EPA regulations do not contain a definition for equivalent feed, the NRC has the statutory authority to interpret the AEA, enact regulations and develop policy and guidance to regulate AEA radioactive materials. The NRC finds the guidance articulated in the Equivalent Feed RIS consistent with this statutory authority and regulations to regulate source and byproduct material. Therefore, the NRC is not circumventing any laws or regulations, because the equivalent feed is still licensed source material under the receiving facility's specific NRC license and must meet NRC's regulatory requirements. The agency is providing guidance for a facility to determine

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			whether a license amendment is needed to receive and process certain types of alternative feed. No changes were made to the RIS.
9.3	2.2 Again, the NRC intends to use a policy that is without statutory and regulatory foundation. The AEA, as amended by UMTRCA, does not sanction the processing of feed materials other than natural ores and the disposal of wastes from such processing at licensed uranium and thorium processing facilities and does not give the NRC the broad authority to authorize the processing of feed materials other than natural ores as "ore," or the disposal of wastes from such processing at licensed uranium and thorium processing facilities as "11e.(2) byproduct material. Please review the comments in Section 1 above.	Uranium Watch	<p>The NRC disagrees with the comment. As stated in the previous response, the NRC finds the Equivalent Feed RIS guidance consistent with NRC's statutory authority and regulations.</p> <p>Furthermore, the NRC disagrees with the comment that the AEA and UMTRCA only allow the processing of natural ores and that the resulting tailings or "waste" from this processing can not be processed for its source material content. The NRC does not find any provision in the AEA or UMTRCA that prohibits the processing of these ULR resins as source materials at UR facilities or reusing the stripped resins after processing. However, stripped resin that is not reused and spent resin is considered 11e.(2) byproduct material after processing. The disposal of these resins must be in accordance with the NRC's regulatory requirements.</p> <p>The NRC's definition of "ore" contained in RIS 00-23 which includes "any other matter from which source material is extracted in a licensed uranium or thorium</p>

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			mill” is not being changed by this RIS. The Equivalent Feed RIS provides guidance to determine whether a facility needs to request a license amendment before processing certain types of alternative feed. No revisions to this RIS were made based on this comment.
9.4	2.3 If the NRC wants uranium recovery operations to be able to process IX resins, then they should do it properly via amendments to the AEA and NRC regulation. EPA regulation must also be amended.	Uranium Watch	The NRC disagrees with the comment. The NRC finds the Equivalent Feed RIS consistent with the NRC’s statutory authority and regulations, and does not require a regulatory amendment. No revisions were made to this RIS based on this comment.
9.5	3.2 The NRC should have provided more detailed information regarding the specific types of Community Water System operations that would be the source of residuals to be treated, the exact nature of the residuals, the transportation issues related to the transport of the residuals, the mills that might receive the residuals for processing, the amount that would be involved, and any potential environmental impacts.	Uranium Watch	The NRC notes the comment. The focus of this RIS on equivalent feed is the chemical and physical form, and radiological content of the IX resin, not the nature of the Community Water System operation. This RIS contains a detailed description of commercially available water treatment resin used by water treatment facilities. The RIS also discusses reuse of the stripped and disposal options for stripped and spent resin after uranium processing. The Equivalent Feed RIS specifies that any licensed uranium recovery facility may receive equivalent feed without a license amendment, as long as that facility is licensed to process IX resin and meets the

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			equivalent feed criteria. Enclosure 1 of the current RIS discusses the transportation impacts from the Community Water System (CWS) to the UR receiving facility in relation to the transportation impacts of the ULR being transported to a RCRA disposal facility. Transportation impacts on the UR receiving facility are covered in the facility's site specific environmental review. From an environmental standpoint this RIS can be viewed as resulting in less uranium contamination being retained in the stripped and spent resins that are disposed as waste. No revisions were made to this RIS based on this comment.
9.6	3.3 The NRC, via a very brief and inadequate regulatory statement, should not give uranium recovery operations a blanket authorization to receive and process residuals from the cleanup of Community Water Systems. Although we do not object to the processing of uranium-loaded wastes from the cleanup of water from Community Water Systems at uranium processing facilities, the mill should request an amendment to process such materials and document the receipt of such materials at the mill. At the minimum, any uranium recovery facility should have a license amendment authorizing the receipt and processing of residuals from the cleanup of uranium from Community Water Systems. The application should fully explain the types and potential sources of	Uranium Watch	The NRC agrees in part and disagrees in part with the comment. The Equivalent Feed RIS does not provide a "blanket authorization to receive and process residuals from the cleanup of Community Water Systems," rather it provides guidance for when a NRC or agreement state licensed uranium recovery facility may accept equivalent feed for processing without a license amendment. The Equivalent Feed RIS does not alter the regulatory requirements for an NRC or agreement state license, with its accompanying safety and NEPA-related environmental review at Community Water

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	residuals, amount of residuals, transportation issues, and environmental impacts. The amendment should set limits on the amount of residuals to accept and require annual reports to the NRC on the amount and source of the materials. It is imperative that all aspects of the mill operations be documented, including the amount and source of any materials to be processed.		<p>Systems, mine dewatering operations treating water for uranium, or uranium recovery operations.</p> <p>As discussed above, Enclosure 1 of the Equivalent Feed RIS discusses the transportation impacts from the Community Water System to the UR receiving facility in relation to the transportation impacts to the ULR being transported to a RCRA disposal facility. Transportation impacts on the UR receiving facility are covered in the receiving facility's site specific environmental review. Furthermore, procedures for accepting equivalent feed are specified in Enclosure 2 of the Equivalent Feed RIS and cover many of the commenter's concerns. No revisions were made to this RIS based on this comment.</p>
9.7	4.1 The NRC should have provided more detailed information all aspects of the processing and disposal of the wastes from the treatment of mine water. The NRC should also discuss the requirements for the processing and disposal of treatment of mine water. The NRC should discuss the requirements for the processing and disposal of treatment pond sludges and other wastes from the treatment of mine water with barium chloride to remove radium. The NRC failed to include this in the discussion of the processing and	Uranium Watch	<p>The comments provide in 4.1 to 4.4 are beyond the scope of the Equivalent Feed RIS.</p> <p>In particular, the NRC does not regulate uranium mining operations. Comments regarding uranium mines, past milling practices and contents of site specific environmental reviews are beyond the scope of the Equivalent Feed RIS. The</p>

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	disposal of wastes from mine-water cleanup.		Equivalent Feed RIS simply provides guidance to determine whether a facility receiving certain types of alternative feed needs a license amendment. No revisions were made to this RIS based on these comments.
9.8	4.2 The NRC should discuss the fact that mines were sometimes included in the mill license, as with the Velvet Mine and Atlas Uranium Mill in Utah, so that the mine water and treatment residuals could be processed at the mill.	Uranium Watch	
9.9	4.3 The NRC should investigate the past practices of "old stope leaching," where the mine operator injected or re-injected mine water into mine workings to extract uranium, pumped out the water, and then processed that water at a nearby mill. This turned the conventional uranium mine into an in-situ leach uranium recovery operation. The NRC and the State of New Mexico, where this was practiced, never licensed these mines as ISL operations, monitored the land and ground water in the area around the mines for contamination, or regulated old stope leaching in any way. The NRC should determine what responsibility they have for these past old stope leaching operations.	Uranium Watch	
10.0	4.4 Any mill that wishes to treat residuals or wastes associated from the treatment of mine water for the removal of uranium and/or radium should be required to have specific license amendment associated with each applicable mine. The Environmental Impact Statement or Agreement State environmental analysis for the mill should assess the connected and cumulative impacts of the associated mine dewatering and the processing and disposal of residuals and wastes from dewatering systems. A future license amendment should have an environmental assessment associated with the approval of the processing and/or	Uranium Watch	

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	disposal of mine dewatering residuals and wastes.		
10.1	4.5 No material should be processed until the NRC changes the AEA and NRC regulations.	Uranium Watch	The NRC disagrees with the comment. See previous response 9.1. No revisions were made to the RIS based on this comment.
10.2	5.1 This section states: "Since the NRC is allowing equivalent feed to be processed at uranium recovery facilities, the wastes associated with processing equivalent feed (i.e., unloaded resin) are considered byproduct material, as defined in Title 10 of the Code of Federal Regulations Part 40." However, the AEA and NRC and EPA regulation do not state that "11e.(2) byproduct material is the tailings or wastes produced by the extraction or concentration of uranium recovery facilities, for example "equivalent feed."	Uranium Watch	This responds to comments 5.1 to 5.4. While the NRC agrees with the comment that the AEA, NRC and EPA regulations do not specifically state that "11e.(2) byproduct material is the tailings or wastes produced by the extraction or concentration of uranium recovery facilities, for example "equivalent feed," the NRC does not interpret 11e.(2) "to only refer to the processing of natural or native minerals." The NRC interprets the term "ore" in Section 11e.(2) of the AEA broadly. The definition of "ore" in RIS 2000-23 states, "Ore is a natural or native matter that may be mined and treated for the extraction of any of its constituents or any other matter from which source material is extracted in a licensed uranium or thorium mill." This RIS is not modifying that definition. Therefore, the ULRs can be processed at licensed uranium or thorium mills for their uranium content as alternative feed. The resulting stripped resin that is not re-used and spent resin is 11e.(2) byproduct material and must be
10.3	5.2 The NRC wants to include "equivalent feed" – along with "alternate feed" – in the ever widening definition of "ore." But, in this case, the NRC is not even including this "equivalent feed" material in their new definition of "ore," or requiring a license amendment.	Uranium Watch	
10.4	5.3 As with the other redefinition of "ore," the processing of "equivalent feed" flies in the face of the AEA and NRC and EPA regulation.	Uranium Watch	

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			<p>handled according to NRC regulatory requirements.</p> <p>The NRC's statutory authority lies in the AEA and UMTRCA. All radioactive material meeting the definition of source material and byproduct material is licensed and regulated under current NRC regulations. No revisions were made to this RIS based on these comments</p>
10.5	5.4 What materials will come next in the NRC's ever-widening concept of "ore"?	Uranium Watch	
10.6	5.5 If the NRC does amend the AEC and NRC regulation, the procedures for accepting "equivalent feed" should document whether the feed is "chemically and physically essentially the same as the resins processed at the facility." "Essentially the same" is not a very precise term, and the process of determining whether they are "essentially the same" is not stated. It is the NRC or Agreement State, not the licensee that should make these sameness determinations. Similar wording applied to the acceptance of "alternate feed," but waste with higher levels of a number of chemical constituents and was far from chemically and physically similar to ore that comes from uranium mines was accepted for processing.	Uranium Watch	<p>As previously explained, many of the commenter's concerns are addressed in the equivalent feed criteria. The equivalent feed procedure in Enclosure 2 states that the licensee's documentation needs to show that the ULR meets the equivalent feed criteria. NRC inspectors will review this documentation to ensure that the processing of the equivalent feed material stays within the receiving facilities license parameters.</p> <p>The NRC does make the determination of what ULR is "essentially the same" in the RIS. The RIS contains the NRC's analysis, rationale and examples to explain what ULR could meet the equivalent feed criteria and be processed</p>

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			<p>at the UR receiving facility without a license amendment.</p> <p>As previously stated, comments regarding RIS 2000-23 are beyond the scope of this document. No changes were made to the Equivalent Feed RIS based on this comment.</p>
10.7	<p>6.1 From the time the NRC used policy guidance to permit the processing of a number of waste streams at uranium recovery facilities to the current new definition of "equivalent feed," the NRC has purposefully circumvented the Atomic Energy Act and NRC and EPA regulation. The NRC circumvented the statues and regulations in a dishonest manner. The NRC took these actions at the behest of the National Mining Association and the uranium industry, not at the behest of the public, health and safety, and the environment. There was no analysis of these materials and their environmental impacts, so that the National Environmental Policy Act was also ignored. This practice of using policies and regulatory issue summaries to amend fundamental provisions of the AEA, as amended by the Uranium Mill Tailings Control Act of 1978, must stop. This practice of using policies and regulatory issue summaries to amend fundamental provisions of 10 CFR Part 40 must stop.</p>	Uranium Watch	<p>The NRC disagrees with the comments 6.1 and 6.2. The current RIS is consistent with the NRC's statutory and regulatory authority and does not require a regulatory amendment. The Equivalent Feed RIS also does not alter the regulatory requirements for a NRC or agreement state license, with its accompanying NEPA-related environmental assessment, at Community Water Systems, mine dewatering operations treating water for uranium, or uranium recovery operations. Environmental impacts at the receiving UR facility are covered in the facility's environmental and safety review. No revisions were made to this RIS based on these comments</p>
10.8	<p>6.2 Therefore I request that the NRC suspend the development of a RIS for Policy Regarding Submittal of Amendments for Processing of Equivalent Feed at</p>	Uranium Watch	

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	Licensed Uranium Recovery Facilities. If the NRC wants to process materials associated with in situ leach uranium recovery, the NRC must amend the AEA and NRC regulation. Additionally, EPA regulations must also be amended. Finally, the NRC must assess the environmental impacts of those amendments.		