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Transfer of Very Low-Level Waste to Exempt Persons for Disposal

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Transfer of Very Low-Level Waste to Exempt Persons for Disposal

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General Comment

Please see attached for comments from US Ecology, Inc.

Attachments

US Ecology Comments_VLLW Interpretive Rule_Docket NRC-2020-0065

US Ecology, Inc. Docket ID NRC-2020-0065

May 22, 2020

US Ecology, Inc.

Subject: Docket ID NRC-2020-0065, Transfer of Very Low-Level Waste to Exempt Persons for Disposal

US Ecology, Inc. has operated licensed low-level radioactive waste disposal facilities in the United States since the 1960s. The company is also a pioneer in providing safe, secure disposal of low-activity radioactive waste (LARW) at permitted hazardous waste disposal facilities regulated under Subtitle C of the U.S. Resource Conservation and Recovery Act (RCRA). Alternative disposal at appropriate Subtitle C hazardous waste facilities has provided a protective, cost-effective disposal option to many NRC and Agreement State licensees, facilitating timely clean-up and environmental restoration.

We commend NRC staff for their efforts on the Draft Interpretive Rule. The Draft Interpretive Rule has the potential to improve access to safe and secure disposal of Very Low-Level Waste (VLLW) at appropriate and qualified non-licensed facilities. Furthermore, expanded utilization of appropriate alternate disposal for LARW or VLLWis in the national interest. Increased access to safe, yet cost-effective disposal will encourage expedient environmental cleanup, serve to conserve valuable LLRW disposal capacity for higher-activity materials, and provide much needed regulatory clarity to the licensed community.

US Ecology is pleased to be able to provide comments on the NRC's proposed interpretive rule. Our responses to the questions posed by NRC in its regulatory notice dated March 6, 2020 are provided below.

1. This interpretive rule would authorize the transfer of licensed material to persons who hold specific exemptions for disposal without a case-by-case review and approval of the transfers. Do you think that case-by-case review and approval of these transfers is necessary?

<u>US Ecology Response</u>: No, under the condition that the disposal facility has already received NRC approval for VLLW disposal through demonstration of a comprehensive program that includes worker protection, radiological monitoring, closure and post-closure dose modeling, and adequate financial assurance mechanisms. NRC approval of the facility's programs and issuance of specific exemptions under this Interpretive Rule will eliminate the need for case-by-case reviews currently required under §20.2002.

The "Authorized Recipient" process would provide an alternative, more streamlined option to the §20.2002 review process for low activity wastes while still protecting human health and the environment. NRC could apply similar qualifying criteria to the VLLW disposal process as they do for Part 61 transfers currently authorized under §20.2001. For example, Generators would provide waste characterization data to the disposal facility to determine compliance with the facility's Waste Acceptance Criteria (WAC) and complete appropriate shipping papers to document the transfer of material to the disposal facility and as proposed in the interpretive rule. The receiving "VLLW Authorized Recipient" would then track each waste shipment,

including radiation doses to their workers against the 25 mrem/year annual limit to control the overall risk and exposure to the VLLW facility worker population.

The §20.2002 process has proven to be an effective means for developing and evaluating dose-based tracking mechanisms for wastes approved for alternate disposal at non-licensed facilities. These methods could very easily be adapted to an "Authorized Recipient" program as discussed in the Interpretive Rule.

2. Transboundary transfer of VLLW associated with the approved disposal actions is an important consideration. What issues associated with transboundary transfer of VLLW should be considered with this interpretive rule?

<u>US Ecology Response</u>: US Ecology interprets "transboundary transfer" as referring to the transfer of waste between different states, both associated and not associated with LLW Compacts, as well as transfers between licensees and non-licensees. Currently, licensed waste approved for alternate disposal at a non-licensed facility under the §20.2002 process, with appropriate exemptions found in 10 CFR §30.11, §40.14, and §70.17, does not meet the statutory definition of LLRW and therefore does not fall under the regulatory authority of the Compacts. The transboundary transfer of licensed VLLW to non-licensed disposal facilities under the interpretive rule is similar to the §20.2002 process, so based on past precedence, we believe the waste should not be subject to the import and export requirements of the Compact system that are applied to the transfer of LLRW to a licensed facility.

Furthermore, NRC's approach to regulate VLLW using site-specific, performance-based criteria under §20.2001 and NOT as a defined statutory category in the Low-Level Waste Policy Act, as amended, there is no regulatory requirement for NRC to treat VLLW any differently than it does radioactive material exempted from licensing under §20.2002.

3. 10 CFR 20.2006 states that "[a]ny licensee shipping radioactive waste intended for ultimate disposal at a licensed land disposal facility must document the information required on NRC's Uniform Low-Level Radioactive Waste Manifest and transfer this recorded manifest information to the intended consignee in accordance with Appendix G to 10 CFR Part 20." Should the exempt persons authorized to dispose of certain VLLW that would be considered §20.2001 "authorized recipients" under this proposed interpretive rule be required to use Uniform Waste Manifests (consistent with §20.2006) for waste transferred to the exempted disposal facility?

<u>US Ecology Response</u>: US Ecology does not believe the shipping document requirements in §20.2006 should be required for shipments of VLLW as proposed in the Interpretive Rule. However, we are not opposed to VLLW shipments being made on Form 540/541 Uniform Low-Level Radioactive Waste Manifests since it is acknowledged that this is the standard practice for shipments from licensees and there is no real need to introduce a new system or requirement to accommodate VLLW.

4. Are there any other criteria that the NRC should consider when it reviews a request for a specific exemption for the purpose of disposal?

<u>US Ecology Response</u>: Above all, the NRC should evaluate all Authorized Recipient applications under §20.2001 using site-specific, performance-based criteria. All applicants should be required to demonstrate that they meet (or exceed) all of the criteria listed below in order to be considered as a VLLW Authorized Recipient:

- Demonstrated, proven experience receiving and disposing LARW/VLLW under the existing 20.2002 process;
- A comprehensive radiological protection program modeled on a Part 61 (or NRC-licensed) Program and consistent with best practices;
- Occupational and environmental radiological monitoring program overseen by a Stateapproved compliance program;
- A site-specific closure and post-closure radiological model for radioactive materials using an industry-standard modelling platform;
- Requirement that all LARW/VLLW will be disposed under a State-regulated compliance
 program through a specific State permit or license from their solid or hazardous waste
 regulator (or equivalent) for the disposal of radioactive material referenced in the
 Authorized Recipient application/approval. Disposal of VLLW must be regulated by the
 appropriate State since NRC does not seek to extend its jurisdiction to monitoring
 disposal operations through this Interpretive Rule. Each authorized recipient must be
 able to demonstrate proper regulation of disposal by their respective State.
- Proven record of local and state-level stakeholder acceptance of LARW/VLLW acceptance and disposal at the requested facility; and
- Proof of appropriate and adequate financial assurance mechanisms for the receiving facility.
- 5. The regulation in §20.2001 is currently identified as a compatibility C regulation for purposes of Agreement State compatibility. In light of this proposed interpretive rule, does the compatibility designation raise issues that the NRC should consider?

US Ecology Response: No comment

US Ecology also offers the following general comments on the Draft Interpretive Rule for Staff consideration:

1. Proposed changes to handling of generally exempt materials in Parts §30 and §40.

Section III. Proposed Interpretive Rule states that the General Exemptions published in, for example §30.14 or §30.18, could not be used for purposes of disposal and that specific licensing exemptions would now be required in order to dispose of radioactive material that meets these definitions. This <u>new</u> position by NRC is inconsistent with past guidance published by the Commission which allowed general exemptions to be used for purposes of disposal if the receiving facility was authorized to receive them.

RIS-2016-11 states: "In some cases, the involvement of the NRC or Agreement State may not be required because the licensed materials may be exempt from NRC or Agreement State licensing requirements. In this case, the unlicensed facility does not need a specific exemption or license to dispose of the material. For example, items meeting the criteria in 10 CFR 30.15, "Certain items

containing byproduct material," would not require a license or an exemption from either the NRC or the Agreement State.

Also, a source material licensee may transfer or dispose of unimportant quantities of source material under the regulations of 10 CFR 40.51(b)(3) and (4) to persons exempt under 10 CFR 40.13(a). Licensees are not required to request and receive NRC approval for these transfers."

RIS-2016-11 clearly indicates that a non-licensed disposal facility does not need a specific exemption or license to dispose of generally exempt radioactive materials as referenced. The Draft Interpretive Rule appears to ignore this past precedent and would thus require a non-licensed facility to either pursue a specific exemption for disposal of generally exempt materials OR gain approval as an Authorized Recipient under §20.2001. US Ecology feels this proposed change is unnecessary and would unfairly upset the current practice that allows disposal of generally exempt radioactive materials at appropriate non-licensed facilities such as RCRA Subtitle-C hazardous waste landfills.

2. US Ecology urges the NRC to consider exclusion of transportation doses as part of the evaluation of Authorized Recipients under §20.2001, specifically with regard to the proposed 25mrem/yr dose criterion for all non-licensed workers.

US Ecology believes that transportation of radioactive materials is already adequately regulated under 49 CFR Subtitle B. Transportation of low-activity radioactive materials by commercial carriers is ubiquitous in the United States. It includes large quantities of NORM, TENORM, accelerator-produced materials, and various byproduct, source, and special nuclear materials that have either been granted exemptions from licensing or not regulated at all by the NRC. None of these materials have been determined to require any form of *a priori* dose assessment, active dose monitoring, or regulatory dose limits in order for them to be safely and compliantly transported to their intended destination beyond confirmation that the dose rate in the cab of the vehicle is less than 2 mrem/hr as required by 49CFR173.441(b)(4). NRC does not concern itself with the transportation of these materials, although many of the shipments meet the criteria for regulation by the DOT as 'Class 7.'

Including transportation worker dose in the annual dose calculation for VLLW disposal facilities when it is not included in the dose calculations for licensed disposal facilities would unfairly penalize VLLW Authorized Recipients, since transport workers receive the same dose regardless of destination (VLLW facility or Part 61 LLRW facility). While US Ecology applauds NRC for attempting to increase access to more safe and appropriate disposal facilities for low-risk VLLW through the proposed Interpretive Rule, retaining the requirement that transportation doses be included in the 25mrem/yr limit only serves to unfairly restrict this improved access without good cause or dose/risk reduction consistent with ALARA principles.

3. US Ecology concurs with the Staff's recommendation that use of an approved "Authorized Recipient" should be voluntary to Licensees, retaining the ability for a Licensee to pursue project-specific approvals and specific exemptions under §20.2002 for a particular waste stream if the Licensee prefers that route.

US Ecology appreciates the opportunity to comment on the Draft VLLW Interpretive Rule. We welcome the opportunity to discuss any or all of our comments with the Staff or Commission if more information is needed. Please do not hesitate to contact me at 208-319-1634 or joe.weismann@usecology.com if we can be of further assistance.

Respectfully Submitted,

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Vice President, Radiological Programs

US Ecology, Inc.