

**NUCLEAR REGULATORY COMMISSION**

[Docket No. 040-38368; NRC-2013-0241]

**Exemption from Licensing for Disposal of Low-Activity Radioactive Waste at the  
US Ecology Idaho Resource Conservation and Recovery Act Disposal Facility**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Environmental assessment and finding of no significant impact; issuance.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) is issuing an environmental assessment (EA) and finding of no significant impact for the exemption from licensing for disposal of low-activity radioactive waste from the Safety Light Corporation (SLC) site in Bloomsburg, Pennsylvania, at the US Ecology Idaho (USEI) Resource Conservation and Recovery Act (RCRA) Subtitle C disposal facility near Grand View, Idaho.

**ADDRESSES:** Please refer to Docket ID **NRC-2013-0241** when contacting the NRC about the availability of information regarding this document. You may access publicly-available information related to this action by the following methods:

- **Federal Rulemaking Web site:** Go to <http://www.regulations.gov> and search for Docket ID **NRC-2013-0241**. Address questions about NRC dockets to Carol Gallagher; telephone: 301-287-3422; e-mail: [Carol.Gallagher@nrc.gov](mailto:Carol.Gallagher@nrc.gov). For technical questions, contact the individual(s) listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **NRC’s Agencywide Documents Access and Management System (ADAMS):**

You may access publicly available documents online in the NRC Library at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select “[ADAMS Public Documents](#)” and then select “[Begin Web-based ADAMS Search](#).” For problems with ADAMS, please contact the NRC’s Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov).

- **NRC’s PDR:** You may examine and purchase copies of public documents at the NRC’s PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

**FOR FURTHER INFORMATION CONTACT:** Mr. Stephen Lemont, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone: 301-415-5163, e-mail: [Stephen.Lemont@nrc.gov](mailto:Stephen.Lemont@nrc.gov).

**SUPPLEMENTARY INFORMATION:**

**I. Introduction**

The NRC staff is considering a request from the US Ecology, Inc. (US Ecology), dated July 7, 2013 (ADAMS Accession No. ML13198A017), for exemption from licensing to receive and dispose of approximately 7,640 cubic meters (270,000 cubic feet) of low-activity radioactive wastes at the USEI RCRA Subtitle C hazardous and low-activity radioactive waste facility located near Grand View, Idaho. The wastes would consist of bulk debris and materials from the demolition of structures on the SLC site in Bloomsburg, Pennsylvania. This proposed NRC action would exempt the USEI site from Atomic Energy Act and NRC licensing requirements.

The term “low-activity waste” does not have a statutory or regulatory definition, but generally means wastes that contain some residual radioactivity, including naturally occurring radionuclides, which can be safely and economically disposed of in hazardous or municipal solid waste landfills rather than in low-level radioactive waste (LLRW) disposal facilities. Such waste is invariably a fraction of the limits for Class A LLRW contained in part 61 of Title 10 of the *Code of Federal Regulations* (10 CFR), and is often below concentrations that are considered safe for unrestricted release under international standards.

The SLC site (also known as the SLC Superfund Site) was listed on the U.S. Environmental Protection Agency’s (USEPA’s) National Priorities List on April 27, 2005, and is presently the subject of a remedial action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The USEPA is the lead agency for the remedial action. Section 121(d)(3) of CERCLA applies in any CERCLA response action involving off-site transfer of any hazardous substance, or pollutant or contaminant (CERCLA wastes). This section of the statute is interpreted in the USEPA’s Offsite Rule (OSR) (40 CFR 300.440), which requires that CERCLA wastes may only be placed in a facility operating in compliance with RCRA or other applicable Federal or State requirements. Therefore, the subject waste from the SLC site must be disposed at an appropriate offsite disposal facility pursuant to the OSR.

The request to the NRC by US Ecology was made under the alternate disposal provision contained in 10 CFR 20.2002 and the exemption provision in 10 CFR 30.11. The Regulations in 10 CFR 20.2001 identify the mechanisms by which a licensee may lawfully dispose of its licensed radioactive waste. It contains seven different disposal paths, including 10 CFR 20.2002, a provision for “alternative disposal” authorizations. Section 20.2002 is a general provision that allows for other disposal methods, different from those already defined in the NRC’s regulations, provided that radiation doses are maintained as low as is reasonably

achievable (ALARA) and within the dose limits in 10 CFR part 20. In practice, § 20.2002 is most often used for disposal of low-activity waste in hazardous or solid waste landfills that are permitted under RCRA.

In Pennsylvania, where the SLC site is located, is an NRC Agreement State, while Idaho, where the USEI RCRA disposal facility is located, is not an Agreement State. As a RCRA facility, USEI is permitted and regulated by the Idaho Department of Environmental Quality (IDEQ), not the NRC. Idaho regulations and USEI's RCRA permit provide for the acceptance and disposal of the low-activity waste material with appropriate NRC exemptions and approval. According to the NRC's March 13, 2012, letter to all Agreement States (ADAMS Accession No. ML12065A038), "Clarification of the Authorization for Alternate Disposal of Material Issued under 10 CFR 20.2002 and Exemption Provisions in 10 CFR (FSME-12-025)," there are various approaches that should be taken when both Agreement States and non-Agreement States are involved in the § 20.2002 exemption process. The present action falls under Situation #3 in that letter, which addresses the course of action when an Agreement State licensee requests authorization under the State's § 20.2002-equivalent regulation to dispose of material at an unlicensed facility in a non-Agreement State. According to Situation #3,

"...both the Agreement State and the NRC would need to become involved. The Agreement State that regulates the license seeking to dispose of the material at an unlicensed facility in another state would need to approve disposal under the Agreement State's 20.2002-equivalent regulation. The unlicensed facility would then need to obtain a license or an exemption from the NRC prior to accepting the material for disposal."

Accordingly, in a letter dated June 11, 2013 (ADAMS Accession No. ML13296A534), the Pennsylvania Department of Environmental Protection informed the USEPA that it had authorized offsite disposal of the subject material from the SLC site in a controlled environment, such as that provided by a RCRA Subtitle C hazardous waste disposal facility. Approval of the US Ecology request to the NRC would satisfy the requirements of FSME-12-025 Situation #3, the State of Idaho and USEI's RCRA permit, and allow the material to be transported to USEI for disposal.

## **II. Environmental Assessment Summary**

Under the requirements of 10 CFR 51.21 and 51.30(a), the NRC staff developed an EA (ADAMS Accession No. ML13296A807) in support of the proposed federal action, which is for the NRC to grant an exemption from licensing to US Ecology for the USEI RCRA Subtitle C hazardous and low-activity radioactive waste facility, located near Grand View, Idaho, to receive and dispose of approximately 7,640 cubic meters (270,000 cubic feet) of low-activity radioactive wastes, consisting of bulk debris and materials from the demolition of buildings on the SLC site in Bloomsburg, Pennsylvania. If the NRC exemption is granted, the waste could be transported from the SLC site for disposal at the USEI facility.

Radionuclides present in the waste materials originated from the production of luminous materials and other commercial products and are expected to be primarily surface and volumetric contaminants on walls, ceilings, floors, and other equipment. The waste will also include debris and materials associated with or contained within the buildings, such as furniture, ductwork, lighting, wiring, process equipment, metal sheet, and some asbestos-containing material in the form of roofing, floor tile and siding. Specific radionuclides expected in the waste

include Actinium-227, Americium-241, Cesium-137, Cobalt-60, Lead-210, Neptunium-237, Nickel-63, Radium-226, Strontium-90, and Tritium. Radionuclide concentrations are not expected to exceed any USEI waste acceptance criteria (WAC), and any material identified that could cause a shipment to exceed the USEI WAC will be segregated and disposed at an appropriately licensed LLRW disposal facility. The remedial action is not expected to generate RCRA hazardous wastes. However, if small quantities of hazardous wastes are generated, they will be segregated and initially separated from the main building debris for classification and radiological assessment. Hazardous waste materials found to contain radiological contaminants will be treated (by micro- and/or macro-encapsulation) and disposed at USEI under the RCRA permit and WAC. If organic compounds that require treatment are present, appropriate methods will be used to treat the organics prior to any stabilization for disposal.

The USEI site comprises an approximately 65-hectare (160-acre) hazardous waste treatment, storage and disposal facility. The facility is permitted under Subtitle C of RCRA and under the Toxic Substances Control Act (TSCA) to treat and dispose of RCRA and TSCA wastes, as well as a wide range of low-activity radioactive wastes and other wastes. The operating disposal area includes two active landfill disposal cells and four surface impoundment disposal units. The site is located in the semi-arid Owyhee Desert where there is limited precipitation. The site's arid climate, deep groundwater, and favorable soil and geologic conditions serve to promote waste isolation.

The information on environmental impacts presented in the EA is focused on those environmental resource areas for which the NRC staff understands that potential impacts of the proposed action could occur. Both potential radiological and non-radiological impacts were considered. If the NRC grants the exemption, the low-activity SLC waste would be disposed of at the USEI site. The USEI site includes an operating disposal facility, and disposition of the

low-activity SLC waste would occur in an existing waste disposal cell at the site. The NRC staff concludes that USEI facility's RCRA permit requirements, site and facility design features, and engineering and administrative controls ensure the protection of workers, members of the public, and the environment. Also, prior major earth disturbances to create the waste disposal cell and other site facilities, and ongoing site operations associated with waste handling and disposal would preclude the existence of listed threatened or endangered species or critical habitat and of historic properties.

The US Ecology request (ADAMS Accession No. ML13198A017) includes a radiological dose assessment for the transport and disposal of the SLC waste material. According to 10 CFR 20.2002, the analysis must show that the radiological doses arising from the proposed action will be ALARA and within the 10 CFR part 20 dose limits. The dose assessment evaluates worker doses for transporting the material to USEI, doses for the onsite workers at the USEI facility, and landfill post closure doses for members of the general public. The analysis used Microshield and RESRAD Version 6.5, as appropriate, to calculate the doses. The NRC staff reviewed and evaluated this dose assessment and performed independent dose calculations, and found the dose assessment to be acceptable under 10 CFR part 20.

The dose assessment uses a conservative source term and site-specific parameter values, and assessed a range of possible exposure scenarios. Estimated doses to workers associated with both the transport and disposal processes were all below 0.01 millisievert/year (mSv/yr) (1 millirem/year (mrem/yr)). Regardless of the radionuclide concentrations used, the post-closure dose to a member of the public was also below 0.01 mSv/yr (1 mrem/yr). By comparison, the 10 CFR part 20 dose limits, as total effective dose equivalents, are 50 mSv/yr (5000 mrem/yr) to workers (10 CFR 20.1201(a)(1)(i)) and 1 mSv/yr (100 mrem/yr) to individual members of the public (10 CFR 20.1301(a)(1)). Also, based on the results of these analyses,

the staff concludes that the proposed disposal action will not significantly add to the annual cumulative dose from all exempted and naturally occurring radioactive material received at the USEI disposal facility.

As a result of the dose assessment and other considerations, the staff concludes that the exemption of the USEI site from NRC licensing requirements will not significantly increase the probability or consequences of accidents, no changes are being made in the types of any effluents that may be released off site, and there is no significant increase in occupational or public radiation exposure.

The staff considered the no-action alternative as an alternative to the proposed action. Under the no-action alternative, the NRC would deny the present US Ecology exemption request and the SLC waste could not be received and disposed at the USEI RCRA disposal facility. However, the staff assumes that the subject SLC waste would still be generated under the USEPA's CERCLA response action and, for this response action to be in compliance with the OSR, the SLC waste would still need to be transported to and disposed at another acceptable offsite facility. This facility could be another appropriately permitted disposal site, such as another RCRA hazardous disposal facility, a municipal landfill, or a licensed LLRW disposal site. Under these circumstances, the potential environmental impacts of the proposed action and the no-action alternative at the disposal facilities would be similar, although denial of the US Ecology request by the NRC may result in delayed demolition of the structures at the SLC site or delayed offsite shipment of the demolition wastes, potentially resulting in increased exposure of site workers and members of the public to the low-activity materials. Also, disposal of the material at a LLRW disposal facility would be at higher cost than at a RCRA hazardous waste landfill or municipal landfill permitted to accept low-activity radioactive wastes but with



little or no commensurate reduction of risk, and disposal in a RCRA hazardous waste or municipal landfill would conserve LLRW disposal capacity for higher activity wastes.

### **III. Finding of No Significant Impact**

The NRC staff has prepared an EA in support of the proposed action. The staff has concluded that the proposed action, for the NRC to grant an exemption from licensing for the USEI RCRA Subtitle C hazardous and low-activity radioactive waste facility to receive and dispose of specified low-activity radioactive wastes from the SLC Superfund Site, will not significantly impact the quality of the human environment, and that the proposed action is the preferred alternative. The USEI site includes an operating disposal facility where the low-activity SLC waste would be disposed of pursuant to a RCRA permit in an existing waste disposal cell. The protection of workers, members of the public, and the environment are ensured by USEI permit requirements, site and facility design features, and engineering and administrative controls. Further, estimated radiological doses associated with transport and disposal of the waste to workers and members of the public would be below 0.01 mSv/yr (1 mrem/yr), which is orders of magnitude below the 10 CFR part 20 dose limits of 50 mSv/yr (5000 mrem/yr) to workers and 1 mSv/yr (100 mrem/yr) to individual members of the public. Also, the staff concludes that the proposed disposal action will not significantly add to the annual cumulative dose from all exempted and naturally occurring radioactive material received at the USEI disposal facility.

On the basis of the conclusion of the EA, the NRC finds that there are no significant environmental impacts from the proposed action, and that preparation of an environmental impact statement is not warranted. Accordingly, the NRC has determined that a Finding of No Significant Impact is appropriate.

Dated at Rockville, Maryland, this 25<sup>th</sup> day of October 2013.

For the Nuclear Regulatory Commission.

/RA/

Kevin Hsueh, Acting Deputy Director,  
Environmental Protection and  
Performance Directorate,  
Division of Waste Management and  
Environmental Protection,  
Office of Federal and State Materials  
and Environmental Management Programs.