



[7590-01-P]

NUCLEAR REGULATORY COMMISSION

[Docket No. 70-7005; NRC-2017-0098]

Exemption Request for Waste Control Specialists LLC

Andrews County, Texas

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 (FONSI) in support of the NRC's consideration of issuance of a new 2017 order that would supersede an order previously issued to Waste Control Specialists LLC (WCS) on December 3, 2014 (2014 Order). The 2014 Order contained conditions and criteria that allowed WCS to be exempt from the NRC's regulations concerning special nuclear material (SNM).

DATES: The EA and FONSI are available as of [INSERT DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

ADDRESSES: Please refer to Docket ID **NRC-2017-0098** when contacting the NRC about the availability of information regarding this document. You may access publicly-available information related to this document using any of the following methods:

- **Federal Rulemaking Web site:** Go to <http://www.regulations.gov> and search for Docket ID **NRC-2017-0098**. Address questions about NRC dockets to Carol Gallagher;

telephone: 301-415-3463; e-mail: Carol.Gallagher@nrc.gov. For technical questions, contact the individuals listed in the FOR FURTHER INFORMATION CONTACT section of this document.

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

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- **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: James Park, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001; telephone: 301-415-6954; e-mail: James.Park@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Introduction

The current action is in response to WCS's December 4, 2014, request for an exemption from NRC regulations to transfer aboveground, under specified conditions, wastes containing SNM in excess of the critical mass limits specified in section 150.11 of title 10 of the *Code of*

Federal Regulations (10 CFR), “Critical Mass,” at its Andrews County, Texas, facility, without first obtaining from the NRC a 10 CFR part 70 license.

The WCS operates a facility in Andrews County, Texas, (WCS site) that is currently licensed by Texas to receive, possess, use, store, dispose and transfer certain types of radioactive material contained in Low-Level Waste (LLW) and Mixed Waste (MW) (i.e., waste that is both hazardous waste and LLW). The WCS site also receives hazardous and toxic waste for disposal. Under an Agreement authorized by the Atomic Energy Act, as amended, the NRC can relinquish and a State can assume, regulatory authority over radioactive material specified in an Agreement with the NRC. In 1963, Texas entered into an Agreement and assumed regulatory authority over source, byproduct, and SNM less than a critical mass.

On November 30, 1997, the State of Texas Department of Health (TDH) issued WCS a radioactive materials license (RML) to possess, treat, and store LLW (RML R04971). In 1997, WCS began accepting Resource Conservation and Recovery Act and Toxic Substance Control Act wastes for treatment, storage, and disposal. Later that year, WCS received a license from the TDH for treatment and storage of MW and LLW. The MW and LLW streams may contain quantities of SNM. In 2007, regulatory responsibility for RML R04971 was transferred by TDH to the Texas Commission on Environmental Quality (TCEQ). In September 2009, the TCEQ issued RML R04100 to WCS for disposal of LLW.

Section 70.3 of 10 CFR part 70 requires persons who own, acquire, deliver, receive, possess, use, or transfer SNM to obtain a license pursuant to the requirements of 10 CFR part 70, “Domestic Licensing of Special Nuclear Material.” The licensing requirements in 10 CFR part 70 apply to persons in Agreement States possessing greater than critical mass quantities, as defined in 10 CFR 150.11, “Critical Mass.” However, the Commission may grant exemptions from the requirements of specific regulations pursuant to 10 CFR 70.17(a), if the

Commission determines the exemptions are “authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest.”

In September 2000, WCS submitted to the NRC an exemption request from the licensing requirements in 10 CFR part 70. On November 21, 2001, the NRC issued an Order to WCS (2001 Order) granting an exemption to WCS from certain NRC regulations and permitted WCS, under specified conditions, to possess waste containing SNM in greater quantities than specified in 10 CFR part 150, “Exemptions and Continued Regulatory Authority in Agreement States and in Offshore Waters under Section 274,” at the WCS Site without obtaining an NRC license pursuant to 10 CFR Part 70. The NRC published the 2001 Order in the *Federal Register* (FR) on November 15, 2001 (66 FR 57489). The publicly available November 21, 2001, NRC letter to WCS (ADAMS Accession No. ML030130085), included as attachments the 2001 Order, the October 2001 EA, and the November 2001 Safety Evaluation Report (SER). The EA discussed the conditions specified in the 2001 Order.

By letters dated August 6, 2003, and March 14, 2004, WCS requested a modification to the 2001 Order to allow it to use additional reagents for chemical stabilization of mixed waste containing SNM. The NRC issued the new Order on November 4, 2004 (2004 Order), which superseded the 2001 Order. The NRC published the 2004 Order in the FR on November 12, 2004 (69 FR 65468). The October 2004 EA (ADAMS Accession No. ML043020614) and October 2004 SER (ADAMS Accession No. ML042250362) discussed the new conditions specified in the 2004 Order. The 2004 Order allowed WCS to use such chemical reagents as it deems necessary for treatment and stabilization of mixed waste containing SNM, provided that the SNM mass does not exceed specified concentration limits.

By letter dated December 10, 2007, WCS requested modifications to the 2004 Order.

The NRC issued the new Order to WCS on October 29, 2009 (2009 Order), which superseded the 2004 Order. The NRC published the 2009 Order in the FR on October 26, 2009 (74 FR 55072). The October 2009 EA (ADAMS Accession No. ML092460509) and October 2009 SER (ADAMS Accession No. ML093070307) discussed the new conditions specified in the 2009 Order. The 2009 Order changed the 2004 Order Conditions regarding sampling of waste, what is allowed to be in the waste, and the amount of highly water soluble SNM in each waste package.

In July 2013, the TCEQ began to merge the license requirements in RML R04971 (for the radioactive waste treatment, storage, and processing facility) with the requirements in RML R04100 (for the LLW land disposal facility). In Amendment No. 22 of RML R04100, the TCEQ license requirements related to the 2009 Order in RML R04971 for the WCS treatment, storage, and processing facility were transferred to RML R04100. Previous NRC Orders referred to that location as the treatment, storage, and processing facility. Subsequently, WCS began referring to that location as the “Treatment, Storage and Disposal Facility.” The NRC will use the name “Treatment, Storage, and Disposal Facility” and the abbreviation TSDF to reference that location at the WCS Site in this EA.

By letter dated July 18, 2014, WCS requested modifications to the 2009 Order to allow movement to and temporary storage of some of the Los Alamos National Laboratory (LANL) Waste at the WCS Federal Waste Disposal Facility (FWF) rather than at the TSDF. The LANL Waste is U.S. Department of Energy (DOE) waste that originated at the LANL that is destined for disposal at the DOE Waste Isolation Pilot Plant (WIPP) Facility. Due to the February 14, 2014, WIPP incident, the DOE suspended operations at the WIPP Facility. In April 2014, WCS began receiving some LANL Waste from DOE that met the conditions in the 2009 Order and WCS began storing the waste at the TSDF. The NRC issued the 2014 Order to WCS on

December 11, 2014, which superseded the 2009 Order. The NRC published the 2014 Order in the FR on December 11, 2014 (79 FR 73647), allowing temporary storage of some of the LANL Waste at the WCS FWF. The October 2014 EA (ADAMS Accession No. ML14238A208) and November 2014 SER (ADAMS Accession No. ML14230A804) discussed the new conditions specified in the 2014 Order.

The previous NRC Orders (2001, 2004, 2009, and 2014) addressed the issue that 10 CFR 70.3 requires persons who own, acquire, deliver, receive, possess, use, or transfer SNM to obtain an NRC license pursuant to the requirements in 10 CFR part 70. However, 10 CFR 150.10 exempts a person in an Agreement State who possesses SNM in quantities not sufficient to form a critical mass from the NRC's imposed licensing requirements and regulations. The method for calculating the quantity of SNM not sufficient to form a critical mass is set out in 10 CFR 150.11. Therefore, prior to the 2001 Order, WCS was required to comply with NRC regulatory requirements and obtain an NRC specific license to possess SNM in quantities greater than amounts established in 10 CFR 150.11. The 2001 WCS exemption request to NRC proposed to use concentration-based limits rather than mass-based limits at a specific location at the WCS Site. The 2001 Order granted, and the subsequent NRC Orders (2004, 2009, and 2014) continued the use of concentration-based limits and other conditions at specific locations at the WCS Site. The TCEQ incorporated the concentration-based limits and other conditions from each respective NRC Order (2001, 2004, 2009, and 2014) into the WCS license for the specific locations at the WCS Site where the concentration-based limits instead of mass-based limits and other conditions are applicable.

II. Environmental Assessment

Description of the Proposed Action

By letter dated December 4, 2014 (ADAMS Accession No. ML14342A773), WCS requested an exemption from NRC regulations to possess SNM in excess of the critical mass limits specified in 10 CFR 150.11 while performing specific transfers aboveground at the WCS Site, without first obtaining a 10 CFR part 70 license. Through subsequent public interactions between the NRC and WCS, the WCS request was revised to allow transfer of waste from off-site the WCS Site directly to either the Compact Waste Facility (CWF) or the FWF, only for disposal (Direct Transfer), without the waste being applied towards the aboveground SNM possession limit for the WCS Site. Pursuant to the NRC proposed conditions in the 2017 Order: (1) WCS would continue to possess waste when it enters the WCS-owned rail spur (for rail shipments) or when it enters the WCS Site (for truck shipments); (2) for Direct Transfers, waste would not apply towards the aboveground SNM possession limit until it is removed from the rail car (for rail shipments) or removed from the truck (for truck shipments); and (3) for Direct Transfers, waste would not be processed, treated, or stored at the WCS Site. The NRC used the concept of Criticality Safety Index (CSI) as the safety basis to support the NRC proposed conditions in the 2017 Order. All aboveground waste containing SNM possessed by WCS would apply towards the aboveground SNM possession limit, except waste meeting the Direct Transfer proposed conditions in the 2017 Order.

The NRC staff evaluated the three types of Direct Transfers:

- Off-site containerized waste that arrives by truck and sent directly to the CWF only for disposal;
- Off-site containerized waste that arrives by truck and sent directly to the FWF only for disposal; and
- Off-site bulk waste that arrives by truck and sent directly to the FWF only for disposal.

The following factors informed the NRC's evaluation of the proposed action:

- The concept of CSI is discussed in 10 CFR part 71, “Packaging and Transport of Radioactive Material.” The provisions in 10 CFR part 71 regulate the packaging, preparation for shipment, and transportation of radioactive material on public roadways.
- 10 CFR 71.4 defines CSI as: “the dimensionless number (rounded up to the next tenth) assigned to and placed on the label of a fissile material package, to designate the degree of control of accumulation of packages, overpacks, or freight containers containing fissile material during transportation. Determination of the CSI is described in 10 CFR 71.22, 71.23, and 71.59. The CSI for an overpack, freight container, consignment, or conveyance containing fissile material packages is the arithmetic sum of the CSIs of all the fissile material packages contained within the overpack, freight container, consignment, or conveyance.”
- The NRC Glossary found at <https://www.nrc.gov/reading-rm/basic-ref/glossary.html>, defines Fissile Material as: “A nuclide that is capable of undergoing fission after capturing low-energy thermal (slow) neutrons”
- 10 CFR 71.22(a) includes: “A general license is issued to any licensee of the Commission to transport fissile material, or to deliver fissile material to a carrier for transport if the material is shipped in accordance with this section.” Other provisions in the regulation specify the CSIs for individual packages and for the shipments of multiple packages. Section 71.22(d)(3) specifically includes: “For a shipment of multiple packages containing fissile material, the sum of the CSIs must be less than or equal to 50 (for shipment on a nonexclusive use conveyance)”
- Use of the CSI of 50 from 10 CFR part 71 for the safe transportation of radioactive material on public roads provides adequate safety for direct transfers at the WCS Site.
- The definition of “conveyance” in 10 CFR 71.4 includes: “For transport by public

highway or rail any transport vehicle or freight container”

- A transportation package is a container placed on or in a conveyance. A transportation package can contain one or more waste packages.
- A waste package is a container with waste that was placed inside a transportation package.
- For this modified request, the concept of CSI only applies to transportation packages.
- The SNM contained in either a transportation package or a waste package that meets the NRC proposed conditions in the 2017 Order do not apply towards the aboveground SNM possession limit at the WCS Site. Otherwise, that SNM does apply towards the aboveground SNM possession limit at the WCS Site.
- When waste is removed from a railcar at the WCS Site, the SNM contained in that waste does apply towards the aboveground SNM possession limit at the WCS Site.

Under the modified request, the Direct Transfers would only occur on appropriately dedicated secure access roads, with conveyances travelling to either the CWF or the FWF under the 25 miles per hour speed limit. Additionally, Direct Transfers would be escorted by at least two radiation safety technicians and two waste acceptance personnel, with entrances to the access roads blocked for a distance of 50 yards from a Direct Transfer.

At any one time, WCS may have one conveyance containing one or more transportation packages with waste traveling to the CWF and one conveyance containing one or more transportation packages with waste traveling to the FWF. There would be no limit to the number of empty conveyances (i.e., with either no or empty transportation packages) traveling from the CWF and traveling from the FWF. Additionally, there may only be a maximum of one transportation package open at the CWF and one transportation package open at the FWF at

the same time. The waste would be allowed to be at the CWF or the FWF for a maximum of 24 hours before being safely disposed of at that location, unless external factors (e.g., weather, equipment) dictate otherwise.

Need for the Proposed Action

The need expressed by WCS in its initial December 4, 2014, request for the proposed action is to reduce the number of onsite transfers required to process rail and truck shipments of wastes containing SNM. The WCS considers that approval of this proposed action would result in a safer (less handling), more secure (less time above ground), and more efficient (less cost) handling of SNM waste shipments.

The purpose of this EA is to assess the potential environmental impacts of the WCS December 2014 exemption request as modified through subsequent public interactions with the NRC. This EA does not approve or deny the requested action. A separate SER has been prepared in support of approval or denial of the requested action.

Environmental Impacts of the Proposed Action

The NRC does not expect that significant changes in radiation hazards to workers would result from the proposed action. In performing the Direct Transfers, WCS would follow its State of Texas-approved radiation protection procedures (e.g., Radiation Safety Procedures, as low as is reasonably achievable [ALARA] Program) to keep radiological doses to workers within the State's regulatory limits (see Texas Administrative Code, Part 1, Chapter 336, Subchapter D, "Standards for Protection Against Radiation"). The WCS conducts this approved radiation protection program with an emphasis on maintaining radiological doses to workers and the general public ALARA.

To reduce the potential for inadvertent criticality, WCS would: (1) be limited in the number of transportation packages transferred on a single conveyance to the CWF or the FWF using the total CSI of less than 50; (2) be required to have a maximum of only one transportation package open in the CWF and the FWF at the same time; and (3) be required to safely dispose of the waste in the CWF or the FWF within 24 hours.

The NRC staff does not expect the proposed action to result in substantive changes to the transportation impacts identified in prior EAs. The modified exemption request addresses only changes to onsite movement of SNM-bearing wastes. Direct Transfers to the CWF or the FWF would take place within an area under control by WCS, on pre-existing dedicated secure access roads, and with administrative controls (speed limits and enforced road blockages during Direct Transfers) intended to reduce the potential for, the severity of, and the potential consequences of accidents. Additionally, all Direct Transfers to the CWF and to the FWF would be escorted by radiation safety technicians and waste acceptance personnel. All other environmental impacts would be the same as those evaluated in the EAs that supported the previous versions of the NRC Order.

If WCS' modified exemption request is approved by the NRC staff, then the NRC would issue a new Order to supersede the 2014 Order, with new conditions added to address the modified exemption request. The WCS would continue to be permitted to possess SNM at the TSDF that meets the concentration limits and controls without an NRC part 70 license. The WCS would continue to be permitted to possess at the TSDF, highly water soluble forms of SNM limited to amounts of SNM less than "special nuclear material of low strategic significance," as defined in 10 CFR 70.4.

The State of Texas regulates effluent releases and potential doses to the public under the WCS license. The State of Texas would continue to regulate the SNM at the WCS facility

subject to the Order, as long as WCS complies with the NRC Order.

Environmental Impacts of the Alternatives to the Proposed Action

As an alternative to the proposed action, the NRC staff considered denial of the WCS' modified exemption request. This would result in the NRC not issuing a new order that would supersede the 2014 Order (i.e., the "no action" alternative). Under that alternative, WCS would continue its currently approved program for transferring SNM wastes to either the CWF or the FWF for disposal. Under that program, WCS would offload waste packages from conveyances one at a time to stay within the current above-ground SNM possession limit. Such actions would require multiple trips (as many as needed to individually transfer waste packages) to the CWF or to the FWF. Compared to the proposed action, this would result in an increased handling of SNM wastes, with a subsequently increased possibility of accidents and radiological exposure. However, WCS would continue to conduct its state-approved radiation protection program to maintain radiological doses to workers and the general public ALARA.

Agencies and Persons Consulted

On December 21, 2016, the staff consulted with the TCEQ, providing by e-mail a copy of the draft EA for review and comment (ADAMS Accession No. ML17026A356). In an e-mail dated January 12, 2017, the TCEQ stated that it had no comments of the draft EA (ADAMS Accession No. ML17026A360).

The proposed action does not involve the development or disturbance of additional land. Hence, the NRC has determined that the proposed action will not affect listed endangered or threatened species or their critical habitat. Therefore, no further consultation is required under Section 7 of the Endangered Species Act. Likewise, the NRC staff has determined that the proposed action does not have the potential to cause effects on historic properties even if they

were present. Direct Transfers would take place on dedicated secure access roads within the WCS site, and no ground disturbing activities are associated with the proposed action. Therefore, no consultation is required under Section 106 of the National Historic Preservation Act.

III. Finding of No Significant Impact

The NRC has reviewed WCS' December 4, 2014, request, as revised through subsequent public interactions between the NRC and WCS, to amend the 2014 Order. The NRC has found that effluent releases and potential radiological doses to the public are not anticipated to change as a result of this proposed action and that occupational exposures are expected to remain within regulatory limits and ALARA. On the basis of the environmental assessment, the NRC finds that the proposed action has no significant impact on the quality of the human environment. Accordingly, the NRC has determined not to prepare an environmental impact statement for the proposed action.

Dated: April 4, 2017.

For the U.S. Nuclear Regulatory Commission.

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