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November 3, 2020

Office of Administration
Mail Stop: TWFN-7-A60M
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
ATTN: Program Management, Announcements and Editing Staff

Submitted by email to: WCS_CISF_EIS@nrc.gov

Dear Sir or Madam,

On behalf of the New Mexico Environment Department (NMED), attached please find comments on the May 2020 draft Environmental Impact Statement (EIS) for the Interim Storage Partners LLC's (ISP's) License Application for a Consolidated Interim Storage Facility for Spent Nuclear Fuel in Andrews County, Texas.

As discussed in our attached technical comments, the ISP site is on the New Mexico-Texas border, and NMED is very concerned that contaminants released to air and water at the site will migrate into New Mexico and create threats to human health and the environment.

Please do not hesitate to contact me to discuss further.

Sincerely,

Digitally signed by James Kenney
Date: 2020.11.03 10:59:08 -07'00'

James C. Kenney
Cabinet Secretary
Environment Department

Attachment (1)

cc: Courtney Kerster, Director of Federal Affairs, Office of Governor Michelle Lujan Grisham
Sara Cottrell Propst, Cabinet Secretary, Energy Minerals and Natural Resources Department
Sandra Ely, Director, NMED Environmental Protection Division
Rebecca Roose, Director, NMED Water Protection Division
Stephane Stringer, Director, NMED Resource Protection Division

Comments

Introduction

The U.S. Nuclear Regulatory Commission (NRC) proposes approval of the Interim Storage Partners, LLC (ISP) license application to construct and operate a consolidated interim storage facility (CISF) for spent nuclear fuel (SNF) and Greater-Than-Class C waste and spent mixed oxide fuel at the existing Waste Control Specialists (WCS) site in Andrews County, Texas, very close to the New Mexico state line. The NRC proffers a draft environmental impact statement (EIS)[1] to support the proposed action, which would authorize storage of up to 5,000 metric tons of uranium (MTUs) for a license period of 40 years. The ISP admits it will seek amendments and extensions of the license to store an additional 5,000 MTUs for each of seven expansion phases over 20 years, resulting in an expanded facility with total storage of up to 40,000 MTUs of SNF. New Mexico opposes the proposed action as the EIS is significantly flawed, and the proposed action presents threats to the health and environment of New Mexico and its citizens.

The New Mexico Environment Department (NMED) has considerable experience and interaction with the WCS facility, due to its location along the Texas-New Mexico border, and is familiar with the operations and environmental issues of this site. Furthermore, prevailing wind direction is generally from the proposed site towards New Mexico, groundwater flow beneath the existing waste cells at the site is predominantly to the southwest towards New Mexico, and surface water flow from the site is directed through outfalls that flow directly into New Mexico.

Contaminants released to air and water at the ISP site, therefore, have the potential to migrate into New Mexico and create threats to human health and the environment. As a result of the potential for existing operations at the WCS site to affect groundwater quality in New Mexico, NMED required WCS to obtain a Groundwater Discharge Permit (DP-1817) for WCS's waste disposal operations in Texas. WCS submits groundwater monitoring reports to NMED as required by DP-1817 and is currently in compliance with DP-1817.

Overall, the technical analysis in the draft EIS is inadequate and does not support the proposed alternative. The EIS fails to properly characterize the site, which is geologically unsuitable. Similarly, the numerous technical site deficiencies preclude thorough evaluation of the site or the proposed project. Furthermore, the draft EIS lacks all applicable state regulatory oversight and environmental impact controls. Additionally, the draft EIS omits a full assessment of environmental justice concerns or analysis of the effects of the proposed project. These deficiencies all contribute to a draft EIS that fails to meet the requirements of Section 102(2)(c) of the National Environmental Policy Act (NEPA). New Mexico disagrees strongly with the recommended action of approving the Interim Storage Partners LLC's License and recommends the No Action Alternative.

1. Moving SNF multiple times creates unnecessary risks to public health, safety, and the environment.

The NRC stated in its Waste Confidence Decision[2] that SNF can be stored safely beyond the operating life of a power reactor, at current locations, until a national repository for SNF is established. Moreover, states and regional groups have consistently supported moving fuel only once – from current locations to a national repository. As this project proposes a temporary solution

1 EIS download: https://www.nrc.gov/docs/ML2012/ML20122A220.pdf.
2 SECY-14-0072: Final Rule: Continued Storage of Spent Nuclear Fuel (RIN 3150-AJ20) https://www.nrc.gov/docs/ML1417/ML14177A474.pdf.

to a permanent problem, the SNF of concern may need to be moved multiple times until a permanent solution is established. Ultimately, moving SNF multiple times increases the likelihood of accidents within the State of New Mexico and elsewhere.

2. The proposed ISP CISF site is geologically unsuitable.

Given that a permanent repository for high-level radioactive waste does not exist in the United States and there is no existing plan to build one, any "interim" storage facility will be an indefinite storage facility, including ISP's CISF. The license life for the application ISP submitted to the NRC is for forty (40) years, and the license life can be extended at every license renewal date. The design life for the storage facility and cask, canisters, and assemblies is for eighty (80) years. The service life for the SNF storage site is one hundred and twenty (120) years. At this time, the NRC cannot guarantee that a permanent repository for SNF in the United States will be developed in 40, 80, or 120 years, or that the proposed ISP CISF facility will not become a permanent repository. Even 80 years of storage at the ISP CISF amounts to impacts beyond the lifetimes of everyone involved in this environmental review and licensing decision.

As early as the 1950s, the National Academy of Sciences recommended disposal of long-lived radioactive wastes in deep, geologically stable formations.[3] ISP, however, proposes to store highly radioactive and toxic SNF at the surface in an area that is underlain by shallow groundwater. ISP's proposed CISF site does not provide deep geologic isolation for indefinite SNF storage, and the proposed site is unsuitable for SNF storage over a period of decades. Therefore, the No Action Alternative is recommended.

3. The draft EIS contains numerous technical deficiencies that preclude a thorough evaluation of the radiological and non-radiological environmental impacts of the proposed ISP facility.

Resolving technical deficiencies in the draft EIS and properly evaluating, with all available data, the description of the affected environment, waste transportation, waste characterization, potential contaminant release mechanisms and exposure pathways, potential risks from aging SNF canisters, and site monitoring will further support the No Action Alternative.

a. Deficiencies Related to Hydrogeologic Characterization

The draft EIS does not contain a comprehensive and internally consistent hydrologic conceptual site model that includes precipitation, recharge, surface water, groundwater and springs. Moreover, the draft EIS fails to identify and characterize all groundwater zones that underlie the site with regard to background water and sediment quality, potentiometric surfaces, and directions of groundwater flow. Of particular concern is that the draft EIS does not identify the source of water in Baker Springs in New Mexico, and whether these springs could be affected by contaminant discharges at the proposed ISP site.

These deficiencies preclude the complete and thorough evaluation of contaminant release scenarios, the resulting migration and exposure pathways, and the resulting risks to human and ecological health.

3 National Research Council. 1957. The Disposal of Radioactive Waste on Land. Washington, DC: The National Academies Press. Available at https://doi.org/10.17226/10294.

b. Deficient Evaluation of Potential Contaminant Release Scenarios and Exposure Pathways

Prevailing wind direction is generally from the proposed site towards New Mexico. Groundwater flow beneath the existing waste cells at the site is predominantly to the southwest towards New Mexico. Surface water flow from the site is directed through outfalls that flow directly into New Mexico. The draft EIS fails to evaluate how contaminant releases to these pathways could directly migrate into, and impact public health and the environment in, New Mexico.

i. The draft EIS fails to evaluate the impacts of a radiological release from a proximal facility.

ISP's Environmental Report, in a section titled Proximity of Hazardous Operations/High-Risk Facilities, erroneously states *"there are no facilities handling large quantities of hazardous materials, chemicals, or other material in proximity to the site."* (See § 2.3.4, Criterion 13, page 2-27). Numerous radiological materials operations are currently occurring in the vicinity of the CISF and are likely to continue or expand in the future. These operations include the Federal Facilities Waste Disposal site, the Compact States Waste Disposal Facility, the By-Products Waste Disposal Facility, and the uranium enrichment occurring at URENCO. A radiological release from one of these proximal facilities could render the ISP CISF unmanageable, at loss of capability to function safely, and at risk for accidents and release of contaminants to the environment.

ii. The draft EIS fails to evaluate the potential impacts of a hydrogen sulfide release from a proposed oil-field waste disposal facility near the site.

ISP's Environmental Report, in a section titled Land Use, erroneously states that "there are no other know current, future, or proposed land use plans, including staged plans, for the proposed CISF or immediate vicinity." (See § 3.1, page 3-3). CK Disposal, however, has proposed to construct an oil field waste disposal facility near the ISP site. The draft EIS does not evaluate how releases of hydrogen sulfide from the CK Disposal facility could render the ISP CISF unmanageable, at loss of capability to function safely, and at risk for accidents and release of contaminants to the environment.

iii. The draft EIS fails to evaluate the potential impacts of numerous boreholes on the ISP property that could act as pathways for contaminants to reach groundwater.

Some 600 boreholes are known to be on the WCS property, and the draft EIS does not provide information on how many boreholes have been improperly abandoned. Improperly plugged or cased boreholes could cause a migratory pathway for contaminant migration to groundwater.

c. Seismicity not Adequately Addressed

The draft EIS asserts that operation of the proposed CISF project would not be expected to impact or be impacted by seismic events. The draft EIS provides general information about the history of earthquakes in the region, including earthquakes caused by fluid injection by the oil and gas industry, and asserts that CISF infrastructure will be designed to withstand seismic events, but does not provide specific information about these safeguards. On March 26, 2020, a

magnitude 5.0 earthquake struck West Texas near the New Mexico border.[4] Since earthquakes of magnitude 5 or greater have already occurred in this area, there is the possibility that more powerful earthquakes may occur, and the ISP facility must be designed to withstand these more powerful seismic events.

d. Deficient Waste Characterization

The draft EIS fails to provide details of the radionuclides and activities in the spent fuel rods, and only references metric tons of uranium (MTU) in the fuel rods that were originally placed in the nuclear reactors. Spent fuel rods can be much more radioactive than the original fuel rods due to the presence of a mixture of byproducts from uranium fission. Radionuclide activities in spent fuel rods can depend on age, uranium burnup and decay, and the type of reactor that was used.

Furthermore, the draft EIS does not adequately address the differences in SNF storage (pool storage, dry storage or both) at the commercial reactor sites. These differences are important as they may present challenges for SNF processing and storage at the proposed ISP facility.

The draft EIS fails to discuss non-radiological contaminants that may potentially be discharged to soil, water and air during operation of the site.

e. Deficiencies Regarding Cannisters and CISF Infrastructure

i. SNF cannisters

Some of the SNF cannisters that would be shipped to the proposed ISP facility have already been stored for decades. As fuel rods age they are subject to corrosion, damage or cladding, and the potential for explosive levels of hydrogen to build up inside the cannisters. The draft EIS does not adequately address these issues.

The SNF cannisters will be stored on concrete pads on the ground surface exposed to the elements. The draft EIS does not address the temperature rating of the SNF cannisters and if maximum summer temperatures at the site are within this temperature rating.

ii. SNF Concrete Pad

The draft EIS does not discuss how the concrete pads used to store SNF cannisters will be protected or repaired from cracking and spalling due to exposure to the elements of the arid Southwest.

4. The draft EIS is significantly incomplete without inclusion of all applicable state regulatory oversite and environmental impact controls.

The draft EIS fails to identify New Mexico water quality regulatory requirements that apply to the proposed ISP facility. As discussed above, contaminants discharged by existing WCS operations, as well as by proposed ISP operations, have the potential to affect water quality in New Mexico. Discharges onto or below the ground surface at the site, and surface water emanating from the site that flows toward New Mexico, have the potential to infiltrate into the subsurface and into groundwater. Consequently, NMED required WCS to obtain a Groundwater Discharge Permit (DP-1817) for WCS's waste disposal operations. WCS submits groundwater monitoring reports to NMED as required by DP-1817 and is currently in compliance with DP-1817.

The existing Texas Pollutant Discharge Elimination System (TPDES) Permit, and monitoring conducted pursuant to that permit, is not an adequate substitute for New Mexico's groundwater permitting and monitoring requirements. Therefore, ISP must submit a Notice of Intent to Discharge

4 https://www.usgs.gov/news/m50-earthquake-hits-west-texas-new-mexico-border.

to NMED in accordance with 20.6.2.1201 New Mexico Administrative Code (NMAC) for proposed CISF operations. The final EIS, and specifically Table 1.6-1, must identify DP-1817, and ISP's requirement to submit a Notice of Intent to Discharge.

Since surface water discharges from the proposed ISP site in Texas may affect surface water quality in New Mexico, the final EIS should include a requirement that the Texas Commission on Environmental Quality consults with NMED as a downstream state during the TPDES Permit process.

The draft EIS fails to commit the NRC to a comprehensive environmental oversight role during operation of the CISF. The final EIS must address possible licensing conditions and the NRC's obligation to evaluate and respond to adverse impacts to environmental media, e.g., soil, surface water, groundwater.

5. **The proposed action threatens minority and low-income populations in New Mexico that have already suffered disproportionally high adverse human health and environment effects from nuclear energy and weapons programs of the United States. The Proposed Action must comply with Executive Order 12898 requiring that all federal agencies achieve environmental justice for vulnerable populations that would be disproportionately affected by programs of the United States.**

The proposed action for indefinite storage of commercial SNF joins the ranks of uranium mining and milling, legacy contamination at national laboratories, and disposal of defense waste at the Waste Isolation Pilot Plant (WIPP), all of which have long presented risks to public health and the environment in the State of New Mexico that are disproportionately greater than such risks to the general population of the United States.

The draft EIS identifies 58.8 percent of the population in Lea County, New Mexico as Hispanic or Latino (Table 1). New Mexico's general percentages of minority (Hispanic or Latino and American Indian) and low-income populations are significantly greater than in the United States' general population (Table 1).

Table 1. New Mexico and United States Demographics.

Demographic	**United States [a]**	**New Mexico [a]**	**Lea County, NM [b]**
Hispanic or Latino	18.3%	49.1%	58.8%
American Indian	1.3%	10.9%	0.7
Persons in poverty	11.8%	19.5%	
Sources: [a] U.S. Census Bureau QuickFacts: https://www.census.gov/quickfacts/fact/table/US/PST045219 [b] Draft EIS, Table 3.11-2, https://www.nrc.gov/docs/ML2012/ML20122A220.pdf.			

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations, February 11, 1994, stated that *"…. each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionally high and adverse human health or environmental effects of its programs, policies,*

and activities on minority populations and low-income populations of the United States."[5] On August 24, 2004, the NRC issued a Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions that stated *"NRC believes that an analysis of disproportionately high and adverse impacts needs to be done as part of the agency's NEPA obligations to accurately identify and disclose all significant environmental impacts associated with a proposed action."*[6]

The draft EIS fails to demonstrate that the Proposed Action will achieve environmental justice for the high percentage of minority and low-income populations in the State of New Mexico who have already suffered disproportionately high adverse human health and environmental effects from nuclear energy and weapons programs of the United States. In fact, the draft EIS (pp. 2-28, 2-29) makes repeated, yet unsubstantiated, assertions that the Proposed Action will result in *"no disproportionately high and adverse human health and environmental effects."* Environmental justice deficiencies in the draft EIS include:

a. Failure to identify and evaluate the cumulative history of adverse human health and environmental effects on New Mexico's vulnerable populations; and

b. Failure to quantify specific impacts and health consequences to vulnerable populations in New Mexico that might occur from the various accidents and release scenarios considered in the draft EIS.

The environmental justice deficiencies in the draft EIS must be corrected by preparation of a proper risk assessment that evaluates all potential release scenarios and that quantifies incident-specific and cumulative impacts to vulnerable populations in New Mexico. In accordance with Executive Order 12898, with Council on Environment Quality guidance, and with NRC policy, every aspect of the proposed action must provide the highest level of protection to New Mexico citizens, including use of Best Available Technology in these safeguards. Our concerns about disproportionate impacts are another reason why NMED supports the No Action Alternative.

5 https://www.archives.gov/files/federal-register/executive-orders/pdf/12898.pdf
6 https://www.govinfo.gov/app/details/FR-2004-08-24/04-19305