

*(Holtec Safety Evaluation Report 2017)*

# **Overview of the Draft Environmental Impact Statement for Holtec Consolidated Interim Storage Facility**

March 2020

NRC ADAMS Accession Number: ML20073P254

# HOLTEC'S PROPOSED CONSOLIDATED INTERIM STORAGE FACILITY

On March 30, 2017, Holtec International (Holtec) submitted an application to the U.S. Nuclear Regulatory Commission (NRC) to construct and operate a Consolidated Interim Storage Facility (CISF) in Lea County, New Mexico. The facility would store spent nuclear fuel (SNF) and reactor-related Greater Than Class C waste, along with a small quantity of mixed oxide fuel. The NRC has reviewed the application and prepared a draft environmental impact statement (EIS) to comply with the National Environmental Policy Act (NEPA) and NRC regulations found at Title 10 of the Code of Federal Regulations, Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions" (10 CFR Part 51).

*Spent nuclear fuel* is fuel that has been removed from a nuclear reactor because it can no longer sustain power production for economic or other reasons.

*Greater Than Class C waste* is low-level radioactive waste that exceeds the concentration limits of radionuclides established for Class C waste in 10 CFR 61.55

*Mixed Oxide Fuel* (often called "MOX") contains plutonium oxide mixed with either natural or depleted uranium oxide, in ceramic pellet form. Using plutonium reduces the amount of highly enriched uranium needed to produce a controlled reaction in commercial light-water reactors.

## WHAT IS THIS DOCUMENT?

The draft EIS describes the impacts that could result from construction, operation, and decommissioning of the CISF. It also details the cumulative impacts from other activities in the area and alternatives evaluated. This document summarizes the NRC's environmental impact analysis that has been published in draft form for public review and comment.

### WHERE CAN I FIND MORE INFORMATION?

- View an online version at <https://www.nrc.gov/waste/spent-fuel-storage/cis/holtec-international.html>
- Review a printed copy or a copy on disc at
  - Carlsbad Public Library at 101 S. Halagueno Street, Carlsbad, NM 88220
  - Hobbs Public Library at 509 N Shipp Street, Hobbs, NM 88240
  - Roswell Public Library at 301 N. Pennsylvania, Roswell, NM 88201

Contact the U.S. Nuclear Regulatory Commission Environmental Project Managers at [Jill.Caverly@nrc.gov](mailto:Jill.Caverly@nrc.gov) or [Stacey.lmboden@nrc.gov](mailto:Stacey.lmboden@nrc.gov)

## WHAT IS BEING PROPOSED AND WHY?

Holtec's proposed CISF would provide an option for storing SNF from nuclear power reactors for a period of 40 years. Holtec requests authorization for the initial phase (Phase 1) of the project to store up to 8,680 metric tons of uranium in 500 canisters. Holtec plans to subsequently request license amendments authorizing an additional 500 canisters for each of 19 expansion phases of the proposed CISF (a total of 20 phases). Over 20 years, the facility would be expanded to store up to 10,000 canisters of SNF. The planned amendments for the 19 expansion phases are not part of the NRC's current licensing review, but the draft EIS considers the impacts of the entire expanded CISF where appropriate when the environmental impacts of the additional phases could be determined.

Holtec is a private organization not related to the NRC. The NRC is not a project proponent, owner, or operator. The NRC is an independent regulatory agency with the mission to protect public health and safety and the environment.

In reviewing Holtec's license application, the NRC has prepared a draft EIS in accordance with the NRC's regulatory requirements that implement the NEPA. The NEPA requires Federal agencies to assess the environmental impacts of major licensing actions. The draft EIS fulfills this requirement, following the NRC regulations found at 10 CFR Part 51. The draft EIS describes Holtec's plans to build, operate, and decommission its CISF and details NRC's evaluation of the environmental impacts of those activities. During operation, the CISF would receive SNF from decommissioned reactor sites around the nation and from operating reactors prior to decommissioning. The CISF would serve as an interim storage facility before a permanent geologic repository is available.

### NEPA

NEPA is a national policy for the environment that establishes the basis for considering environmental issues in the conduct of Federal activities.

The Act requires the following:

- Use a systematic, interdisciplinary approach for decision-making about actions that may impact the human environment.
- Inform and involve the public in the decision-making process.
- Consider significant environmental impacts associated with the action.
- Consider alternatives and compare their impacts to those from the proposed action.

The EIS provides the necessary information required under this Act.

The CISF license would be issued under 10 CFR Part 72, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste, and Reactor-Related Greater Than Class C Waste" (10 CFR Part 72). The NRC previously licensed one other away-from-reactor dry cask spent fuel storage facility, called Private Fuel Storage ([NUREG-1714](#)); however, that facility was never built. Most of the spent fuel storage facilities licensed by NRC are co-located with commercial nuclear power plants.

## **WHO IS LEADING THE HOLTEC CISF LICENSE APPLICATION REVIEW?**

The NRC is the lead Federal agency for reviewing the license application. However, other State and Federal government agencies are supporting the NRC's review. For example, the U.S. Bureau of Land Management (BLM) must give its approval for Holtec to construct 1) a rail spur across BLM-managed land to connect existing rail lines to the proposed CISF site and 2) a site access road. Both the NRC and the BLM must ensure that the NEPA process is properly conducted and completed before they can provide approval for their respective Federal actions in connection with this project. Because the necessary environmental reviews conducted by both agencies are similar, BLM is cooperating with the NRC to prepare a single EIS that describes the potential effects on the environment from construction and operation of the proposed CISF, the rail spur, and the site access road.

The New Mexico Environment Department (NMED) has been identified as a cooperating agency having special expertise in surface water and groundwater resources for the proposed CISF project. The NMED does not have any obligations under NEPA related to the proposed project and its participation in preparing this EIS does not imply concurrence. Impact determinations in the EIS should only be attributed to the two Federal agencies, NRC and BLM.

A detailed description of how the NRC determines whether or not to issue a license to Holtec is explained in the following sections. After the BLM has completed its review of Holtec's application to construct a rail spur and site access road on BLM-managed lands, it will issue a separate Record of Decision.

## **WHAT IS NRC'S PROCESS FOR REVIEWING A LICENSE APPLICATION FOR A CISF?**

When an applicant such as Holtec submits a license application, the NRC first determines if the application is sufficient to warrant a detailed review. If so, the agency "accepts" and "dockets" the application and begins parallel safety and environmental reviews for the proposed action.

Exhibit A shows the NRC's review process for a CISF licensing review. The final product from the safety review is a safety evaluation report that details storage facility design and radiological safety issues. The final product from the environmental review is an EIS that describes the environmental effects of building, operating, and decommissioning the CISF. The Atomic Safety and Licensing Board (ASLB) also may conduct an adjudicatory hearing if a member of the public or an organization successfully files a petition that raises safety or environmental concerns.

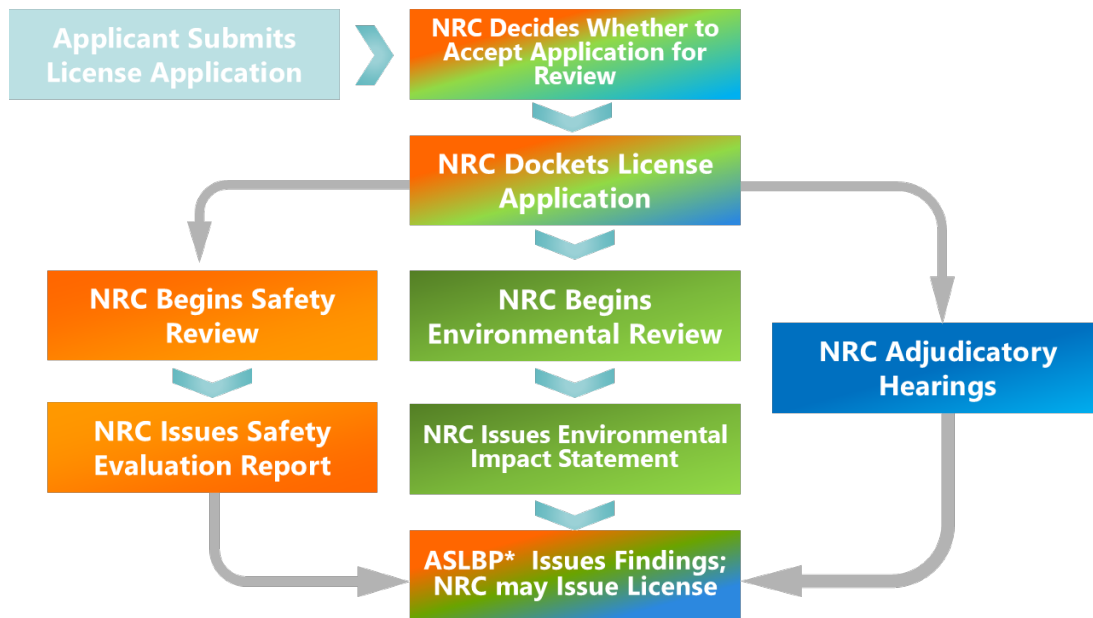


Exhibit A. License Application Review Process

## SAFETY REVIEW PROCESS

The purpose of the NRC staff's safety review is to verify that the proposed location, design, and operations of the CISF will comply with applicable NRC regulations and requirements for the protection of members of the public, the workers, and the environment. The safety review is a combination of multiple reviews that includes 1) a detailed characterization and evaluation of the proposed site to determine the likely natural phenomena (earthquakes, storms, etc.) and man-made hazards (from activities at the site or at nearby industrial or commercial operations) that can occur; 2) an evaluation of the design, construction, and operations of structures and equipment at the site to confirm that the facility will withstand normal, abnormal, and accident conditions without releasing radioactive materials; 3) an evaluation of the physical protection plan and emergency response plan for the facility to ensure that it is protected against sabotage or theft, and provides for the common defense and security; and 4) an evaluation of the financial qualifications of the license applicant to ensure that it has the required resources to adequately construct, operate, and decommission the facility. The results of NRC's safety review are documented in a safety evaluation report.

## ENVIRONMENTAL REVIEW PROCESS

The environmental review includes a careful look at the potential environmental impacts of construction, operation, and decommissioning of a CISF at the proposed site and the potential mitigation measures for reducing environmental effects. The NRC prepares the draft EIS consistent with its NEPA-implementing regulations in 10 CFR Part 51, and NRC staff guidance in NUREG-1748, “Environmental Review Guidance for Licensing Actions Associated with NMSS Programs.” The NRC categorizes impacts as *SMALL*, *MODERATE*, *LARGE*, or a range of these categories, which are based on the Council on Environmental Quality’s definition of “significantly.”

The environmental review includes consultation and coordination with representatives of local, State, and Federal agencies and Tribal Nations. Independent evaluations by the NRC, BLM, and contractor experts also are undertaken. These evaluations involve 1) review of the applicant’s information about the environment (documented in an environmental report or ER); 2) visits and tours of the proposed project site; 3) requests for further information from the applicant as needed (requests for additional information or RAIs); 4) reviews of other published studies and reports; and, when necessary, 5) performance of additional analyses to confirm the applicant’s conclusions. The analysis of environmental impacts is documented in the EIS.

In addition, members of the public can provide input to the environmental review during the scoping process that is undertaken before the draft EIS is prepared and then again during public meetings on the draft EIS and a public comment period after the draft EIS is issued. The NRC addressed public comments during the scoping process (documented in the Scoping Summary Report) in the draft EIS and will address public comments on the draft EIS in the final EIS.

Exhibit B shows a more detailed process for environmental reviews leading up to a decision on license issuance. The blue blocks are areas in which public involvement occurs. The yellow blocks are steps leading up to Draft EIS publication, and the green blocks are steps leading up to Final EIS publication and the NRC decision whether or not to issue a license.

### COUNCIL ON ENVIRONMENTAL QUALITY

The Council coordinates environmental efforts between Federal agencies and White House offices to develop environmental policies. The Chair of the Council serves as the environmental policy advisor to the President. Impact categories used by the Council are defined below:

- *SMALL* – Environmental effects are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute of the resource.
- *MODERATE* – Environmental effects are sufficient to alter noticeably, but not to destabilize, important attributes of the resource.
- *LARGE* – Environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the resource.



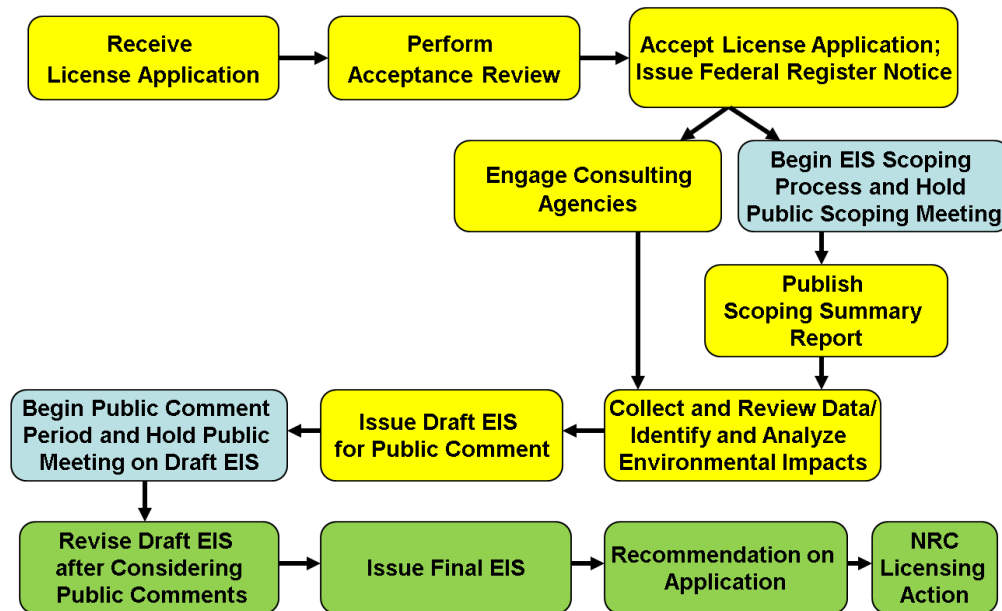


Exhibit B. Environmental Review Process

## NRC REVIEW AND DECISION

In addition to safety and environmental reviews, a contested hearing may be held by the ASLB panel if a member of the public or organization successfully files a petition raising safety or environmental concerns about licensing the CISF.

The ASLB then makes a decision about disposition of the issues raised in the contested hearing, and this decision may be appealed to the Commission. Currently, all submitted petitions for hearing on this project have been denied by the ASLB, but petitions have been submitted to the Commission appealing the decisions. The Commission decisions are pending.

### ASLB

Members of the ASLB panel are employees of the NRC who act as administrative judges on behalf of the Commission. This panel rules over contested public hearings.

The NRC would make its licensing decision regarding the Holtec application only after all of the reviews (safety and environmental) have been completed. If an adjudicatory hearing is held, the NRC's licensing decision would be made after the conclusion of such hearing.

## WHO ELSE DID THE NRC WORK WITH ON THIS EIS?

The BLM and NMED served as cooperating agencies for development of the draft EIS. These agencies shared information regarding the site and surrounding area and provided comments on a preliminary version of the draft EIS.

Additionally, several Federal agencies, Tribal and local agencies, and community organizations were contacted during the development of the draft EIS. These parties provided comments and



information used to develop a good understanding of the environmental resources in the area and the potential for environmental impacts. Correspondence related to consultations can be found in Appendix A of the draft EIS.

In addition to a license from the NRC, Holtec may need environmental permits and certifications required by Federal and State agencies related to construction and operation of a CISF. Table 1.6-1 of the draft EIS contains a comprehensive list of all the permits and requirements Holtec would need to build and operate a CISF.

## WHAT IS HOLTEC'S PROPOSED CISF?

The proposed CISF would use the Holtec International Storage Module Underground MAXimum Capacity (HI-STORM UMAX) technology. This technology is a dry, in-ground storage system that stores a canister containing SNF in a number of vertical ventilated modules (VVM). The NRC previously certified the system as meeting safety requirements (<https://www.nrc.gov/waste/spent-fuel-storage/designs.html>).

For the proposed action (Phase 1), the part covered by the license, 500 VVMs would be constructed on about 120 acres of land within the project boundary. If all future amendments are approved by NRC (Phases 2–20), the proposed facility would contain 10,000 VVMs over an area of approximately 330 acres. Within the storage and operations area, there would be the HI-STORM UMAX SNF storage units licensed under 10 CFR Part 72; the cask transfer building where casks would be delivered and prepared for canister placement in storage in the VVMs; the security building; the administration building; the site access road; and a construction laydown area that would contain an equipment storage building and a concrete batch plant. Exhibit C is a conceptual figure of the proposed CISF.

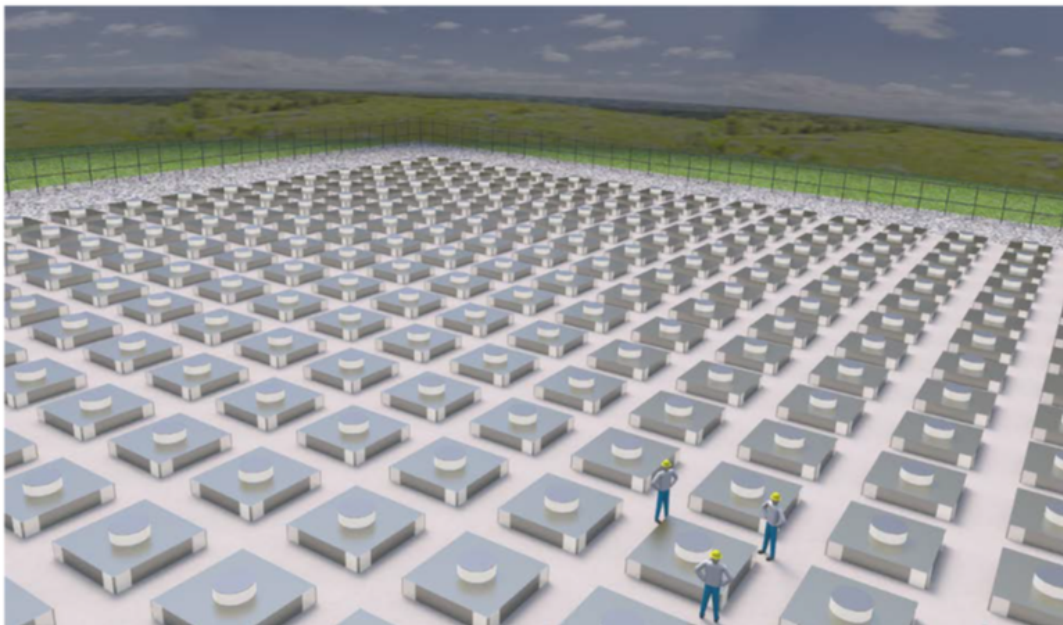


Exhibit C. Pictorial View of Proposed Project (Source: Holtec Safety Evaluation Report 2017)

## WHERE WOULD THE PROPOSED CISF BE LOCATED?

The proposed CISF would be located on approximately 1,000 acres of land in Lea County, New Mexico (Exhibit D), which is approximately halfway between Carlsbad and Hobbs, New Mexico. Currently, the land is privately owned by the Eddy-Lea Energy Alliance LLC (ELEA); however, Holtec has committed to purchasing the property from ELEA if the proposed CISF is licensed by the NRC. The proposed project area is near U.S. Highway 62/180 and consists of mostly undeveloped land used for cattle grazing. There are no water wells within the proposed project area. There are 18 plugged and abandoned oil and gas wells located on the property, but none of these are within the area where spent fuel would be stored or where any construction activities are planned.

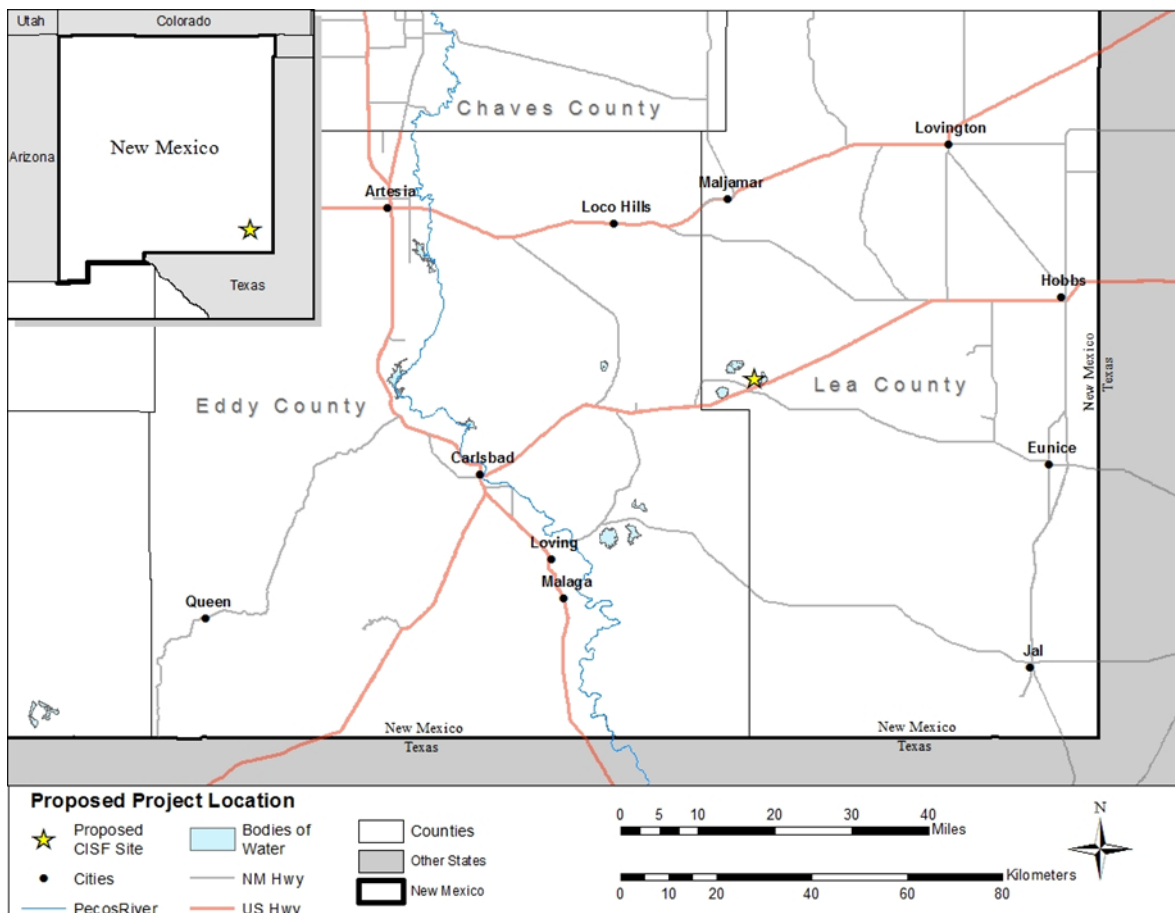


Exhibit D. Proposed Project Location (Source: Holtec Environmental Report, Revision 6, May 2019)

## WHAT ALTERNATIVES WERE CONSIDERED?

### NO-ACTION ALTERNATIVE

Under the No-Action alternative the NRC would not approve the Holtec license application for the proposed CISF. The No-Action alternative would result in Holtec not constructing or operating the facility. No concrete storage pad or infrastructure (e.g., cask handling building) for

transporting and transferring spent fuel would be constructed. Spent fuel would remain stored at individual sites across the country in existing wet and dry storage facilities in accordance with NRC regulations and would remain subject to NRC oversight and inspection. Site-specific impacts at each of these storage sites would be expected to continue. In accordance with current U.S. policy, the NRC staff also assumes that the spent fuel would be transported to a permanent geologic repository, when such a facility becomes available.

## ALTERNATIVES NOT CONSIDERED IN DETAIL

Section 2.3 of the draft EIS discusses alternatives to the proposed action that were considered but not evaluated in detail. These alternatives eliminated from detailed analysis include:

- Storage at a government-owned CISF operated by U.S. Department of Energy. This option has not been developed sufficiently and detailed information is not available.
- Alternative design or storage technologies
  - Dry cask storage system design alternatives
  - Hardened Onsite Storage Systems (HOSS)
  - Hardened Extended-Life Local Monitored Surface Storage (HELMS)

These three options were evaluated. However, they were found to be speculative or did not meet the purpose and need for the proposed action.

- Location alternatives – Alternative sites considered were either further away from the rail line, were not privately owned so ownership may not be easily transferred, or had ecological habitat that may be impacted.
- Facility layout alternative – The current proposed layout best optimizes the site access and facility layout.

### PUBLIC PARTICIPATION

- Scoping meetings were held on April 25, 2018, in Rockville, Maryland; April 30 in Roswell, New Mexico; May 1 in Hobbs, New Mexico; May 3 in Carlsbad, New Mexico; May 21 in Gallup, New Mexico; and May 22 in Albuquerque, New Mexico.
- All scoping comments received and their corresponding responses were included in a scoping summary report posted on the NRC website and in ADAMS at <https://www.nrc.gov/docs/ML1912/ML19121A295.html>.
- Public meetings for comments on the draft EIS will be announced on NRC's public website.
- Comments received and their corresponding responses will be included in an Appendix of the Final EIS.

## WHAT ARE THE CONCERNS OF INTERESTED PARTIES?

To learn about the concerns of interested groups and individuals across the country, public scoping comments were invited for 60 days originally, but extended to 120 days through notices in the *Federal Register*. Opportunities for public comment were also announced on NRC's website, the NRC Facebook and Twitter accounts, news releases, local newspapers and radio advertisements.

Some of the concerns raised during scoping included:

- What are the impacts on agriculture?
- Will the project disproportionately impact minority populations?
- How will transportation of spent fuel be addressed?
- How will this site impact public health?

The NRC staff responded to these comments in the scoping summary report, available on the NRC public website and ADAMS at <https://www.nrc.gov/docs/ML1912/ML19121A295.html>.

## HOW ARE THESE CONCERNS ADDRESSED IN THE DRAFT EIS?

The draft EIS contains an analysis of the impacts of construction, operation, and decommissioning of a CISF on environmental resources. The draft EIS considers the potential for impact on each resource. Some of the impacts on resources that were raised during scoping are:

### LAND-USE IMPACTS

The proposed project area currently is owned by ELEA but has been approved for sale to Holtec for development of a CISF. At full build-out (Phases 1–20), the facilities and infrastructure associated with the CISF would be located on approximately 330 acres within the 1,000 acre parcel of land. Existing land uses within and surrounding the project area include cattle grazing, underground potash mining, oil and gas exploration and development, access to and maintenance of pipeline rights-of-way, and recreational activities. Cattle grazing would be prohibited on the 330-acre storage and operation area. The State of New Mexico and Holtec are discussing possible conflicts with the proposed project and potash mining in the vicinity of the project. The CISF may reduce the total amount of potash mined in the region; however, this impact to land use is minor given the expansive potash leasing area surrounding the site.

There is active oil and gas development in the region, with one operating gas well in the project area along with numerous plugged and abandoned wells. None of these oil and gas wells are located within the 330-acre storage and operation area or where any land would be disturbed by construction activities. Excavation and grading for the CISF would disturb soils to a depth of approximately 25 feet below grade. The CISF will have no impact on oil and gas exploration and development in the proposed project area because oil and gas extraction will continue to occur at depths greater than 3,050 feet.

Section 4.2.1 of the draft EIS contains further details on land use impacts.

## **SOCIOECONOMIC IMPACTS AND ENVIRONMENTAL JUSTICE IMPACTS**

The socioeconomic impacts from the CISF are primarily associated with workers who might move into the area and tax revenues that the proposed project would generate, which would influence resources availability for the community. Tax revenues and economic growth from the proposed project and from the additional workers in the area would create a beneficial impact on the region, while there would be some increased use of public services, schools, and housing demand due to increased population in the region.

Environmental justice refers to the Federal policy established in 1994 by Executive Order 12898 (59 FR 7629), which directs Federal agencies to identify and address disproportionately high and adverse human health and environmental effects of their programs, policies, and activities on minority or low-income populations. The environmental justice review includes an analysis of the human health and environmental impacts on low-income and minority populations resulting from the proposed action (Phase 1), Phases 2-20, and the No-Action alternative using census block groups and a 50-mile radius for the analysis. There are 115 block groups that fall completely or partially within the 50-mile radius of the proposed CISF project area. The NRC staff found no activities, resource dependencies (subsistence fishing or farming), pre-existing health conditions, or health service availability issues resulting from construction and operations at the CISF that would cause a health impact for the members of minority or low-income communities within the study area. Therefore, it is unlikely that any minority or low-income population would be disproportionately and adversely affected by the proposed action for all phases.

Sections 4.11 and 4.12 of the draft EIS contain more details on socioeconomic and environmental justice impacts.

## **TRANSPORTATION**

Potential transportation impacts include increases in traffic, potential changes to traffic safety, and increased degradation of roads. These impacts would result from transport of equipment, supplies, and produced construction wastes. Workers commuting to and from the facility would also increase traffic. These impacts were found to be minor for all phases of the project. Other impacts, including radiological and nonradiological health and safety impacts under normal and accident conditions, could result from the proposed use of national rail lines to transport shipments of SNF to and from the CISF. These rail shipments of SNF could include relatively short segments of barge or heavy haul truck transportation as needed to move SNF from reactor sites to the nearest rail line where onsite rail access is limited.

Radiological impacts from transportation to both workers and the public were estimated based on prior NRC transportation risk estimates in NUREG-2125, "*Spent Fuel Transportation Risk Assessment*," and scaled using a representative transportation route that is longer than the distance from most reactor sites to the CISF. Because dose estimates increase with shipment distance, selecting a route with a larger distance than that actually expected is bounding (i.e., it overestimates potential dose). The radiological impact to workers from incident-free transportation of SNF to and from the CISF for all phases (Phases 1-20) were found to be below the NRC 10 CFR Part 20 standard dose limit of 0.05 Sv (5 rem) (see Section 4.3.1 of the draft EIS).

The potential radiological health impacts to the public from incident-free transportation of SNF to and from the CISF would occur from exposures to the normal radiation emitted (during transportation) from the loaded transportation casks. All of the estimated public health effects from the proposed incident-free SNF transportation for all phases are below the thresholds for health effects (Section 4.3.1.2.2.1 of the draft EIS) and, therefore, are most likely to be zero. Someone who stands about 98 feet from the tracks and watches all 10,000 shipments over 20 years would receive a dose of about 0.06 mSv, or 6 mrem, of direct radiation emitted from the heavily shielded transportation casks. For comparison, the NRC limits annual public doses from licensed facility operations to 1 mSv (100 mrem) (10 CFR Part 20) and the average annual background radiation exposure in the United States is 6.2 mSv (620 mrem), with approximately 3.1 mSv (310 mrem) from natural sources of radiation and 3.1 mSv (310 mrem) from man-made sources (medical, commercial, and industrial sources).

Impacts from transportation accidents to both workers and the public also were evaluated. All SNF proposed to be transported to and from the CISF would be shipped in canisters that are placed in NRC-certified transportation casks. In the most recent analysis (NUREG-2125, *Spent Fuel Transportation Risk Assessment*), the NRC staff concluded that there is no accidental release of canistered fuel during transportation under the most severe impacts studied, which encompassed all historic or realistic accidents, including fire and impacted force to the casks.

## **PUBLIC AND OCCUPATIONAL HEALTH**

The radiological impacts from normal operations involve radiation doses to workers and members of the public. Operational doses to workers would occur as a result of their proximity to SNF casks and canisters during receipt, transfer, handling, and storage operations. Public radiation doses from normal operations occur from offsite exposure to low levels of direct radiation from the stored SNF casks. Holtec would monitor and control both occupational and public radiation exposures by following a radiation protection program that addresses NRC safety requirements in 10 CFR Parts 72 and 20.

The resulting single worker annual dose estimate for processing 500 canisters during any single phase was 0.025 Sv (2.5 rem) (see Section 4.13 of the draft EIS). This estimated dose to the most highly exposed group of workers is below the 0.05 Sv/yr (5 rem/yr) occupational dose limit specified in 10 CFR 20.1201(a) for occupational exposure.

To assess the radiological impacts to the general public from normal operation of the CISF, the NRC staff evaluated Holtec's estimates of the potential dose to a hypothetical maximally exposed individual located at the boundary of the facility's controlled area (i.e., protected area), as well as to nearby residents. The potential exposure pathways include direct exposure to radiation (neutrons and gamma rays), including skyshine, emitted from the storage casks. Exposure pathways that would require a release of radioactive material from the casks (e.g., environmental transport to air, water, soil, and subsequent inhalation or ingestion) are not applicable to normal operations.

For the operations stage of the proposed action (Phase 1) and any single phase of Phases 2–20, Holtec estimated an annual dose of 0.022 mSv (2.2 mrem) to a hypothetical individual that spends 2,000 hours at the fence line 100 m (328 ft) from the CISF. Doses to actual individuals further away from the CISF or who spend less than 2,000 hours at the proposed project boundary would be smaller. The estimated 0.022 mSv (2.2 mrem) dose is less than the 0.25 mSv (25 mrem) regulatory limit specified in 10 CFR 72.104 for the maximum permissible annual whole-body dose to any real individual. Additionally, the 0.022 mSv (2.2 mrem) dose is less than 1 percent of the average annual background radiation exposure in the United States of 6.2 mSv (620 mrem) [approximately 3.1 mSv (310 mrem) from natural sources of radiation and 3.1 mSv (310 mrem) from man-made sources (medical, commercial, and industrial sources)].

## **SUMMARY OF ENVIRONMENTAL IMPACT LEVELS**

For most resource areas, the impacts are SMALL. Resource areas with a SMALL impact are land use, transportation, geology and soils, surface water, ground water, air quality, noise, historic and cultural resources, visual and scenic, and public and occupational health. Impacts on waste management would be SMALL except during decommissioning, where there would be a MODERATE impact to waste management until a new landfill is established for decommissioning waste. There would be a SMALL to MODERATE (beneficial) impact to socioeconomics, with the MODERATE (beneficial) impact to the local economy due to tax revenues. For environmental justice, no disproportionately high and adverse human health and environmental effects were found for minority and low-income populations. Ecology resources would experience a SMALL to MODERATE impact. Additional information about resource impacts may be found in Chapter 4 of the draft EIS.

## **HOW CAN THE IMPACTS BE REDUCED?**

Many of the SMALL impacts are considered minimal because monitoring and use of environmental practices and safeguards would reduce any negative effects on an environmental resource. However, some of the impacts greater than SMALL can be reduced or compensated or prevented from becoming disruptive.

Chapter 6 of the draft EIS discusses mitigation measures that would reduce adverse impacts from the construction, operation, and decommissioning of the CISF. Chapter 6 discusses both mitigation measures to which Holtec has committed and additional mitigation measures identified by NRC staff to reduce adverse impacts on the environment.

## **WHAT IS THE RELATIONSHIP OF THIS PROJECT WITH OTHER PROJECTS IN THE AREA?**

Cumulative impacts may result when the environmental effects associated with the proposed project are added to the temporary or permanent effects associated with past, present, and reasonably foreseeable future projects. Cumulative impacts can result from the combination of effects that might have been minor by themselves but become more noticeable when affecting the same resource over a period of time.

Several projects near the CISF were considered relevant in the analysis of cumulative impacts. These projects include the Waste Isolation Pilot Plant, potash mining, oil and gas development, oilfield waste facilities, and a second CISF proposed in Andrews County, Texas. Section 5.1.1 of the draft EIS contains further details on these projects. The NRC staff used that information, the environmental setting discussed in Chapter 3 of the draft EIS, and impacts described in



Chapter 4 of the draft EIS to independently evaluate cumulative impacts of the CISF in Lea County. Exhibit E contains the cumulative impacts considering all phases of the project.

Exhibit E. Cumulative Impacts Considering All Phases	
	<b>Cumulative Impact</b>
Land Use	The proposed project is projected to have a SMALL incremental effect when added to the MODERATE impacts from other past, present, and reasonably foreseeable future actions resulting in an overall MODERATE cumulative impact to land use.
Transportation	The proposed project is projected to have a SMALL incremental effect for traffic-related impacts for all project stages if reclamation transportation occurs in 5 years or more, and SMALL incremental effect for the radiological effects of radioactive materials transportation when added to the SMALL impacts from other past, present, and reasonably foreseeable future actions resulting in an overall SMALL cumulative impact to transportation resources.
Geology and Soils	The proposed project is projected to have a SMALL incremental effect when added to the MODERATE impacts from other past, present, and reasonably foreseeable future actions resulting in an overall MODERATE cumulative impact to geology and soils.
Surface Water	The proposed project is projected to have a SMALL incremental effect when added to the SMALL impacts from other past, present, and reasonably foreseeable future actions resulting in an overall SMALL cumulative impact to surface water.
Groundwater	The proposed project is projected to have a SMALL incremental effect when added to the MODERATE impacts from other past, present, and reasonably foreseeable future actions resulting in an overall MODERATE cumulative impact to groundwater.
Ecology	<p>The proposed project is projected to have a SMALL to MODERATE incremental effect when added to the SMALL to MODERATE impact from other past, present, and reasonably foreseeable future actions resulting in an overall SMALL to MODERATE cumulative impact to ecology.</p> <p>“No Effect” on Federally listed threatened or endangered species, and “No Effect” on any existing or proposed critical habitats.</p>
Air Quality	The proposed project is projected to have a SMALL incremental effect when added to the MODERATE impacts from other past, present, and reasonably foreseeable future actions resulting in an overall MODERATE cumulative impact to air quality.
Noise	The proposed project is projected to have a SMALL incremental effect when added to the SMALL impacts from other past, present, and reasonably foreseeable future actions resulting in an overall SMALL cumulative impact to noise.
Historic and Cultural	The proposed project is projected to have a SMALL incremental effect when added to the SMALL impact from other past, present, and reasonably foreseeable future actions resulting in an overall SMALL cumulative impact to historic and cultural resources.
Visual and Scenic	The proposed project is projected to have a SMALL incremental effect when added to the SMALL impact from other past, present, and reasonably foreseeable future actions resulting in an overall SMALL cumulative impact to visual and scenic resources.

Exhibit E. Cumulative Impacts Considering All Phases

<b>Cumulative Impact</b>	
Socioeconomic	The proposed project is projected to have a SMALL to MODERATE (beneficial impact for local finance) incremental effect when added to the SMALL to MODERATE impacts from other past, present, and reasonably foreseeable future actions resulting in a SMALL to MODERATE cumulative impact in the socioeconomic region of influence.
Environmental Justice	The cumulative impacts would have no disproportionately high and adverse impacts to low-income or minority populations.
Public and Occupational Health	The proposed project is projected to have a SMALL incremental effect when added to the SMALL impacts from other past, present, and reasonably foreseeable future actions resulting in an overall SMALL cumulative impact to public and occupational health.
Waste Management	The proposed project is projected to have a SMALL to MODERATE incremental effect when added to the SMALL impacts from other past, present, and reasonably foreseeable future actions resulting in an overall SMALL to MODERATE cumulative impact to waste management.

## WHAT ARE THE NRC AND BLM CONCLUSIONS?

After considering the environmental impacts of the proposed action, the NRC staff's preliminary recommendation is issuance of an NRC license to Holtec to construct and operate a CISF for SNF at the proposed location. In addition, BLM staff recommends the issuance of a permit to construct and operate the rail spur. This preliminary recommendation is based on:

- The license application, which includes the Environmental Report and supplemental documents, and Holtec's responses to the NRC staff's requests for additional information
- Consultations with Federal, State, Tribal, and local agencies and input from other stakeholders
- Independent NRC and BLM staff reviews
- Assessments provided in the EIS.

The NRC will make a decision about whether to issue the license following issuance of the final EIS and the final safety evaluation report.

## WHAT ARE THE NEXT STEPS IN THE ENVIRONMENTAL REVIEW?

The draft EIS has been issued for a 60-day public review and comment period. All comments received on the draft EIS during this time will be considered and addressed in a final version of the EIS, which the NRC plans to issue in March 2021.



## FOR MORE INFORMATION

Readers may access more information about the proposed Holtec CISF by:

- Scanning the following QR code



- Visiting the NRC website at <https://www.nrc.gov/waste/spent-fuel-storage/cis/holtec-international.html> for additional information
- Contacting the NRC Environmental Project Managers Jill Caverly at [Jill.Caverly@nrc.gov](mailto:Jill.Caverly@nrc.gov) or Stacey Imboden at [Stacey.Imboden@nrc.gov](mailto:Stacey.Imboden@nrc.gov).



