

Trip Report for Holtec International's Proposed Consolidated Interim Storage Facility in Lea County, New Mexico Site Visit and Agency Information Gathering Meetings April 30–May 3, 2018

INTRODUCTION

During the week of April 30 to May 3, 2018, staff of the U.S. Nuclear Regulatory Commission (NRC) and its contractor, the Center for Nuclear Waste Regulatory Analyses (CNWRA[®]), conducted a site visit and information gathering meetings in support of the NRC's environmental review and preparation to develop an Environmental Impact Statement (EIS) for a proposed Consolidated Interim Storage Facility (CISF) for spent nuclear fuel (SNF) in Lea County, New Mexico.

On March 30, 2017, the NRC received an application from Holtec International (Holtec) requesting authorization to construct and operate a CISF for spent nuclear fuel and High Level Waste in Lea County, New Mexico (Holtec, 2017a). The application included an Environmental Report (ER) (Holtec, 2017b) and Safety Analysis Report (SAR) (Holtec, 2017c). The function of the CISF would be to store spent nuclear fuel and reactor-related Greater Than Class C Low-Level Radioactive Waste (collectively referenced herein as spent nuclear fuel) generated at commercial nuclear power reactors. Holtec requests authorization in the initial phase of the project to store approximately 5,000 metric tons of uranium (MTUs) in 500 canisters for a license period of 40 years. However, because the capacity of individual canisters can vary, the 500 canisters proposed in the Holtec license application have the potential to hold up to 8,680 MTUs. In addition to the first phase, Holtec has stated its intent to request license amendments in the future to expand the facility to eventually store up to 10,000 canisters of SNF.

This trip report summarizes the staff's interactions and site visit and other meetings. This included a meeting with Holtec staff in Carlsbad, New Mexico; a site tour of the potential location of the CISF, including the proposed rail spur and surrounding areas; and meetings with other agencies and local governments in the region. To begin each of the agency and local government meetings, the NRC staff provided a briefing to meeting attendees to familiarize them with NRC's license application review process for the proposed CISF. Then the meetings were opened for discussion and questions.

In addition to the site visit and information gathering meetings held during April 30 - May 3, 2018, the NRC staff held public scoping meetings in Roswell, Hobbs, and Carlsbad, New Mexico on April 30, May 1, and May 3, 2018, respectively. The EIS scoping meetings are part of the NRC's EIS scoping process that are designed to solicit input from the public and government and private sector agencies and organizations to focus the scope of the NRC's environmental review and impact evaluation on areas of genuine concern. The EIS scoping process helps the NRC staff determine the range of issues, alternatives, and potential environmental impacts to be considered in the EIS and identify significant issues related to the proposed action. Details of these meetings, as well as the comments received from stakeholders and other interested parties during the scoping process, will be addressed in a scoping summary report that will be prepared after the end of the public comment period.

Table 1 identifies the staff members who participated in the site visit and information gathering meetings.

Table 1. NRC and CNWRA Participants in Holtec EIS Site Visit and Information Gathering Meetings, April 30-May 3, 2018	
Staff Member and Title	Role in Environmental Review
U.S. Nuclear Regulatory Commission	
Jill Caverly, Environmental Project Manager	Environmental Review Branch
Stacey Imboden, Environmental Project Manager	Environmental Review Branch
John McKirgan, Chief	Licensing and Safety Review Branch
Jose Cuadrado, Safety Project Manager	Licensing and Safety Review Branch
Brian Smith, Deputy Director	Division of Fuel Cycle Safety, Safeguards, & Environmental Review
Cinthya Román, Chief	Environmental Review Branch
Dave McIntyre, Public Affairs Officer	Office of Public Affairs
Bill Maier, Regional State Liaison Officer	Regional State Liaison Officer, Region 4
Lisa Clark, Attorney	Office of General Counsel
Chris Hair, Attorney	Office of General Counsel
Antoinette Walker-Smith, Licensing Assistant	Environmental Review Branch
Center for Nuclear Waste Regulatory Analyses	
Miriam Juckett, Program Manager	Program Manager, Public Outreach, NEPA Reviewer
Marla Morales, Senior Research Scientist	Principal Investigator, Purpose and Need, Alternatives, Cumulative Impacts
Amy Minor, Senior Research Scientist	Ecology, Socioeconomics, Environmental Justice
Patrick LaPlante, Staff Scientist	Public and Occupational Health, Transportation, Waste Management
James Prikryl, Principal Scientist	Geology and Soils, Water Resources, Land Use
Bradley Werling, Senior Research Scientist	Air Quality, Climatology, Cost/Benefit Analysis

MEETING SUMMARIES

Date: Monday, April 30, 2018

Local Government: City of Artesia

Meeting Location: City Hall; 511 W. Texas, Artesia, New Mexico

Attendees: Raye Miller (Mayor), Luis Florez (Councilman), Jeff Youtsey (Councilman), and George Mullen (Councilman)

NRC and CNWRA Attendees: Jill Caverly, Stacey Imboden, Cinthya Román, Bill Maier, Miriam Juckett, and Marla Morales

The City of Artesia issued a public notice of the NRC meeting, and members of the public were allowed to attend the meeting. However, per the City of Artesia Mayor, members of the public were allowed to listen but not make comments or ask questions. The meeting was video recorded by some members of the public. After the NRC staff provided a brief overview of the NRC environmental review process, the mayor and councilmen directed questions to the NRC staff.

Date: Tuesday, May 1, 2018

Local Government: City of Hobbs

Meeting Location: 200 E. Broadway St, Hobbs, New Mexico 88240

Attendees: Sam Cobb (Mayor), Manuel Gomez (Fire Chief/Acting City Manager), Mike Stone (City Attorney), and Toby Spears (Financial Director)

NRC and CNWRA Attendees: Jill Caverly, Stacey Imboden, Cinthya Román, Brian Smith, John McKirgan, Jose Cuadrado, Miriam Juckett, Marla Morales, and Bradley Werling

After the NRC staff provided a brief overview of the NRC environmental review process, Mayor Cobb indicated that the City's role in this project was as part of ELEA. The Fire Chief and Acting City Manager provided information on emergency response plans. The NRC staff inquired about sensitive populations and health studies, but none were noted.

Agency: Economic Development Board of Lea County

Meeting Location: 200 E. Broadway St, Hobbs, New Mexico 88240

Attendees: Steve Vierck (President), Sid Applin (Board Member), Joshua Grassham (Treasurer), and Lisa Hardison (Secretary)

NRC and CNWRA Attendees: Jill Caverly, Stacey Imboden, John McKirgan, Brian Smith, Miriam Juckett, Marla Morales, Bradley Werling, Amy Minor, Jim Prikryl, and Pat LaPlante

After the NRC staff provided a brief overview of the NRC environmental review process,

Mr. Vierck discussed the changes in local housing, road and traffic, development of an industrial park near the airport, and construction of the Center of Recreational Excellence, which is planned to open June 2, 2018. They also noted that an economic development plan update was conducted two years ago and may be publicly available.

Date: Thursday, May 3, 2018

Agency: Bureau Land Management (BLM) Carlsbad Field Office

Meeting Location: 620 E. Greene St, Carlsbad, New Mexico 88220

Attendees: Tessa Cisneros (Realty Specialist and primary point of contact), Cassie Brooks, Robert Gomez, Ty Allen, Ray Keller, Brianna Truebe, Indra Dahal, Zeke Salaz, Jana Onsurez, Bruce Bueke, and Terry Gregston

NRC and CNWRA Attendees: Stacey Imboden, Cinthya Román, Jose Cuadrado, Miriam Juckett, Bradley Werling, and Amy Minor

The NRC staff provided a brief introduction to the NRC's role and environmental review process. The discussion with BLM staff focused on the proposed rail spur, which would primarily be constructed and operated on BLM land. BLM staff noted that they had been working collaboratively with Holtec staff to develop and review potential corridors. The Carlsbad Field Office is revising BLM's Resource Management Plan (RMP) for the planning area. The draft RMP and associated draft EIS are scheduled to be publically released in May 2018. Although not yet available, BLM staff noted that there is an area of critical environmental concern proposed in the RMP that the NRC staff should be aware of when developing the EIS, although it is not anticipated to overlap with the proposed project area.

Local Government: Lea County Manager and Commissioners

Meeting Location: 100 N. Main Avenue, Suite 4, Lovington New Mexico 88260

Attendees: Dean Jackson (Commissioner), Rebecca Long (Commissioner), Ron Black (Commissioner), Jonathan Sena (Commissioner), Don Jones (Commissioner), Mike Gallagher (County Manager), and Lorenzo Velasquez (Emergency Management Director),

NRC and CNWRA Attendees: Jill Caverly, Brian Smith, John McKirgan, Marla Morales, and Jim Prikryl

The meeting was held between the NRC staff and the county commissioners as part of the Lea County Commissioners weekly meeting. During the meeting, the Commissioners asked NRC questions regarding the safety of transport along the rail lines, the certification of transportation casks and internal canisters, project schedule (e.g., date of issuance of record of decision and how hearings could impact or delay the project schedule), and the safety record of NRC-licensed facilities. Mr. Velasquez from the Emergency Management Department described the Lea County consolidated emergency center. Mr. Gallagher, the County Manager, spoke of new projects coming to the region.

Local Government: Eddy County Manager and Commissioners

Meeting Location: 101 W. Greene St, Carlsbad, New Mexico 88220

Attendees: Rick Rudometkin (County Manager), Susan Crockett (Commissioner), and James Walterscheid (Commissioner)

NRC and CNWRA Attendees: Stacey Imboden, Cinthya Román, Jose Cuadrado, Miriam Juckett, Bradley Werling, and Amy Minor

The NRC staff provided an overview of the proposed project and explained the NRC's role and process for developing the EIS. The local government officials stated that the area is experiencing increased economic growth due primarily to the expansion of the oil and gas industry. The county representatives noted that issues of concern to their constituency consisted of transportation, location, monitoring, and security. The commissioners and county manager informed the NRC staff that the Air Force is developing an EIS for a training center for new pilots at Holloman Air Force Base in Alamogordo, New Mexico. Mr. Rudometkin identified the Carlsbad Department of Development <http://www.developcarlsbad.org/> as a source for documents on various topics about the area, including water usage.

Agency: Carlsbad Soil and Water Conservation Service (CSWCS)

Meeting Location: 3219 S, Canal St, Carlsbad, New Mexico 88220

Attendees: Judith McCollaum (CSWCS), Judy Bock (CSWCS), and Ray Keller (BLM)

NRC and CNWRA Attendees: Jill Caverly, Marla Morales, Jim Prikryl, Pat LaPlante

After introductions and summary of the proposed project by staff, CSWCS staff noted that runoff would occur during intense storm events (i.e., storms dropping 4 to 5 inches of rainfall over a few hours) and identified seed mixes that would be useful to control erosion. The NRC staff also asked about sinkholes in the area, given that these are a focus of public comments and concern. The CSWCS staff described the large sinkhole identified near their office in Carlsbad and noted that there is ongoing planning regarding how to mitigate its effects. The CSWCS offered the staff copies of the publically available CSWCS Annual Reports for 2014, 2016, and 2017, as well as a copy of *Troublesome Weeds of New Mexico* publication.

Local Government: City of Carlsbad, Mayor's Office

Meeting Location: 101 N. Halagueno, Carlsbad, New Mexico 88221

Attendees: Dale Janway (Mayor of Carlsbad), John Heaton (ELEA Chairman), and Mike Hernandez (Deputy Administrator)

NRC and CNWRA Attendees: Stacey Imboden, Cinthya Román, Jose Cuadrado, John McKirgan, Dave McIntyre, Chip Cameron (Consultant to NRC), Miriam Juckett, Bradley Werling, and Amy Minor

After a brief introduction by the NRC staff, Mayor Janway explained that the area is experiencing growth primarily due to the expansion of the oil and gas industry. It was mentioned that the Secretary of the Department of the Interior designated portions of New Mexico as part of the United States strategic potash reserve <https://www.blm.gov/programs/energy-and-minerals/mining-and-minerals/nonenergy-leasable-materials/potash>. The NRC staff were notified that the City of Carlsbad Planning, Engineering, and Regulation Department and the Water Board may have useful information on regional development planning. Also, the Carlsbad Department of Development <http://www.developcarlsbad.org/> is a source for documents on various topics about the area. Mining surveys were also noted as a source of information for subsurface characteristics.

INFORMATION GATHERING AND SITE TOUR OF HOLTEC FACILITIES AND SURROUNDING AREAS

Meeting Location: National Cave & Karst Research Institute (NCKRI), 400-1 Cascades Ave., Carlsbad, New Mexico

Attendees: Jill Caverly, Stacey Imboden, Cinthya Román, Jose Cuadrado, John McKirgan, Antoinette Walker-Smith, Bill Maier, Brian Smith, Chris Hair, Lisa Clark, Dave McIntyre, Miriam Juckett, Marla Morales, Jim Prikryl, Pat LaPlante, Amy Minor, and Bradley Werling

Additional Attendees: Ron Kellermueller (New Mexico Department of Game and Fish), Mel Massaro (DOT), David Gildea (DOT), Butch Tongate (Secretary of NMED), Ed Mayer (Project Manager, Holtec), Stefan Anton (Holtec), Ben Zwierlein (Holtec), John Heaton (ELEA Chairman), Lisa Ann Anaya Flores (Carlsbad City Council member), Doug Lynn [Center of Excellence for Hazardous Materials Management (CEHMM)], Beth Bennigton (CEHMM), Robert Lambe (GEI Consultants), Jay Scully (GEI Consultants), and Jay Rose (Tetra Tech)

After initial introductions, Holtec staff and their contractors gave a presentation responding to general topics of interest to the NRC staff provided ahead of the trip to Holtec. The NRC and CNWRA staff (staff) emphasized to Holtec and its contractors the need to include any and all new information and clarifications that were provided during the meeting as updates to the ER or in responses to NRC's Request for Additional Information so that the information is publicly available and can be used as part of the analysis in the NRC's EIS. There was clarifying discussions about the following topics:

- Proposed Action
- Land Use
- Transportation:
- Geology and Soils
- Water Resources
- Air Quality
- Cost Benefit
- Socioeconomics and Environmental Justice
- Mitigation

During the afternoon of Wednesday, May 2, 2018, Holtec and their contractors, including CEHMM, led NRC and CNWRA staff members, along with Butch Tongate (Secretary of the NMED), Mel Massoro and David Gildea (DOT), Lisa Ann Anaya Flores (a Carlsbad City Council

member), Ron Kellermueller (New Mexico Department of Game and Fish), Ron Black (a Lea County Commissioner) and John Heaton (ELEA), on a tour of the proposed CISF location and surrounding areas. In addition to the NRC and CNWRA staff, other city and ELEA representatives also attended the site tour at Holtec's discretion. The objective of the site tour was to view the site in context of the proposed project and to observe the natural setting. Specifically, as requested by staff prior to the site visit, the tour included visits to the two playa lakes (Laguna Gatuna and Laguna Plata) and the proposed rail spur route. The staff were permitted to walk various areas of the site to make close observations of rock outcrops, soils, vegetation, and other natural features. Since the proposed facilities and associated infrastructure have not been constructed, Holtec provided the staff a packet of slides of 3D renderings of what the site and facilities would look like. A few members of the public expressing opposition to the project were present at the site location in an effort to attend the NRC site visit; however, these individuals were not permitted to join the site visit and were restricted to public access areas (e.g., the county road) because the proposed site is on privately owned land.

The following is a summary of observations collected by the staff during the site tour and reconnaissance.

- The first stop was at the southeastern corner of the proposed site boundary. This location would be the location of the administration and site security buildings.
- The second stop was to the outside southeastern corners of proposed Phase 1. From this location, the stakes could be seen for the corners of the planned pad area for Phase 1. In the middle of Phase 1 were 4 stakes marking the location of previous geotechnical and geophysical surveys.
- Although the 3D renderings did not show them, the cell phone tower visible in the previously shown map and oil and gas storage tanks are visible from the proposed site, and would remain in place during the project. However, both are located outside of the site boundary.
- Holtec stated that the Smith Ranch near where the proposed CISF is located participates in a voluntary Candidate Conservation Agreement for the protection of the lesser prairie-chicken and the dunes sagebrush lizard. It was also suggested that other organizations such as the New Mexico State Land Office, New Mexico Game and Fish Department, and the U.S. Fish and Wildlife may be able to confirm the status of the agreement and habitat for these species.

Some staff traveled in off-road vehicles (provided by Holtec) along the proposed rail spur route from the proposed site location to the location where the proposed spur would intersect and link to an existing rail line. The staff observed mostly flat and unobstructed terrain with low-lying patchy natural vegetation (mesquite upland scrub) along the approximately 5-mile length of the proposed spur route. The staff noted a depression in the land surface along a small portion of the route that may have been a prior excavation, and that may require infilling if the spur is constructed. The location where the proposed spur is planned to link with the existing line was noted as open space with good visibility along the track. The potash mine facility at the terminus of the line could be easily seen from the proposed rail link location. Other observations include:

- Two raptor nests were observed along the proposed rail spur route along with dozens of lark buntings, jack rabbits, and cotton tail rabbits.
- Observed site topography indicates that runoff from the CISF would drain primarily toward Laguna Plata to the northwest.
- Laguna Gatuna and Laguna Plata contained no water at the time of the site visit; salty deposits were evident in the playas.
- Alluvium and underlying Dockum Group rebeds were observed in exposures along the flanks of Laguna Gatuna.

A second group of staff traveled to see the two playa lakes bordering the site, Laguna Gatuna and Laguna Plata. The first stop, Laguna Gatuna located to the east of the site, allowed staff to see erosional, drainage, and rebeds features surrounding the playa lake. Onsite there was a nonfunctioning pump jack facility used for oil & gas and additional discarded oil & gas operations debris. Staff asked the rate of drainage of Laguna Gatuna. Holtec staff stated that due to short-duration intense rain events, the playa lake would fill quickly and drain over the course of days to a week and that the majority of runoff from the proposed site would be to the northwestern playa lake, Laguna Plata. Holtec staff noted that neither of the playas (Lagunas Gatuna and Plata) had external drainage, indicating they were a closed system and that the majority of water in the playas had previously been from potash and oil brine disposal activities, but that this practice had been banned in recent years. Staff also visited Laguna Plata to the northwest of the proposed CISF site. Laguna Plata was noted as being significantly larger and had visibly more surficial salt deposition compared to Laguna Gatuna. The slopes of Laguna Plata were less steep with less visible rebeds compared to Laguna Gatuna. Holtec staff stated that Laguna Plata was part of the Laguna Plata Archeological District (registered on the National Register of Historic Places).

OTHER AGENCIES CONTACTED BUT NOT VISITED

The staff also made contact or attempted to make contact with a few other agencies or local governments which did not result in meetings during the site visit trip.

REFERENCES

Holtec. "Holtec International HI-STORE CIS (Consolidated Interim Storage Facility) License Application." ADAMS Accession No. ML17115A418. Marlton, NJ: Holtec International. March 2017a.

_____. "Environmental Report-HI-STORE Consolidated Interim Storage Facility." ADAMS Accession No. ML17139C535. Marlton, NJ: Holtec International. March 2017b.

_____. "Safety Analysis Report-HI-STORE Consolidated Interim Storage Facility." ADAMS Accession No. ML17116A106. Marlton, NJ: Holtec International. March 2017c.