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Via Electronic Mail

April 9, 2021

Jill Caverly, Senior Project Manager
U.S. Nuclear Regulatory Commission
Jill.Caverly@nrc.gov

Dear Ms. Caverly,

The New Mexico Environment Department (NMED) provides its comments regarding the U.S. Nuclear Regulatory Commission's (NRC) working draft of the Final Environmental Impact Statement (FEIS) for the proposed Holtec Consolidated Interim Storage Facility for spent nuclear fuel. NMED provides these comments pursuant to the Memorandum of Understanding (MOU) between the Department and the NRC signed July 24, 2019, which recognizes the state's expertise regarding the regional environmental impacts and environmental permitting aspects of the proposed project. Our comments respond to three draft FEIS water resources sections (Chapter 3: Affected Environment, Chapter 4: Impacts and Chapter 5: Cumulative Impacts) received from NRC on March 26, 2021.

The attached comments consist of a crosswalk of NMED's technical review and comparison of comments submitted by NMED in September 2020 on the Draft EIS and corresponding sections of the working draft of the FEIS. The comments reflect NMED's technical expertise in groundwater and surface water, including geology and other industrial activity around the specific proposed Holtec site.

Thank you for the opportunity to participate in NRC's development of the FEIS. Please let me know when the official Final EIS for this project is sent to the Federal Register for publication. You can reach me at Rebecca.Roose@state.nm.us or (505) 670-6852.

Sincerely,

Rebecca Roose Digitally signed by Rebecca Roose
Date: 2021.04.09 13:34:17 -06'00'

Rebecca Roose
Director, Water Protection Division

Attachment – NMED comments

cc: (via email)
James C. Kenney, Cabinet Secretary, NMED
Courtney Kerster, Director of Federal Affairs, Office of Governor Michelle Lujan Grisham

Bruce Baizel, General Counsel, NMED
Michelle Hunter, Ground Water Quality Bureau, NMED
Shelly Lemon, Chief, Surface Water Quality Bureau, NMED
John Tappert, Director, Division of Rulemaking, Environmental and Financial Support
Stacey Imboden, Senior Project Manager, US NRC

New Mexico Environment Department

Review of NRC's Draft Final Environmental Impact Statement

Holtec Consolidated Interim Storage Facility

April 9, 2021

On Friday, March 26, 2021, NRC invited NMED groundwater and surface water experts to review the Water Resources sections of three chapters of the draft Final EIS, Chapter 3: Affected Environment, Chapter 4: Impacts, and Chapter 5: Cumulative Impacts.

A. Crosswalk between March 2021 drafts and Sept. 2020 NMED comments

Sept. 2020 NMED Comment (pull comment number and bold text only)	**Fully addressed/ partially addressed/ not addressed**	**Explanation**
3.a. The draft EIS fails to provide a conceptual hydrologic site model	Partially addressed	NMED comment 3.a states that the EIS should include a comprehensive conceptual hydrologic site model addressing specific related topics, noting, for example, the EIS's omission of hydraulic relationships between shallow groundwater, springs and playas in the area. Comment 3.a also points out groundwater chemical background inconsistencies and inadequacies. EIS Sections 3.5.1.1 and 3.5.4.2 have been revised to include reference to possible spring flow to the Laguna Gatuna. EIS Section 3.5.1.3 has been revised to include reference to brine disposal into Laguna Gatuna. EIS Section 5.5.5 has been revised to acknowledge that water loss in the lagunas is primarily from evaporation instead of only from evaporation. EIS Section 4.5.2.1.1 (newly added) states that Holtec will "ensure adequate characterization of groundwater" at the proposed site by performing a significant baseline survey of the water prior to facility construction. Therefore, NMED reiterates its Sept. 2020 comment that the NRC should not finalize the EIS without "a comprehensive and internally consistent hydrologic conceptual site model that includes

		precipitation, recharge, surface water, playas, groundwater and springs" that NRC relies upon through the EIS.
3.b. The draft EIS contains data gaps and erroneous statements	Partially addressed	NMED Comment 3.b questions the consistency of EIS statements at Section 3.5.3 stating that groundwater in some formations in the region are used as water resources, and at Section 3.5.3.2 stating that no potable groundwater is known to exist in the vicinity of the project area. EIS Sections 3.5.3.2 (Local Groundwater Use) and 4.5.2.1 (Impacts from the Proposed CISF) have been revised to state that "very little," instead of "no," potable groundwater is known to exist in the vicinity, i.e., within 10 km, of the proposed CISF project area. Acknowledgement of the existence of some potable groundwater in the vicinity is a significant revision. However, NMED considers it premature for the EIS to address the amount of potable groundwater at Section 3.5.3.2 considering the statement at Section 4.5.2.1.1 (newly added) that Holtec will "ensure adequate characterization of groundwater" at the proposed site by performing a significant baseline survey of the water prior to facility construction. NMED recommends the NRC further revise the EIS should the baseline survey reveal the existence of more extensive shallow potable groundwater.
3.b. The draft EIS contains data gaps and erroneous statements	Not addressed	NMED comment 3.b questions the sufficiency of the number of boreholes and monitoring wells relied upon to characterize the lithology, hydrology and groundwater below the proposed project area. NMED's comment continues by referencing a Holtec proposal to perform a baseline study by installing 29 groundwater monitoring wells at the area prior to construction of the facility, points out the hydrological and human health risk data gaps that exist because the baseline study has not been performed, and suggests the NRC require Holtec perform the baseline study so as to include the information in the EIS. EIS Section 4.5.2.1.1 has been revised to add reference to Holtec's baseline study prior to facility construction. However, the EIS continues to be insufficient and premature before completion of the baseline study.

3.c Karst Conditions not Adequately Addressed	Not addressed	NMED's comment states that the EIS insufficiently addresses sinkholes. NMED does not find the subject addressed in the revisions to the Sections of the draft Final EIS provided (Section 3.5, 4.5 and 5.5).
3.d Seismicity not Adequately Addressed	Not addressed	NMED comment 3.d states that the EIS insufficiently addresses seismic events. NMED does not find the subject addressed in the revisions to the Sections of the draft Final EIS provided (Section 3.5, 4.5 and 5.5).
3.f. Deficient Waste Characterization	Not addressed	NMED comment 3.f states that the EIS insufficiently addresses the variability of radionuclides in the spent fuel rods, complications associated with the various fuel rod storage processes at the generator sites, and possible non-radiological contaminants. NMED does not find the subject addressed in the revisions to the Sections of the draft Final EIS provided (Section 3.5, 4.5 and 5.5).
3.g. Deficient Evaluation of Potential Contaminant Release Mechanisms and Exposure Pathways	Partially addressed; unknown	NMED comment 3.g states that the EIS insufficiently addresses possible "off-normal" or "accidental" releases of radionuclides from the facility and associated risks to the environment. EIS Section 4.5.1.1.2 has been revised to include reference to there being no potential for radiological contamination of surface water during "normal operations." The subject of "off-normal" and "accidental" events was included in Section 4.15 of the draft EIS, a Section not included in the revisions provided to NMED.
3.h. The draft EIS fails to evaluate potential human and ecological exposure pathways via groundwater	Not addressed	NMED comment 3.h states that the EIS insufficiently addresses potential human and ecological exposure pathways via groundwater, including groundwater with elevated salinity. EIS Sections 3.5.4.1 and 5.5.2 do address regional groundwater use, including water for the Permian Capitan Aquifer, the Permian Rustler Formation, and the Santa Rosa Sandstone, suggesting each aquifer as being "not suitable for domestic use." The Section does acknowledge that groundwater in the Quaternary alluvium aquifers is highly variable and may be utilized, and Section 3.5.4.2 has been

		revised to reference a well with potable groundwater approximately two miles southwest of the proposed project area. Section 5.5.2 states that groundwater impacts from the project would be "small," and would "result mainly from consumptive use and infiltration into near-surface aquifers." The Section states that potable water for facility use would be provided by the City of Carlsbad and that near-surface groundwater impacts would be "mitigated by the implementation of the SWPPP, SPCC Plan, the requirements of the NPDES permit, the groundwater discharge permit, and Section 401 certification." NMED does not find the subject of exposure pathways otherwise addressed in the revisions to the Sections of the draft Final EIS provided (Section 3.5, 4.5 and 5.5).
3.k. Deficient Site Monitoring	Not addressed	NMED comment 3.k states that the EIS insufficiently addresses the necessity of monitoring the radiation of all radionuclides in spent nuclear fuel. NMED does not find the subject addressed in the revisions to the Sections of the draft Final EIS provided (Section 3.5, 4.5 and 5.5).
4. The draft EIS is significantly incomplete without inclusion of all applicable state regulatory oversight and environmental impact controls	Not addressed	NMED comment 3.k states that the EIS insufficiently addresses the regulation of hazardous wastes and spills of oil and grease. NMED does not find the subjects addressed in the revisions to the Sections of the draft Final EIS provided (Section 3.5, 4.5 and 5.5).
Numerous other non-groundwater related comments, including: 1 – transportation risks 3.e - transportation risks 3.i - transportation risks 3.j - aging cannister risks 5 – environmental justice	Not addressed	NMED does not find the subjects of the referenced comments addressed in the revisions to the Sections of the draft Final EIS provided (Section 3.5, 4.5 and 5.5).

6 – NRC's environmental oversight role 7 – NM Radioactive Waste Consultation Task Force comments		

B. New Comments (not raised by NMED in Sept. 2020)

The NRC should further consider the possibility of geologic structural instability of Holtec's proposed project area. One approach to such a consideration would be to commission an independent study of the area similar to that done for the WIPP site. One 2006 study[1] illustrates numerous dissolution features associated with the Permian Capitan Reef complex where the dissolution was caused by undersaturated artesian water within the Reef leaching salts from overlying evaporate units. The Capitan Reef structure is located directly below Holtec's proposed area. The study identifies numerous dissolution features within the region associated with the Reef, including the San Simon Sink and the Kermit-Wink Sink.

[1] Hill, Carol A., "Intrastratal Karst at the WIPP Site, Southeastern New Mexico," published in *New Mexico Geological Society Fall Field Conference Guidebook: Caves & Karst of Southeastern New Mexico* (available at https://nmgs.nmt.edu/publications/guidebooks/downloads/57/57_p0233_p0242.pdf).