

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY LICENSING BOARD**

IN THE MATTER OF
HOLTEC INTERNATIONAL

(Consolidated Interim Storage Facility)

Docket No. 72-1051

May 11, 2020

**FASKEN LAND AND MINERALS, LTD.'S AND PERMIAN BASIN LAND AND
ROYALTY OWNERS MOTION FOR LEAVE
TO FILE AMENDED CONTENTION NO. 2**

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Now comes Fasken Oil and Ranch Ltd. (“Fasken”) and Permian Basin Land and Royalty Owners (“PBLRO”) (collectively “Joint Petitioners”), by and through undersigned counsel, who respectfully move the Atomic Safety Licensing Board (“ASLB”) for leave to file amended Contention No. 2 in the above-captioned matter, filed concurrently with Petitioners’ Motion for Leave to Reopen the Record, and in support of their Motion for Leave to File Amended Contention No. 2, state as follows:

I. INTRODUCTION

Pursuant to 10 C.F.R. §§ 2.309(c)(1) and (f)(1), Joint Petitioners seek leave to file amended Contention No. 2 based on the Holtec International (“Holtec”) draft environmental impact statement (“DEIS”) and to contest newly disclosed and highly pertinent information, as well as material omissions, inadequacies and inconsistencies contained in Holtec’s licensing application documents, which give rise to unaddressed technical and integration issues that the U.S. Nuclear Regulatory Commission (“NRC”) must resolve to properly review and analyze environmental impacts and ensure that spent nuclear fuel (“SNF”) and high-level radioactive nuclear waste can be safely transported to, and stored at, the proposed Holtec consolidated interim storage facility (“CISF”) in Lea County, New Mexico over the entire course of the license term.¹ This new information and the unresolved issues it brings to light must be noticed, appropriately analyzed

¹ Consistent with 10 C.F.R. § 51.23(c), the Holtec DEIS “serves as *the site-specific review* conducted for the construction and operation of the proposed CISF for the period of its proposed license term.” *See* Environmental Impact Statement for the Holtec International’s License Application for a Consolidated Interim Storage Facility for Spent Nuclear Fuel and High-Level Waste, Draft for Comment, NUREG-2237 (March 2020) (ADAMS Accession No. ML20069G420), herein after “Holtec DEIS” at 1-5. The initial proposed license term is for a period of 40 years, but Holtec has indicated that it intends to “seek to renew the license for two additional renewal periods of up to 40 years each for a total of *up to 120 years*.” *Id.* at 2-2. The NRC Staff’s cumulative impact analyses in the Holtec DEIS alleges to have “considered these expansion phases in its impact analysis. . .and carries forth those impacts into the description of cumulative impacts. . . so as to conduct a bounded analysis for the proposed CISF project.” *Id.* at 5-9.

and fully disclosed in the Holtec DEIS and final Environmental Impact Statement (“EIS”), and resolutions and risk-mitigation strategies delineated and implemented within the Holtec Safety Analysis Report (“SAR”),² as they implicate important legal issues, safety risks and environmental impacts relating to the construction and operation of the proposed CISF project.

As explained *supra*, the data, analyses, and conclusions in the Holtec DEIS not only vary significantly from Holtec’s Environmental Report (“Holtec ER”),³ but are also misleading, inaccurate, unreliable and inconsistent, painting a distorted picture of subsurface mineral rights, the depths and locations of oil and gas wells, mining extraction and industry operations and geologic characteristics at and in the vicinity of the proposed Holtec CISF site. Reliance on such incomplete and deficient sources of information precludes a proper cumulative impact analysis on geology and soils and land use under the National Environmental Policy Act (“NEPA”)⁴ and further violates NRC regulations.

II. PETITIONERS HAVE STANDING

The Permian Basin is a vital petroleum resource for the nation’s energy, security and independence. PBLRO consists of 12 entities with substantial operations and leases throughout the Permian Basin in southeast New Mexico and Texas. It has been drilling and extracting oil in the region for over 80 years. Members of PBLRO have mineral leases beneath and surrounding the proposed CISF site and graze cattle within 5-miles of the site.

² Holtec International, Licensing Report on the HI-STORE CIS Facility, Rev. 0H, Docket No. 72-1051, (March 30, 2019) (ADAMS Accession No. ML19163A062), herein after “Holtec SAR.”

³ Environmental Report on the HI-STORE CIS Facility, Rev. 7, Docket No. 72-1051 (August 2019) (ADAMS Accession No. ML19309E337), herein after “Holtec ER.”

⁴ The National Environmental Policy Act of 1969, 42 U.S.C. § 4321 *et seq.*, herein after “NEPA.”

As set forth in the Declaration of Tommy E. Taylor (Vice President of Fasken Management, L.L.C., which is the general partner of Fasken Land and Minerals, Ltd.), Fasken is a member of the PBLRO, which is an association of oil and gas producers, ranchers, and royalty owners formed specifically in response to the proposed Holtec CISF project.⁵

Fasken owns and/or leases property related to oil and gas activities located approximately 2 miles from the Holtec site. Fasken's acreage (over 2,000 acres) are located directly west and adjacent to the proposed Holtec CISF site and has four producing wells on this acreage.⁶ Fasken employees frequently visit the region for work related purposes, including routine checks and maintenance on oil and gas production equipment and monitor well operations.⁷ Additionally, Fasken owns grazing property and operates significant agricultural operations nearby consisting of 160,000 acres. This property has been in the Fasken family for over one-hundred years.

If a petitioner has already satisfied the general standing requirements under 10 C.F.R. § 2.309(d), in the same proceeding for which a new contention is filed, the petitioner "does not need to do so again."⁸ On May 7, 2019, the ASLB held that Fasken has demonstrated standing in the current proceeding.⁹ Thus, Petitioners have standing to bring amended Contention No. 2.

III. LEGAL STANDARDS

A. Petitioners Have Good Cause to File Amended Contention No. 2.

⁵ Declaration of Tommy E. Taylor, May 11, 2020, attached hereto as Exhibit 1.

⁶ *Id.*

⁷ *Id.*

⁸ 10 C.F.R. § 2.309(c)(4).

⁹ See ASLB "Memorandum and Order" LBP-19-4 at 17 (May 7, 2019) (ADAMS Accession No. ML19127A026) ("Fasken has demonstrated standing.").

New or amended contentions submitted after the initial date for hearing requests must meet the requirements of 10 C.F.R. § 2.309(c)(1). To do so, a party must demonstrate good cause by showing the following three conditions are met:

- (i) The information upon which the filing is based was not previously available.
- (ii) The information upon which the filing is based is materially different than information previously available.¹⁰
- (iii) The filing has been submitted in a timely fashion based on the availability of the subsequent information.¹¹

New or amended contentions regarding NEPA may be filed if there are data or conclusions in the NRC DEIS or final EIS or any supplements relating thereto, that differ significantly from the data or conclusions in the applicant's documents.¹²

The availability of a DEIS is the first opportunity to challenge the adequacy of any discussion of issues that appear for the first time in the DEIS and the first opportunity to challenge language in the DEIS that was similar to language in applicant's Environmental Report that intervenors had tried to challenge through previously filed contentions.¹³

¹⁰ The Commission has stated that "materially different" information is that which "differs significantly. . . from the information in the applicant's documents." Amendments to Adjudicatory Process Rules and Related Requirements, 77 Fed. Reg. 46, 562 at 46, 572 (Aug. 3, 2012). See also, *Fla. Power & Light Co.* (Turkey Point Units 6 & 7), LBP-17-6, 86 N.R.C. 37, 48, *aff'd*, CLI-17-12, 86 N.R.C. 215 (2017) (in the context of late-filed contentions, "materially different" concerns the "type or degree of difference between new information and previously available information").

¹¹ See *In the Matter of Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-12-21, 76 N.R.C. 491, 491 (2012) (noting that "although 'timely' is not expressly defined by months or days in [NRC] regulations. . . typically [] 30 to 60 days from the initiating event [is considered] a reasonable deadline for proposing new or amended contentions."); *Shaw AREVA MOX Services* (Mixed Oxide Fuel Fabrication Facility), 67 N.R.C. 460, 493 (2008) (30 days held as presumptive time frame for timeliness of late-filed contentions).

¹² 10 C.F.R. § 2.309(f)(2). See *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-20, 62 NRC 523, 533 (2005) ("Our rules expressly allow timely amendment of NEPA contentions if there is significant new information or different conclusions in the DEIS that could not have been challenged previously") (citing 10 C.F.R. § 2.309).

¹³ See e.g., *In re Matter of TVA* (Clinch River Nuclear Site Permit Application), LB-18-14, Docket No. 52-047-ESP (July 31, 2018), (ADAMS Accession No. ML18212A148).

Petitioners' amended Contention No. 2 satisfies the requisite three conditions for good cause set out in 10 C.F.R. § 2.309(c)(1). The information forming the basis for amending Contention No. 2 was not available prior to publication of the Holtec DEIS on March 10, 2020. As discussed *infra*, data, reliance on sources, and recently developed conclusions disclosed for the very first time in the Holtec DEIS significantly vary in material respects from information contained in Holtec's license application documents. Pursuant to the April 7, 2020 Order by the Secretary of the Commission "Petitions to intervene, hearing requests, and motions to admit contentions challenging the [Holtec] DEIS will be deemed timely if filed on or before May 11, 2020."¹⁴ The foregoing Motion to admit contentions, based on information only recently published in the Holtec DEIS, and filed on May 11, 2020 is timely. And Petitioners have demonstrated good cause to file same.

B. Petitioners Amended Contention No. 2 is Admissible

In addition to meeting the requirements of 10 C.F.R. § 2.309(c)(1), new or amended contentions must also satisfy the basic standards for admissibility under 10 C.F.R. § 2.309(f)(1).

This section requires that each contention:

- i) Provide a specific statement of the issue of law or fact to be raised or controverted;
- ii) Provide a brief explanation of the basis for the contention;
- iii) Demonstrate that the issue raised in the contention is within the scope of the proceeding;

¹⁴ Commission "Order (Granting Motion for Extension of Time to File)" Docket No. 72-1051 (April 7, 2020) (ADAMS Accession No. ML20098F515).

- iv) Demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding;¹⁵
- v) Provide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue...together with references to the specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue;¹⁶ and
- vi) Provide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact. This information must include references to specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes and the supporting reasons for each dispute, or, if the petitioner believes the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner's belief.¹⁷

10 C.F.R. § 2.309(f)(1)(i-vi).

A contention may state an “issue of law or fact.” A purely legal issue contention need not necessarily address every requirement of 10 C.F.R. § 2.309(f)(1), such as the requirement to provide “a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue.”¹⁸

¹⁵ Requires a significant link between the claimed deficiency in the application and the agency's ultimate determination whether the applicant will adequately protect the health and safety of the public and the environment. *Nextera Energy Seabrook, LLC* (Seabrook Station, Unit 1), LBP-17-07, 75 NRC 301 (2017) (citing *Private Fuel Storage, LLC* (Indep. Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 179-80 (1998), *Aff'd*, CLI-98-13, 48 NRC 26 (1998)). See also, *Oconee*, CLI-99-11, 49 N.R.C. at 333-34 (to show that a dispute is “material” a petitioner must show that its resolution would make a difference in the outcome of the licensing proceeding).

¹⁶ However, at the contention admissibility stage, petitioners are not required to prove their case on the merits. *Fansteel, Inc.* (Muskogee, Okla. Site), CLI-03-13, 58 N.R.C. 195, 203 (2003).

¹⁷ See, *U.S. Dept. of Energy*, CLI-09-14, 69 NRC 580, 588 (2009) (demonstrating a genuine dispute of fact or law requires a petitioner to show “specific ties to NRC regulatory requirements, or to safety in general”); *Nextera*, LBP-17-07, 75 NRC 301 (finding “sufficient information” to demonstrate a genuine dispute to require inclusion of references to specific portions of the application that a petitioner disputes and for deficient applications, identification of alleged areas of deficiencies with supporting beliefs).

¹⁸ 10 C.F.R. § 2.309(f)(1)(v). See *U.S. Dep't of Energy*, CLI-09-14, 69 NRC 580 at 588–91. (“We agree, for example, with the Boards' view in this proceeding that requiring a petitioner to allege ‘facts’ under section 2.309(f)(1)(v) or to

To satisfy basic contention admissibility requirements, a petitioner must “proffer at least some minimal factual and legal foundation in support of their contentions.”¹⁹ Although a petitioner need not prove the merits of contentions at this stage, mere notice pleading of proffered contentions is insufficient.²⁰ Rather the NRC requires a petitioner read the pertinent portions of the license application, state the applicant’s position and the petitioner’s opposing view, and explain the disagreement.²¹

As discussed in further detail below, Petitioners are filing amended Contention No. 2 relating to the Holtec DEIS to challenge newly disclosed material facts and conclusions, which contain glaring omissions, inaccuracies, and inconsistencies regarding ownership of subsurface mineral rights, oil and gas and mining extraction operations and geologic characteristics in the region of the proposed Holtec CISF project, as well as the status of compliance with federal and state laws and approvals, which preclude a proper analysis of Holtec’s licensing application under NEPA and NRC regulations. The application is only as good as its underlying data. Reliance on a less-than-complete record in the context of licensing a facility to house the entire nation’s nuclear storage will not suffice to meet NRC regulations, federal or state laws. Petitioners’ contentions implicate serious and important safety and environmental issues that the NRC must notice, disclose and appropriately address in the licensing of the proposed Holtec CISF project.

C. NRC and NEPA Legal Standards

provide an affidavit that sets out the ‘factual and/or technical bases’ under section 51.109(a)(2) in support of a legal contention—as opposed to a factual contention—is not necessary.”)

¹⁹ *Oconee*, CLI-99-11, 49 N.R.C. at 334.

²⁰ *Fansteel, Inc.*, CLI-03-13, 58 N.R.C. 195 at 203.

²¹ Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, 54 Fed. Reg. 33, 168, 33, 170-71 (Aug. 11, 1989).

The overarching goal of the NRC is to avoid avoidable risks of harms. Its regulations promote that goal. As such, the NRC may only issue a license upon a finding that the proposed site complies with NRC siting evaluation factors.²² More specifically, NRC regulations require that proposed sites “be examined with respect to the frequency and the severity of external natural and man[-]induced events that could affect [] safe operation”²³ and applications for dry cask modes of storage east of the Rocky Mountain Front will be accepted by the NRC only if “...the results from onsite foundation and geological investigation, literature review, and *regional geological reconnaissance show no unstable geological characteristics, soil stability problems, or potential for vibratory ground motion at the site....*”²⁴ It is further imperative that information provided by a license applicant to the Commission is “complete and accurate in all material respects.”²⁵

Additionally, the NRC cannot grant a license for construction or operation of the proposed CISF project until it determines that applicable regulatory requirements of the Atomic Energy Act of 1954 (“AEA”) and NEPA requirements are satisfied.²⁶ NRC regulations implementing NEPA reflect amendments designed to improve regulatory efficiency in environmental reviews and to

²² See 10 C.F.R. §§ 72.40(a)(2), 72.90 – 72.108.

²³ See 10 C.F.R. § 72.90(b); see also 10 C.F.R. § 72.24(a) (requires applicants to provide a description and safety assessment of the site on which the ISFSI is to be located, “with appropriate attention to the design bases for external events.”); NUREG-1567 § 2.4.2 (requires applicants to identify products or materials produced, stored, or transported by nearby industries, and discuss “any potential hazards to the ISFSI from activities or materials” produced by nearby industries).

²⁴ 10 C.F.R. § 72.103(a)(1) (emphasis added).

²⁵ 10 C.F.R. § 72.11(a).

²⁶ See Holtec DEIS at 4-102; see also 10 C.F.R. § 51.10(a) (Nothing in the NRC NEPA implementing regulations alter the cardinal requirement that license applications comply with all NRC regulations. Indeed, NEPA regulations must be carried out in a “manner which is consistent with the NRC’s domestic licensing and regulatory authority under the [AEA].”

provide for “more focused and therefore more effective” NRC NEPA reviews by focusing on “significant case[-]specific concerns.”²⁷

NEPA mandates that federal agencies prepare an EIS before undertaking any “major Federal actions significantly affecting the quality of the human environment.”²⁸ The preparation of an EIS is meant to ensure that federal agencies “*will not act on incomplete information, only to regret [their] decision after it is too late to correct.*”²⁹ NEPA requires agencies to take a “hard look at environmental consequences” of the proposed action, and imposes a duty upon the agency to both “consider every significant aspect of the environmental impact of a proposed action” and “inform the public” of its analysis and conclusion.³⁰

Pursuant to NRC regulations, a draft EIS must “state how alternatives considered in it and decisions based on it will or will not achieve [NEPA][] requirements,³¹ . . . *identify any methodologies used and sources relied upon, . . . be supported by evidence that the necessary environmental analyses have been made . . . [and that] [t]he NRC staff [] independently evaluate and be responsible for the reliability of all information used in the draft [EIS].*”³² In completing a draft EIS, the NRC is encouraged to cooperate with State and local agencies and “include consideration of major points of view concerning the environmental impacts of the proposed action

²⁷ Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. 28,467 (Jun. 5, 1996); id., 61 Fed. Reg. 66,537 (making minor clarifying and conforming changes and adding text omitted from Table B-1); Correction, 66 Fed. Reg. 39,277 (Jul. 30, 2001) (making further corrections to Table B-1).

²⁸ 43 U.S.C. § 4332(2)(c) (Including a detailed statement by the responsible official on “(i) the environmental impact of the proposed action, (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented, (iii) alternatives to the proposed action, (iv) the relationship between local short-term uses of man’s environment and the maintenance and enhancement of long-term productivity, and (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.”)

²⁹ *Marsh v. Or. Nat. Res. Council*, 490 U.S. 360, 371 (1989) (emphasis added).

³⁰ *Balt. Gas & Elec. v. Nat. Res. Def. Council, Inc.*, 462 U.S. 87, 97, 103 (1983) (quoting *Vermont Yankee Nuclear Power Corp. v. Nat. Res. Def. Council*, 435 U.S. 519, 553 (1978)).

³¹ Specifically, “sections 101 and 102(1) of NEPA and of any other relevant and applicable environmental laws and policies.”

³² 10 C.F.R. § 51.70(b) (emphasis added).

and the alternatives, and contain an analysis of significant problems and objections raised by other Federal, State, and local agencies, by any affected Indian Tribes, and by other interested parties.”³³

Additionally, a draft EIS must include discussion of the cumulative effects for a proposed project, defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.”³⁴ Cumulative effects, synonymous with cumulative impacts, can result from individually minor but collectively significant actions taking place over a period of time.

Draft and final EISs are government-sponsored documents that will subsequently be issued to other federal agencies, state agencies, and the public. Because the government stands by the reliability of the information and conclusions in its EISs, they are often used as references for a broad array of decisions. “To casually include information that has not been independently verified for its reliability and completeness by the NRC would violate both NRC regulations and NEPA’s fundamental purpose of informing the public about environmental issues.”³⁵ Moreover, to protect the inclusion of information in an EIS from challenge in a licensing proceeding would violate NRC regulations governing public participation requirements.³⁶

IV. AMENDED CONTENTION NO. 2

Holtec’s application fails to adequately, accurately, completely and consistently describe the control of subsurface mineral rights and oil and gas and mineral extraction operations beneath and in the vicinity of the proposed Holtec CISF site,

³³ 10 C.F.R. § 51.71(b).

³⁴ 40 C.F.R. § 1508.7 (emphasis added); Council on Environmental Quality (“CEQ”) Regulations.

³⁵ TVA, Intervenor’s Reply to Responses in Opposition to Motion for Leave to File Contention 4 (Inadequate Discussion of Environmental Impacts of Spent Nuclear Fuel Pool Fires) and Contention 5 (Impermissible Discussion of Energy Alternatives and Need for The Proposed SMR), Docket No. 52-047-ESP (June 22, 2018), (ADAMS Accession No. ML18174A075).

³⁶ 10 C.F.R. § 51.104.

which precludes a proper analysis under NEPA and further nullifies Holtec's ability to satisfy NRC's siting evaluation factors now and anticipated in the future and is in further violation of NRC regulations.³⁷

A. Basis for Amended Contention No. 2

Petitioners amend Contention No. 2 to address materially different conclusions and reliance on sources of data and information and statements, made for the very first time in the recent Holtec DEIS, which continue to misrepresent the control and ownership of subsurface mineral rights, the status of industry operations, and geologic characteristics in the region of the proposed Holtec CISF project. Reliance on false and speculative information in the Holtec DEIS cannot reasonably form the basis for proper analyses of safety risks or environmental impacts under NEPA or NRC regulations.³⁸

Petitioners maintain their arguments in previously filed Contention No. 2 and further dispute the data and conclusions in the Holtec DEIS to the extent that they are inconsistent with Holtec's SAR and ER, omit material information, and present incomplete, inaccurate, unreliable and misleading information.³⁹

B. Facts Petitioners Intend to Rely on To Further Support Amended Contention No. 2

According to the Holtec DEIS, the NRC's analysis of potential cumulative impacts from the proposed CISF project is "based on publicly available information about existing and proposed projects," information in Holtec's ER and SAR, and Holtec's "responses to the [NRC's] requests

³⁷ Petitioners' original Contention No. 2 read as follows: "Statements in Holtec's Safety Analysis Report (SAR) and Facility Environmental Report (FER) regarding 'control' over mineral rights below the site are materially misleading and inaccurate. Reliance on these statements nullifies Holtec's ability to satisfy the NRC's siting evaluation factors."

³⁸ Inaccurate and misleading statements in the Holtec DEIS further violate NRC regulations requiring an applicant provide information to the Commission that is "complete and accurate in all material respects." 10 C.F.R. § 72.11(a).

³⁹ Petitioners' original Contention No. 2 was timely, satisfied the requirements of good cause and would have been found to be an admissible contention. As such, it is permissible to incorporate the arguments and facts relied on in Contention No. 2 in the foregoing amendments to Contention No. 2.

for additional information [“RAIs”].”⁴⁰ For the proposed Holtec CISF project, other past, present and future actions considered in the analysis include “potash mining, oil and gas production, other nuclear facilities, and wind and solar farms.”⁴¹

Holtec’s application misleads the NRC and the public regarding subsurface mineral rights, ongoing oil and gas and mining extraction operations, geologic characteristics and the cumulative impacts the proposed CISF site and regional activities will have on the environment, land use, and surrounding populations. Such inaccurate, incomplete, unreliable, inconsistent and/or outstanding facts and information relied on include, but are not limited to, those listed in attached Exhibit 2. Petitioners reserve the right to amend and/or supplement same as additional relevant information becomes available.

C. Petitioners Raise Genuine Disputes of Material Fact and Law

i. The Recent Holtec DEIS Paints a Seriously Distorted and Materially Different Picture

Holtec’s ER found “minimal potential” for any cumulative impact to geology and soils from the proposed Holtec CISF project.⁴² By comparison, the Holtec DEIS recently concluded that the project would have a “small cumulative impact” for geology and soils, which when combined with regional activities would result in an “overall MODERATE cumulative impact.”⁴³ This constitutes new and material information that is significantly different.

⁴⁰ Holtec DEIS at 5-1.

⁴¹ *Id.*

⁴² Holtec ER at 5-3 (“Impacts to geology and soils would be minimal and would be limited to soil disturbance and temporary increases in soil erosion at the CISF. There are no known significant new projects in the project area, and for purposes of this cumulative impact assessment, the existing activities (nuclear or non-nuclear) are assumed to continue at current levels, with no significant impact on geology and soils.”)

⁴³ Holtec DEIS at 5-10 to 5-11.

As discussed *supra*, Petitioners object to reliance on insufficient data and speculative agreements with unknown terms, object to the omission of material information, and further object to the improper conclusions drawn from same in the recent Holtec DEIS. Accurate, complete, and reliable inputs and information are necessary to fully assess the safety risks and cumulative environmental impacts of the proposed Holtec CISF over the lifetime of the project. Petitioners further dispute the use of the 6-mile radius for land use impacts, applied for the first time in the Holtec DEIS.⁴⁴ A wider radius is necessary to account for the multitude of interdependent and unique factors tied to regional operations, especially given the geologic characteristics of the region, to fully and appropriately analyze the potential cumulative impacts.

1. Descriptions of Subsurface Mineral Rights Remain Misleading, Inaccurate, Incomplete and Inconsistent

Contrary to statements in Holtec’s application documents and the most recent Holtec DEIS, and previously highlighted by Petitioners: “Holtec does not own the mineral rights below the site and does not have the ability to prevent others from extracting minerals below and adjacent to the site.”⁴⁵ As stated in Petitioners’ previously filed Contention No. 2 challenging statements regarding the ownership of subsurface mineral rights (incorporated by reference herein) and further supported by the New Mexico Land Office Commissioner’s Letter excerpts below.

Holtec’s claim that it has secured third-party agreements for control of the Site is incomplete at best . . . Holtec does not “control” the “mineral rights of the Site.” Instead, Holtec only has an agreement with a single company, Intrepid, relating to that company’s potash mining – an agreement that has yet to be approved by the State Land Office, under whose authorization Intrepid conducts its mining activities

⁴⁴ Holtec DEIS at 5-17.

⁴⁵ See *Fasken Oil and Ranch and Permian Basin Land and Royalty Owners Motion for Leave to File a New Contention* (Aug. 1, 2019) (Fasken Motion for New Contention); Letter from Stephanie Richard, New Mexico Public Lands Commissioner, to Krishna Singh, President of Holtec International (June 19, 2019) (ADAMS Accession No. ML19183A429, published on July 2, 2019) hereinafter “Land Commissioner Letter,” attached as Exhibit 3 at 2.

on the Site. The State Land Office’s oil and gas lessees, meanwhile, confirm they have not entered into agreements with Holtec to suspend or limit their oil and gas development to accommodate Holtec’s planned nuclear waste disposal facility. In addition, there are other mineral resources potentially present on the Site that may fall within the State Land Office’s mineral estate that are not addressed in Holtec’s filings at all.⁴⁶

Petitioners further dispute statements made for the first time in the Holtec DEIS, speculating on a proposed but not-yet-accepted “land use restriction or condition” at the Holtec site and prospective future contractual relationships between oil and gas lessees and the State Land Office. As stated in the Commissioner’s Letter it is not a “foregone conclusion” that the State Land Office has the “ability and desire to restrict oil and gas drilling on the Site.”⁴⁷ The Holtec DEIS does not provide any concrete evidence to suggest otherwise. Indeed, the State Land Office presently “does not impose any depth restrictions on drilling activities” at or adjacent to the proposed Holtec site and has not approved such restrictions on oil and gas lessees because it “would likely trigger legal challenges from businesses that already are conducting operations on the Site pursuant to their existing mineral leases.”⁴⁸ Furthermore, as stated in the attached Declaration of Stonnie Pollock, oil and gas may still be extracted “anywhere within 330 – 660 feet from Holtec’s site without impacting the correlative rights of those who actually own the minerals below the site.”⁴⁹

Holtec’s improper reliance on speculative and inaccurate information eliminates its ability to satisfy an applicant’s necessary requirements to support their arguments with “appropriate and

⁴⁶ See Land Commissioner Letter, attached as Exhibit 3 at 2.

⁴⁷ *Id.*

⁴⁸ *Id.* at 3.

⁴⁹ See *Fasken Oil and Ranch and Permian Basin Land and Royalty Owners Motion for Leave to File a New Contention* (Aug. 1, 2019) (Fasken Motion for New Contention); see also Decl. of Stonnie Pollock at Exhibit 4 at 2.

accurate references to legal authority and factual basis”⁵⁰ and evaluate crucial site evaluation factors, including both man-induced and natural events. Such faulty premises also fail to meet NEPA requirements. The concession in the most recent Holtec DEIS that Holtec is now trying to work with the State Land Office to relinquish mineral rights further validates Petitioners’ prior arguments. NEPA and NRC regulations call for concrete evidence and facts based on the current state of knowledge. Holtec’s refusal to provide material information, inevitably renders such analyses impossible and falls short of the transparency and independent review required of the NRC and necessary to ensure public participation in the Holtec licensing proceedings. Holtec and the NRC cannot conclusory rely on speculative future contracts, future land use restrictions or agreement terms which are unknown and uncertain and by their very nature not considered in the underlying methodology and analyses. Applicants have to make the case for safety and provide sufficient information to the NRC to allow for an adequate assessment of environmental impacts, and they are not allowed to substitute those responsibilities with inchoate desires to deal with such problems.

2. Descriptions of Oil and Gas Operations are Misleading, Inaccurate, Incomplete Unreliable and/or Inconsistent

The Holtec DEIS description of oil and gas operations at and in the vicinity of the proposed Holtec CISF site alters reality. Holtec’s application fundamentally misrepresents past, present and potential for future oil and gas operations in the 6-mile region and flat out ignores operations at any further increments of distance. In order to truly appreciate the extensive amount of oil and gas activity in the region of the Site, an accurate well-count has been obtained by Petitioners. In reality, there are a total of 527 wellbores within a 6-mile radius of the proposed site. Of these, 164 are

⁵⁰ *Shaw AREVA MOX Services (Mixed Oxide Fuel Fabrication Facility)*, 67 N.R.C. 460 (2008)

active oil wells, 140 are abandoned oil wells, 128 are dry wells, 52 are gas wells, 34 are abandoned gas wells, 6 are injection wells, and 3 are Saltwater Disposal (“SWD”) wells.⁵¹ Given industry operations and geologic characteristics in the region, Petitioners believe a wider radius is necessary to truly evaluate cumulative impacts.⁵² previously provided similar statistics for operations within a 10-mile radius and 17-mile radius in its original Contention No. 2

a. Purported Drilling Depths are Misleading, Inaccurate, Incomplete, Unreliable and Inconsistent

The Holtec DEIS for the very first time, mistakenly asserts that oil and gas production zones and targets in the region of the proposed Holtec CISF site “occur beneath the Salado Formation” at depths “that range from relatively shallow oil and gas at approximately 930 to 1,524 m [3,050 to 5,000 ft]. . .to deep gas targets . . . in excess of 4,877 m [16,000 ft] deep.”⁵³ Petitioners adamantly dispute the factual basis of this newly disclosed source and its absurd associated conclusions.⁵⁴ Given the advancements in drilling technologies and practice over the past several decades, relying on a 1978 historical source to accurately describe 2020 oil and gas operations defies all logic and common sense. As discussed *supra*, the source and conclusion are unmoored to any present-day factual basis.

⁵¹ See Declaration of Stonnie Pollock, Exhibit 4.

⁵² See *Fasken Oil and Ranch and Permian Basin Land and Royalty Owners Motion for Leave to File a New Contention* (Aug. 1, 2019) (Fasken Motion for New Contention) (showing oil and gas operations in a 10-mile radius and 17-mile radius of the proposed Holtec CISF site).

⁵³ See Holtec DEIS at 4-4 (stating “all oil and gas production zones in the area of the proposed CISF occur beneath the Salado Formation at depths greater than 914 m [3,000 ft] (Cheeseman, 1978; Holtec, 2019b)”); Holtec DEIS at 3-7 to 3-8 (stating “Oil and gas exploration targets within and surrounding the proposed project area range from relatively shallow oil and gas at approximately 930 to 1,524 m [3,050 to 5,000 ft] in upper and middle Permian formations (EIS Section 3.4.1.2) to deep gas targets in middle Paleozoic formations in excess of 4,877 m [16,000 ft] deep (ELEA, 2007).”).

⁵⁴ See Declaration of Stonnie Pollock, Exhibit 4.

The Holtec DEIS further falsely states that “[t]he proposed CISF will have no impact on oil and gas exploration and development. . .because extraction will *continue to occur at depths greater than 930 m [3,050 ft]*.”⁵⁵ These novel statements are substantially inconsistent with Holtec’s ER, which claimed that “[b]y agreement with the applicable third parties, the oil drilling and phosphate *extraction activities have been proscribed* at and around the site and would not affect the activities at the site,”⁵⁶ and Holtec’s latest SAR which claims “any future oil drilling or fracking beneath the Site would *occur at greater than 5,000 feet depth*, which ensures there would be no subsidence concerns [2.1.8].”⁵⁷ It is unlikely that any of these claims were based on solid evidence or substantial factual support when made.

There are material inconsistencies with the Holtec DEIS and Holtec’s prior statements in the Holtec SAR (which claim that drilling will be limited to depths greater than 5,000 feet) and in Holtec’s ER (which stated Holtec had complete control of subsurface mineral rights), and statements made by the governing authority in the State Land Office letter (which indicate no land use restrictions or drilling depths on oil and gas lessees). The Holtec DEIS presents new sources of information and new conclusions, materially different from prior Holtec licensing documents, as to drilling depths and subsurface mineral rights that are unforgivingly inaccurate, misleading and unreliable. Based on statements in Holtec’s application, it is unclear if the factual reality of this information has even been considered in Holtec’s design basis, any cumulative impact analyses, or in connection with any assessment of Holtec facility’s safety structures and

⁵⁵ Holtec DEIS at xxiv-xxv (emphasis added)

⁵⁶ Holtec ER at 2-19.

⁵⁷ Holtec SAR at 2-112 (emphasis added).

components – which violates NRC and NEPA regulations, including but not limited to, those listed explicitly above.

Petitioners further dispute each and every one of the inconsistent statements in Holtec’s application as they fail to accurately state the depth at which wells have been drilled and will be drilled in the vicinity of the proposed site. Broad and general statements that drilling depths will not occur at less than 3,050 feet rely on erroneous assumptions that fail to consider: (1) the New Mexico Land Office has imposed no such restrictions on drilling depths, (2) the advantages of drilling at shallower depths (i.e. lower risk of triggering seismicity and lower costs), and (3) the advancements in drilling technology for shallower depths such as the Yates Formation beneath and surrounding the proposed Holtec CISF site. In stark contrast to statements in Holtec’s application, hydrocarbons exist at shallower depths, the attached map clearly shows a total of 82 wells have been drilled at a depth shallower than 3,050 feet within a 6-mile radius of the site.⁵⁸ In fact, there are perforations as shallow as 887 feet.⁵⁹ As Petitioners’ expert clearly states, drilling near the proposed site at shallower depths frequently occurs and will increasingly occur in the future, to which Holtec’s application willfully turns a blind eye.⁶⁰

b. Alleged Status of Oil and Gas Operations Beneath the Site are Incomplete, Unreliable and Inconsistent

New and material information recently disclosed in the Holtec DEIS also state that “[t]here is one active oil/gas well on the southwest portion of Section 13 that *operates at minimum production to maintain mineral rights.*”⁶¹ These unmoored statements, discussed for the very first

⁵⁸ See Declaration of Stonnie Pollock, Exhibit 4.

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ Holtec DEIS at 3-7 (emphasis added).

time in the Holtec DEIS, are conclusory, unfounded and lack citation to any reliable source in violation of NRC and NEPA regulations, which require the NRC to identify methodologies and sources, independently evaluate and be responsible for the reliability of all information used in a DEIS.⁶²

c. Alleged Status of Past, Present and Future Oil and Gas Operations in the Region are Misleading, Inaccurate and Unreliable

The Holtec DEIS acknowledges that the proposed CISF project area “is located in the middle of the Permian Basin oil hub” – in an area that “continues to be the focus of extensive exploration, leasing, development, and production of oil and gas with the most heavily concentrated areas of wells being located in eastern Eddy County and western Lea County.”⁶³ And further recognizes that “oil and gas industry in the region is anticipated to continue to have stable production output with some expansion over the foreseeable future.”⁶⁴ Yet, the Holtec DEIS bizarrely and unjustifiably relies on outdated, historical sources to describe and predict the state of oil and gas operations in the region.⁶⁵ Petitioners dispute the factual basis of such statements.

Contrary to Holtec’s application documents, advancements in technology for directional drilling and other unconventional methods make revisiting existing wells beneath and around the proposed Holtec CISF site a real possibility.⁶⁶ Directional drilling has enhanced the appeal for oil

⁶² 10 C.F.R. § 51.70(b).

⁶³ Holtec DEIS at 5-2.

⁶⁴ *Id.*

⁶⁵ See Holtec DEIS at 4-4 (stating “all oil and gas production zones in the area of the proposed CISF occur beneath the Salado Formation at depths greater than 914 m [3,000 ft] (Cheeseman, 1978; Holtec, 2019b)”); Holtec DEIS at 3-7 to 3-8 (stating “Oil and gas exploration targets within and surrounding the proposed project area range from relatively shallow oil and gas at approximately 930 to 1,524 m [3,050 to 5,000 ft] in upper and middle Permian formations (EIS Section 3.4.1.2) to deep gas targets in middle Paleozoic formations in excess of 4,877 m [16,000 ft] deep (ELEA, 2007).”).

⁶⁶ See Declaration of Stonnie Pollock, Exhibit 4.

and gas operators to utilize traditional vertical wells to boost productivity and other unconventional drilling methods have enabled operations to revisit formations once thought to be depleted.⁶⁷ The Holtec DEIS and SAR fail to factor this into already conservative assumptions over the course of the entire CISF project.

3. Holtec Refuses to Provide Information Necessary for the NRC to Conduct an Appropriate Review and Evaluation of Its Licensing Application

In defiance of NRC regulations, guidance documents and explicit instructions in the NRC's outstanding RAIs, Holtec remains steadfast in its disregard of regulatory obligations, failing to provide information to the Commission that is "complete and accurate in all material respects."⁶⁸ On November 14, 2019 the NRC issued RAIs to Holtec addressing issues that go to the heart and core of Amended Contention No. 2. The NRC's RAIs were probing for additional, more reliable information that directly relates to safety risks, environmental impacts and the cumulative effects of regional seismicity, oil and gas operations, regional mining extraction activities, and potential for subsidence, sinkholes and seismicity.⁶⁹ Given the gravity and seriousness of the subject matter, the NRC requested expedited responses within 60 days, precisely because the NRC "determined that [this] additional information [was] necessary in connection with its review."⁷⁰ Rather than fast-track its responses, Holtec waited nearly four months to summarily state (without any explanation) that it would not be providing responses with this crucial information until October 30, 2020 (nearly a year after the NRC first issued the requests it deemed "necessary in connection

⁶⁷ *Id.*

⁶⁸ *See* 10 C.F.R. 72.11(a).

⁶⁹ *See* Jose Cuadrado (NRC Project Manager) Letter to Kim Manzione (Holtec Licensing Manager) re First Request for Additional Information, Part 5 dated November 14, 2019, ADAMS No. ML193322C260; *see also* Exhibit 2 (listing relevant outstanding RAIs).

⁷⁰ *Id.*

with its review” of Holtec’s licensing application).⁷¹ If Holtec had good answers, it would have timely answered.

Holtec’s outstanding responses to the NRC’s RAIs are crucial information, deemed necessary for the NRC’s review and allegedly relied on in the Holtec DEIS, because they are intricately woven into safety and environmental issues that NRC must thoroughly and appropriately consider and analyze in the review of Holtec’s licensing application pursuant to NEPA, NRC and host of other federal laws. Holtec’s non-response here is unacceptable – resulting in ill-informed analyses and conclusions, and rendering the recently released Holtec DEIS wholly deficient.

Of significance, applicant RAI responses which are not received within the agreed-upon time may result in the review being delayed again or suspended. In addition, low quality RAI responses may be deemed non-responsive and result in the suspension of the review.⁷² Because Holtec’s refusal to provide the NRC with RAI responses also robs the public of a meaningful opportunity to comment on the Holtec DEIS, such a non-response warrants suspension or at least delay of Holtec licensing review to allow for accurate and complete information to be provided and incorporated into the Holtec DEIS and ensure transparency and civic participation under NEPA and NRC regulations.

The NRC cannot feasibly conduct an independent review and analysis without considering Holtec’s RAI responses, including but not limited to, the RAIS listed below.

⁷¹ *Id.*

⁷² See John McKirgan (NRC Office of Nuclear Material Safety and Safeguards) Letter to Kimberly Manzione (Holtec Licensing Manager) re Revised Review Schedule dated July 1, 2019, ADAMS No. ML19182A147 (citing guidance in LIC-SFM-26, “Operational Strategies and Management Expectations” (ML16222A251).

a. Outstanding RAIs Responses and Information Regarding Interdependent Regional Activities are Materially Omitted

As acknowledged in Holtec's SAR, the "magnitude, rate of development, and surface expression of the subsidence processes are controlled by several factors, most of which are interdependent."⁷³ These "interdependent factors" collectively combine to create the possibility for subsidence, sinkholes and the capability to induce geologic instability and Holtec's pending responses to the NRC's RAI relating to any of these factors are of paramount importance to an independent and thorough review under NEPA and NRC regulations. Such information is materially important as it relates to the safety structure features at the proposed Holtec CISF site and influences the proposed facility's design basis. The NRC must independently review and analyze information provided to any RAIs regarding same and cannot ignore the synergies of these interdependent factors or their obvious relevance to any cumulative impact analysis on geology and soils and land use in the Holtec DEIS.

In refusing to answer the NRC's RAIs, Holtec's application ignores the current state of knowledge resulting in an insufficient DEIS and SAR analysis. The information relied on in Holtec's SAR and DEIS is unreliable, inaccurate, incomplete and inconsistent with respect to the potential occurrence and severity of subsidence and sinkholes in the region and materially omit related information from the NRC's RAIs deemed necessary to the review of Holtec's licensing application. Such information is material because it implicates the design basis for external man-induced events and renders Holtec's application deficient with respect to 10 C.F.R. § 72.94(a) because it fails to examine the region for "man-made facilities and activities that might endanger

⁷³ Holtec SAR at 2-9.

the proposed ISFSI” and further violates NRC regulations mandating “[i]nformation concerning the potential occurrence and severity of such events must be collected and evaluated for reliability, accuracy, and completeness” and “[a]ppropriate methods must be adopted for evaluating the design basis external man-induced events, *based on the current state of knowledge about such events.*”⁷⁴

For example, Holtec must provide information and responses to the following RAIs to enable NRC to complete a proper review of Holtec’s license:

- RAI 2-25: “. . . Justify the basis for the 5,000 ft minimum depth of oil drilling or fracking activities; clarify the depth to the shallowest oil or gas field in the site subsurface; and characterize the potential for surface deformation at the site due to drilling or fracking at the depth of the shallowest oil or gas field in the site subsurface. Discuss the potential for surface deformation due to mineral or resource mining exploration or extraction activities in the subsurface for the licensed life of the proposed facility. . . In addition, the application does not consider surface deformation from the exploration or extraction of minerals or other resources other than potash, oil, or gas.”⁷⁵
- RAI 2-26: “Related to origin of potential dissolution features at the site . . . Explain the origin of the features circled in red in Figures 2.1.2 and 2.1.5, particularly with respect to dissolution of the Capitan Reef or other subsurface carbonate and evaporite deposits either through natural process or human activities. Also, assess the future potential for similar surface deformation as a result of natural processes or human activities in the site area.
- RAI 2-40: “RAI 2-40: Demonstrate that the Residual Soil beneath a spent fuel storage pad would not undergo settlement more than the maximum allowable of 0.2 inch, as per the HI-STORM UMAX Canister Storage System FSAR, considering the construction sequence and operational time frames. . . It is also not clear whether the long-term settlement of the SFP can be the only consolidation settlement component, as assumed in Report No. HI-2188143, as some components of the total load may be placed after significant time has elapsed since the SFP has been constructed. The soil below the SFP may undergo consolidation settlement from the load(s) already placed when a new load is placed on the SFP. Therefore, an assessment is necessary to determine whether the long-term settlement of the SFP would be comprised only of the consolidation settlement from the individual load components, or if it may include some of the immediate or elastic settlement from loads placed later in time. If that is not the case, an assessment is necessary

⁷⁴ 10 C.F.R. § 72.94(b)-(c) (emphasis added).

⁷⁵ “This information is necessary to determine compliance with 10 CFR 72.98(c)(2) and 72.103(f)(2)(ii).”

to determine whether the SFP would be able to sustain the immediate or elastic settlement imposed by the subsequent load components, in addition to the consolidation settlement as the long-term settlement (less than 0.2 in as per HI-STORM UMAX FSAR).”⁷⁶

- RAI 2-41: “Provide an assessment(s), using site-measured geotechnical properties, to demonstrate that the strata at the subgrade and under-grade of the storage pads and the CTF would have sufficient bearing capacity and would not undergo excessive differential settlement, both immediately and in the long-term, due to spatial and vertical variation of the subsurface geotechnical properties.

b. Outstanding RAI Responses and Information re the Status of Green Frog Drilling Island are Materially Omitted

Statements made in recently disclosed Holtec DEIS for the very first time concerning the status of the Green Frog Drilling Island, indicating it was “no longer proposed”⁷⁷ are materially inconsistent with the underlying factual premises in the NRC’s still outstanding November 2019 RAI 2-8 and Holtec’s SAR, which both indicate *oil and gas wells have been drilled in the Green Frog Café Drill Island located just east of the proposed CIS Facility.*⁷⁸ And publicly available information from the New Mexico Oil Conservation Division website indicates it is “active.”

c. Outstanding RAI Responses and Information Regarding Orphaned and Abandoned Wells on the Proposed Holtec Site are Materially Omitted

The attached expert Declaration of Stonnie Pollock aptly notes that “any wellbore can be a potential conduit,” but older wells drilled prior to any statewide plugging regulations are particularly susceptible to casing corrosion issues and leaking. Within a 6-mile radius of the proposed Holtec CISF site, 53 wells were drilled at depths shallower than 3,050 feet between 1937-

⁷⁶ “This information is necessary to determine compliance with 10 CFR 72.24(a), 72.103, and 72.122.”

⁷⁷ Holtec DEIS at 3-8 (purportedly relying on Holtec responses to RAIs and stating that the “no-longer-proposed Green Frog Café drill island would have been located just outside the eastern boundary of the proposed project area.”)

⁷⁸ Holtec SAR at 2-12; RAI 2-8 (emphasis added).

1966 and 30 were plugged before 1967. This makes the region of the proposed Holtec CISF site subject to potential subsidence issues, sinkholes, and radiologic exposure. Contrary to Holtec's application and subject to outstanding RAIs, Petitioners experts contend that these wells were drilled in the absence of regulations and may pose a potential hazard for subsidence, sinkholes and are a possible conduit for radiological material.

The Holtec application inadequately addresses these issues and Petitioners object to the Holtec DEIS's failure to incorporate responses to NRC deemed necessary RAIs and information relating to abandoned drill holes and the potential for casing corrosion at and surrounding the proposed Holtec CISF site, which implicate serious safety risks and necessarily would contribute to cumulative environmental impacts. This is illustrated by the following outstanding RAIs and material omissions as to:

- RAI 2-8: "potential for subsidence due to corrosion of the casings of the abandoned drill holes is illustrated by the formation of the Wink and Jal sinkholes . . . hazards from potential land subsidence induced by casing failure, any future horizontal drilling beneath the site, or from oil/gas production from nearby wells should be evaluated and assessed to demonstrate that important to safety structures at the proposed facility and facility operations are not affected."⁷⁹
- RAI 2-5: "Clarify how the [existing] structures currently on the proposed site would be dealt with during construction and operation phases of the proposed facility in SAR Section 2.1.2, 'Site Description.' . . . [N]o information has been presented in the SAR as to what happens to. . . two oil recovery facilities and associated hardware, and [] a producing oil/gas well. . . The description should include detailed characteristics of the existing structures and assessments of potential hazards posed by them to the proposed facility if they would not be dismantled or, in the case of the producing oil/gas wells, abandoned and plugged."⁸⁰

⁷⁹ "This information is necessary to determine compliance with 10 CFR 72.24, 72.90(a) through (d), 72.94, and 72.98."

⁸⁰ "This information is necessary to determine compliance with 10 CFR 72.24(a), 72.90(a) through (d), 72.94, and 72.98."

As stated in Petitioners previously filed Contention No. 2, potential casing corrosion in orphaned and abandoned wells drilled prior to regulations are inaccurate, incomplete, unreliable and must be addressed. Wells that were cased before the 1960 regulations provide no assurance that seepage and water will not leak into salt formations surrounding the proposed Holtec CISF site and cause subsidence, sinkholes or karst formation, implicating serious safety and environmental issues. Both Holtec's ER and the Holtec DEIS fail to take this into account. A proper analysis and ongoing monitoring are necessary to address the potential risks and cumulative impact of such abandoned or plugged wells in the proposed Holtec CISF region under NRC and NEPA regulations.

d. Outstanding RAI Responses and Information Regarding Past, Present and Future Potash Mining Operations are Materially Omitted

Holtec responses to NRC RAIs are necessary to determine the cumulative impacts of regional activities and potash mining on sinkholes and subsidence in the region of the proposed Holtec CISF site. Under NEPA and NRC regulations, Holtec must provide complete and accurate information regarding the use of potash solution mining and accurate descriptions of potash mining activities in the region to ensure an adequate analysis and appropriate independent review by the NRC. Holtec has not provided this information as the following RAIs remain outstanding and have not been incorporated or considered in the Holtec DEIS:

- RAI 2-10: “[I]nformation [regarding Intrepid Potash LLC] dates from 2012, and information on the current status of potash extraction using solution mining technology is not given. Any additional subsidence at the surface due to potash extraction from remnant pillars using solution mining technology is needed to assess the potential effects on the proposed storage facility.”⁸¹

⁸¹ “This information is necessary to determine compliance with 10 CFR 72.24(a), 72.90(a) through (d), 72.94, and 72.98.”

- RAI 2-11: “. . .[Holtec’s] SAR Section 2.1.4, states that the maximum surface subsidence observed in the southeastern New Mexico potash mines is nominally 4 ft for an average mining height of 6 ft using the room and pillar mining method. Use of the solution mining technique to extract the remnant pillars from the existing room and pillar mines would induce additional subsidence, as the support provided by these remnant pillars would be removed. As stated in SAR Section 2.1.4, Intrepid Potash LLC has been authorized to use the solution mining technique to extract additional potash ore from the remnant pillars, including mines where potash mining was suspended in the past. It is not clear from the SAR whether any of the nearby mines has used this technique to extract potash and the resulting additional surface subsidence. . .”⁸²
- RAI 2-12: “Provide a rationale for why mining operations at nearby underground potash mines or extraction of oil and gas from underneath the CISF would not pose any hazard to the proposed facility from surface subsidence. Also, justify why mining of potash would not be feasible beneath or around the proposed CISF site for the proposed duration of the license. . . The application should discuss the rationales for the conclusion that potash would not be extracted under and around the site during the licensed life of the project. Similarly, SAR Section 2.6.4 states that there would be no subsidence concerns from any future oil and gas extraction beneath the site. The application should also discuss the rationale for why future oil and gas extraction beneath the site would not present a subsidence concern.”⁸³

e. Outstanding RAI Responses and Information Regarding Seismicity are Materially Omitted

Finally, Holtec must provide responses to outstanding NRC RAIs relating to seismicity, as they are imperative to a proper analysis of the safety of structures and system components and another piece to the subsidence and sinkhole related puzzle. Holtec’s confidential probabilistic hazard analysis analyzing potential seismic risks prevents interested parties from meaningfully reviewing and commenting on same. Because this has not been made available to the public it is unclear if adequate consideration is given to the potential risks and consequences of seismicity and its impacts on design basis at the proposed Holtec site, information and responses to related RAIs

⁸² “This information is necessary to determine compliance with 10 CFR 72.24(a), 72.90(a)–(d), 72.94, and 72.98.”

⁸³ “This information is necessary to determine compliance with 10 CFR 72.24(a), 72.90(a) through (d), 72.94, and 72.98.”

are all the more important. Especially in light of the recent March 26, 2020 5.0 magnitude earthquake occurring less than 50 miles away and registering as a 3.0 magnitude earthquake at the proposed site. The following relevant RAI related to seismicity illustrates the important of such information in review of Holtec’s license:

- RAI 2-30: “[Holtec’s] approach to developing the DBE does not account for the potential for induced seismicity in the site region, because the NSHMP approach removes induced and potentially induced seismicity from its earthquake catalog prior to performing the hazard analysis. . .”⁸⁴
- RAI 2-31: “Justify not incorporating site-specific subsurface geologic and geophysical properties through a site response analysis for development of the site-specific design basis earthquake (DBE) . . . Given the lack of site-specific hazard development, [Holtec’s] exceedance [of the DBE] should be justified.”⁸⁵

V. CONCLUSION

Because the Holtec DEIS and Holtec’s SAR are based on misleading inaccurate, incomplete, unreliable and inconsistent information and subject to material outstanding NRC RAIs, Holtec’s application is deficient. Its data sources and conclusions lack integrity and the requisite cumulative impact analyses are based on misleading, inaccurate, incomplete, unreliable, inconsistent and/or outstanding RAIs. As a result, Holtec’s application and its data and conclusions lack integrity and the requisite independent agency review and “hard look” into environmental impacts required by NEPA and further violate NRC regulations.

Dated May 11, 2020

/electronically signed by Allan Kanner

Kanner & Whiteley, LLC

Allan Kanner, Esq.
Conlee S. Whiteley, Esq.

⁸⁴ “This information is necessary to determine compliance with 10 C.F.R. 72.103.”

⁸⁵ “This information is necessary to determine compliance with 10 C.F.R. 72.103.”

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**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD**

IN THE MATTER OF
HOLTEC INTERNATIONAL

(Consolidated Interim Storage Facility)

Docket No. 72-1051

May 11, 2020

CERTIFICATE OF SERVICE

Pursuant to 10 C.F.R. § 2.305, I Allan Kanner certify that, on this 11th day of May, 2020, true and correct copies of Fasken's Motion for Leave to File Amended Contention No. 2, and attachments were served upon the Electronic Information Exchange (the NRC's E-Filing System) in the above-captioned proceeding.

/electronically signed by Allan Kanner

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