

Holtec-CISFEISCEm Resource

From: Terry Lodge <tjlodge50@yahoo.com>
Sent: Monday, July 30, 2018 10:52 PM
To: Holtec-CISFEIS Resource; Cuadrado-Caraballo, Jose; Cuadrado-Caraballo, Jose; Caverly, Jill
Cc: Keegan/Michael
Subject: [External_Sender] Scoping Comments of Don't Waste Michigan submitted to Docket ID NRC-2018-0052
Attachments: Scoping Comments FINAL.pdf

Dear May Ma:

Attached are the scoping comments I am filing in NRC Docket No. NRC-2018-0052 on behalf of my client, Don't Waste Michigan.

Thank you.

Terry Lodge, Esq.
(419) 205-7084

Federal Register Notice: 83FR13802
Comment Number: 3482

Mail Envelope Properties (950533276.1167383.1533005513376)

Subject: [External_Sender] Scoping Comments of Don't Waste Michigan submitted to
Docket ID NRC-2018-0052
Sent Date: 7/30/2018 10:51:53 PM
Received Date: 7/30/2018 10:52:00 PM
From: Terry Lodge

Created By: tjlodge50@yahoo.com

Recipients:

Post Office: mail.yahoo.com

Files	Size	Date & Time
MESSAGE	192	7/30/2018 10:52:00 PM
Scoping Comments FINAL.pdf	90752	

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

Law Office
TERRY JONATHAN LODGE

316 N. Michigan Street, Suite 520
Toledo, Ohio 43604-5627

Phone (419) 205-7084
Fax (419) 452-8053
lodgelaw@yahoo.com

July 30, 2018

May Ma
Office of Administration
Mail Stop: TWFN-7-A60M
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001.
Via email to Holtec-CISFEIS@nrc.gov

Jose Cuadrado, Project Manager
Division of Spent Fuel Management
Via email to jose.cuadrado@nrc.gov

Jill Caverly, Environmental Project Manager
Via email to Jill.Caverly@nrc.gov

SUBJECT: Scoping Comments of Don't Waste Michigan on Holtec International
HI-STORE Consolidated Interim Storage Facility Project Docket No.
72-1051

Dear NRC:

Don't Waste Michigan hereby submits the following comments for record on the application and supporting documents for the proposed Holtec International (Holtec) consolidated interim storage facility (CISF) for spent nuclear fuel (SNF) being planned for southeastern New Mexico.

1. Improper Appendix C Redaction from ER

We object that some 144 pages, amounting to one-quarter (25%) of the 543-page Holtec Environmental Report (Rev. 1), are redacted and inaccessible for public review and comment. Holtec proposes to construct and operate a HI-STORE CISF for spent nuclear fuel storage on a 960-acre site in Lea County, New Mexico.

In the 543-page Holtec Environmental Report on the HI-STORE CIS Facility ("CISF"), Rev. 1 ("ER"), Holtec mentions in several places that there are two historical or cultural properties that could be directly affected by the project and refers the reader to Appendix C, but the ER does not explain where they are located, what they are, their significance, how they would

be affected by the CISF, nor what measures are being considered to mitigate their destruction or alteration as a consequence of building and operating the CISF. From p. 321 to 464, (“Appendix C: Cultural Resources Communications and Survey Results”) all of Appendix C is redacted, and each page is marked “Security-Related Information Withheld under 10 CFR 2.390.” Without it, the public has, at best, only a vague notion that there will be supposedly unavoidable destruction of the properties from CISF construction and operation, and further, cannot meaningfully propose possible mitigation actions.

2. Holtec Grossly Underestimates the Volume of Low-Level Radioactive Waste To Be Generated By the Project

Holtec refers in the Environmental Report to the prospect of generating merely “small quantities of hazardous and non-hazardous waste. . . includ[ing] low-level radioactive waste, radioactive mixed waste, hazardous waste, solid (sanitary) waste, and industrial waste.” But millions of tons of concrete will be mixed and poured onsite in providing barriers between the subterranean environment and the SNF casks, and so the “small quantities” assertion is misleading and factually inaccurate. Even if cask replacement is undertaken only one time, to ready the SNF to be removed to a repository, and the waste is held at Holtec for only one century, very considerable low-level radioactive waste (“LLRW”) will be generated in the form of a huge quantity of concrete. Also, since Holtec does not describe what the once-a-century restoration will involve, it must be presumed that after the first century changeover, there will be 10,000 used metal canisters, all of which will also be LLRW. Finally, there is no discussion nor projection of the wastes that will be created by the arrival of defective, malfunctioning casks or casks with SNF impairments that are leaking, which will inevitably result in creation of LLRW.

3. By its own delineation of the CISF, Holtec has defined a site-specific spent nuclear fuel storage facility and does not qualify for the presumptions of the Waste Storage GEIS

The “Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel: Final Report, Volume 1”¹ (“Continued Storage GEIS”) allows an applicant to bypass NEPA analysis of certain aspects of a nuclear waste storage proposal. Here, it is unlikely that severe accident mitigation can be treated as a generic issue because the Holtec proposal does not substantially mirror the Continued Storage GEIS parameters.

Holtec proposes no means for dealing with the arrival of a leaky or cracked cask at its facility. The Continued Storage GEIS assumes the presence of a dry transfer system (“DTS”) to address cask problems from the early stages of facility operation.² Moreover, the Continued Storage GEIS notes that there is no DTS capability anywhere in the United States, including all

¹Located at <https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr2157/v1/>

²From Continued Storage GEIS p. 1-16: “A DTS will be built at each ISFSI location during the long-term storage timeframe to facilitate spent fuel transfer and handling.

of the nuclear plant sites from which spent nuclear fuel shipments will originate,³ underscoring the imperative for Holtec to have a DTS from the inception of waste storage there. The Chief Executive Officer of Holtec, Dr. Kris Singh, has stated that “It is my personal belief, it is not practical to repair a canister if it were damaged.”⁴

As a consequence of Holtec’s decision not to have a DTS in its first century of operations, and to rely on a policy of “return to sender,” viz., to return leaking or damaged casks to their points of origin, the proposal is site-specific, the Environmental Impact Statement here must address the environmental effects and consequences for each anticipated delivery and delivery route (there being no mobile DTS systems to address consequences of radioactive leakage along each of the routes).

4. There is likely to be fracking beneath the Holtec CISF site

At p. 54/543 of the Environmental Report, Holtec states that it “With regard to potential future drilling on the Site, Holtec has an agreement with Intrepid Mining LLC (Intrepid) such that Holtec controls the mineral rights on the Site and Intrepid will not conduct any potash mining on the Site. Additionally, 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 (Holtec 2016a).”

The state of technology of horizontal hydraulic gas and oil fracturing, or “fracking,” is such that there can be lateral drilling through productive shale for several miles. So a fracked well could be drilled vertically, somewhere offsite miles away, but the drilling could proceed at the 5,000 foot depth directly underneath Holtec. At the fracturing stage which gives fracking its name, subterranean high explosives are detonated, deliberately set to create underground caverns into which the toxic industrial cocktail is injected to draw out oil or gas.

While 5000 feet of depth provides some comfort that subsidence (collapse of subterranean caverns) will not take place, the pre-existing drilling effects, mining induced changes, and use of fracturing explosives in, under or near the site make for complex geology. Add to that the Permian Basin rises and falls documented recently by Southern Methodist University scientists. There is routinely fracking activity below 5000' in the immediate region of the Holtec facility. The EIS must provide projections as to the timing, volume of fracking activity, intensity, anticipated geological effects, and other geological data on the shale formations which are found beneath the Holtec site.

Even if fracking beneath the Holtec site were determined not to be a cause of future subsidence, it can cause fissures underground, which induce contact with groundwater,

³*Id.* at p. 2-20.

⁴<https://youtu.be/euaFZt0YPi4>

infiltration of groundwater with corrosives into aquifers (the chemical cocktails for fracking are rife with corrosives). Remember, the local aquifer(s) are at 1000 feet, and there is supposed groundwater at about 34 feet of depth. The implications for fracking beneath the Holtec site must be geologically investigated, understood and communicated via the EIS.

5. The Holtec facility is part of a plan to aggregate SNF for reprocessing, and reprocessing which has either been segmented from the Holtec proposal or omitted from disclosure of cumulative effects

In a 2015 slide show given by a Holtec representative to the New Mexico State Legislature,⁵ Holtec represented that the CISF “Provides the most flexibility for recycling, research, and disposal” and “Dispels Arguments There Are No Solutions For SNF.” In another slide, Holtec delineated the “waste solutions” as including “reprocessing SNF.”

In 2008 the U.S. Department of Energy published a “Draft Global Nuclear Energy Partnership Programmatic Environmental Impact Statement” (“GNEP PEIS;” DOE/EIS-0396), in which it expressed a preference for reprocessing of spent nuclear fuel under U.S. auspices as a nonproliferation policy. GNEP proposed to institute a framework for nuclear fuel services in order to remove the need for a country to develop its own enrichment or reprocessing facilities. GNEP PEIS p. I-3. The proposed Holtec site in New Mexico was actively under consideration for GNEP activity, either as a CISF or reprocessing center, at that time.

Since reprocessing of SNF has been identified by Holtec as an activity associated with the aggregation of SNF in southeastern New Mexico, and available industrial resources exist in the vicinity which could be harnessed for reprocessing, there is either segmentation of the overall Holtec project, or reprocessing must be candidly investigated and discussed as a cumulative effect of the Holtec CISF.

6. The Environmental Report fails to provide a table of data concerning minimal radiation effects from transport of SNF

In several locations of the Environmental Report, Holtec maintains that a “Table 4.9.1” provides data tending to show minimal radiation dangers from transporting the expected thousands of casks of spent nuclear fuel. The data is not narratively described in the ER, and consequently there is no basis for the ER conclusions of minimal effect.

At the following places in the ER, there is reference to Table 4.9.1:

- “Results of the incident-free analysis of transporting 500 canisters of SNF annually are presented in Table 4.9.1. As shown, the annual doses to the public along the transportation route would be much small. *[sic]*.” ER p. 200/543.
- “In assessing the Yucca Mountain repository, DOE also evaluated the national impacts

⁵www.nmlegis.gov/handouts/RHMC 080216 Item 5

of transporting SNF from commercial reactors across the U.S. to the repository. DOE determined that transporting up to 70,000 metric tons of SNF would result in a total dose of 1,100-1,200 person-rem to the population along the transportation routes (DOE 2008, Table 6-4). Those results correlate well with the results presented Table 4.9.1 of this ER, when the results in that table (which represent the impacts of transporting 5,000 MTUs) are integrated to account for a similar overall quantity of SNF transport.” ER p. 203/543.

- “Prior to D&D activities, all canisters of SNF would be removed and transported to a permanent repository. For purposes of this ER, it is assumed that the repository would be at Yucca Mountain in Nye County, Nevada. The impacts associated with transporting the SNF from the CIS Facility to Yucca Mountain are presented in Table 4.9.1. Those impacts represent the annual impacts of transporting 5,000 MTUs. The impacts of transporting the full inventory of the CIS Facility (100,000 MTUs) would be 20 times the impacts presented in Table 4.9.1.” ER p. 203/543.

Omission to provide the table renders these conclusions suspect and deprives the public of the basis for making them.

7. Holtec cannot demonstrate, as required by 10 C.F.R. § 72.22, that it either possesses the necessary funds, or that it has reasonable assurance of obtaining the necessary funds, or that by a combination of the two, it will have the necessary funds available to cover the construction, operation and decommissioning of the CISF.

By CFR 10 C.F.R. § 72.22(e), Holtec is required to demonstrate “reasonable assurance” that it can fund the construction, operation and decommissioning of the CISF. Holtec inconsistently states that it will solely and internally finance these facets, and that it must have definite contractual arrangements with the U.S. Department of Energy (“DOE”) in order to undertake the CISF.

Holtec cannot provide “reasonable assurance” because its financing plan is dependent upon an arrangement that is not disclosed within Holtec’s narrative explanation. And if the ambiguously-delineated statement that Holtec requires a contract with DOE before it will undertake the CISF means that DOE must take title and assume liability for the waste, there is no provision in the Nuclear Waste Policy Act, as amended that allows such an arrangement.

Holtec projects in its financial plan an estimate of construction costs that Holtec says it will cover via a line of credit from an unnamed creditor. At p. 4/10 of the “Holtec International & Eddy Lea Energy Alliance (ELEA) Underground CISF - Financial Assurance & Project Life Cycle Cost Estimates” (“Financial Assurance Plan”), Holtec specifically says:

Additionally, as a matter of financial prudence, Holtec will require the necessary user agreements in place (from the USDOE and/or the nuclear plant owners) that will justify the required capital expenditures by the Company. However, if the NRC approves and the necessary contractual instruments are established insuring the minimum revenue stream needed to justify the facility, then Holtec will launch the construction using its

own resources so as to bring the interim storage solution to the industry in the shortest possible time.

Holtec thus will not construct the CISF without financial guarantees from the U.S. Department of Energy. The only conceivable way that such financial guarantees could be forthcoming from DOE would be by means of DOE taking title to the spent nuclear fuel (“SNF”) at the commercial nuclear reactor site. There is no legal authority under the federal Nuclear Waste Policy Act for DOE to enter into any agreement, either with Holtec or any commercial nuclear reactor utility, to pay.

8. There will be inadequate inspection of cask vents for blockage and debris

The casks which will be used for a century of storage at the Holtec site will almost certainly not be subjected to effective visual monitoring for obstruction of the vents. In Amendment 5 to Certificate of Compliance No. 1032, Appendix A,⁶ the NRC abandoned the practice of requiring vent examination once every 24 hours by making it an option. Now, the custodian of the casks must either “Verify all OVERPACK inlets and outlets are free of blockage from solid debris or floodwater” every 24 hours, or “For OVERPACKS with installed temperature monitoring equipment, verify that the difference between the average OVERPACK air outlet temperature and ISFSI ambient temperature is = 137 degrees F for OVERPACKS containing PWR MPCs, = 136oF for OVERPACKS containing BWR MPCs” every 24 hours.⁷

Given that the bottom vents will be difficult or impossible to inspect, it is probable that visual inspection of vents will be supplanted by the temperature monitoring option. The scientific differences between these two monitoring methods must be identified in the EIS and the calculations disclosed to the public.

Also, the only two “credible exposure scenarios” (Holtec’s characterization) is “worker exposures to direct radiation during cleaning of the storage cask vents or replacing a cask damaged by windborne debris.” ER p. 224/543 of .pdf. Holtec maintains that “Such exposures would be small and would be administratively controlled to further reduce the exposure levels. . . .” But there is no explanation of what administrative controls would be undertaken.

9. The varying estimates of length of time the CISF will be in operation require investigation and evaluation as a possible permanent repository.

Holtec plans to provide long-term SNF storage for up to 120 years,⁸ or for however much

⁶<https://www.nrc.gov/docs/ML1721/ML17214A042.pdf>

⁷*Id.*, p. 25/38 of .pdf.

⁸ER Rev. 1, p. 13/543 of .pdf.

time beyond 120 years it may take to develop a repository.⁹ Holtec itself has recommended to the U.S. Department of Energy that a CIS facility “should have a minimum service life of 300 years.”¹⁰ These inconsistencies raise legitimate questions as to the possible permanence, fitness and suitability of the Holtec plan for storing high-level spent nuclear fuel in the New Mexico desert. Accordingly, the scope of the EIS should include investigation and analysis of the Holtec site as a potential permanent repository.

10. Unassessed radiological effects from normal operations

At p. 214/543 of the Environmental Report, Holtec states, “There have been no previous activities at the Site that would have led to radiological contamination, so Phase 1 construction activities do not pose a radiological risk.”

But at p. 91/543 of the Environmental Report, it states that “Laguna Gatuna was the site of multiple facilities for collection and discharge of brines that were co-produced from oil and gas wells in the entire area; facility permits authorized discharge of almost one million barrels of oilfield brine per month between 1969 and 1992.” Perhaps 300,000,000 gallons of oil and gas waste, or more, have been disposed of in Laguna Gatuna. It is well established that petroleum drilling wastes can contain Naturally-Occurring Radioactive Material (“NORM”), or Technologically-Enhanced Naturally-Occurring Radioactive Material (“TENORM”), in the form of uranium progeny, in particular, Radium-226 and isotopes of thorium such as Th-232. In light of the historical volumes of drilling wastes disposed at the Holtec site, intensive soil sampling and groundwater sampling should be conducted to identify the presence of radioisotopes in excess of background levels.

11. Transportation sabotage and accident costs must be included in the EIS

The Environmental Report contains no credible accident scenarios of sabotage damage or transportation accidents, and thus there also is no delineation of the costs of cleanup and associated economic effects after such events. These deficiencies are significant because, without considering the cleanup costs of reasonably foreseeable attack scenarios, there is no adequate disclosure of environmental impacts under NEPA.

Holtec has failed to provide a realistic estimate of population radiation doses and the cost of cleanup following a sabotage event. If insurance coverage available under the Price-Anderson

⁹According to the Holtec ER Rev. 1, p. 19/543 of .pdf: “Holtec anticipates the SNF could be stored at the CIS Facility for up to 120 years, *or until a permanent geologic repository is opened consistent with the NRC’s Continued Storage Rule.*” (Emphasis added).

¹⁰Letter, Joy Russell, Holtec Vice-President, to DOE, “Response to RFI on Private Initiatives to Develop Consolidated SNF Storage Facilities,” 1/27/2017, <https://www.energy.gov/sites/prod/files/2017/02/f34/Jan%2027%2C%202017%20-%20Joy%20Russell%20-%20Response%20to%20the%20RFI%20on%20Private%20Initiatives.pdf>

Act (Section 170 of the Atomic Energy Act of 1954, as amended) turned out to be inadequate, Congress would have to supplement the cleanup costs. Also, the period of cleanup could be greater than one year, implying an increase in radiation exposure over that assessed by Holtec.

This deficiency is significant because, without considering a reasonable cost of cleanup following a sabotage event, Holtec has failed to adequately assess its environmental impact.

12. There is no evaluation of the operational effects of changed rail freight traffic volume, nor of the effects on shared use of the likely SNF rail transport corridors by non-SNF passenger and freight traffic

The Environmental Report fails to mention, much less evaluate, the operational impacts of the shared use of railroad corridors, which is the means by which more than 90% of the SNF will be delivered to the Holtec facility. This deficiency is significant because, without fully considering the operational impacts of shared use under common carrier obligations, there is no adequate disclosure under NEPA. Moreover, a large percentage of the rail deliveries will be conducted on tracks in a severely hot desert environment, which both increases the likelihood of accelerated wear of the rails as well as adding to the potential for derailments.

A reasonable discussion of the operational impacts of the shared use option must be incorporated into an assessment of the physical effects the thousands of tons of additional volume might cause to the national rail system. This analysis must also disclose and include assumptions as to how many deliveries will be returned to the originating utility sender, inasmuch as Holtec has no intentions of handling radiation containment problems of delivered casks.

13. There is no identification of regions of influence for public health and safety along anticipated transportation routes, and no accompanying recognition of sabotage or accident scenarios, the effects of changes in population within either set of regions over the decades of transport of SNF

In the “Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada, Volume I” (February 2002), the U.S. Department of Energy pronounced that the “region of influence for public health and safety along existing transportation routes is 800 meters (0.5 mile) from the centerline of the transportation rights-of-way and from the boundary of railyards for incident-free (nonaccident) conditions. The region of influence extends to 80 kilometers (50 miles) to address potential human health and safety impacts from accident scenarios.” §§ 3.2.1, p. 3-119.

Given that the ultimate destination for the SNF that would be delivered to Holtec’s facility is a federally-mandated permanent repository, there is no discernible reason why these two regions of influence - 800 meters for incident-free deliveries, and 50 miles for accident-interrupted deliveries - should not be immediately adopted.

There is credible evidence of accident potential admitted by Holtec. In the “HI-STORE CIS Safety Analysis Report, Revision 0A (October 6, 2017), Holtec asserts:

In order to uphold the HI-STORE philosophy of “Start Clean/Stay Clean” HP personnel ensure that contamination levels on the canisters of incoming shipments meet site requirements. Canisters exceeding the limits will be returned to the originating power plant for dispositioning.

Id., § 3.1.4.6, p. 179/581 of .pdf.

And in the Environmental Report, Holtec admits:

The potential exposure pathways at the CIS Facility Site include: (1) direct exposure to radiation (neutrons and gamma rays) that is emitted from the storage casks, (2) exposure to radioactive material through ingestion of contaminated water or food, including plants and animals in the vicinity of the Site that may be used for subsistence, and (3) exposure to radioactive material through submersion or inhalation of airborne radionuclides. The evaluation of exposures from the first route requires consideration of the radiation source (i.e., the canister contents).

Exposures from the second and third routes require that some radioactive material escape from the casks and the proposed CIS Facility. Given the CIS Facility start clean/stay clean philosophy (i.e., CIS Facility plans to reject and return canisters that have unacceptable external contamination), as well as the fact that no canisters would be opened at the proposed CIS Facility, and considering the engineered features of the canister/cask, there appears to be no viable mechanism by which significant radioactive materials would migrate off-site, or even away from the casks. Thus, while the latter two exposure routes are possible, radioactive material is unlikely to be available for ingestion or inhalation via those pathways during normal conditions, and hence, there is no opportunity for impacts from these pathways (NRC 2001, page 4-46).

Id. at p. 214/543. These admitted effects logically are true along every inch of each transportation corridor used for delivery of the SNF - and for the return of casks to their point of origin. Indeed, the illegal proposal by Holtec to return the casks to point of origin serves to create a “viable mechanism by which significant radioactive materials would migrate off-site. . . .”

Holtec states that if the “maximum reasonably foreseeable accident associated with SNF transport to the CIS Facility” occurred - the scenario is not disclosed - that “If the accident occurred in an urban area, the estimated population radiation dose would be about 16,000 person-rem. If the accident occurred in a rural area, the estimated population radiation dose would be about 21 person-rem. Because these risks are for the entire population exposed during the accident, the risk to any single individual would be small. In an urban area or rural area, the radiation dose from the accident for the maximally exposed individual would be 34 rem; this is based on the individual being 1,100 feet downwind from the accident, where the maximum dose would occur (DOE 2008, Section 6.3.3.2).” ER § 4.9.3, p. 201/543 of .pdf.

Holtec assures that “normal conditions” will not see radioactive material becoming available for ingestion or inhalation, but gives little accounting for abnormal conditions which would cause that. At least 10,000 shipments will travel to the Holtec facility; an unknown number will be returned to sender. Holtec renders only calculation-free person-rem exposures, does not define “urban” and “rural,” and provides no comprehensive overview of transportation exposure potential all along every possible transportation route.

These deficiencies are significant because, without full consideration of exposed populations and health and safety impacts within the transportation radiological regions of influence, there is no adequate evaluation of environmental impacts as required under NEPA. Because those environmental impacts could be materially different from those presented in the ER, the data and calculations must be performed and the EIS must reflect the new information.

14. Transportation sabotage risk may differ from risks of ISFSI storage

The Environmental Report omits to describe and quantify the risks of sabotage either at Holtec’s facility, or at the ISFSIs where SNF is being stored, or will be stored. Holtec’s discussion of the “no-action” alternative doesn’t even acknowledge reasonably foreseeable sabotage events at one or more of the 76 identified commercial reactor or DOE storage sites. This deficiency is significant because, without equally considering reasonably foreseeable sabotage events under both the Proposed Action (including the prospect of sabotage during transport) and the No-Action Alternative, there is a failure to adequately assess their environmental impacts, and those environmental impacts could be materially different from the current ER.

15. The Holtec site contains habitat for the dunes sagebrush lizard and Lesser prairie chicken that has been assessed as present on immediately adjacent terrain to the planned facility and there is a federal Endangered Species listing petition pending

The dunes sagebrush lizard (“DSL”) is a narrow-ranging habitat specialist that lives in irreplaceable shinnery oak sand dune habitat in parts of southeastern New Mexico and West Texas. The species is currently in danger of extinction (and so, endangered), or is likely to become an endangered species in the foreseeable future (threatened species) throughout all or a significant portion of its range.

The Lesser prairie chicken is found in habitat that includes the shinnery oak which is also critical to the DSL.

On May 8, 2018, Center for Biological Diversity and Defenders of Wildlife formally petitioned¹¹ for its addition to the Department of Interior’s Endangered Species Listing. Accord-

¹¹https://www.biologicaldiversity.org/species/reptiles/dunes_sagebrush_lizard/pdfs/DSL-petition.pdf

ing to the petition, the DSL is affected or will be affected across its entire range by three threat factors recognized in the Endangered Species Act (ESA):

- “Present and future habitat modification and destruction, with over 40% of historic shinnery oak habitat already lost and the lizard gone from as much as 86% of previously occupied survey sites. The primary cause of habitat loss has been widespread oil and gas development in the shinnery oak sand dune complexes the species prefers. An estimated 35% of DSL habitat has already been compromised by high and very high petroleum well densities across the species’ range; further losses are expected, especially in Texas where existing regulatory mechanisms are inadequate to protect the species (Factor D). . . . Based solely on currently available mine lease boundaries, over 20,000 acres of DSL habitat and buffer may be lost from Texas.”

- “Existing regulatory mechanisms have been insufficient to protect the species. While it appears the avoidance requirements of a Candidate Conservation Agreement (CCA) and CCA with Assurances (CCAA) in New Mexico have slowed the loss of the lizard’s habitat, the Texas Conservation Plan (TCP) has failed to conserve the DSL or its habitat.” The Texas experience imposes increased pressure on preservation of the adjoining habitat in New Mexico.

- “Other manmade and natural factors, including invasive species, climate change, and contaminants further imperil the species throughout its range. Invasive species, including honey mesquite and Malta starthistle, are present threats to the DSL and shinnery oak dune communities, and their establishment is exacerbated by human activities such as oil and gas development in the area. Drought and temperature increases and variability driven by climate change may shift the climate envelope for the lizard or the shinnery oak beyond the species’ biological limits over the next 50-80 years. A mismatch between the lizard or its preferred vegetation and the presence of sand dunes, even if direct habitat destruction was not an issue, will be perilous in coming decades. And contamination from various mining, drilling, and petroleum transportation activities may harm local populations and significantly impede conservation. When combined with the effects of threat Factor A and the demonstrated inability of existing voluntary mechanisms to protect the DSL and its habitat in Texas, the additional stressors of invasive species, climate change, and contamination are likely to exacerbate the threats to the lizard.”

The DSL and Lesser Prairie Chicken, or beneficial habitat to the DSL and Lesser Prairie chicken are found immediately to the north and east of the Holtec site. The EIS must reflect ESA investigative work and consultations concerning the potential for their presence, and further, the possible environmental effects of casual encounters between these species and the industrial processes and radioactive waste proposed for storage by Holtec must be investigated and analyzed. Even if the species do not occupy the Holtec site, there is a realistic likelihood that they may move toward it, or casually travel on or through it.

Don’t Waste Michigan respectfully requests that the Draft Environmental Impact Statement include and address each of the foregoing areas of comment.

Sincerely,

/s/ Terry J. Lodge

Terry J. Lodge, Esq.

Counsel for Don't Waste Michigan