

Office of Administration
ATTN: Program Management, Announcements
and Editing Staff
Mail Stop: TWFN-7-A60M
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Via submission to [Regulations.gov](https://www.regulations.gov) and cc to
stacy.Schumann@nrc.gov

RE: Palisades Nuclear Plant, Docket ID NRC-2022-0158 (Comments on post-shutdown decommissioning activities report (PSDAR))

Dear NRC Office of Administration:

I hereby submit comments on the PSDAR and associated concerns related to the Palisades Nuclear Plant on behalf of Beyond Nuclear.

Sincerely,

Kevin Kamps, Radioactive Waste Specialist, Beyond Nuclear

A note on the following comments: Quotations from the PSDAR and DCE (Decommissioning Cost Estimate) are enclosed within brackets.

Process Comments:

Holtec's multiple bait and switches have made a mockery of this public comment proceeding. Dating back to December 23, 2020, Holtec supposedly sought to acquire Palisades in order to decommission it. But on September 9, 2022, Holtec announced it had applied to the U.S. Department of Energy (DOE) for a billion dollar bailout under the Civil Nuclear Credit program, in order to restart the 51-year old reactor. Its application had been filed on July 5, 2022, just eight days after acquiring Palisades in the first place, under the false basis of decommissioning it. Holtec's application to DOE was kept secret from the public for more than two months.

On November 18, 2022, Holtec announced — not in a press release, nor even on its website, but rather on its social media platforms — that DPOE had denied its CNC program application. Holtec meekly announced it would thus return to its supposed purpose for taking over Palisades in the first place — decommissioning.

But then on December 19, 2022, Holtec pulled a 180 yet again, announcing it would re-apply for the second round of CNC program bailout funding, in January 2023.

As shocking as its unprecedented zombie reactor bailout and restart scheme is, perhaps it should not be a surprise. After all, as early as April 2022, Holtec's CEO, Krishna Singh, in the trade press publication ExchangeMonitor, floated the trial balloon of building one or more of its Small Modular Nuclear Reactors (SMNRs) at the Palisades site, instead of or in addition to decommissioning the 51-year old reactor. Follow the bouncing ball. Hope you're enjoying the roller coast ride. The chaos and obvious bad faith of Holtec has made a mockery of NRC's PSDAR and DCE public comment proceeding.

Yet NRC has carried on, blithely and complicity, as if the SMNR new build scheme, as well as the dangerously age-degraded reactor bailout and restart scheme, don't even exist. The public is left bewildered and whiplashed. But perhaps that's the point and intention?

Another major reversal that has taken place since the publication of the PSDAR and DCE on December 23, 2020 is the withdrawal (or ouster?) of SNC-Lavalin from the CDI consortium.

Have the PSDAR and DCE been updated to reflect ANY of this?!

Another major example of NRC complicity with the industry, against the public interest, is its flippant approval of the Palisades license transfer, from Entergy to Holtec, despite significant opposition from environmental groups and the Attorney General of the State of Michigan. A coalition comprised of Beyond Nuclear, Don't Waste Michigan, and Michigan Safe Energy Future met NRC's arbitrarily and capriciously short 20-day deadline, post Federal Register Notice publication, to file an intervention petition by the February 24, 2021 deadline. So too did Environmental Law and Policy Center of Chicago, as well as the Office of the Attorney General of the State of Michigan, Dana Nessel.

Despite the short 20-day deadline, the NRC saw fit to keep the would-be intervenors waiting a year and five months, before getting back to them on the ruling re: the status of their interventions. The environmental groups were essentially told to go jump in a Great Lake. Thankfully, the MI AG's intervention is still alive, alive significantly whittled down by the NRC. Remarkably, these initial intervention rulings, which NRC took 17 months to publish, happened in July 2022. But Holtec declared victory on the license transfer on June 28, 2022. Talk about a mockery of a proceeding.

Similarly, improper withdrawals from NDTF (Nuclear Decommissioning Trust Fund) for non-decommissioning related expenses, requested by Holtec on December 23, 2020, have been speedily rubber-stamped by NRC, even though adamant opposition to such drain downs for unrelated expenses was a central focus of the would-be interventions. Yet another mockery of due process and sound decision making.

But there are more process outrages. NRC's setting this public comment deadline on December 27, 2022, in the middle of the holidays, is another.

A number of outrageous things happened at NRC's public comment in-person meeting held at Lake Michigan College in South Haven on September 22, 2022. NRC staffer Bruce Watson physically confronted me as I was setting up a public information table at the back of the

meeting room. I told him I had done this countless times at NRC public meetings in the past, including those held in this very room, as well as at other locations around South Haven, dating back not years but decades. Watson contested my simple statement of fact, and demanded, apparently in an attempted intimidating manner, that I leave the room, with my partially assembled information table. A local police officer who witnessed Watson's behavior shrugged his shoulders and made a telling face at me, then generously helped me lug my information tabling materials through a nearby door, and just tens of feet away in the meeting venue lobby, where I then set up. Why Watson felt the need to try to physically intimidate me is beyond me. It is not the way he should treat members of the public at an NRC public meeting, particularly one who has set up such information tables at NRC meetings in South Haven countless times over decades.

But that was just the beginning of the meeting. Shaun Anderson, who controlled the microphone during the actual public comment session, held the mike while I delivered my comments. At the end of my allotted time, he said not to worry, since it was clear I had more comments I'd like to have made verbally, because there would be another opportunity. Another round would be provided, and I could make my additional comments then. But he and the rest of the NRC staff renege on that promise. Except they did give two opportunities to a pro-nuclear commenter who called in. The broken promise by Anderson was inappropriate, and the allowance by NRC of two comment opportunities to a pro-nuclear caller-in, but not to anti-nuclear locals who attended in person, was an unacceptable double standard.

Also, during the question and answer segment of the meeting, Watson gave false information to the public. He said that radioactive steam generators are routinely shipped via boat on the Great Lakes. This is a glaring false statement. Numerous members of the public — both in the room, and on the phone — were active participants in a campaign that blocked Bruce Nuclear Generating Station's attempt to ship a grand total of 64 radioactive steam generators on the Great Lakes, more than a decade ago. The scheme was ultimately blocked when the Mohawk Indigenous Nation of the St. Lawrence River informed Bruce Nuclear and the Canadian Nuclear Safety (sic) Commission that the radioactive steam generator shipments simply would not be allowed through their territory. Is it appropriate for NRC staffers like Bruce Watson to spew blatantly false information at NRC public meetings? Of course, Watson and NRC did not provide any opportunity for those of us taking part who knew better, to correct the record on his false assertions, meaning many members of the public were left with a false impression, of benefit to Holtec, which proposes to barge radioactive steam generators, as well as highly radioactive irradiated nuclear fuel and other radioactive wastes, on Lake Michigan. This was highly inappropriate.

Comments on the Substance of the PSDAR and DCE — Introduction and Background:

Moving on from process objections, to criticism of the substance of the PSDAR and DCE itself, I'd like to start by pointing out that Holtec's word cannot be trusted. This is partly based on its horrendous track record. For example, at Oyster Creek, NJ, Holtec's careless rush job during transfer of highly radioactive irradiated nuclear fuel from indoor storage pool to outdoor dry cask storage doused and dosed a worker with radioactive water. There was also the incident where a Holtec employee backed a vehicle into an electrical component, and caused a power outage for

tens of thousands of people on the Jersey Shore. And, similarly to Palisades, Holtec's acquisition of Oyster Creek involved a bait and switch. Holtec initially said it was solely focused on decommissioning Oyster Creek, but then later floated the trial balloon of building one or more of its SMNRs there. Such dangerous incompetence, as well as bait and switches, shows that Holtec's word cannot be trusted, including in the Palisades PSDAR and DCE.

At San Onofre, CA, Holtec's bad design and procedures at a dry cask storage facility nearly led to the 18-foot drop of loaded irradiated nuclear fuel canister weighing 50 tons. Again, Holtec's mere words cannot be trusted at face value, given such dangerous incompetence, coupled with Holtec's attempt to cover up the incident. If but for a courageous whistleblower, the incident might never have come to public light.

At Indian Point, NY, Holtec has proposed dumping radioactive storage pool water dump into the Hudson River, causing push back from concerned locals. Similarly at Pilgrim, MA, Holtec has proposed dumping radioactive pool water into Cape Cod Bay, leading to a groundswell of opposition to the scheme. The scheme is even opposed by US EPA. Holtec similarly plans to dump radioactive storage pool water at Palisades into Lake Michigan, despite it being not only a fishery, as at Pilgrim and Indian Point, but also a freshwater drinking and agricultural irrigation water supply. Nowhere in its PSDAR does Holtec mention such dumping plans at Palisades, calling into question, what else has it left out, and hidden from public knowledge?

For more information about Holtec's incompetence, bad faith, and even law breaking, please see an annotated bibliography I posted online, entitled "Radioactive Skeletons in Holtec International's Closet": <<https://archive.beyondnuclear.org/centralized-storage/2019/7/25/radioactive-skeletons-in-holtec-internationals-closet.html>>.

Similarly, see Nancy Vann's "rap sheet," or "Holtec Company Profile," also posted online: <<https://static1.1.sqspcdn.com/static/f/356082/28258075/1582115755427/2+16+20+Holtec+SNC-L+Profiles+2-16-20.pdf?token=i03YrI5fX6A%2FOsNyvQmp8PPfmYM%3D>>.

A serious disconnect in Holtec's Palisades decommissioning plan — the indoor wet storage pool is to be dismantled early in the process. Where then would any needed cask unloading or replacement activities take place? After all, there is no mention whatsoever in the PSDAR of building a hot cell, or dry transfer system, at Palisades.

The fourth cask to be loaded at Palisades, in July 1994, is a cautionary tale. Its welds are defective, and violate technical specifications. Palisades then-owner had promised — including under oath, in federal court — that any problem dry casks would simply unload their highly radioactive wastes into the indoor wet storage pool. Due to problematic thermal challenges, that defective cask has never been unloaded, after nearly 30 years. While this example calls into question how reliable the pool itself would be for cask emergencies, its dismantlement would mean there would be no facility whatsoever at Palisades to deal with cask failures.

Beyond Nuclear endorsed coalition comments spearheaded by NIRS and CAN on August 30, 2022, re: the U.S. Nuclear Regulatory Commission's ("NRC's") proposed

rule, Regulatory Improvements for Production and Utilization Facilities Transitioning to Decommissioning, 87 Fed. Reg. 12,254 (March 3, 2022) (Docket No. NRC-2015-0070) (“Proposed Rule”). The coalition comments are posted online here:

<https://drive.google.com/file/d/1T5Etc58KdySuiVX5L63MUPp73tpN2N-j/view>

I would like to apply those coalition comments in response to Holtec’s PSDAR and DCE, as if fully incorporated herein.

Similarly, a backgrounder report I wrote re: the lackluster decommissioning of Palisades’ sister plant, Big Rock Point, is relevant. It is posted online: <http://archives.nirs.us/reactorwatch/decommissioning/bigrockbackgrounder272007.pdf>. I would like to incorporate its lessons learned to the Holtec Palisades PSDAR and DCE, as if fully rewritten here. Of course, Big Rock Point is a part of the package deal with Palisades, in terms of Holtec’s takeover from Entergy.

I would also like to call NRC’s attention to a letter prepared by an environmental coalition — including Beyond Nuclear — re: Holtec’s decommissioning schemes at Indian Point. Please apply all relevant concerns at Indian Point, as expressed in the letter, to Palisades as well. The letter and attachments are posted online: <https://archive.beyondnuclear.org/decommissioning/2021/5/26/beyond-nuclear-letter-requesting-congressional-oversighthear.html>.

I’d also like to remind NRC of a broad environmental coalition’s comments on the 2006 SEIS (Supplemental Environmental Impact Statement) re: Palisades’ 20-year license extension. Please apply all relevant lessons learned in that document to Holtec’s Palisades decommissioning schemes contained in its PSDAR. Those comments are posted online here: <http://archives.nirs.us/reactorwatch/licensing/cntsnureg1437supplement27.pdf>.

I’d particularly like to remind NRC of our 2006 coalition’s warning about the vulnerability of Native American sites — such as burial sites and sacred cultural sites — at Palisades, including to decommissioning activities.

Please also apply all relevant parts of this Beyond Nuclear report regarding radioactive releases at nuclear power plants to Holtec’s PSDAR, especially the chapter about Palisades itself: <https://archive.beyondnuclear.org/reports/>. An important complement to that report, very relevant to Palisades’ decommissioning and its costs, given tritium spills and leaks at Palisades (not to mention “routine” and intentional discharges), are extensive studies about the health hazards of tritium, posted online at: <https://static1.1.sqspcdn.com/static/f/356082/6736687/1272554001127/Tritiumbasicinfofinal.pdf?token=JC83j8cgYLrkEnP2jcnwDifxGU0%3D> and <http://archives.nirs.us/radiation/tritium/tritiumhome.htm>.

All relevant sections of the 2/24/21 intervention petitions mentioned above should also be applied to rebutting Holtec’s PSDAR and DCE, namely:

The MI AG's intervention petition <<https://static1.1.sqspcdn.com/static/f/356082/28407936/1614230015377/2+24+21+MI+AG+Petn-1.pdf?token=rGI%2FqZ6bP4X1TSG6yt7NBIUC4MQ%3D>>;

ELPC's intervention petition: <<https://static1.1.sqspcdn.com/static/f/356082/28407935/1614229845020/2+24+21+ELPC+petn-1.pdf?token=0Gr1Ytf10xh61tj9Kw%2FSzlS49jQ%3D>>;

And the intervention petition submitted by attorney Terry Lodge on behalf of Beyond Nuclear, Don't Waste Michigan, and Michigan Safe Energy Coalition <<https://static1.1.sqspcdn.com/static/f/356082/28407932/1614228735173/2+24+21+Petn+COMPLET-1.pdf?token=Tn6cKFuWVsx7iFJYj9x%2BQ%2FXPhOg%3D>>.

Re: the above, the ASLB and NRC Commissioners should not have rejected all but a part of the MI AG's intervention; the NRC Staff's silence was and is deafening.

Re: the MI AG's intervention petition dated 2/24/22, I would like to add the following:

Re: Holtec's half-baked, half-hearted decommissioning plan, see the section of the MI AG's intervention petition having to do with footnotes #31-33. As mentioned above, Holtec's screw ups at Oyster Creek NJ and San Onofre CA represent a red flag.

The MI AG intervention petition at point #66 on page 43 of 74, reads:

Even so, following the dormancy period, the expected DOE recovery would largely be limited to the on-going costs of spent fuel management and even if retained would not offset any substantial overrun in decommissioning costs.

But isn't that exactly what those damage awards are supposed to be for? Compensating the licensee for storage expenses in light of DOE's partial breach of contract? Of course, it isn't turning out that way at all. It's pure profit for Holtec. And it will not use those pure profits to make up for NDT shortfalls, of course, nor to reimburse the NDT fund for non-decommissioning drain downs that NRC has inexplicably, unacceptably permitted. But it does show what a bad faith rip off the entire DOE damages dynamic is now, certainly in regards to Holtec's bad behavior going forward.

Here is the dynamic. It is so unthinkable that it's hard for me to wrap my head around it. But the MI AG did address this in her intervention to an extent, so I'm not crazy.

Holtec does plan to continue to sue DOE for partial breach of contract. The damages come out of the US Judgment Fund at the US Treasury. This is federal taxpayer money. It's supposed to reimburse the owner of Palisades (and Big Rock Point) for on-site storage costs, until DOE someday (some decade, some century) at long last takes title.

But at the same time Holtec has gotten NRC to allow it to drain the NDT funds for those same SNF storage costs.

In a sane world, Holtec should of course have to reimburse the NDT fund for those drained funds.

But nope. They have no plan to. Nor requirement to.

So Holtec's plan is simply to stick those ongoing damages in its pocket, as pure profit.

While also draining the NDT fund by \$166 million for SNF management, which even NRC's own regs say is not allowed—but NRC has granted a rubberstamp waiver. Holtec just had to ask.

So it's the worst of all possible worlds. Little to no radioactive clean up will be done, because there's simply no funding for it. Holtec drained it away from the NDT fund for SNF management and other non-decommissioning expenses, like non-radiological site restoration.

Meanwhile, major shortcuts are taken on dry cask storage, despite the huge money flows, because NRC requires no more/better, so Holtec skates by doing the bare minimum. While laughing all the way to the bank, with vast amounts of public money.

Use of NDT funds for spent nuclear fuel management and site restoration — per the MI AG's intervention contention #2 — is outrageous. The NDT is short as it is. This will drain it significantly further. Radiological cleanup will inevitably get shortchanged and neglected by this. But of course NRC is complicit, by allowing it, with its ready rubber stamp, every waiver and exemption requested.

The Big Rock Point backgrounder mentioned above further makes the point about the hazards of lingering radioactive contamination, even post decommissioning, even post NRC releasing the site for unrestricted use.

In addition to the backgrounder report, please consider the words of wisdom contained in closely related press statements (all dated Nov. 30, 2006) by my colleagues, posted at: <<http://archives.nirs.us/reactorwatch/decomissioning/decommissioninghome.htm>>.

Point #14 on p. 47 of 74 in the MI AG's contention #2 from 2/24/21 reads:

While the Applicants claim the existence of the DOE recoveries bolsters the Holtec's financial qualifications, they fail to note that Holtec nowhere commits to return such recoveries to the trust funds or otherwise ensure their availability to Holtec if and when additional license termination, site restoration, or spent fuel management funds are needed.

It is unthinkable to me that this is allowed. But it is. It is a sickening abuse of taxpayer dollars.

The following is from p. 56 of 74 in the MI AG's 2/24/21 intervention petition:

11. Actual costs are available for the BRP ISFSI, which consists of a single concrete storage pad. The Palisades ISFSI currently consists of two concrete storage pads (not collocated) which the Holtec PSDAR states will be consolidated following shutdown. The Holtec DCE also includes a schedule for pad construction. It is not clear from the DCE whether this is an expansion of one of the existing pads or construction of a new pad. Nonetheless the Holtec estimated cost for maintaining the Palisades ISFSI is 35% less than the actual BRP cost. No explanation has been provided for this reduced spent fuel management cost.

The BRP ISFSI holds “only” 8 casks (7 contain irradiated nuclear fuel; one contains GTCC). Palisades ISFSIs hold scores to hundreds of casks! So what gives?! The cost to manage Palisades' ISFSI(s) must, therefore, be expected to cost significantly more than BRP's relatively small-sized ISFSI, right? Yet Holtec's PSDAR and DCE say exactly the opposite, inexplicably.

The MI AG's expert witness declaration deserves a very careful review by NRC staff, and its warnings applied to the Holtec PSDAR and DCE.

The Holtec scheme to barge radioactive wastes — irradiated nuclear fuel, steam generators, and other radioactive wastes, including large nuclear components such as the reactor pressure vessel — on Lake Michigan, is a non-starter. As U.S. Senator Debbie Stabenow has said — and NRC Chairman Hanson agreed with her — protecting the Great Lakes against radioactive waste risks is a “sacred trust.” We, and our countless members and supporters across Michigan and throughout the Great Lakes Basin and beyond, agree wholeheartedly.

Comprehensive exams of Palisades' RPV, lid, and Steam Generators is called for, but there is no mention of any such thing in the Holtec PSDAR. Lessons learned — as from the embrittlement status of Palisades' RPV — should be applied at other badly embrittled RPVs, such as at reactors at Point Beach WI, Beaver Valley PA, Diablo Canyon CA, and other PWRs across the US.

Unacceptably, inexplicably, NRC has already approved Holtec's numerous large-scale drain down requests from the NDTF for non-decommissioning related expenses. This, from an already inadequate NDTF — made so by a 2007 looting of the NDTF, allowed to happen by NRC, and blessed by the MPSC. The Palisades NDTF is so inadequate that it has already led to a major delay in Holtec's otherwise “prompt” decommissioning schedule, in order that the fund can regrow. Hence the 2025-2035 “nap” in the middle of the decommissioning activities. How, with this decade-long lull, can NRC bless another looting of the NDTF, for non-decommissioning expenses?

NRC's effectively regulation-free zone on decommissioning — and its wanton rubber-stamp of each and every request made of it by industry for exemptions and waivers from what few regulations exist — is a reflection of NRC's lawlessness and rogue behavior, that undermines its own mandate (protection of public health, safety, environment, etc.). The Fukushima Daiichi

nuclear catastrophe in Japan is a cautionary tale in this regard. Collusion between the regulatory agency, the nuclear utility, and governmental officials was the root cause, the Japanese Diet (Parliament) concluded in 2012. We long have had — and still do have — such potentially catastrophic collusion in spades at Palisades. NRC’s collusion and complicity with Holtec is objectionable and very high risk.

Specific Comments on Particular Passages/Sections of Holtec’s Palisades PSDAR and DCE

Page 14/98 on the PDF counter—there will be no research—the RPV will not be examined. But it sure should be, as mentioned above.

P. 17/98 — this is very poorly worded:

[Operation and maintenance of the ISFSI until the spent fuel is removed from the SFP and placed in the ISFSI.]

That goes without saying, of course. And of course, operation and maintenance of the ISFSI must continue, indefinitely, after the SFP is emptied, as well!

Re: Section 2.4 — “properly disposed” — there is no proper disposal. Disposal itself is a misnomer. There is no way to dispose of forever deadly radioactive waste, let alone properly dispose of it.

From P. 19/98:

[2.4.7 Waste Transportation

The transportation approach for hazardous, Class A, LSA, or SCO classes of waste is to use a combination of truck and rail to support bulk quantity removal of waste. Since there is no active rail at Palisades, a truck will be used to deliver the waste to a transload facility. The waste transportation process will be fully defined in the WMP to include the estimated number of shipments, the disposal facilities, and applicable requirements. ***As discussed earlier***, HDI may elect to ship large plant components by barge.] {Emphasis added}

Actually it had not been mentioned yet. This is a reflection of the sloppy nature of the PSDAR and DCE document.

Another example of such sloppiness occurred earlier, on P. 9/98: “vessels” was mentioned. There is only one vessel at Palisades. Holtec very likely copied and pasted its Indian Point PSDAR, and forgot to delete the plural s:

[Decommissioning International, LLC (HDI) Post-Shutdown Decommissioning Activities Report (PSDAR) for the decommissioning of the Palisades Nuclear Plant (Palisades) following the scheduled permanent cessation of plant operations and permanent removal of fuel from the

reactor *vessels* and subsequent transfer of the Part 50 and Part 72 licenses to Holtec International (Holtec) and HDI.] {Emphasis added}

Another example of the sloppiness in the PSDAR and DCE is the exclusion of acronyms from the glossary that are then later used in the documents.

For example, on P. 20/98, the acronym DCGLs is used, but had not been defined in the glossary.

Also, in the PSDAR itself, LTA is defined as License Transfer Application. But in its cover letter, Holtec says Agreement, not Application. This inconsistency is another example of the carelessness and sloppiness of these documents.

On P. 25/98, what is A&G? Corporate A & G is used, but the acronym/abbreviation is not explained, including in the glossary.

On P. 90/98, Master Summary Schedule (MSS) is mentioned. But this acronym is also not listed in the glossary.

Numerous other acronyms used in the documents are simply not included in the glossaries.

Re: MARSSIM, this inter-agency agreement is very problematic. It does NOT provide reasonable assurance of adequate protection of public health and safety. NRC has violated its mandate by blessing MARSSIM.

On P. 20/98, it states:

[The spent fuel and GTCC waste will remain on the ISFSI until it is transferred to the DOE.]

Who says DOE will be in charge of GTCC? Has a Record of Decision been finalized on this decision?

From P. 21/98:

[Additionally, corporate support from Holtec and/or SNC-Lavalin will be provided in areas such as legal, financial reporting systems, information technology, procurement, and human resources.]

Of course, SNC-Lavalin is now gone from the CDI consortium. Yet the PSDAR has never been updated to reflect such a major change?

And re:

[The number of site personnel will vary throughout the life of the project, with increased or decreased staffing levels required as decommissioning activities ramp up or down, or as requirements for security and emergency planning are reduced.]

Why would requirements be reduced, when very significant risks remain?!

P. 22/98:

[ISFSI decommissioning and final license termination in 2041.]

This is very wishful thinking, but has no basis in fact.

P. 23/98:

[Zirconium fire eliminated 9/20/23]

That's very debatable. See Alvarez et al. 2003, which cites an NRC study that admits such an assumption cannot be made. That is, ignitability of zirconium persists indefinitely into the future. This is especially true when a terrorist attack using hot burning incendiaries could itself ignite zirconium!

In the chart, RVI and RPV are considered as Class A waste? This is hard to believe. NRC's "low-level" radioactive waste category must be very permissive. These components are significantly radioactive!

P. 24/98:

SMEs — Subject Matter Experts — are mentioned.

But obviously from his expert witness declaration submitted as part of the MI AG intervention petition, the MI AG SME disagrees with Holtec's SMEs!

P. 24/98:

[The decommissioning costs presented in this report are reported in 2020 dollars. **Escalation of future decommissioning costs over the remaining decommissioning project life cycle are excluded.**] {Emphasis added}

Now why would that be? That is not very conservative at all.

P. 24/98:

re: [Real time experience and executed contracts from Holtec-owned nuclear decommissioning sites.]

Why didn't Holtec include "real time" experience of its major screw ups at San Onofre CA and Oyster Creek NJ then? Because it refuses to learn lessons?

In Table 4-1, on P. 25/98, re: SNF, why are there no figures for packaging, transportation, and removal? Are the SNF costs for these included in Spent Fuel (Direct Expenditures)? Or

are they included under License Termination column? That I have to ask such questions indicated that this table is not well written.

License Termination column actually adds up to 443,213, not 443,215. Granted, there may be figures beyond the rounded decimal point, in terms of significant figures, but shouldn't they have at least mentioned that in a footnote?

Similarly for Site Restoration column, the figures add up to 34,678, not 34,679.

Similarly, for Total column, the figures add up to \$644,016, not \$644,015.

Similarly, the Packaging row figures add up to \$39,027, not \$39,028.

Similarly, the Transportation row figures add up to \$34,410, not \$34,411.

Similarly, the Program Management row figures add up to \$181,711, not \$181,712.

Similarly, the Grand Total row figures add up to \$644,016, not \$644,015.

Why was no footnote warning about rounding errors included with this table? Other similar tables elsewhere in these documents included a footnote warning about rounding errors. The lack of such a footnote here leads to confusion and erroneous figures without explanation, per the above.

P. 26/98: ENVIRONMENTAL IMPACTS

Please see the environmental coalition's 2006 DEIS comments, with the link provided above. Apply relevant sections of those comments to this PSDAR and DCE. It applies directly to both:

NUREG-1437, Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 27, Regarding Palisades Nuclear Plant, Final Report, October 2006 (herein referred to as the SEIS) (Reference 9).

and

NUREG-1437, Revision 1, Generic Environmental Impact Statement for License Renewal of Nuclear Plants, June 2013 (SEIS, Revision 1) (Reference 10).

Re: [5.1.1 Onsite/Offsite Land Use

The NRC concluded in the GEIS (Reference 2) that the experience of plants being decommissioned has not included any need for additional land offsite. Consistent with this determination, HDI does not anticipate any changes in land use beyond the site boundary during decommissioning.]

Except that the abandoned, not cleaned up radioactive contamination will bleed out into the surrounding environment, with no respect for the site boundary, over time.

P. 27/98:

re:

[the existing permit would require a stormwater permit from the Michigan Department of Environment, Great Lakes, and Energy (MDGLE) prior to proceeding with the activity. The NPDES permit, and any MDEGLE stormwater permit contain best management practices (BMPs) to control sediment and erosion effect on water courses and wetlands.] {Emphasis added}

This passage shows, in a single sentence, how sloppy this PSDAR is. One usage of the acronym is correct, but the other is incorrect, in the same sentence. Elsewhere in the document, Holtec also slaughtered the same acronym.

re:

[HDI may elect to ship large plant components by barge. Use of barge transportation to remove waste and provide waste disposal transportation could provide an opportunity for improving project schedule and costs. A barge slip or landing, and if needed dredging to allow navigation of vessels to the slip for loading and transport of selected wastes, may be constructed adjacent to the facility. HDI will evaluate this opportunity through the use of commercial infrastructure or development at site. The onsite slip would be evaluated, designed, permitted, constructed, and operated in accordance with applicable federal, state, and local permits, and required certifications. HDI would seek to avoid any disturbance of sand dunes protected under the Michigan Natural Resources Environmental Protection Act. If constructed, applicable BMPs will be implemented during construction and operation of the slip. This land use would be for a short duration. No changes to land use patterns would result from the use of barge transportation.] {Emphasis added}

Local beachfront property owners face high hurdles when they propose to build even minor structures on or near the lakefront. But Holtec seems convinced it can build a major industrial port facility without much trouble?

Saving Holtec time and money is not a good reason to cause such damage, nor to take such risks. This dock/pier/slip/port facility, and the radioactive waste barge shipments on Lake Michigan it would enable, are non-starters. As US Senator Stabenow has said — and NRC Chairman Hanson agreed with her — protecting the Great Lakes, which include Lake Michigan, against radioactive risks is a “sacred trust.”

This is why I objected to the NRC staff person’s falsehoods re: barging of radioactive wastes on the Great Lakes on the Canada side during the Sept. 22, 2022 meeting. The public on both sides of the Lakes rose up and put a stop to the scheme before it began. Was the staffer intentionally trying to deceive the public about this issue? In order to assist Holtec in its scheme to barge radioactive wastes on Lake Michigan?

P. 27/98:

re:

[The NRC concluded in the GEIS that the experience of plants being decommissioned has not included any needs for additional land offsite. Consistent with this determination, HDI does not anticipate any changes in land use beyond the site boundary during decommissioning.]

Of course, the barge slip, and barge shipping corridor, are off-site. Consumers Energy, the previous owner/operator of both the Palisades and Big Rock Point nuclear power plants, held that Lake Michigan was not its private property, so it did not have to clean up the BRP discharge canal into Lake Michigan, despite document radioactive contamination there. Astoundingly, NRC agreed with that position. This violates the “sacred trust” of protecting the Great Lakes against radioactive risks, as US Sen. Stabenow put it, and as NRC Chairman Hanson agreed with.

P. 28/98

re: [5.1.2 Water Use]

Of course, dumping the radioactive pool water into Lake Michigan is not acceptable. US EPA has said Holtec should not dump radioactive pool water into Cape Cod Bay at Pilgrim MA. There is public resistance to Holtec dumping radioactive pool water into the Hudson River at Indian Point as well. Lake Michigan is both drinking and irrigation water — a further reason Holtec should not dump radioactive pool water into Lake Michigan. Holtec did not even bother to mention its scheme to dump radioactive pool water into Lake Michigan in the PSDAR, but it came to light elsewhere.

The following Beyond Nuclear pamphlet warns against the intentional discharge of radioactive pollutants into surface waters:

<http://static1.1.sqspcdn.com/static/f/356082/26605366/1444852853757/BN_RoutineRadioactiveReleases_Oct2015.pdf?token=zwsUExAyfOttAa88dOgh7qJ3NkE%3D>.

As Barbara Pellegrini, a local resident and Palisades watchdog, has said, tritium discharge into Lake Michigan doesn't dilute. It adds to the concentration of hazardous artificial tritium that otherwise would not be there.

As Dr. Rosalie Bertell of the International Institute of Concern for Public Health, as well as the International Joint Commission Nuclear Task Force, put it, “Dilution is not the solution to radioactive pollution!” She warned about the bio-accumulation, bio-concentration, and bio-magnification of tritium and other radioactive pollutants in Great Lakes waters.

As Michael Keegan of Don't Waste Michigan and Coalition for a Nuclear-Free Great Lakes has said, “Dilution is a delusion.”

P. 28/98:

[5.1.3 Water Quality (Non-Radiological)]

re:

[Areas of one acre or more disturbed during decommissioning that are not covered by the existing permits will require new stormwater permits from the MDEGLE. In addition to the specific permit requirements, selection and implementation of BMPs for stormwater that may be generated from areas disturbed by decommissioning activities is also required.]

It's telling that Holtec will need additional NDPES permits not already in hand. So it seems they'll be disturbing other parts of the plant site? This could harm Native American sacred cultural and burial sites, as mentioned above. This should be prevented at all costs.

RE: [Sanitary waste is managed in an onsite treatment and disposal system (SEIS, Reference 9). As decommissioning proceeds, management of sanitary wastewater may be transitioned to temporary, contained onsite facilities with transport of the sanitary waste to offsite facilities permitted to receive, treat, and dispose of the wastes.]

Porta-Johns as a decommissioning stop gap for decades into the future? This does not seem responsible.

P. 30/98:

Re: [5.1.5 Aquatic Ecology]

re:

[The operational area within the Palisades site boundary includes areas that may be used for moving large plant components during decommissioning from the Palisades power block to a barge slip or landing. These areas have been used during plant operation for similar activities. The GEIS (Reference 2) concludes that for decommissioning activities that do not disturb lands beyond operational areas, the effects on aquatic ecology are not detectable or destabilizing, and that effects on aquatic ecology related to use of a dock or barge loading area and dredging for barge navigation are small.]

So Holtec can dredge to build a radioactive waste shipping dock, but Consumers Energy could not dredge, as at Big Rock Point, to remove radioactive contamination from Lake Michigan sediments known to be present in the discharge canal there?!

P. 31/98

Re: [Any significant potential for sediment runoff or erosion on disturbed areas will be controlled in accordance with BMPs outlined in the current MDEGLE NPDES permit (Reference 15), and any new stormwater permit obtained from the MDEGLE.]

The SEIS (Reference 9) found that there would be no impacts on ecological resources associated with decommissioning beyond those discussed in the GEIS. Therefore, HDI concludes that the impacts of Palisades decommissioning on aquatic ecology are bounded by the GEIS.]

But was such a slip/dock even raised in DEIS? Not that I can recall.

And how is it that dredging for a slip/dock won't worsen already bad shoreline erosion at Palisades? How will such dredging impact the water intake structure not far offshore from Palisades. It was installed to supply water to a nearby natural gas burning plant, but has since been turned over to the City of South Haven as a fresh drinking water intake.

Re: [5.1.6 Terrestrial Ecology

Terrestrial ecology considers the plants and animals near Palisades, as well as the interaction of those organisms with each other and the environment. Evaluations of impacts to terrestrial ecology are usually directed at important habitats and species, including plants and animals that are important to industry, recreational activities, the area ecosystems, and those protected by endangered species regulations and legislation. Section 4.3.6 of the GEIS (Reference 2) evaluates the potential impacts from both direct and indirect disturbance of terrestrial ecology.]

Lake Michigan shoreline sand dune ecosystems are themselves very fragile, rare, threatened, and even endangered. So any industrial activity at Palisades is a risk to worsen already very bad damage there.

Re: [Fugitive dust emissions will be controlled through the judicious use of water spraying.]

How does this not just turn radioactive dust into radioactive run off? How will it be captured as radioactive wastewater before it flows into the Lake, or into aquifers? Or simply spreads radioactive contamination downstream?

P. 32/98

re: [As discussed above, there are no unique disturbances to the terrestrial ecology anticipated during the decommissioning of Palisades.]

As stated above, the fragile, threatened dune ecosystem at Palisades is itself unique, in the sense of being very rare, so Holtec's flippant disregard is unacceptable.

re: [Any transfer of large plant components, soil, or debris from demolition activities during decommissioning would be of short duration and would have minimal impact on terrestrial resources because the components will be transported within the previously disturbed operational area of the site that contains no unusual, rare, or sensitive plants or animals, and no important or sensitive habitats. Because no high-value terrestrial habitats will be disturbed, impacts are expected to be small and should not require mitigation beyond routine construction BMPs.]

Well, that's only because they have already been destroyed by Palisades!

re: [There are no critical habitats in the vicinity of Palisades.]

Again, this is a falsehood. The forested dunes are themselves critical habitats.

Re: [A review of state-listed threatened and endangered species in the Palisades area was presented in the SEIS (Reference 9). The NRC identified 45 state-listed species as endangered, threatened or of special concern in Van Buren County. An updated list of threatened, endangered and special concern species potentially present in the vicinity of Palisades was obtained from the Michigan State University, Michigan Natural Features Inventory online database in July 2020. The updated list designates 113 species as endangered, threatened or of special concern in Van Buren County.]

So, in 14 short years, the number of endangered, threatened or special concern species in Van Buren County more than doubled?! This is ecological apocalypse at a high rate of speed. While decommissioning should be done with the utmost care to prevent further damage, Holtec's schemes to restart Palisades, and/or to build one or more SMNRs there, shows how little Holtec cares about such things as endangered species, ecology, etc. Also, this doubling of the number of species in serious trouble at or near Palisades shows what a dismal failure NRC's 2006 SEIS on license extension was, in regards to impacts on such species. To summarize the environmental coalition comments, in retrospect: "We told you so."

P. 34/98

re: [There is limited to no habitat available within or along the lake shoreline of the operational area of Palisades suitable for the short-duration, stop-over behavior of migrating Red knots; consequently, they are unlikely to be affected by decommissioning activities]

Again, per above, likely because Palisades destroyed it.

Re: endangered Piping plover habitat...

[The operational area shoreline adjacent to the central portion of the facility is developed with no potentially suitable habitat. It is not anticipated that areas of potentially suitable habitat for these birds will be used during decommissioning.]

Of course, it used to be, till Palisades destroyed it.

Re:

[The Pitcher's thistle is a flowering plant present along Great Lakes shorelines on open dunes with sparse vegetation. The plant was documented as present from the early 1980s to the late 1990s in suitable habitat near the cooling towers, and in 2005 on the north end of Palisades property outside the operational area near Van Buren State Park, and n1 A-049*+F5 thistle was found near the cooling towers, or in areas of suitable habitat north or south of the facility property, in surveys conducted in 2005 (SEIS, Reference 9).]

So, Holtec is essentially admitting that Palisades wiped this species out on site? If yes, then how was this not a LARGE impact? And yet NRC's 2006 SEIS foresaw no such LARGE impacts. Which shows how much of a failure the NRC 2006 SEIS was and is.

Re:

[NRC concluded that continued operation of Palisades was not expected to adversely affect any federally-listed, threatened or endangered terrestrial species during the license renewal term (SEIS, Reference 9).]

Well, that's absurd. See immediately above.

P. 35/98

Re: [These activities will be of short duration and take place in operational and previously disturbed areas on Palisades-owned land that has very little value as wildlife habitat. No protected terrestrial species will be affected by this activity.]

Again, because Palisades already destroyed that habitat, and extirpated those species, on site.

Re:

[If selected as a transportation option, barging large plant components from Palisades on Lake Michigan and beyond may require construction of a barge slip or landing and dredging for barge navigation. If a barge slip or landing, or dredging, is needed, these activities will be conducted in accordance with applicable federal, state, and local permits and certifications that include consideration of environmental impacts to threatened and endangered species. In the SEIS, Revision 1 (Reference 10), the NRC noted that if dredging could affect threatened or endangered species or critical habitat, as established under the Endangered Species Act, the USACE must consult with the USFWS or the NMFS before it makes a permit decision. Barge slip or landing construction and dredging would be conducted in accordance with BMPs defined in the applicable permits issued by the MDEGLE and USACE.]

How can Holtec conclude that such major construction would not affect the terrestrial species mentioned above?!

P. 36/98

re: [5.1.7.3 Conclusion

HDI anticipates that decommissioning activities at Palisades will not encroach on the habitat of any state or federally-listed terrestrial species. Any indirect (disturbance-related) impacts from construction noise and human activity are expected to be localized, of short duration, and ecologically insignificant.]

Per immediately above, I think barge dock construction would affect certain species, such as the very sensitive Piping plover, in a LARGE way. That is, a catastrophic way. How could it not?

Re: [5.1.8 Radiological

The GEIS (Reference 2) considered radiological doses to workers and members of the public when evaluating the potential consequences of decommissioning activities.]

What about the LACK OF adequate decommissioning having a radiological impact?! Radioactive contamination not cleaned up will flow into the environment over time, harming people and other living things downwind, downstream, up the food chain, and down the generations, for 10 to 20 half-lives of scores of hazardous radioactive isotopes that Palisades has emitted over the past half-century, which still pollute the site.

re: [Palisades will be within the range of the cumulative occupational dose estimates for decommissioning PWR plants of 560 - 1,215 person-rem (per reactor) provided in Table 4-1 of the GEIS (Reference 2). Palisades is bounded by the PWRs evaluated in the GEIS, and the ALARA program will be maintained to ensure that occupational dose is maintained ALARA and well within 10 CFR Part 20 limits.]

How does this compare to Big Rock Point's decommissioning from 1997 to 2006? BNFL — British Nuclear Fuels, Inc. — bragged on its website this was one of the most contaminated decommissioning projects it had ever undertaken. Which was really saying something, coming from the company that ran the infamously contaminated Sellafield nuclear complex in the U.K. Yet, decommissioning workers at Big Rock Point were given little to no warning.

P. 37/98

re: [5.1.8.2 Public Dose]

Again, what about LACK OF adequate decommissioning?

Re:

[5.1.9 Radiological Accidents

The likelihood of a large offsite radiological release that impacts public health and safety after Palisades is permanently shut down and defueled is considerably lower than the likelihood of a release from the plants during power operation. This is because most of the potential releases associated with power operation are not relevant after the fuel has been removed from the reactor. Furthermore, handling of spent fuel assemblies will continue to be controlled under work procedures designed to minimize the likelihood and consequences of a fuel handling accident. In addition, emergency plans and procedures will remain in place to protect the health and safety of the public while the possibility of significant radiological releases exists.]

What about Holtec's screw ups at San Onofre CA and Oyster Creek NJ, as mentioned above?

And to the contrary, emergency preparedness is often rolled back during decommissioning. It is most unwise, given the significant risks still present during decommissioning, such as the on-site storage of all the irradiated nuclear fuel ever generated at that nuclear power plant.

P. 38/98

re: [the NRC staff performed analysis of the offsite radiological consequences of beyond-design-basis SFP accidents using fission product inventories at 30 and 90 days, and two (2), five (5), and ten (10) years. The results of the study indicate that the risk at SFPs is low, and well with NRC's Quantitative Health Objectives. The generic risk is low primarily due to the very low likelihood of a zirconium fire.]

Well, we are talking Holtec here. Compare Frank von Hippel's 2016 study, the Jan. 2003 Alvarez et al. study, the 2011 Alvarez study, the 2006 NAS study, etc., as to the catastrophic risks of indoor wet storage pool fires.