NEW YORK STATE | Department of Public Service

Three Empire State Plaza, Albany, NY 12223-1350
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June 10, 2024

VIA EMAIL

Hon. Michelle L. Phillips
Secretary to the Commission
3 Empire State Plaza
Albany, NY 12223-1350

Re: Matter No. 21-01188 – In the Matter of the Indian Point Closure Task Force and Indian Point Decommissioning Oversight Board.

Dear Secretary Phillips:

Please accept for filing in the above-captioned matter, the April 25, 2024 Indian Point Decommissioning Oversight Board meeting transcript. Should you have any questions regarding this filing, please contact me. Thank you.

Respectfully submitted,

Tom Kaczmarek
Executive Director
Indian Point Decommissioning Oversight Board

4/25/2024 - Indian Point

STATE OF NEW YORK

PUBLIC SERVICE COMMISSION

INDIAN POINT DECOMMISSIONING OVERSIGHT BOARD

MEETING

Thursday, April 25, 2024

6:05 p.m. until 9:20 p.m.

Cortlandt Town Hall

1 Heady Street

Cortland, New York 10567

Or

Via Zoom

4/25/2024 - Indian Point

APPEARANCES:

FOR DEPARTMENT OF PUBLIC SERVICE:

TOM KACZMAREK

TOM CONGDON

JOHN SIPOS

FOR DEPARTMENT OF ENVIRONMENTAL CONSERVATION:

KELLY TURTURRO

FOR DEPARTMENT OF LABOR:

JANE THOMPSON

FOR CORTLANDT MANOR:

RICHARD BECKER, SUPERVISOR

FOR THE HENDRICK HUDSON CENTRAL SCHOOL DISTRICT:

MICHAEL TROMBLEE

FOR VILLAGE OF BUCHANAN:

THERESA KNICKERBOCKER, MAYOR

FOR WESTCHESTER COUNTY:

SUSAN SPEAR

FOR UTILITY WORKERS UNION OF AMERICA, LOCAL 1-2

BILL SMITH, VICE PRESIDENT

FOR WESTCHESTER PUTNAM CENTRAL LABOR COUNCIL:

THOMAS CAREY, PRESIDENT

FOR RIVERKEEPER:

RICHARD WEBSTER

FOR NEW YORK STATE DISTRICT 40:

4/25/2024 - Indian Point

PETER HARCKHAM, SENATOR
FOR NEW YORK ASSEMBLY DISTRICT 95:
DANA LEVENBERG, ASSEMBLYWOMAN
FOR WESTCHESTER COUNTY BOARD OF LEGISLATORS:
EMILJANA ULAJ
FOR HOLTEC:
FRANK SPAGNUOLO
PAT O'BRIEN
FROM FAIRE WINDS ENERGY:
ARNIE GUNDERSON
FROM DEPARTMENT OF PUBLIC SERVICE:
BRIDGET FRYMIRE
FROM HUDSON RIVERKEEPER:
TRACY BROWN
FROM VALLEY COTTAGE:
JACQUELYN DRECHSLER
FROM THE CITY OF PEEKSKILL:
TINA VOLZ-BONGAR
NANCY VANN
COURTNEY WILLIAMS
FROM THE HAMLET OF MONTROSE:
JAMES ROGULSKI
FROM THE TOWN OF NORTH SALEM:
SUZANNAH GLIDDEN

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FROM THE VILLAGE OF SUFFERN:

SUSAN SHAPIRO

FROM THE CITY OF WHITE PLAINS:

HERSCHEL SPECTER

FROM MOHEGAN LAKE:

JANE SIMS

FROM CORTLANDT MANOR:

MARILYN ELIE

4/25/2024 - Indian Point

(The meeting commenced at 6:05 p.m.)

CHAIR CONGDON: Thank you all and welcome to this meeting of the Decommissioning Oversight Board. I'm Tom Congdon, I'm Chair of the Decommissioning Oversight Board and the Executive Deputy of the New York State Department of Public Service. I appreciate everyone's attendance tonight. I'm going to turn it over to Tom Kaczmarek to do a roll call and to go over some meeting logistics.

Tom Kaczmarek?

MR. KACZMAREK: Thanks, Tom.

As Tom said, my name is Tom Kaczmarek and I serve as the Executive Director of the D.O.B. As I call your name, just please indicate your presence, quickly.

Tom Congdon?

CHAIR CONGDON: Present.

MR. KACZMAREK: John Sipos?

MR. SIPOS: Present.

MR. KACZMAREK: Senator Harckham?

SENATOR HARCKHAM: Here.

MR. KACZMAREK: Assemblywoman Levenberg?

ASSEMBLYWOMAN LEVENBERG: Here.

MR. KACZMAREK: Kelly Turturro?

MS. TURTURRO: Present.

MR. KACZMAREK: Alex Damiani?

MR. DAMIANI: Here.

MR. KACZMAREK: Jane Thompson?

MS. THOMPSON: Present.

MR. KACZMAREK: Mark Pattison?

Linda Malave?

MS. MALAVE: Here.

MR. KACZMAREK: Jennifer Wacha?

MS. WACHA: In attendance.

MR. KACZMAREK: Thank you.

Joe Leary?

MR. LEARY: Here.

MR. KACZMAREK: Dave Lochbaum?

Richard Webster?

MR. WEBSTER: Yeah, here.

MR. KACZMAREK: Theresa Knickerbocker?

MS. KNICKERBOCKER: Here.

MR. KACZMAREK: Richard Becker?

MR. BECKER: Here.

MR. KACZMAREK: Susan Spear?

MS. SPEAR: Here.

MR. KACZMAREK: County Boardmember Ulaj?

Colin Smith?

Superintendent Tromblee?

MR. TROMBLEE: Present.

MR. KACZMAREK: Bill Smith?

MR. SMITH: Here.

MR. KACZMAREK: Tom Carey?

MR. CAREY: Here.

MR. KACZMAREK: And Lou Picani?

CHAIR CONGDON: Thank you, Tom.

MR. KACZMAREK: Thank you. Before I turn it back to Chair Congdon, as he mentioned, I just want to provide a few -- a few brief reminders to our panelists and participants to promote a smooth meeting.

To our in-person Board members and guest presenters, please speak into the mic to ensure your comments are clearly heard and accurately recorded. And also indicate your name when you are speaking. That will support our transcription of this meeting.

To our panelists joined by Zoom, please keep your mics muted unless you are speaking.

To our Zoom participants, please reserve the chat feature for reporting technical issues to our A.V. team. Any questions captured in the Q and A field are able to be saved and reviewed.

And with that, Tom, I'll turn it right back to you.

CHAIR CONGDON: Great. Thanks very much, Tom. And thanks for all you do to set us up for success. We can't do these meetings without you, Tom. We really appreciate all your work.

We have a big agenda again, this evening. We're going to cover some housekeeping for the closure Task Force. We're going to hear from the state agencies on some of their oversight activities since our last meeting. We are going to hear from Holtec on activities at the site, since the last meeting, and what's planned for the coming months.

And then, we're going to turn it over to some -- two -- two guest presenters. The first will be Arnie Gundersen from Fairewinds Energy.

Welcome, Arnie. Thank you for being here.

And we will also hear from our own Bridget Frymire from the Department of Public Service

to talk about alternatives to the planned discharge -- - the previously planned discharge of wastewater to the Hudson.

Then, we will have the remainder of the time, this evening, for public statements. A number of you have pre-registered. We will take them in the order of registration and get through as many of them as we can.

Next slide.

On the Indian Point Closure Task Force, as folks know, there are -- there are technically two bodies, the Task Force and the Decommissioning Oversight Board. The Task Force, by statute, has to provide annual reports. We tend to issue those for public comment before they are finalized. And I want to make a public announcement that they will -- the next annual report will be issued in draft form for public comment today or tomorrow. And so folks should look out for that.

There should be no surprises in the annual update. If you are regular attendees to these meetings and if you pay attention to our website, it's all information that we've discussed. But it's a nice inventory of activities of the D.O.B. and Task

Force work and we'll welcome feedback through the public comment process before we finalize it.

Comments will be due -- well, the deadline will be in the public notice that will accompany the issuance.

Next slide, please.

Okay. I'm going to turn it over to -- is it John that's going to start? John Sipos to provide an overview of some of the State activities.

MR. SIPOS: Thank you, Tom.

Good evening, everyone, nice to see you all again. So this part of the meeting --.

CHAIR CONGDON: Hi, County Legislator, welcome.

MS. ULAJ: Good evening. Forgive me. Parking was --.

CHAIR CONGDON: No -- no -- no, please, please. No worries at all. I'm glad you arrived because I -- I failed to introduce Superintendent Tromblee, as well. And you and he are both newer members to the D.O.B., and I want to welcome you to -- to your first meeting. So thank you.

MS. ULAJ: Thank you so much.

MR. SIPOS: All right. So this portion of the meeting will be providing some State Agency oversight descriptions that have occurred since the last meeting. First -- first up is reported on the tip hotline.

As of Monday, there were no tips or whistleblower complaints of that sort. So we're going to turn it over to the next page, which is the monitoring update and these are the printouts of the four remaining Reuter Stokes monitors.

And these results are consistent, in fact entirely consistent with previous reports that we have provided to the Oversight Board and to the community. So there are no changes there.

Turning quickly to the next page on the oversight aspects, State Agencies have been in contact with Holtec regarding minimum trust fund balances.

We have had meetings with them about it. And again, this is a unique safeguard that the State built into the Joint Proposal and the Commission accepted as part of this Order to ensure that there are sufficient funds for decommissioning and site restoration.

We provide here a list of the meetings that have occurred with Holtec. And one occurred earlier -- earlier this -- earlier this month. And Holtec, as we noted in the last bullet, has also reported that it remains in compliance with minimum trust fund balance obligations.

What we provide on slide 11 is a summary. And this is of Decommissioning Trust Fund balances. This is based on reports that Holtec made to the Nuclear Regulatory Commission, the federal oversight agency, and all -- as all reports to that agency, such reports must be accurate and -- and fulsome given the federal oversight agency's authorities and the obligations and the regulations there.

So when you sum up the totals on the bottom line of the chart that we have here, it's approximately, I believe, $1.8 billion. And the reports are also on the D.O.B. website. They're also on the N.R.C.'s ADAMS website and are easily available for review.

So turning to our D.P.S. oversight activities, you know, we are joined here tonight by our resident site inspector, Inspector Cliff Chapin.

And also, as Tom said, we have our chief, Bridget Frymire here will be giving a presentation later on.

But staff has been looking at the financial protection aspects, as indicated. There has been an emergency plan revision. And there have been -- as well as the property damage insurance aspects.

State regulators have been present at monthly meetings that Holtec has provided as -- along with other interested governmental entities who are able to join that. And Holtec has provided information to the State at those meetings.

Also, one thing that may not have gotten a lot of awareness, recently, Holtec and Consolidated Edison filed a petition to provide for the transfer of control of the switchyard area. And this goes back to when Entergy transferred the property or the site to Holtec.

It actually, given the way the site was defined, it brought along the -- the segment of the property, the segment of the site that involved the switchyard equipment. So this proposal here, which has been publicly noticed in the New York State Register, is a sort of a realignment and adjustment

between Holtec and Con Ed regarding the control of that -- of those systems and those components.

And at the bottom, we do provide the number for the State agency proceeding here, it's a proceeding before the Public Service Commission. If anyone wishes to comment, there's an opportunity there to look at it.

Moving on, there has been significant decommissioning activity work that has occurred at the site since we last spoke and over the last year. There are a number of segmentation actions that have occurred.

These are all -- most of these, I should note, are inside -- inside existing structures, either the turbine building or the containment structures themselves, including the Unit 2 reactor head cutting, Unit 2 cavity leak repair preparations, the Unit 3 feedwater heater removal. And there was also a safety walkdown for -- for Indian Point Unit 1.

So that is -- that is work that is continuing on as part of decommissioning. As -- as folks know and I believe, as we discussed at the previous two meetings, the N.R.C., with the support

of its inspector staff, has been looking at a compliance issue concerning the fabrication, by fabrication, I mean construction, the making of the dry casks. And we provide here, the -- some updates on that.

N.R.C. did issue a notice and a safety determination regarding this issue, which really is -- it’s going to the -- to the factory and what goes on in the factory in -- in a certain construction aspect regarding the dry casks.

And again, as we -- I believe, as we said at the last meeting, the N.R.C., that’s the federal regulator, has determined that there was a -- an extremely low safety significance essentially, not a significant safety issue problem from the N.R.C. That is what the N.R.C. determined.

CHAIR CONGDON: If I may, John, N.R.C. will be coming to our next meeting, as well. And we'll have further discussion of this and other N.R.C. activities in June.

MR. SIPOS: And I think that pretty much completes the circle from a D.P.S. perspective. I'm going to turn it over to Kelly Turturro from the Department of Environmental Conservation to touch on

some D.E.C. aspects.

MS. TURTURRO: Thank you, John.

Good evening, everyone. So in terms of the administrative consent order requirements, the investigation, as I've mentioned in the past, will be done under Remedial Investigation Work Plans.

Back in October of 2023, D.E.C. approved a draft Remedial Investigation Work Plan for one portion of the site. That is the Lafarge Former Spectra Construction area, which Holtec refers to as A.O.C. 118. So that was -- that work plan was approved by D.E.C. in October of 2023.

The consent order requires that Holtec provide D.E.C. two weeks' notice prior to field activities. Holtec provided D.E.C. that notification on March 13th of 2024, and they began investigation activities on March 28th, 2024.

Those investigation activities, Holtec reported to D.E.C., included soil borings, collection of soil samples, and installation of groundwater monitoring wells. And D.E.C. anticipates, based on the schedule that Holtec shared, that we will have a report summarizing the investigation by July of 2024.

Next slide, please.

So in terms of the SPDES permit process, Holtec had -- had submitted additional information that D.E.C. requested back in November.

Our staff continue to review that information. As I've mentioned in the past, as soon as we have a draft SPDES permit prepared, we will issue that SPDES permit for public comment and -- and take public comment on the draft SPDES permit.

And next slide, Tom.

And then, finally, D.E.C. continues to oversee the closure and assessment of all of the petroleum tanks that are on the site.

Thank you, Tom.

CHAIR CONGDON: Thank you, Kelly.

I'm going to open it up to the D.O.B. members for discussion. Yes, Pete?

SENATOR HARCKHAM: Thank you very much for all the presentations. Hello, everybody. Thanks for being here.

Quick comment, and then, a quick question if I may? The comment is based on conversations with the mayor and the superintendent who were concerned about state financial support, if the process lagged on.

I spoke with -- at the budget hearing, with the -- I asked on the record the Commissioner -- Public Service Commissioner Rory Christian, if, from their perspective, they would be open to having that conversation about some form of extended relief should the process drag on. He said they'd be willing to have that conversation. So premature to say anything more than that at this point, but -- but, you know, those conversations can happen if they need to.

So the question I have for John, you mentioned the emergency plant revision. What -- what was that, again?

MR. SIPOS: So the reference was to the emergency plan -- planning -- oh, it's emergency plant. Sorry, I was probably rushing through there.

SENATOR HARCKHAM: I'm sorry; did I miss -- miss that?

MR. SIPOS: So the --?

SENATOR HARCKHAM: Well, the emergency plan, what -- what is going on with the emergency plan? Thank you.

MR. SIPOS: As -- as Holtec exceeded the requirement to move the fuel that was in the

densely packed spent fuel pools, to the dry cask storage facility outside, they, Holtec, you know, met -- met the deadline. In fact, they met it by more than a year in advance so they completed that early.

But once spent nuclear fuel is out of the pool, and into the casks, it changes the -- it changes the way that the emergency plan would work. And actually, it really -- the -- the plan -- the focus of the plan really shrinks down.

SENATOR HARCKHAM: Yeah, because --.

MR. SIPOS: You no longer have the fuel packed together so tightly in the pools. So that the plan can evolve and it really -- it really does shrink down.

SENATOR HARCKHAM: Okay. Thank you.

CHAIR CONGDON: Yes?

ASSEMBLYWOMAN LEVENBERG: Thanks so much for that update. And I'm also supportive of the comment that Senator Harckham made to try to extend the -- the funding over the course of a longer period.

I just was curious for the -- all the work that's currently being done, do we have a number of employees on site, how many people are actually on

site doing all of the work of -- and also I have a list of questions. So that's number one.

My second question is where did the U2 reactor head go -- Unit 2 reactor had go? And -- and I'm just curious about that.

And then, the -- in terms of the N.R.C., the dry cask construction violations, are we able to see that report, also? Are we able to see, you know, exactly what -- what the violations were, and have some kind of an understanding of why the N.R.C. felt like that -- that they were insignificant?

And -- and then -- that question got answered. And in terms of the SPDES permit, I know it's a lot, but I'm just going to throw them all out there and you can answer them. The -- what -- what is -- exactly is the permit now for? It says it governs discharges from the main facility. Discharges of what? I'm not clear what that is. That's it.

CHAIR CONGDON: Why don't we start with the last one, with Kelly, and then we can move to the other ones. And I actually think some of your questions are going to be more appropriate for the

Holtec presentation when -- when they're at the table.

ASSEMBLYWOMAN LEVENBERG: Okay.

CHAIR CONGDON: To answer employee numbers and things of that nature.

ASSEMBLYWOMAN LEVENBERG: Are they not -- did you say they're not coming?

CHAIR CONGDON: They're here tonight.

ASSEMBLYWOMAN LEVENBERG: Okay.

CHAIR CONGDON: They're going to come up to the table for their presentation next --

ASSEMBLYWOMAN LEVENBERG: Got it. Okay.

CHAIR CONGDON: -- on the agenda, yeah.

ASSEMBLYWOMAN LEVENBERG: Yeah, I -- that's fine.

CHAIR CONGDON: Okay.

MS. TURTURRO: So Assemblywoman, in terms of the -- the SPDES permit, that's exactly why D.E.C. had asked for that full technical review. We had a SPDES permit in place, governing the -- the operations at the facility. And with the change to -- and from an operating facility to a decommissioning

facility, we wanted to understand exactly the nature of discharges that were happening at the facility.

We asked Holtec for that information. They submitted it and our staff is now reviewing it. But there continue to be and -- and Holtec can comment on this, as well. But there -- there continue to be discharges, not necessarily as -- as we have talked about in the past from the spent fuel pools, but just normal operations of any facility can have discharges. Not from the -- the radioactive areas of the plant, but just normal areas of the facility.

MR. SIPOS: Okay. And so I'm going to take the rest of the questions, probably, in reverse order. I think the last question you asked was about the N.R.C. enforcement process and I'll provide a little more information on that.

So the N.R.C. did release a report and I believe it is available from the hyperlink that we have on our slide here. I will also note -- and just -- just to put some context in the -- the violation that the N.R.C. is looking at regarding Holtec's manufacturing processes involves changing how a certain subcomponent is attached inside the dry cask.

And the change was from a weld to a bolt. And this is to ensure that the internal lattice work, the framework for the dry -- for the spent nuclear fuel remains aligned within -- within the cask. And so Holtec changed, as I said, you know, weld to bolt.

And that is -- that is what N.R.C. is asserting is a violation, that that occurred without a prior notification to the N.R.C., and a prior N.R.C. approval.

I'll also note that, recently, I believe it was this year, on behalf of the State of New York, I participated in a conference call with the N.R.C. and with other sites around the country. And, you know, on behalf of New York, I advocated to the N.R.C. enforcement team. I said, you know, what you do from an enforcement perspective, you do from an enforcement perspective, but don't come to the Decommissioning Trust Fund, you know, if there's any financial consequence.

So I just, you know, I appreciate your question and I want you to know that D.P.S. staff is watching them and is seeking to ensure that the Decommissioning Trusts are maintained and are not

sort of used for other purposes.

You asked about the --?

ASSEMBLYWOMAN LEVENBERG: I mean, just before you get off that, but just as a follow-up, I mean, obviously, you know, I agree with you on -- on that point. But, you know, is this a Boeing situation? I mean, I don't think any of us want to see a door flying open on dry cask storage if, you know, the bolt versus the weld is not the best thing.

You know, I think it's more to the point of what is the safest and why was the change made without the oversight?

MR. SIPOS: So I'm not going -- I appreciate it. I -- I understand the comment and, you know, probably in some way agree with you. I -- I'm not -- by reporting what N.R.C. is doing, I'm not necessarily saying that N.R.C. or Holtec is -- is right. I'm just trying to report the facts --

ASSEMBLYWOMAN LEVENBERG: I got it.

MR. SIPOS: -- to everyone and to provide some background as to, to what is going on here. Certainly, and -- and -- and I should -- I think it's appropriate to again note that the N.R.C. has looked at it. They have an inspector who is

detail oriented. And -- and ultimately, N.R.C. concluded, and I'm just reporting it here, that it was -- this violation was of low safety significance.

They looked at the various failure mechanisms, what would happen if the cask tipped over. And they concluded, and again, speaking for N.R.C., that bolt versus weld would not have a significant negative environmental impact. So just to round that out.

You also asked about the U2 -- Unit 2 reactor head. So that is being separated and segmented. I do not know, sitting here right now, whether those parts have departed the site.

But that is -- that is the general approach that there are reactor vessel internals, they get cut up, they get put in boxes, and they get shipped to an appropriate disposal site.

And I'm sorry to say, but to your first question, which I'm coming to last, the exact number of head count employees of today, I don't have that right here at the moment. Either we can get that or maybe --.

CHAIR CONGDON: We'll pose the question to Holtec when they're at the table.

ASSEMBLYWOMAN LEVENBERG: Thank you.

CHAIR CONGDON: And I believe all of the N.R.C. inspection reports have been placed on our website, the D.O.B. So to your other question about will we see the report, it's -- it's -- it's been distributed to the D.O.B. members on the website. Thank you.

MR. WEBSTER: I actually have a question for Kelly.

CHAIR CONGDON: Yeah.

MR. WEBSTER: Kelly, we've got the picture of one of these A.O.C.s, but can you give us more of an overall framework, how many A.O.C.s are there, you know, what's the schedule for -- for actually carrying out characterization, who sets the schedule?

MS. TURTURRO: So that would be a question for Holtec in terms of their schedule for submitting us the investigative work plans.

MR. WEBSTER: So you don't have any control over the schedule?

MS. TURTURRO: No.

MR. WEBSTER: And do you know how many -- how many --?

MS. TURTURRO: Not off the top of my head, but I can certainly get that for you, Richard.

MR. WEBSTER: More or less.

MS. TURTURRO: Yeah.

MR. WEBSTER: So there's no estimate for when they might finish characterization of the site?

MS. TURTURRO: You would have to ask Holtec that question.

MR. WEBSTER: Okay. You don't have any estimate?

MS. TURTURRO: No.

MR. WEBSTER: Okay.

CHAIR CONGDON: Mayor?

MAYOR KNICKERBOCKER: The village board had sent a letter to the governor and I'm sure, Dana and Pete, you've seen that, and were asking for the extension because we were under the assumption that this was going to be a prompt decommissioning. As we can see, this is going off the rails, fast. So we do appreciate your support with that.

It's important to us. We only have a few more years of the cessation fund and we were hoping for release of some of the parcels. But

things are not working out that way. So we appreciate whatever support you can give to the village.

And also, I will speak for the superintendent of the school district.

MR. TROMBLEE: You did it much better than I, so thank you.

CHAIR CONGDON: And -- and we responded to the mayor's letter and indicated the State will continue, through the D.O.B., exploring opportunities to continue supporting the taxing jurisdictions. Excuse me.

The cessation fund, though, I will point out is a statewide program and it is a state statute administered by the E.S.D. And there are several communities, not just the Indian Point community, several communities that have been getting support out of that program, which provides seven years of assistance.

So I'm not sure that that's a feasible option, but there are other mechanisms to support the taxing jurisdictions, including the school district and the village, that we will continue discussing and keeping open mind to any way we can help from the

State.

MR. TROMBLEE: Yes, just to confirm, being near the table, that is a fully funded cessation fund due to a small tax on the utility bill.

CHAIR CONGDON: Yeah, I wouldn't call it a tax, but it is a -- it's through our ratemaking powers of the Public Service Commission that -- I'll just quickly give you the mechanism. So the State program is the cessation program. That's in permanent statute.

And one of the first things this body started to discuss around 2017-18 was whether the -- it's great that the law exists, but is there money and can a district actually plan for having all seven years of the assistance that's laid out in the statute.

And we were explaining, initially, at the time that you can count on it. However, it's still subject to annual appropriations in the budget. The budget is only adopted for one year at a time. And -- and that was a big issue for this community and the community raised that as a huge concern because you couldn't financially plan if you were

subject to annual appropriations. And you weren't sure that you'd have that full seven years of assistance.

And so I and my colleagues brought that back to the State Energy Planning Board, which is a totally separate body, which under State Energy Law, adopts regular state energy plans that all agencies then must take actions to support.

We have to -- our actions have to be consistent with the State Energy Plan. Through the work of this body, the State Energy Plan was made aware of the -- one of the, say, weaknesses of the cessation program for communities. And to help make that a better and stronger program, they made an amendment to the State Energy Plan to indicate that the Public Service Commission could be an appropriate funding mechanism.

Since we're talking about the closure of power plants, there's a nexus to our ratemaking powers. And the State Energy Plan asked us to look into having a separate revenue stream that wasn't dependent on the State appropriations.

So in February 2021, I believe, the State P.S.C. followed the State Energy Plan guidance

and adopted an Order that created this assessment, not a tax, that, you know, is paid for by all ratepayers in the state. So it's, you know, not noticeable on everyone else's bill.

But it is a small, small pennies charge on all consumers that results in an appropriate level of funding that now gives us the ability to say, yes, it is fully funded. So it's a long-winded answer, but to explain how that -- the genesis of that.

MR. TROMBLEE: Thank you.

CHAIR CONGDON: So any other questions for the State Agencies? Thank you all.

At this time, I'd like to call up Holtec. Frank and Pat, welcome. Thank you.

MR. SPAGNUOLO: Hi; good evening, everybody. Frank Spagnuolo, I'm the Site Vice President at Indian Point.

So what I'm going to talk about today, I'm going to talk about some of the work that's going on, the workers here in the audience that are supporting us. We'll talk about what we're doing with vessel seg, Unit 1 demolition.

And I'm going to introduce

conventional plant demolition. Last time, I introduced the Unit 1 demo. I'll introduce the conventional this time. And as we do more and more phases of demo, I'll introduce that and give you updates between board meetings.

I'll talk about what the results or the actions we took due to the earthquake, the update on the pipeline, CertainTeed update, Lafarge remediation. We'll talk about the finance report that was issued, a brief liquid waste discussion update, N.R.C. inspections actions and violations, and then, a safety topic.

So I'd like to get right -- to answer your question, Ms. Levenberg, I would say about 400 workers at the plant -- at the site right now.

So Unit 2, you can see the -- the pictures there. We've completed -- on Unit 2, we've completed the control rod drive shafts. Those ride through the head. That's removed.

We suspended plans to commence upper internal segmentation on Unit 2. When we did flood up, we had a small leak on the cavity liner. This leak goes to a tank that's below the liner designed for it.

So we drained back down. We built scaffold. And we are, right now, doing weld repairs on any imperfections that we see. This has been a longstanding issue at Unit 2. It doesn't exist at Unit 3. We're going to do a permanent repair because, at this point, we don't know, once we flood up the cavity -- do the vessel seg on Unit 2, we don't know when we're going to drain it back down. So we don't want any leakage in order to have to re-circuit back to the pool. So that work should be complete by May -- the end of May.

On Unit 3, at the last meeting, we were just validating that the core barrel removal stand modification was complete.

That was. We returned it to the core and we prepared for -- for vessel seg. While we were working in Unit 2, we stopped and we moved back everything over to Unit 3. And now lower internal segmentation is in progress.

And if you can see the upper left picture there, that shows the saw in the vertical position. And what you're looking at, what it's cutting, if you look at the one that's to the right, that is the actual core. So that's where the fuel

was -- was staged in the baffle formation. And those are the walls of the -- what we call the up -- lower internals or the core barrel.

And the bottom left picture is actually the Unit 2 cavity liner repair. So as you can see, we cut away a section. That blue sealant was supposed to seal all the leaks in the cavity. It failed in several areas, so we peeled it away.

We're doing weld repairs in four different spots. Then we're going to coat it again with a better sealant this time, a better epoxy coating. We'll flood up and we'll check for any leaks, and then, we'll make -- we'll go from there. The plan is, like I said, the end of May, we should know we're done and -- and then, we'll move ahead.

Okay. So if we can go to the next slide, I'll talk a little bit about the head.

So on Unit 2, we expect to complete the liner repairs and flood up, like I said, by the end of May. And the head segmentation never really commenced. We did some -- some segmentate -- some extraneous parts of the head, we cut off. But we -- once we identified that we had a leak, in order to drain back down, we needed -- we would need to put

the head back on the core on the vessel to -- for shielding for the workers.

So once we made that decision, we actually put the head back on the core. So that segmentation, once we're done with cavity liner repair, we'll put a team of workers on that.

That will be segmented up and if you -- we did talk about this on Unit 3. I don't remember the exact number of boxes, but it's a class A waste. That will be boxed up and it will be sent to Texas through our normal shipping process. Don't -- it should be complete by the end of the year, roughly.

CHAIR CONGDON: Frank, just for our listening audience, can you explain what class A is?

MR. SPAGNUOLO: I might. So there's several layers -- several levels of waste. Most of our waste is what we call exempt waste. It's the lowest level of waste. Level A is the next highest level. Level B.C. is the next highest level. And then, there's greater than class C.

So right now we're cutting greater than class C waste in the Unit 3 vessel. The baffle walls that held the fuel for 40 years is considered greater than class C. It's about as hot as fuel.

And it goes into the same type of containers. It goes into a dry fuel container, a little different insert model that -- that holds it.

So there'll be six, what we call greater than class C containers for each Unit 2 and Unit 3 vessel internals that will be stored. And that will be shipped with the fuel when the D.O.E. ever picks up the fuel.

The A -- the A boxes, they can ship -- there's D.O.T.-approved shipping method for that. It's very simple. And then, there's also what we call B.C. boxes. That's a higher level of waste, not as high as greater than class C. These are all industry terms; I didn't make them up. I apologize.

Those are stored on site until the transportation -- there's a -- we need a license for a transportation mode. So right now, there's no B.C. shipments that are going on in the -- in the country.

So we have a what we call the interim -- we call it -- it's our old flex building. It was a rad waste storage building with three-foot thick walls. And it's stored in there. And we can store all of our waste and it'll be there until we -- we ship.

And we'll be working with Pilgrim, Oyster, and then, Indian Point to ship B.C. waste over the next decade, really.

CHAIR CONGDON: That was really helpful. Thank you.

MR. SPAGNUOLO: No problem.

So the pictures here, that is -- can you go back one? Sorry. So that is the Unit 2 head as we're putting it back on the cavity. And that's just another close-up of the saw that's cutting through the baffle walls and the -- and the core barrel, itself.

So Unit 1 demo, as you remember, I introduced this last at the last D.O.B. So Unit 1 started to be built in 1956, put in service in 1962. A little different design, but ultimately is a four-loop pressurized water reactor.

And what you're looking at in the picture, on the upper picture, is an actual view of the steam generators there -- horizontal steam generators, which are a different design than Indian Point Two and Three.

And those insulated pipes that run up the top vertical, they're called vertical risers.

They go to a steam drum, so each steam generator, there's four of them, have three independent components, two drums on the bottom, one drum on the top.

And right now, what we're doing is we're -- we're getting ready to cut all those risers so that we can remove the steam generators. And we'll remove the lower sections. We'll support the top section, cut the risers, remove the lower sections, and then, remove the upper sections. And that will occur over the next two years.

2025, we plan on removing 11 and 12 boiler. And then, '26 we plan on removing 13 and 14. So we're doing all the prep work now, and then, we'll remove them as we go. They'll be shipped as exempt waste. Con Ed, in '93, '4, '5 timeframe, did a full system decon on that and was able to lower fields. So that -- that's not going to be high-level waste.

So the work we're doing, we're continuing to cut the loops. You can see the bottom picture. There's a good graphic of the -- the -- the component on the right, with little plywood covers over it, is actually the hot and cold legs that go to the Unit 1 core. And on the left, that piece of

white insulation or white plastic is actually covering up one of the steam generators.

So there was loops in there, pumps, and valves. All that's been removed on 11, 12, and 13. We'll continue -- we'll complete 14 before the next meeting.

And, of course, in 1962, asbestos was really good. So this is all asbestos covered insulation. We're building a tent right now, and then, we'll do the asbestos abatement on 11. And then, we'll work our way around.

And I did report on the last one, there was a polar crane mod that was in place. That is complete and that's fully functional.

So I talked about most of what's going on through the next D.O.B., 13 and 14 loops. And the picture on the -- one back, sorry. I'm -- you're ahead of me. That's actually one of the cold legs. There are vertical runs of cold leg. We're removing those around all four loops.

And then, the pictures on the -- on the left are a heat exchanger that was also asbestos legs. We did the abatement. We removed it. Now, we're able to remove that. So the process is you

remove the hazards, then you remove the components.

So I'll introduce some work we're doing on the conventional plant. Actually, John talked about some of it. So we had talked about we're working up at GT2-3, across the street from the plant.

That demo of the GT2-3 and the fuel oil tank, that's all complete. The cement pads with GT2-3 are still there. Right now, we're set with what we're doing up there. We have one underground storage tank that we need to remove. We're going to work with -- with D.E.C. on that. And then, we'll pretty much be done with that for a while.

We are working with Con Ed. They have several components that they have to disconnect, kind of what John was talking about. Almost everything coming in and out of the switchyard will be disconnected, the overhead lines and all of the 138, 345-kV lines and a lot of internal components will be all removed. We're working with Con Ed and we'll proceed to try to get that done by September.

So since we don't -- if you visit the plant, you would not need to go through the same security that you had to do before. So that has

reduced. You would be able to walk into the G.S.B. And then, once you're badged as a visitor, you'd be able to go right into the plant. So all of that security equipment is no longer necessary. So we're actually supporting Palisades and -- and removing it. And so whatever we can remove, we'll remove.

Picture on the upper right is just one of our station batteries. There's probably about 15 station battery banks.

And probably three will remain and everything else we're just removing to remove the hazards. Again, that's hydrogen gas generation and the sulfuric acid. So we'll remove them and we're recycling them.

So I gave you a snapshot. There's 49 above-ground storage tanks between Unit 2 and Unit 3. 31 have already been removed; 8 are planned for 2024. And there's 14 total underground storage tanks and 4 are planned for removal in 2024. And we're also continuing to remove equipment.

The picture on the bottom right is one of our feed water heaters. There are 12 on Unit 2, 12 on Unit 3. So far, we've removed 6 on Unit 3. The other six should be removed here in a week or

two. They're all cut out, big piece of equipment, big -- they're just big horizontal heat exchangers. And again, we're recycling those.

So we expect to complete the Unit 3 feedwater heater job before the next meeting and start Unit 2 feedwater heaters. And if you're on site today, you would see a 160-foot-long, 400-ton crane that's being assembled in the parking lot. That's being assembled to do work on the roof of the G.S.B. We're putting new air conditioning units up there. And then, that crane will go down to the dock and we'll start removing the Unit 3 dock components.

The traveling screens, since we don't need circ water anymore, we'll move the traveling screens, circ water motors go down to the Unit 1 screen millhouse, remove the traveling screens, river water pumps.

So all of those components will be removed over the next several months. We'll bring pictures, show these are big components. We need a big crane for it. So that's the goal. The focus is that everything we need this big crane for to remove it, and then, we'll recycle.

And so earthquake response. So as

everyone knows, we had an earthquake, 4.8 magnitude earthquake centered in Jersey on April 5th. At the site, it was registered as 3.6 magnitude earthquake. So I got a lot of questions on that.

IPEC has -- was seismically designed to stand an earthquake of peak ground acceleration, 0.15g horizontal and 0.10g vertical, which probably means nothing to everybody here. But they don't -- engineers don't use the Richter Scale. They use Gs in horizontal and vertical. So the value is based on the ability to stand a category seven earthquake on a Modified Mercalli Intensity scale. Again, nobody else uses that, but engineers.

The ISFSI pads are built to the standard, as well. So the Unit 2, Unit 3 plants were built to that standard. The ISFSI pad was built to that standard. It basically roughly is equivalent to a 6.0 magnitude earthquake.

So plant staff were on site. They have -- we have a procedure, an A.O.P., Abnormal Operating Procedure Seismic 1, which basically lists all the equipment in the plant. And the operators and security did their tours. There was no issues. And then, the design engineer did his -- his portion

of that and there were no issues.

Okay. This one, I might need the pointer for. So I tried to get -- I tried to -- okay. It doesn't work. So all right, so --.

CHAIR CONGDON: You can use the -- he can use the cursor, maybe.

MR. SPAGNUOLO: Yes. So that little pond there, affectionately we know that -- we call that Darra's Pond (phonetic spelling) after the late Darra Gray, who was our environmental and identified an issue with that pond. So now, furthermore, that will be called Darra's Pond.

So that is basically a groundwater receptacle. And the road right behind it, to the south -- this is -- this is looking south. That road is the gypsum plant access road. And got a call in January from CertainTeed. And I went over there and their -- their road was -- had water over it. And then, you can see it was pooling on the -- on the south side of the road.

So we contacted the Village of Buchanan. We looked for city water leaks. We looked for any other leaks in the plant. This is so far away from the plant, there's no plant components.

This is as far south as you can get. We did sample it. There is no radioactive component to it, whatsoever.

And then, we put a drone up because you really can't see this as clear. That's a drone shot. And we could see that Darra's Pond was overflowing to the east and south. So it's overflowing because, since September of 2023, we've had 7.5 inches of rain more than the 30-year high value. I didn't get that myself. We called a hydrologist from T.R.C. to help us determine what's going on.

The other -- the big concern was the pipeline. That's also the route that the pipeline takes. So we brought in Enbridge. Enbridge did their evaluation. There is no safety concerns with the pipeline. The only concern really is the Gypsum Plant Road. It's not being undermined. So T.R.C. is going to give me a report that we'll review and see what we can do with it.

Does not communicate with the Hudson. It basically flows south through the -- there's another pond, and then, it flows to the ball field, which I'm sure you know is flooded. And then, that

eventually gets to Lake Meahagh -- Meahagh. So that's where -- that's the flow it's taking.

Everything right now is just -- it's saturated. So we expect, with warmer weather, this will -- this will clear up and, you know, we don't have rain. But so far, there's no concerns.

And Kelly already talked about the Parcel D. Where that -- on the other south side of the road is also Parcel D. That is one of our Remedial Investigation Work Plans. So that -- like Kelly said, that plan, all the samples have been obtained. We should get a final report in July. We don't expect to do any remediation. The only reason this -- you were asking about A.O.C.s and I don't have a number off the top of my head. I'm not prepared for that, but we'll get it through Kelly.

The only reason that was an A.O.C. is because when Spectra built the pipeline, that was their laydown area. And technically, Entergy at the time didn't have a presence out there. So we don't know what happened.

So we said it's an A.O.C. in case any of these trucks had hydraulic leaks, motor oil leaks, they spilled diesel fuel while they were fueling up

their equipment. So that's what we're looking for.

If the Remedial Investigation Work Plan comes back with work for us to do, then we submit a plan to -- to D.E.C. and that'll get approved. And then, we'll do the remediation. Then we'll do the sampling again and we'll have the results. And then, that that piece of property will be one of the A.O.C.s, that will be clear.

Okay. So this is a cut-and-paste directly out of the report that we filed on March 29th. So every year, we have to report in accordance with 10 CFR 50 Section 82, Termination of License on behalf -- you know, the company on behalf of Indian Point submits the annual report.

So the estimates provided use all December 31st, 2023 numbers, just as John showed you. The estimates provide, according to A.C.I., we do not have any further action required to demonstrate adequate funding. John already talked about the trust fund balances as of the 31st. If you actually read the report, the very last line of Tables 3 A, B, and C are the trust fund balances at the end of everything.

Right now, full license termination,

based on D.O.E. doing their part of fuel transfer, is 2063. And that would be the trust fund balances at the end of that. So and also, as John alluded to, we are maintaining our 400 million for the 10 years following transaction close date.

Okay. So liquid waste discharge, I did want to close the loop on two items that I brought up at the last meeting about tritium removal. So there were two vendors that approached us with sound ideas on how to remove tritium from the water.

So on November 10th, we met with Veolia. We discussed the potential tritium removal. They would use a Modular Detritiation System. And when we actually explained the scope of it, this works in the lab, it doesn't work in the commercial process.

So they basically made a decision to move away from tritium issues.

Then we had a further -- I think it was at the December D.O.B., Nathan Plummer was here with some of his support. So we met with him. He was the hemp guy, as everybody remembers him. It's basically called phytoremediation.

So we did narrow it down. The hemp is

not the only product that can be grown. Wheat can, alfalfa. So we continued with a conversation with him, getting away from hemp to get that off the table to understand what the technology was.

So on the 24th, we met with him. We requested more information because I need to know how big the equipment is, what the power consumption rates are, what the cycle is, what the cost is.

On April 22nd, we did have, we -- we -- they provided the proposal. They kind of changed the plan a lot. They no longer want to grow plants. They want to use sawdust of -- of hemp again, or soybean, and then, basically just sprinkle it with liquid waste.

And so we're -- we're -- it's not the same type of plan. But they did introduce another player into this and he uses electrical molecular disassociation to enhance tritium removal. So I'm talking to them, see if any of these plans are sound. Nobody in the country is using them.

So and then, as everyone knows, on April 18th, we did file a lawsuit in the Southern District of New York regarding Chapter 279 of the laws of 2023. And a lot of the questions, we're just

not going to be able to discuss due to pending litigation on liquid waste. Okay?

So N.R.C. inspection reports -- so N.R.C. inspection reports are public documents once we get them. They -- they'll -- they do their -- every quarter, they issue a report. They debrief us at the end of the quarter. We just had a debrief last week. The N.R.C. has 45 days to issue a report. Then it's a public document.

So the only public document that's available right now is the one from February 22nd of 2024. That was the fourth quarter exit report, which discussed the charitable donations. This is just a cut-and-paste out of that. Now, we had the exit debrief on the preliminary report for the first quarter. And that final report, I will be able to discuss at the next D.O.B.

And then, the last slide talks about a supplemental employee received an injury to the right hand. That was also on John's slide. That was operating a tool with a 30-foot shaft and one operator on one end of the tool went in the wrong direction and twisted someone's finger. So he's okay. He's back -- he never left -- you know, he

never lost any work time. And it was an easy enough fix to just not use that tool. There's a better way.

And as you can see, the 2024, Dose Report, since we're in the first quarter, this is our quarterly Dose Report and we're well on track. And that's really all I have.

CHAIR CONGDON: Thank you, Frank.

Questions for our Holtec folks?

ASSEMBLYWOMAN LEVENBERG: I have one, really quick one.

CHAIR CONGDON: Sure.

ASSEMBLYWOMAN LEVENBERG: What's a supplemental employee?

MR. SPAGNUOLO: A contractor.

ASSEMBLYWOMAN LEVENBERG: And when you mentioned those 400 employees, does that include supplemental?

MR. SPAGNUOLO: Correct.

MR. BECKER: Frank, thank you for the report. And I was very pleased to see that you guys are looking at alternative ways of dealing with the tritium because I don't think there's any established other way of doing it. And we don't want to keep this tritium water there forever.

So we're -- we're pleased to hear that you're moving on because I know, in a lot of the projections that Holtec has made, the fact that currently, since you can't discharge into the river, it's going to delay the process eight years. But I wasn't sure how that -- where that eight years came from, since there isn't an alternative right now for getting rid of the tritium.

And the second question is a follow-up. I did a lot of research on this online. Certainly not an expert, but I do know that certain countries are mixing it with cement-like materials, turning it basically into a concrete block that can be buried and naturally decompose deep into the ground or be transported elsewhere.

MR. SPAGNUOLO: Did I have a question there? I'm sorry?

MR. BECKER: Yeah, well, the question is have you looked into that, and how you came up with the eight years?

MR. SPAGNUOLO: I'm sorry. The eight years. So I talked about it in the last slide. Eight years was based on what we project the lawsuit, you know, somewhere in that window to take. The

eight years is based on the fact that I -- without -- if I can't release liquid waste, I'm not going to be able to take down the Unit 2 or Unit 3 V.C.s, Unit 2 or Unit 3 spent fuel pools, and I won't be able to take down any of the support structures. So -- nuclear site support structures, because eventually, no matter what, we have to move this waste around from the tanks that they're in now, to process it.

Even in Arnie's, what he's going to talk about, all that waste would need to be processed through our existing systems. So we need the current infrastructure that we have. So in order to do that, I also need power, so that impacts the turbine buildings.

That's why, when I talked about what we're doing on the conventional side, the feedwater heater bays are really outside buildings. They're tied to the turbine hall, but I could literally gut those buildings without impact.

The Unit 2, Unit 3, Unit 1 docks really aren't support. Unit 2 docks supports us for dilution, but the Unit 1 and 3 docks don't. I could remove all of that in the condensate polisher building.

So what we can do, we will do. The security buildings, I can remove them. I don't need them. Where it locks me up is when I just can't -- when I need to keep the infrastructure available to process waste, no matter where I put it.

MR. SIPOS: And just for clarification, Frank, when you use the term V.C., could you tell us what that is?

MR. SPAGNUOLO: Those are the big domes you see. Those are the footprints. They're called vapor containments, domes. Yeah, sorry.

MR. WEBSTER: Can I just ask for clarification on that? So aren't you processing the -- at some point, you have to process the tritium waste, right, and take the -- take everything apart from the tritium. Are you doing that now or are you just waiting?

MR. SPAGNUOLO: I don't have any ability to do that now. I can -- I can process waste and put it back in the same tank and it would not be -- it would not be adequate to release.

So once you process waste -- we process waste on Unit 2. We put it in what we call the waste distillate tank. That tank is -- is

recirced three times, sampled for all components, including P.C.B.s, then it's released. If I take that and put it back in any tank, then I have to start the process over. You're not really buying anything.

MR. WEBSTER: Well, if you had a clean tank, you would be buying something; right?

MR. SPAGNUOLO: If I had a what?

MR. WEBSTER: If you had a clean tank.

MR. SPAGNUOLO: A heating tank?

CHAIR CONGDON: A clean tank, a different tank, a new tank.

MR. SPAGNUOLO: But even -- I don't want to steal Arnie's -- the end of his thing, but at the end, I still need to be able to release that tank.

MR. WEBSTER: I know but --.

MR. SPAGNUOLO: So I still need dilution flow. I still need to meet my SPDES permit. I still need to meet all the N.R.C. requirements so --.

MR. WEBSTER: I understand that, but what you're saying is you can't process the waste and I'm just trying to figure out why. The reason why is

because you don't have a clean place to put it; right?

MR. SPAGNUOLO: Yeah, right now, I -- it's not the solution. It's a -- I don't want to end -- I don't want to go -- you know, it's not -- it's not an end solution because --

MR. WEBSTER: Understood.

MR. SPAGNUOLO: -- the tanks need to get released somehow, somewhere, they need to, someday. We can make this our grandchildren's problem if that's what we decide to do.

MR. WEBSTER: Well, I guess my question is could we come up with an interim solution that would then allow you to move more quickly on the -- on the -- on the demolition?

MR. SPAGNUOLO: We're going to give you our diatribe.

MR. O'BRIEN: Yeah, at the advice of counsel, we're not going to be able to discuss anything related to wastewater disposal.

MR. SPAGNUOLO: That's where we're at.

MS. KNICKERBOCKER: Thank you, Frank, for the update. And I'm sorry, were you done, Richard? If you had more --.

MR. WEBSTER: Actually, I believe I'll just ask one more question. I actually have two questions. One is, on the site remediation, could you answer the questions that Kelly told me to ask you?

MR. SPAGNUOLO: Well I answered it, I don't have the number of A.O.C.s that we have. But each A.O.C. is scheduled in our schedule and it's all tied to partial site release. So Parcel D was basically a southern piece of property that's not impacted by any equipment. So we chose to do that.

And we'll continue to do other areas of concern that don't have any impact. There's a -- I'll give you an example of an area of concern.

There's a 1500-gallon oil tank that used to heat one of the training buildings on site. I don't know, 15 years ago, it overflowed. The vendor that was filling it up, overflowed it and spilled 100 gallons, whatever it was. It's well documented. That is now an area of concern. So in order to remediate that, I need to get rid of the tank and do our -- so most of the A.O.C.s are of that nature.

MR. WEBSTER: Right. And I'm actually

most interested in the A.O.C.s that are causing impacts, unsurprisingly. So for the most contaminated A.O.C.s, do you have any schedule for some characterization of those?

MR. SPAGNUOLO: Yeah, it's all -- it's all in our P.S.D.A.R. schedule and --.

MR. WEBSTER: That can change; right?

MR. SPAGNUOLO: Absolutely.

MR. WEBSTER: So the current -- is the current schedule the same as the P.S.D.A.R.?

MR. SPAGNUOLO: The current schedule that we have right now is what we just issued in March of this year to the N.R.C. So any changes -- any material changes to that, we have the ability to move items around in the schedule.

MR. WEBSTER: Right.

MR. SPAGNUOLO: Based on priority. There are no A.O.C.s that are impacting the environment. They're legacy issues. They were cleaned up.

MR. WEBSTER: No -- no, that's not true.

MR. SPAGNUOLO: Okay.

MR. WEBSTER: What about the -- the

spent fuel pool leak that goes down into the Hudson?

MR. SPAGNUOLO: I don't actually know if that's an A.O.C. See, but A.O.C.s -- A.O.C.s are Areas of Concern.

Yeah, the entire nuke site is an area of concern, the entire nuke site. Underneath the reactor is an area of concern.

MR. WEBSTER: Right. And I'm asking you what's the schedule. Do you know?

MR. SPAGNUOLO: I don't have that. I don't have that information.

MR. WEBSTER: Could you -- could you give me that information after the meeting?

MR. SPAGNUOLO: We'll see what we have public.

MR. WEBSTER: Last question. I think at the last meeting, you told me that you couldn't estimate the amount of tritiated water on site. As you saw from a letter that I checked -- from a letter I sent you a couple of days ago, I checked back and Rich Burroni, your predecessor, had provided an estimate. So how come Rich Burroni can provide an estimate and you can't?

MR. O'BRIEN: At the advice of

counsel, we will not be discussing anything related to wastewater disposition.

MR. WEBSTER: Well, with respect, that is not a legal issue. That is a factual issue about your -- your statements at this -- at this meeting. And is your counsel here?

MR. O'BRIEN: No.

MR. WEBSTER: So how are you getting this advice?

MR. O'BRIEN: I've been told to, at the advice of counsel, defer anything related to anything relating to water disposition.

MR. WEBSTER: That's not relating to water disposition.

MR. O'BRIEN: You're asking me about water on site --

MR. WEBSTER: Again, that's not --

MR. O'BRIEN: That's fine.

MR. WEBSTER: If the advice of council is water disposition, I'm not asking about that.

MR. O'BRIEN: Okay.

MR. WEBSTER: I'm asking about your ability to estimate the amount of water on the site.

MR. O'BRIEN: Which would then be need

to be disposed, which is what I'm not going to comment on.

MR. WEBSTER: I'm not asking about disposal.

CHAIR CONGDON: So could I just interject because it's not constructive. The issue is that in answering the question at past meetings, Mr. Barone provided a number of 1.3 million gallons on site. Other comments by Holtec, over time, have also clarified that was at a moment in time and that there is other activity on site producing more wastewater that is added to whatever that number was when Rich provided it.

So can I just ask you, the number is increasing, yes?

MR. SPAGNUOLO: Yes.

CHAIR CONGDON: And the number is increasing because you're not releasing anything that you can't release, pursuant to the law in place?

MR. SPAGNUOLO: Correct.

CHAIR CONGDON: Richard, is that -- I mean, you understand that there's additional water being --

MR. WEBSTER: Okay.

CHAIR CONGDON: -- added from the processes that they're using; right?

MR. WEBSTER: If Mr. Barone could provide an estimate of the volume then, why can't you provide an estimate now?

MR. SPAGNUOLO: Because we're under a --.

MR. WEBSTER: No, but you could provide an estimate last time, before you sued.

MR. SIPOS: Okay. I -- I think, Richard, you've made your point. I think Mr. O'Brien has made his point that he's communicating from their lawyers. And I think maybe we could --

MR. WEBSTER: I'm happy to move on.

MR. SIPOS: -- in the interest of efficiency, we could move on.

CHAIR CONGDON: And the mayor had a question, as well.

MS. KNICKERBOCKER: Yes. Well, I just want to say thank you -- of course, I've said, thank you for the update, but also we had -- the Village Board had toured CertainTeed. And that was our question, like, we knew that the property line was right there, the water that was coming into the

CertainTeed lot. So thank you for explaining that. I'll bring that information back to the board.

Also, I'm hoping -- first of all, I'm pleased that you're looking at other alternatives of how to get rid of the wastewater, the -- the tritium, and by these other processes that you're looking at that, and you'll continue to look at that.

And I know you had said that this isn't done anywhere else in the country, but we have been -- this -- this decommissioning process, we -- we've kind of been trailblazers. So maybe perhaps going forward, there might be some type of technology that will work and that we can -- or we can further look into it.

But thank you for at least, you know, being open to -- to looking at that. Thank you.

CHAIR CONGDON: Susan?

MS. SPEAR: Thank you. Is the seismological measuring equipment still functional on site?

MR. SPAGNUOLO: No.

MS. SPEAR: So where did you get the 3.6 number from?

MR. SPAGNUOLO: From the website that

is put out by the National Geologic Service. It actually has thousands of points. You can find what it was at your house on this website.

MS. SPEAR: Interesting. Thank you.

MR. SPAGNUOLO: I didn't know it existed until after the earthquake, either.

MS. SPEAR: One more question, the above Class C waste that's not the spent fuel rods, where is that being stored on site?

MR. SPAGNUOLO: That'll be stored on the ISFSI pad.

MS. SPEAR: So it's boxed up and on -- physically on the ISFSI pad?

MR. SPAGNUOLO: It will. Right now, there's two cans that are greater than Class C waste, each from the Unit 1 -- I'm sorry -- Unit 2 and the Unit 3 spent fuel pool. There'll be six more from Unit 3, six more from Unit 2 and that was planned in the design of the ISFSI pad.

MS. SPEAR: Thank you.

CHAIR CONGDON: Yes, Legislator?

MS. ULAJ: Thank you so much. Regarding the lawsuit you filed on April 18th, are you able to speak to how those legal fees are being

funded? Are any part of the decommissioning trust fund being used to support that lawsuit?

MR. O'BRIEN: I -- I don't have that answer. Honestly, I don't -- I don't know offhand. Yeah, it would come from the company because that's who's filing the suit, so.

CHAIR CONGDON: I think that was an excellent question. And I think we should follow up on that and learn more about the -- how the -- how the litigation is being paid for.

Other questions? Yes, Superintendent?

MR. TROMBLEE: I'm going to -- I'm going to ask a new-guy question here.

CHAIR CONGDON: Okay.

MR. TROMBLEE: The -- the inspection report regarding the use of the trust fund for community outreach activities is not the intention of the trust fund and it's a violation of that. Does that preclude Holtec from providing any other outreach activities outside of that trust fund? So could they use general operating funds to support community outreach?

MR. O'BRIEN: The company can -- I'll say it doesn't preclude outside if we choose to do

so.

MR. TROMBLEE: Okay. Thank you. Thank you.

CHAIR CONGDON: Other questions? Okay. Thank you, Frank.

Thanks, Pat.

Arnie Gundersen is here from Fairewinds Energy. And at the request of community members, we've invited Arnie to make a presentation. He's given a -- a couple of other presentations that we've circulated videos of to the D.O.B. So we're familiar with your work and we appreciate you coming.

I want to do a -- just -- just make an announcement by the State. You're going to hear two presentations tonight about alternatives to the wastewater discharge. One is storage on site, which will be presented by Arnie Gundersen. Another is further examination of what occurred at Vermont Yankee, which was shipment offsite.

And I want to make clear that this is a Decommissioning Oversight Board that is not the decision maker as to how the water will eventually be disposed of. We are an information sharing body and we are here to facilitate information exchange.

And we're really grateful, Mr. Gundersen, that you made the trip to -- to join us and to share your knowledge with us. And I want to open the floor to you. Thank you.

MR. GUNDERSEN: Well, thank you. Do I need this closer?

CHAIR CONGDON: You do need to speak into the mic. I will ask our A.V. folks to opine.

MR. GUNDERSEN: Okay. Wow. Yeah, thank you for inviting me to speak to you tonight. I want to thank the groups that contacted Fairewinds in the past year, seeking our information and the belief that in technical knowledge that Fairewind has.

I want to thank Governor Hochul and the D.O.B. and all the advocates that have been seeking to protect the -- the Hudson River by inviting me here to answer questions. I'd like to give a shout out to my union brethren, my -- for 44 years, my dad was a member of the -- he was a master mechanic in the Oil, Chemical, and Atomic International Union, which rolled into the A.F.L.C.I.O. back in -- in -- right around the change of the century.

I walked the line with him when I was

a kid. In my union history, I was the first union kid to ever get a scholarship from my father's company. Before that, it was all managers and -- and -- and -- and doctors.

So each summer out of high school, I was a Teamster back when Jimmy ran the union. And between my Teamster wages, plus the union kid scholarship, plus about half that my parents were able to chip in, I was able to get out of school debt free. So I'm -- I'm deeply appreciative of -- of Teamsters and -- and what unions have done.

After I became a whistleblower, I was a high school math teacher and a member of the N.E.A., which is the teachers union. And I was invited by the N.E.A. to -- to write an article in the -- in a magazine. So I appreciate the people that gave us the 40-hour work week. Thank you very much.

The Board has my C.V. It's 16 pages long. And this is going to be a speed date. Okay. We're going to -- we're going to do a real quick interview.

I graduated R.P.I. Rensselaer, up in Troy, New York with honors cum laude. I was the

first in the nuclear engineering department. I earned my reactor operators license. I was a recipient of Atomic Energy Commission Fellowship for my master's degree up there.

I was the author of one of the chapters of the very first Department of Energy Decommissioning handbook. And I was coauthor of three peer-reviewed papers about the spread of radiation and bestselling author in -- in Japan about the Fukushima meltdown. And I hold a patent on a nuclear power safety device.

Professionally, for 20 years after college, I -- I started as an associate engineer and wound up as a senior V.P. of a company, a nuclear company that was licensed by the N.R.C. to dismantle nuclear facilities, including shipping port and -- and other non-reactor nuclear facilities.

And this is important. When I was a senior V.P., we had tough engineering problems and you get half a dozen engineers in a room and -- and, within a week or so, you figure out a solution. So I just don't buy that argument, oh, we can't do it.

My -- my groups created the first thing that could catch a fuel canister that was

dropped from 100 feet high, two-story spent fuel racks, free standing sliding racks, which was the first in the world, missile shields, turbine nozzle dams -- steam generator nozzle dams, rather.

So when I hear it can't be done, I just know the power of a -- of a group of engineers to come up with -- with solutions.

New York State, I think my nuclear career started in New York State when, at eight years old, my mother took me to the Brooklyn Navy yard to see the Nautilus, which was just a nuclear-powered sub that had just gone from Seattle under the ice pack and popped up in the Atlantic.

And then, of course, I was at Rensselaer. I was on the sailing team. We used to sail on the Hudson River. The reactor I worked at was in Schenectady. And I joined New York State Electric and Gas, and where I met my wife, and who's Fairwinds's co-founder.

We were -- we were married in Owego. We dated in Oswego and we were married in Owego. Our son was born in Johnson City and I spent many, many family vacations on the Sacandaga Reservoir. So it really is the Empire State and it's nice to be here

today.

I got to stop one rumor. There was a rumor floating around. We're -- we're -- we're whistleblowers, my wife and I. We lost our home, we lost our savings, we went -- we lost our pension, and I own no stock in anything. I -- I get by on Social Security.

There was a rumor around that I was pushing the Eberline Lab that we've channeled our work through because I own stock in the company. And I own stock in nothing. I can't afford it. So let's put that rumor to rest.

Briefly on Holtec, I -- I need to note that Holtec has never designed a nuclear power plant, never constructed a nuclear power plant, never operated a nuclear power plant, and never wholly decommissioned a nuclear power plant as of today.

Holtec's chief financial officer's suing the company, alleging that he was forced to overinflate the company's assets by three-quarters of a billion dollars. I think an important comparison here is what happened at Zion.

Zion is a nuclear plant just north of Chicago. And it's a 2-unit, 4-loop, Westinghouse

plant, pretty much identical to Indian Point 2 and 3. Zion was 2 units. And the -- the company that dismantled -- it has been completely dismantled by a company called Zion Solutions and -- not Holtec -- Zion solutions for $800 million.

So when I -- when I hear the -- the -- the amount of money available here, I'm really in awe of what the Zion Solutions was able to accomplish for $800 million.

I -- I also need to talk about the Nuclear Regulatory Commission, which came up in discussions earlier. The N.R.C. distorted federal law to allow Holtec to license a temporary spent fuel storage facility in the southwest. Luckily, concerned citizens and states were able to get that reversed.

Holtec is licensed to take apart the Palisades Plant, and it appears that the N.R.C. is ready to green light, without any legal precedence, the restart up of -- of the Palisades reactor.

In -- in addition, State of Michigan has given Holtec 300 million, and the Department of Energy has given them billions, as well. I don't know why. For a company that never designed, never

constructed, never operated a nuke, they sure have a -- a great cash flow.

We've talked about N.R.C. integrity. I need to point out that in -- in 2017, the Inspector General did a report that they -- they surveyed all of the Nuclear Regulatory Commission staff. 15% percent of the staff was afraid to talk about the safety problems. 50% of the staff was afraid to put their concern in writing. 85% of the staff would advise a friend not to put it in writing. And every single member of the N.R.C. staff that put a concern in writing in something called a D.O.P. -- Differing Professional Opinion, D.P.O. -- every single person experience retribution within the N.R.C.

So, you know, if you think you're getting an honest broker here, I -- I think you really need to reevaluate the existence of the tooth fairy.

I was -- as a senior vice president, I told you I was a whistleblower. As a senior V.P., I found violations to the license, told the N.R.C. about it. They blew me off. I went to Congress, John Glenn, and I was sued for a million and a half dollars in a SLAPP suit. That's a strategic

litigation against public participation, which is something that you'll probably learn a lot about in the next couple of months.

And John Glenn praised me. The head of the N.R.C. praised me. And yet, the N.R.C. didn't lift a finger to protect my family and I from bankruptcy. So I don't have a lot of faith in the integrity of that -- of that organization.

Specifics on Indian Point, why are we here? The reason we're here is because Holtec wanted to take the least expensive alternative and dump radioactive waste into the Hudson. We, Fairewinds, the company my wife founded, were approached by citizens who were opposed to that.

And the -- the -- the -- the industry statement was that there was no other alternative. And -- and to the credit of some of the citizens here, they came to us and said are there alternatives? And based on -- based on my experience, but based mainly on my wife working with the citizens groups, she thought we could evaluate it. And -- and in fact, I think we have a good alternative, which I'll talk about coming up.

So based on, you know, 50-plus years

of experience, I graduated in '71. 50-plus years of experience, I think there is an alternative to the -- to the inexpensive route of dumping it into the Hudson. And that's why I'm here today.

The -- the panel gave me a dozen really great questions that -- some of the questions are quite long. I've -- I've got the format here in a question-and-answer format. Rather than read a three-paragraph question, I'll try to summarize it in interest of time to get through the -- the example. But my -- my thanks to the -- the panel for some really well-thought-out questions.

I'm going to start on slide five. Slide four, by the way, is a great explanation of the -- the analysis Fairewinds had put forward. Based on what happened at Vermont Yankee, where they had unexpected tritium that they needed to store, they put drums -- put tanks in the basement of the turbine building and collected it there. They didn't have town approval.

They didn’t have N.R.C. approval because they already controlled the building. And based on that, I thought -- I was a member of the Vermont Public Oversight Panel -- I thought that was

a viable alternative here, and it certainly is worth pursuing. So question one -- I'm on five now -- "Would contaminated water in the spent fuel pools be processed through filters and demineralizers to remove the majority of radioactivity prior to being placed in the building's storage tanks?"

The water in these tanks has already been filtered and demineralized several times but it will continue to hold radioactivity because no filter and no demineralizer is entirely capable of removing the radioactivity. I would expect that before the -- the water was transferred to the tanks that I proposed, there would be one other filtration and demineralization to capture whatever was stirred up from the contamination and spent fuel pool and the associated tanks.

I'm proposing storing the tanks -- storing the fuel in multiple tanks with an empty tank as a reserve and a berm around them in case there's leakage. And I propose they use the empty turbine building to do that, based on what happened at Vermont Yankee when they used the turbine building without town approval and without N.R.C. approval.

The -- the spare tank is an extra

layer of protection, and also the berm is an extra layer of protection that I -- that I suggest we do. Once the tanks are filled, they're static. So some of the questions they -- that -- that Board presented suggest that that flooding could occur, overfilling could occur.

Once they're filled, they're filled. You're not -- the tanks in question at other sites have overflowed because people were pumping water in and taking water out, which is different than what -- what I'm proposing will happen at -- at Indian Point.

The vent line on a tank is designed so that as the volume of water goes up, the air can leave. But once the tank is static, you put a diaphragm seal on that to prevent further evaporation, which is something I'll get back to in -- in couple of minutes. It's important to remember these tanks are static once they're filled.

Okay. Second question, Q2, the -- I have suggested 30 samples; the proposal was 3. And why did I suggest 30 samples versus 3 as this water is being transferred over?

The reason for that is tank recirculation may be effective if the liquid is

really homogeneous. And I'm not sure the material is homogeneous. I think you're going to find contamination in the corners of the fuel pool or at the bottom of the tank.

So as you turn over the tank, you're really not getting to the material at the bottom of the tank. You'll get gravity separation. So as the tank is drained, it is entirely foreseeable that the first batch of radiation coming through will be different than the middle, and will certainly be different than the bottom, which is why I -- I propose taking 30 samples.

It's not a big deal. I mean, it probably adds two days to the process and a couple thousand bucks in -- in -- in analysis. And out of a $2 billion budget, you're -- you're just never going to see it. So 30 versus 3, it’s because you can't assure yourself that you're getting homogenous mixing. And -- and a good survey will likely detect that.

Question 3, this was great, about a storage tank being overfilled, and there's also been examples where tanks at Fukushima were overfilled, how will the radioactively contaminated water be

transferred into the storage tank that I proposed being stored in the building.

Indian -- the Indian Point tank was in use for years and it was used to -- to fill and it was not a static tank. They were filling it and -- and discharging from it. Now, I'm proposing three brand new tanks with brand new instrumentation, which minimizes, but doesn't eliminate the possibility of -- - of overflowing.

But considering the public interest in that process for the day you're filling those tanks, it sure wouldn't hurt to have somebody standing there watching to make sure that the tanks didn't overflow.

Separately, though, it would get -- on to the other piece of that is I'm proposing a berm around these tanks to collect what may overflow.

As far as the part of the question suggested, what policies and procedures for transferring liquid, Holtec's already going to do that. They're already transferring waste from Unit 3 to Unit 2. Well, I -- I believe the transfer procedures that are in place can be modified to -- to pump it to -- to the turbine building, which is my suggestion.

So they had planned to transfer water anyway. I'm just changing where it's ultimately -- ultimately going. You know, the goal is to protect the Hudson River. And -- and having new tanks that are -- are robust and a berm around them will avoid the -- the possibility of something running across the floor, out the door, across the parking lot, and into the river.

And that's really our goal is to protect the river, you know, from a commercial standpoint, from visitors to the facility, as well. And -- and, you know, it's a great tourist attraction. I loved sailing on it.

The next question is a little bit longer and probably the most important answer I've got here. How long would tritiated water be stored in the turbine building's tanks? I -- I -- two things I need to talk about first is, first, all water contains tritium. In very low quantities, it's created by cosmic rays.

So the river in the Hudson now is -- has tritium in it. The tritium in the tanks in the building are tens of thousands of times more radioactive than that.

And the second is it's not just tritium in those tanks. Yes, there is tritium in the tank, but there's -- there's other isotopes, as well. So to just call it tritiated water really isn't -- is -- is a misnomer.

Now, I don't -- I am not advocating any specific duration. As far as I'm concerned, it's undefined and it's unspecified. But I believe that the immediate release is unwarranted, it's unnecessary, and it's unscientific.

Now, I'm an engineer. I -- I was taught that -- that tritium couldn't get through the skin and the -- the -- the beta particle was very weak, except -- I know I have no knowledge of that, except I was taught that in 1971.

Now, if you look at what's happened since then, there -- there's a lot of information coming out that suggests that tritium is not as benign as I was led to believe as a -- as an engineer. There's a -- the -- the misconceptions seem to have their root, like a lot of things in nuclear power with the bomb program.

Scientific American did a great article about the history of the E.P.A. tritium

standards. And -- and they quote a guy named David Kocher at Oak Ridge, who said, as a health physicist who studied tritium for years, in the 1970s the E.P.A. did not rely on any health standards in setting its original standards.

Instead, the E.P.A. back calculated acceptable levels of tritium in water from radiation exposure, delivered in the already extent radionuclides from the weapons testing program. And then he adds -- this is important. This is -- this is a guy at Oak Ridge, a doctor at Oak Ridge. Kocher says it's not a health-based standard; it's based on what was easily achievable.

So a couple of -- of individuals who I really respect, Dr. Gordon Edwards in Montreal, Dr. Ian Fairle in the U.K., Dr. Arjun Makhijani in Washington, D.C., and Dr. Tim Mousseau in South Carolina have all said, based on what we know now, we really need to take another look at tritium because it's not as benign as we think.

And -- and there's two other pieces, one of which is unique to the Hudson River. And that's this thing called synergistic toxicity. We know the Hudson has P.C.B.s in it, they're not good

for you. We know that tritium is not good for you. And the combination of those two have a synergistic effect. They don't add up, one plus one is two. They multiply.

So this issue of synergistic toxicity for the Hudson is -- is critical to my mindset about not releasing that stuff until we've done more scientific analysis.

Dr. Makhijani wrote a phenomenal book on tritium that was published last year. And I -- I'd advise reading it. I -- I did. And he talks about how while the beta particle doesn't travel very far, if the tritium gets inside the cell, it can do a lot of -- of damage.

Okay. Next question. On question 5, what would happen to tritiated water being stored in the turbine building's tanks. I -- I think this was about the retention period. And as I said in the previous question, I don't know what that retention period should be, but I do know that releasing it now is unscientific and unwarranted.

And what I -- what I suggest is that, after scientists really look at the synergistic toxicity with the -- with the P.C.B.s in the Hudson,

and the organically bound tritium, and -- and analyze that, at that point, we'll be able to, as a community, get together and say, hey, it's a no-brainer, we can release it, or my God, I'm glad we kept it on site, let's hold it longer.

But that decision doesn't have to be made now. Let's wait for the science to catch up and store it until then. We need precise, reliable information and data that are available after the analysis.

Question 6 is a -- is a long one, and I'm going to shorten it for time's sake. It gets back to the seismic issues. There's this thing called the D.B.E., a Design Basis Earthquake, or an S.S.E., Safe Shutdown Earthquake. And three times in nuclear history, nuclear plants have experienced an earthquake as bad or worse than what they were designed for.

One was at North Anna, one was at Sumner, and one was at Perry. Then the question is what would happen to the tanks at Indian Point if a bigger earthquake, one it wasn't designed for, were to hit? And I -- I looked at all three of those and -- and this was great research, by the way.

I -- I looked at all three. And within a couple of days, the turbine buildings had started up, the plants were continuing to generate electricity. So even when the design basis event hit like the 6.0 that we heard earlier, the turbine buildings are robust enough to ride through it. Even at Fukushima, which had a 9 offshore, the turbine buildings remained intact. So I'm not worried about the structural integrity of the -- of the turbine buildings.

Put that design-based event in context though, the river -- the bridges over this river would likely be damaged or collapsed. The infrastructure in towns would likely either -- either potable water or sewage water would likely fail. Gas lines would break and there'd be fires. It would not be a pleasant thing for the -- the Hudson River Valley, but I do believe that turbine building will -- will ride through it.

The -- the -- the -- the quake at North Anna actually cracked the Washington monument that was 400 miles away. And yet, within -- within a short period of time, the plant started back up. So I believe the turbine building is robust enough to

withstand a -- a design basis event without releasing the -- the tritium that -- tritiated water and other radioactivity that I'm proposing to be in it.

There are other alternatives. I chose the turbine building because of the Vermont Yankee experience, that Vermont Yankee had stored tritium in its turbine building, didn't get town approval, didn't get N.R.C. approval.

However, I mean, if you want more robust buildings that the containment is there, and the auxiliary building is there, but I think Holtec would like to be knocking those down. And once they've gutted the turbine hall, it's essentially about a -- about as big as a 10-court indoor tennis facility. It's a huge empty space, and to put tanks in there didn't seem to me to be too difficult.

But again, I'm not opposed to storing it in the containment or in the aux building or something like that. But the turbine building certainly seemed robust enough and was available.

Question 7, again, great research, thank you, about unheated -- freezing pipes and unheated buildings, how would instruments monitoring the level inside the tank be protected during cold

water -- weather?

First off, this is a static tank, so you really don't need level instrumentation screwed into the side of the tank. You could put somebody at the top of the -- you know, pipe to -- to drop it down every so often. But the goal is you're going to be looking around the berm to see if there's leakage. But, you know, Holtec's got $2 billion. I think they could keep the heat on. That's answer number one.

But the -- the failures were -- were in unmonitored systems like the Dresden example. And, you know, I'm proposing once a -- once a day you have a -- a person on -- on a shift go by and just look at the berm to see if there's -- if there's any water.

Next question, another one of these great -- great research about problems at Oyster Creek that went -- went undetected. The tanks in question in question eight were -- were not static. You know, they were pumping water in, taking water out. So having active height monitors, water volume monitors was critical.

And that's -- that's really not what we're experiencing here. It's a -- it's a matter of

once that tank is full, once a day look for leaks and -- and -- and once every so often go in and measure the -- the amount of freestanding -- the amount of air above the water.

Those kinds of things are -- are much more simple than the -- the examples quoted here.

Question 9, Holtec has a dry storage technology used in The Ukraine. Is it a viable method for Indian point? And I looked at it and, no, the Holtec storage technology in Ukraine for dry storage is not really applicable for -- for storing liquids.

Question 10, we heard from another nuclear expert that there are risks including evaporation and leaks. Can water be stored in tanks without evaporation or leaks?

Once the proposed tanks are filled, they're going to be surrounded by a berm. The level doesn't fluctuate. And vents on a tank are designed to allow when water is pumped in, the oxygen goes out. When water comes out, oxygen goes in.

This is a static tank. You can put a diaphragm on the end of the -- the vent to allow for some expansion, contraction due to temperature, but

you're not going to have a significant amount of evaporation.

So between -- I don't believe evaporation will be significant. I discuss that a little bit later here. And also leakage, if there is any, in a -- in a new tank that's not being stressed by volume changes, and it's unpressurized. In -- in a tank of that nature, leakage, if it were occur -- were to occur, would be minimal and would be caught in a berm, and either the tank could be sealed or the fluid could be transferred to the extra tank.

And then, of course, it's not hard to put a water sensor at the bottom of the berm, so if you get flooded, you -- you detect it between shifts. If they're there once a day and a leak occurs between shifts, a water -- a water monitor would alert that -- the staff.

If there is evaporation from the tank, what amount of tritium is released? I think evaporation may be about 2 gallons compared to 1.3 million gallons. So the issue of evaporation from a tank that has a diaphragm seal on it is about one millionth of the issue of releasing it to the -- to the Hudson River.

Question 12, when I -- when I wrote this, I was proposing new storage capability. I have not proposed reusing old tanks that are presently in use at Indian Point. And I propose putting three new tanks with a berm around them at Indian Point.

It -- and I've suggested they'd be in the turbine building because of the Vermont Yankee experience. But other buildings are also options. But I think Holtec wants to get rid of those buildings, the containment and the auxiliary building because they're the ones where the -- the radioactivity is -- is highest.

I -- I understand that Riverkeeper may have suggested using an existing tank. And I haven't studied it, but if it's bermed to prevent any leakage that -- from getting out, I -- I guess I'd have to study it a little further, but it seems to be a viable alternative.

But the -- the key -- my first goal is to keep it out of the Hudson until we get better -- better science on -- on tritium -- organically-bound tritium, and synergistic toxicity.

Are you aware of any advancements in technology to remove Tritium from water? Tritium is

10% heavier -- tritiated water is 10% heavier than water. Hence, they call it heavy water. And so because it's heavier, it boils at 214 instead of 212. So it is possible to -- to distill water out from the tritiated water. It's awfully expensive.

And I'm aware of no other technology that's -- that is reasonably priced. You know, hemp and things like that, if hemp works, the tritium just moved from the tank into the hemp, and now you've got -- what are you going to do with the hemp?

So it's -- it's not -- none of those eliminate tritium, but over time, you just have to wait for it to decay -- to decay. So it's possible to separate out tritium. There are technologies available. It's awfully expensive, and -- and -- and most of them are not -- not viable -- not commercially viable, I guess I'd say.

The Village of Buchanan has passed a resolution, last year, expressing its intent not to approve any permit for on-site storage of tritiated water. Do you agree with the village's -- that the village's position should be respected? Does the N.R.C. or local authorities take precedence?

Well, I agree with the will of a half

a million people who signed the petition to stop Holtec. That should be respected. The Town of Buchanan had benefited from low taxes for years and, until the situation is -- is evaluated further, I -- I don't believe that the -- you know, the precedent that the Town of Buchanan suggests about passing the law is -- is reasonable.

I -- again, I chose this because it happened elsewhere. The turbine building at Vermont Yankee was used for storage of tritiated water in -- in the past. Okay. I -- I've never suggested outside storage. I think building new tanks outside invites the Town and invites the N.R.C. to get involved in the process.

And considering my experience with the N.R.C. and its close relationship with Holtec, I don't think you're going to have an honest broker at the N.R.C. And I think they and the Town will go out of their way to stop new tankage outside. So that's why I chose an existing building with -- with -- with tankage inside the building.

Given Holtec's long legislative history of manipulating the N.R.C. to achieve favorable -- favorable outcomes, I -- I don't expect

that a new facility, a new tank outdoors at -- at Indian Point will -- will ever be approved.

Hence, if we keep it in a building that's already approved, that problem goes away.

I think I'll just skip over 14.3 because I already discussed it. These never before things that the Nuclear Regulatory Commission has -- has given to Holtec are -- are being reversed on decision within the circuits. But it's citizens, it's like the -- the people in this room, it's citizens that are forcing the -- the action. It's not the Nuclear Regulatory Commission.

I was one of the five members of the Vermont Yankee Oversight Panel for years. The panel approved Vermont Yankee's license to run for 20 more years. And I signed it. So I approved Vermont Yankee to run for 60 years and it -- it ultimately shut down well before that.

But I approved that, with appropriate upgrades, it was ready to go for another 20 years. I've been to Indian Point. I've looked at Indian Point. And I -- I chose the alternative, I've chosen to preclude any licensing ramifications by using the interior of a pre-existing building for new tanks

given that there's a precedent already in -- in Vermont Yankee.

Until we get this synergistic toxicity straightened out, the organic bound nature of it, and the overall tritium standards, which had no basis in science when they were originally proposed, until those issues are -- are addressed, I -- I --I think it's unreasonable, unnecessary to release that water into the -- into the Hudson.

My goal is to protect the Hudson's economics, its tourist industry, its agricultural viability, and its -- and its population, and animal population, as well, from -- from something which has not been adequately analyzed by the N.R.C.

And I want to thank, again, my wife for -- for creating Fairewinds and for the -- the people in the community for -- for seeking us out. You know, a hundred million -- sorry -- 500,000 signatures is a -- is a deeply meaningful value. And it gets not just Governor Hochul's attention, but -- but the attention of all the -- all the people throughout the country. So thank you guys for -- for what you've done.

Thanks to the Oversight Board for

having me here and for all those advocates who seek to protect the Hudson River by inviting me here today.

CHAIR CONGDON: Thank you, Mr. Gundersen.

I'd like to -- I'd like to open the floor for a few short questions or comments. And then I'm going to turn it to Bridget Frymire. And then there can be further discussion for both speakers after Bridget's presentation.

But a few quick reactions to Arnie, Supervisor Becker?

DR. BECKER: Thank you very much, Tom.

And thank you, Arnie, for your presentation.

And I've been consumed, the Town Board of Cortlandt's been consumed with this issue of the tritiated water. And as a physician, I know about tritium and radioactive and beta radiation. And I also read about what you talked about, that even though beta radiation does not penetrate the skin, it can be absorbed through drinking.

And the question is the half-life within cells is not long, but it's probably long

enough to cause genetic changes. And that's the issue. And I've said this before. There really is no safe established lower limits of any form of radiation, whether it's X-ray, gamma, or beta in this case.

Second of all, you know, I -- I think two of the points that I take from you that I agree with is, number one, it has no place in the -- in the river. And the Town Board felt this way, we had a rally on May 6th. So many of the organizations from Food and Water, Scenic Hudson, Riverkeeper, every -- I know I'm missing dozens that were there -- stood up and we had every Congressman from Manhattan to Albany supporting us, as well as multiple state senators and assemblymembers.

And when Senator Harckham and Assemblywoman Levenberg got the rules -- the law changed, so that they cannot dump into the river, that was a huge step.

So now Holtec is going to challenge that law and it'll go to the courts. I don't know how the court will opine. They're not going to look at it as a nuclear issue. They're not going to look at it as a -- as a safety issue. They're going to

look at does a federal level of government supersede a local or state level. That's where the decision is going to come by.

And that's not what this should be about. It's about the environment and the safety of the public, which takes me to the next logical step, your healthy distrust of the N.R.C.

The N.R.C. is a government organization that responds to Congress. So the next step of all the activists, all the environmentalists, and the residents of the town and of the state and all the other communities that are going to face decommissioning is telling Congress to pass legislation to direct the N.R.C. that they can't discharge nuclear material into waterways, nationwide.

You know, we should take this and take it further than just our local community.

And the final thing is the storage on site is a reasonable alternative, but I don't want it to be the permanent solution because that does help -- hurt Buchanan, which is a major part of our town. So if it is stored on site, that's just somewhat better than keeping it in the pools, but it's not the

permanent solution.

And when you started your talk about where we have to find technologies and get our engineers to find -- you know, to figure out what to do with tritium, you know, tritium comes from lithium, if my understanding, through the lithium nuclear process. And it's really just H3. It's similar to hydrogen. People are talking about converting it into water, turning it into peroxide, turning it into other materials, or just mixing it with silicates and burying it almost like concrete.

So there are other solutions. So I think the -- the points I want to make, very quickly, are we got to get the N.R.C. to listen to Congress by making Congress aware of the issues nationwide. And this will force the industry to come up with other solutions. Thank you.

CHAIR CONGDON: Thank you.

Mayor?

MS. KNICKERBOCKER: I have many -- many questions, so I --.

CHAIR CONGDON: And there will be more discussion after -- after Bridget's presentation, as well.

MS. KNICKERBOCKER: I just want to follow up on something Rich said, because I have been sitting at these meetings, even before 2017, you know, the N.R.C. updates. And it's a consistent theme consistently, you know, N.R.C. can't be trusted. N.R.C. is this. They're in bed with the nuclear plants.

And you know what? That's way above our pay grade here, way above, for anybody, any activist, any elected official here. So Richard, you are correct. If people feel that there is an issue with the N.R.C., that needs to be addressed through other authorities, the President, the Congress, the Senate, whatever it is because I consistently hear this. We can beat that drum forever.

So if people feel that it's an issue, then we need to take it from here and go further with that.

I do have some questions, also. I heard what you said about the Village of Buchanan received tax dollars. Yes, we did. Yes, we did. And we also -- I wasn't born yet -- we also accepted that responsibility in the early -- the mid '50s when Con Edison purchased the property, went online in

'62. Nobody knew what nuclear power was at the time.

So we were given money to have a nuclear power plant in the backyard. And over the years, you know, people understood more and more what nuclear power was and what nuclear power can be going forward in the future. You know, you see there's new technologies and all.

But you talk about -- you talk about the -- the storage tanks. And one thing I was interested in, you said three storage tanks, you were -- you assume would be three. What are the sizes of those storage tanks? What -- the sizes of the storage tanks that you're proposing?

MR. GUNDERSEN: Well, Holtec originally said -- Holtec originally said 1.3 --

MS. KNICKERBOCKER: Yeah, we'll use 1.3, yeah.

MR. GUNDERSEN: -- you know, divided by 3, it's like a 400,000-gallon tank.

MS. KNICKERBOCKER: Okay. Inside the -- the turbine buildings.

MR. GUNDERSEN: Yes.

MS. KNICKERBOCKER: So not -- I'm not sure if the Village of Buchanan would be able to

regulate at that point, but I know the N.R.C. would have some type of control over that. I'm sure they would have a voice in that.

But with Vermont Yankee, you had mentioned, were you -- when the original agreement was done, was that part of the original agreement that the water would be stored on site, or was the original agreement there that it would be discharged into the river there?

MR. GUNDERSEN: Vermont Yankee was a zero liquid discharge --

MS. KNICKERBOCKER: Okay.

MR. GUNDERSEN: -- plant.

MS. KNICKERBOCKER: I know it's a different plant from what we have.

MR. GUNDERSEN: So there -- I -- there was -- they -- they were never allowed to discharge into the Connecticut River.

MS. KNICKERBOCKER: Okay. So in the end, how much tritium -- how much water did they end up having?

MR. GUNDERSEN: Ultimately, they shipped it off site. I -- I don't --.

MS. KNICKERBOCKER: But it's nowhere

near 1.3 million?

CHAIR CONGDON: Bridget's going to get into that.

MS. KNICKERBOCKER: Okay. Thank you very much. I will have more questions, but I -- I definitely will have more questions. I have things written down, but I just wanted to ask those few. Thank you.

CHAIR CONGDON: Thank you, Mayor.

Superintendent?

MR. TROMBLEE: Thank you, Arnie, for the presentation. Just two quick questions. You had mentioned, in your study, that the storage would -- the storage solution would survive an earthquake, but that gas pipelines might fail and might cause bigger issues.

We do have a pipeline running underneath, probably very close to where we'd be storing the -- the tanks. Any consideration to that in your study?

MR. GUNDERSEN: I didn't take any consideration of the gas pipeline when I was looking at this.

MR. TROMBLEE: And then the other

question is the footprint of Vermont Yankee, about -- about how big -- what is going on at Vermont Yankee right now? Is there development, is there any reuse of the property, or is -- is it sitting idle?

MR. GUNDERSEN: Vermont Yankee is being dismantled as we -- as we speak. It's a single unit. And it's a boiling water reactor, versus these. Boiling water reactors are, in general, more contaminated than pressurized water reactors. It's a single unit.

And they had a significant release on site, back in 2010. They'd released not just tritium, but strontium 90, cobalt 60, cesium 137. So there's a groundwater wedge that's heading toward the -- toward the river, and it's possible that the groundwater is also contaminated.

So you know, it -- when I chose to compare it to Zion, Zion was a pretty clean plant and Units 2 and 3 are pretty clean plants compared to the example of Unit 1, which -- which, you know, is ancient and had its -- had its problem early on, or Vermont Yankee.

So the -- the -- the best example, if you're going to do a head to head, was -- was Zion 1

and 2, compared to Indian Point 2 and 3.

MR. TROMBLEE: So -- so let's talk about Zion. What's -- what's the status of Zion's property?

MR. GUNDERSEN: Zion is squeaky clean.

MR. TROMBLEE: It’s redeveloped?

MR. GUNDERSEN: The site is in the process of being turned over. The -- the decommission -- the dismantlement of the facility is done. The N.R.C. is still evaluating the -- the survey data to determine whether or not to release the site for public use.

MR. TROMBLEE: Is -- is any part of the goal -- yes, to protect the Hudson, but is any part of the goal to reclaim the property for any particular type of use?

MR. GUNDERSEN: At Zion, yes.

MR. TROMBLEE: Thank you.

CHAIR CONGDON: Thank you, Superintendent.

John Sipos, and we're going to want to start Bridget's presentation, to stay on schedule, within the next couple of minutes. So John, do you have a couple of quick --?

MR. SIPOS: Just a couple of clarifying questions. First of all, Mr. Gundersen, thank you for coming here tonight. Welcome to Westchester and to New York State. Thanks for coming down from Vermont.

You -- you started your presentation off by asking a question, are there alternatives. And you discussed that there were tanks in the basement of Vermont Yankee, and that was an alternative that you're -- you're building off of.

Those tanks were in the turbine building, correct?

MR. GUNDERSEN: Yes.

MR. SIPOS: And the turbine building today is demolished; correct?

MR. GUNDERSEN: Today?

MR. SIPOS: Today, April 25th --?

MR. GUNDERSEN: I don't know where -- what the status is, yeah.

MR. SIPOS: Is the water still in the basement of the turbine building?

MR. GUNDERSEN: No -- no, it's been -- .

MR. SIPOS: So the water is gone from

the basement of the turbine building?

MR. GUNDERSEN: Yeah.

MR. SIPOS: Okay. And just in prep for today, I went back and I looked at a video that you prepared a year ago with Courtney Williams, runs roughly 20 minutes. And you described that there were three alternatives for Indian Point.

One was releasing it in a controlled way to the Hudson River. The second was also a Vermont Yankee alternative. And you described it as that Vermont Yankee shipped the tritiated water via tanker trucks to a licensed facility down in Tennessee.

Do you recall that statement?

MR. GUNDERSEN: I know that to be true, yeah.

MR. SIPOS: And you know that to be true. Okay. And then the third was to -- the third option you proposed was to keep the fuel -- keep the water in the fuel pools at Indian Point. I think that was your third option. Do you recall that?

MR. GUNDERSEN: Yes, those are the three options, yeah.

MR. SIPOS: And then at the end of

that video, you said either the last two alternatives. And that would be trucking the water to the facility in Tennessee or keeping the fuel -- keeping the water in the fuel pool would be -- I think you -- the words you used are better than the controlled release to the river. Do you recall that?

MR. GUNDERSEN: I'm -- I'm sure, if I had to rank them, dumping it into the river is -- is far and away --.

MR. SIPOS: You're not for that? You're not for dumping it into the river; correct?

CHAIR CONGDON: I -- I got that.

MR. SIPOS: Because you want to protect that.

MR. GUNDERSEN: And the -- the indigenous communities here feel it's an environmental justice issue to take that material and give it to somebody else to give the contamination to somebody else.

MR. SIPOS: I -- I want to come back. Just -- but -- what you did in tiering them -- or you know, a relative evaluation, you suggested that the Vermont Yankee approach, which was to truck it off site, or keeping it in the fuel pool were the better

two options.

MR. GUNDERSEN: Yes.

MR. SIPOS: Is that correct? All right. Thank you very much. Those are my questions.

CHAIR CONGDON: Thanks, John.

And we're almost on schedule. We do want to reserve the last half hour of tonight's meeting for a public statement hearing. And so Bridget, with that in mind, I know you have a number of slides to get through.

And I want to thank you for doing some research on the Vermont Yankee options as a good segue from -- from John's questions.

And thank you again to Mr. Gundersen.

I just want to remind the audience that Bridget does work for the Department of Public Service, but she is not opining on any of these alternatives. She's presenting research that she conducted about the Vermont Yankee site.

So with that as my introduction, Bridget, please proceed.

MS. FRYMIRE: Thank you, Tom. All right. Good evening, everyone. My name is Bridget Frymire, and I am the Chief of Nuclear Affairs and

Emergency Preparedness for the Department of Public Service.

Tonight, I will be giving a presentation on another option for disposal of wastewater at Indian Point. Specifically, I will be discussing the possibility of shipping wastewater off site during nuclear decommissioning.

Before I begin, I would like to thank Alyse Peterson from NYSERDA, who isn’t here tonight. She's usually sitting at this table; Cliff Chapin from the Department of Public Service; and Tony Leschinskie from Vermont's Department of Public Service.

This presentation would not have come together or been nearly as informative without your assistance and patience with my many, many, at times, seemingly, endless questions.

As an initial caveat, as Tom said, in discussing this option, I'm providing information to facilitate discussion on, one possible option for disposal of wastewater at the Indian Point site. This presentation does not necessarily reflect the position of the Department of Public Service.

Next slide, please. Go back one.

Okay. All right. During this presentation, I will be discussing past decommissioning experience and information from both the Vermont Yankee plant, and also, from West Valley here in New York.

Further, as is necessary with any option, there are many things to take into consideration, and we're going to be running through many of those, as well.

Next slide, please.

First things first. Is this a feasible option? Yes. Has it been done successfully elsewhere? Also, yes. Has it been done successfully by Holtec? Not yet.

Next slide, please.

Vermont Yankee seems to be the topic of discussion tonight, so I'm glad that we have a few slides here describing a little bit more about the plant. And before I dive into what Vermont Yankee has done during decommissioning, here is some information summarizing the plant itself.

The Vermont Yankee Nuclear Power Plant is both similar and different from Indian Point. It is a boiling water reactor located in Vernon,

Vermont, and was permanently shut down in 2014. The plant was bought by NorthStar in 2019. The right-side column shows us that Vermont Yankee is quite a few years ahead of Indian Point's decommissioning process, with partial site release set for 2026.

In the background of this slide, you'll see Vermont Yankee when it was operating. The Connecticut River is right in foreground there. The reactor build -- building, the biggest building pictured with the white stipe on the top is in the foreground, with the cooling towers to the left, and the turbine and administrative buildings to the right.

The picture -- the picture on the right is an exciting look at where Vermont Yankee is in their decommissioning process.

Next slide.

This one has a lot of words. Stay with me here for a minute. It is impossible to talk about the decommissioning experience and wastewater shipping at Vermont Yankee without, first, discussing the three categories of wastewater at that site.

When the Vermont Yankee reactor plant permanently shut down, the turbine building cooled

and contracted, and numerous in-leakage paths developed. Groundwater leaked into the buildings and was contaminated. This water was labeled as contaminated intrusion water and can be seen on the slide in the yellow row.

To deal with this groundwater intrusion, a diversion system was installed to prevent groundwater from entering the buildings. This water is collected by NorthStar, prior to entering any Vermont Yankee building, and is labeled in the first row in green, uncontaminated diversion water.

Lastly, there is process water. This is the water that has been collected and stored from draining and decontamination of abandoned plant systems. For this category of water, I find it easiest to think of spent fuel pool water or the water that was used to cool the reactor plant when it was operating. That's in the bottom row there.

Okay. So those are the three categories. What did Vermont Yankee do with this water? Starting on the top, the uncontaminated diversion water was discharged to the Connecticut River with a permit from the State of Vermont. Both

the contaminated intrusion water and the process water are shipped off site for disposal.

Next slide, please.

Okay. So as I said, contaminated water, process water, both shipped off site at Vermont Yankee.

Shipping wastewater offsite, and I believe this is what you just said, this was always a part of the plan. NorthStar knew this, coming in, when they purchased the plant in 2019.

Vermont Yankee -- this is per the N.R.C., Vermont Yankee is the only U.S. commercial decommissioning nuclear power plant to have performed this type of bulk liquid radioactive waste disposal and shipping. So Vermont Yankee is shipping wastewater off site and they have been since the start of their decommissioning. But how much waste water?

The contaminated intrusion water, they -- actually the State of Vermont just released a report in January 2024. And this report stated that NorthStar had shipped a total of 3.3 million gallons of contaminated intrusion water off site. That's total so far.

With regard to process water shipping, again, think spent fuel pool water, reactor plant water, they shipped 900,000 gallons of this water off site in 2021 and 2022. Approximately, 300,000 gallons of that was from the spent fuel pool.

And in 2023, NorthStar shipped the last of its process water inventory, approximately 100,000 gallons, to Waste Control Specialists in Texas. Like I said, this was the last process water inventory at the Vermont Yankee site.

This means that the spent fuel pool is now empty, thereby facilitating further decommissioning and demolition of the reactor building.

Next slide.

Where does Vermont Yankee wastewater go, and how is it moved? Over the years, Vermont Yankee was owned by Entergy before it was bought by NorthStar. So that's -- when it says they're -- the different owners, I'm talking about Entergy and NorthStar. Different owners ship this water to different destinations, South Carolina, Tennessee, Idaho, and Texas. These owners use a combination of truck and tanker rail to ship the wastewater off

site.

NorthStar currently uses tanker rail for wastewater shipping. And I really -- I love this picture just to, like, draw your attention to it real quick. What you'll see, and you can see the reactor building, which we already kind of discussed. But right in the foreground here, you can see the rail line that goes right onto the Vermont Yankee site.

And then at the base of the reactor building, you can see two black -- black tanker cars. Those are -- those kind of exemplify what NorthStar is using right now to ship wastewater off site.

Next slide.

All right. How much is Vermont Yankee spending on wastewater shipping? Unfortunately, there is no public record of exact shipping costs and how much NorthStar has spent on this endeavor. The Decommissioning Trust Fund Annual Reports submitted to the Nuclear Regulatory Commission do not separate out this information.

We did find two separate newspaper articles from a Vermont not -- non-profit news outlet that provides some insight into cost. In 2017, an article referenced Vermont Yankee spending

approximately $4 per gallon to truck contaminated water to Tennessee.

Further, in 2018, another article references that Vermont Yankee spent $3.5 million to ship approximately, almost 800,000 gallons of water off site. And just for everyone, that 2018 article, if you do the math, that also kind of corresponds to $4 per gallon.

And before we go on, it should be known that these wastewater shipping costs are drawn from the Vermont Yankee Decommissioning Trust Fund.

Next slide, please. Thank you.

Additional information on wastewater shipping was provided to us by a New York decommissioning experience at West Valley.

In 2020 and 2021, approximately 23,000 gallons of radioactive wastewater, in a similar class to that that we have an Indian Point, was shipped via tanker truck offsite to the tune of $10 per gallon.

This liquid was shipped by the West Valley Demonstration Project, the D.O.E., to Energy Solutions for treatment and solution -- treatment and disposal.

Now back to Indian Point. I'm very

aware that I am standing between you and the public statement hearing. So I'm not going to go into all of this. You know Indian Point. You're familiar with its history and its decommissioning milestones.

Next slide.

As we've already stated tonight, Indian Point has approximately 1.3 million gallons of wastewater for disposal on site right now. This water is currently stored in several locations on site.

It is important to note that Holtec has stated additional wastewater will be generated by upcoming decommissioning activities. So we should probably think of the 1.3 million gallons as the low end.

Unlike Vermont Yankee, shipping wastewater outside was not considered in Holtec's initial decommissioning plan. The licensee had planned to discharge this water to the Hudson River.

However, in August of 2023, Governor Hochul signed a new law, prohibiting the discharge of any radioactive substance into the Hudson River in connection with decommissioning a nuclear power plant.

So is it possible to ship wastewater from Indian Point? Yes, it is. As with any waste disposal option, there are several considerations to take into account when discussing the shipping of wastewater during decommissioning.

I'll start with the regulatory considerations. If Holtec were to ship this water off site, and they shipped it to either Tennessee or Texas facilities, these facilities are licensed for radiological waste disposal. So Holtec would not need or require prior N.R.C. approvals.

If Holtec chose to send this water to Idaho, that would require an additional N.R.C. approval from the N.R.C. And I feel as though this is worth mentioning because, typically, when you talk about additional regulatory approvals, that means more time and it means more money.

Transport considerations. Indian Point does not have a rail spur on site. What you saw in that picture of Vermont Yankee, Indian Point doesn't have that. So as with other waste from decommissioning, trucks will need to be used to transport the waste to a transfer facility with rail and with applicable radiological permits. And as

with any movement of liquid, there's always a risk of possible leaks or spills.

Next slide.

Fiscal considerations. From what we could gather, the estimated cost to ship wastewater is between $4 and $10 per gallon. With Indian Point's 1.3 million gallons that they have currently, this could cost the site between $5 and $13 million. I'll caveat that by saying that the $4 estimate is based on Vermont Yankee's 2017 and 2018 costs, and these do not account for subsequent inflation. Further, these estimates do not take into account the extra work of first trucking the Indian Point wastewater to rail.

Lastly, there is a financial risk of a lengthy decommissioning timeline. Shipping the water off site will almost certainly shorten the decommissioning timeline at Indian Point and thus alleviate this financial risk.

Wastewater storage and disposal. If Holtec were to ship the wastewater off site, on-site storage would no longer be a concern or an issue. If shipped off site, this water would be evaporated, or it would be solidified and buried at a licensed

disposal facility.

Lastly, licensee considerations. Holtec is the owner of Indian Point. Holtec may utilize any option permitted by state and federal law.

That concludes my presentation and I'm happy to take any questions.

CHAIR CONGDON: Thank you, Bridget.

Susan?

MS. SPEAR: Thank you so much, Bridget. Really appreciate all your work on this. Two questions. What happens to the wastewater when it gets to the facilities?

MS. FRYMIRE: Okay. Good question.

MS. SPEAR: What did they do with it? Do they discharge it into a river? Do they retain it on site? What do they do?

MS. FRYMIRE: No. Okay. So as of now -- and again, I have to thank Alyse Peterson because we did a lot of work looking at -- into where this would go, what would happen. So there are three -- three -- three waste management companies that could be used in this situation.

So we have Waste Control Specialists.

They're located in Texas. The Texas facility stated that once the water arrives, it would be offloaded into a storage tank, analyzed, and then, fed into a process building to undergo solidification. The resulting material would then be used as landfill.

CHAIR CONGDON: Landfill where?

MS. FRYMIRE: In a RCRA cell. I'm sorry, everyone. In a RCRA cell. So in like a radiological facility.

MS. SPEAR: Uh-huh.

MR. SIPOS: At a licensed -- yeah, licensed --

MS. FRYMIRE: At a licensed radiological waste facility.

MR. SIPOS: -- facility.

MS. SPEAR: Uh-huh. Okay. So that's Texas. There's also another company called Energy Solutions. They have facilities in Utah and in Tennessee.

If the water went to Utah, it would be very similar to what was -- what I just described in Texas, solidification. If it went to Tennessee, it would go to an evaporation plant.

Lastly is Idaho. And at this

facility, the water would either be used as process water or evaporated in a retention pot.

MS. SPEAR: Thank you. One more question.

MS. FRYMIRE: Uh-huh.

MS. SPEAR: Would you anticipate the water from Indian Point would be considered Class A when shipped?

MS. FRYMIRE: I asked that question multiple times. And yes, Class A was the answer every time.

MS. SPEAR: Thank you, Bridget.

MS. FRYMIRE: Yes.

CHAIR CONGDON: Assemblywoman Levenberg?

ASSEMBLYWOMAN LEVENBERG: Thank you.

And thanks so much for that presentation, Bridget. How many trucks, maybe -- I don't know if you know this, but how many trucks are already transporting Class A material off site, or any other class for that matter from Indian Point?

MS. FRYMIRE: I can't give you an answer on that right now. I'm sure we can -- we could get that information for you.

ASSEMBLYWOMAN LEVENBERG: Great. And -- and just in terms of the -- the work that's already been done, do we know if there have been any leaks or spills or any accidents or anything else from any of the trucking off site to date from the decommissioning process?

Because I know that there have been plenty of trucks that have transported materials off site.

MS. FRYMIRE: Are you asking this specifically to Indian Point, or are you asking the question specific to the wastewater shipping that's been done historically in the -- in the commercial nuclear industry?

ASSEMBLYWOMAN LEVENBERG: Well, since you asked them, I'm now asking it about both.

MS. FRYMIRE: Okay.

ASSEMBLYWOMAN LEVENBERG: Okay.

MS. FRYMIRE: So at Indian Point, I don't believe that they've shipped any wastewater off site, and because of that, there have been no leaks or spills. And we did an in-depth look to try to find any issues with this wastewater and there was nothing public that we could find.

CHAIR CONGDON: From the Vermont Yankee experience.

ASSEMBLYWOMAN LEVENBERG: From Vermont Yankee. Okay. I think the only question -- I don't know if I'm allowed to go back and ask the question for Arnie, but I did have a question.

CHAIR CONGDON: Of course.

ASSEMBLYWOMAN LEVENBERG: Okay. Just in terms of --.

CHAIR CONGDON: Arnie, for you.

ASSEMBLYWOMAN LEVENBERG: There was -- I think that Holtec had said that a couple of the options that you mentioned were not possible because of the turbine billing -- building being needed to move water during the decommissioning process.

I didn't know if you wanted to comment on that. And also, how long it would take, based on your estimation, to actually build those storage tanks in the turbine building.

MR. GUNDERSEN: Okay. Transferring it between the units is a matter of a day or two, you know, the -- to pump a million gallons is not a -- it is not a -- or half a million gallons from one unit to the other is a -- is a -- a short duration

project.

Construction of the tanks is, you know, a couple months after the building has been gutted because all of the material inside that -- that facility is clean and is sold as scrap. So once the building's gutted, it's a matter of leveling the floor, building the tank, and putting the berms in.

CHAIR CONGDON: Dana, my recollection, and I know on advice of counsel, you're not allowed to discuss this. So if you can clarify, please join us at the mic.

But my recollection from the previous discussions was that Holtec was contending that the systems that are currently used to treat the wastewater, store it in the tank that is then used to hold the treated wastewater, and then, to pump it into the discharge canal, are all part of systems that would be decommissioned.

If they didn't have -- they want to -- they can't take out those systems that are within other components that would need to be decommissioned.

So if Mr. Gundersen's approach of a short-term or shorter-term storage in that scenario,

where further research would be conducted, and if there were a time in the multiple-year timeframe when the scientific consensus under his suggestion said, yeah, we can go back to the original plan, treat and release, the systems that contain all of the water pumping and -- and -- and get it to the discharge canal may not be intact.

Frank, is that what you've previously reported?

MR. WEBSTER: Yeah, but Mr. Gundersen's proposal is to pre-treat the water before you put it in the storage tank. So if you pre-treated all the water, then you wouldn't have to retain all of that stuff.

CHAIR CONGDON: But there's pumping equipment that takes it from that tank after treatment and gets it to the discharge canal. And there's pumping water for dilution that occurs. And so what about those systems?

MR. WEBSTER: Right. They wouldn't have to retain treatment systems. They'd have to get a way to get it to the discharge canal. Now, if they were, I assume they would just build a new system for that.

At the time of discharge, that's what they would do.

ASSEMBLYWOMAN LEVENBERG: Okay. So theoretically. And then there's one more -- more question, sort of for Frank, I guess. You had mentioned about the areas of concern. You sort of mentioned that the Units 1 and 2, once removed, underneath those two units, would be areas of concern.

Is that -- and -- and you sort of mentioned like different levels of concern. Is that -- I mean, is that something that would theoretically make it difficult to put another commercial venture on top of that? I'm just curious.

You know, and I know -- I know that talked a little bit about Zion and that. I -- I just don't --.

CHAIR CONGDON: Maybe -- maybe just explain what an area of concern is and the relevance of that term. Would that be helpful?

ASSEMBLYWOMAN LEVENBERG: Sure.

MR. SPAGNUOLO: An area of concern is any -- anything that's been identified over the course of the last 60 years where a spill occurred.

CHAIR CONGDON: Spill of anything of concern like petroleum or --.

ASSEMBLYWOMAN LEVENBERG: Right, but he was saying under Units 1 and 2. I'm not thinking that that's petroleum concern there. I don't know what else --.

MR. SPAGNUOLO: Got it. So -- so basically anything on the nuke side of the plant.

ASSEMBLYWOMAN LEVENBERG: Right.

MR. SPAGNUOLO: Right. Just trying to keep it at a -- a simple level. We need to remove all the components. We need to remove all -- everything inside of every building needs to get removed. All the hazards need to be removed, all the major components need to be removed, then we remove the building.

Now, you're left with the foundation. Underneath that foundation, we need to remove the foundation and then we need to sample everything to make sure that nothing is there. That's part of, I'm going to say D.E.R. 10, and it's a state requirement, it's also a federal requirement.

Feds require us to get to 25 MR. If you stand in one spot for one year, you'll never get

more. State requires ten. So that's -- that's kind of all the same thing.

That'll all be in the written plan, it's all part of our partial site release plan. It's not specifically a listed A.O.C., but it's treated almost the same. A.O.C.s are little spots where we've had history of mostly oil spills that were -- that were treated, or any kind of a contaminant. But again, I don't have the table of them or where they are.

ASSEMBLYWOMAN LEVENBERG: Right. Sure.

MR. SPAGNUOLO: But ultimately, no matter what you're looking at, that -- that block of 35 acres of all the congested buildings, once they're all cleared, they would need to be remediated.

And it's basically the same process as an A.O.C., needs to go through every soil sample, soil bores, drilling wells, all that needs to get done and of -- and the remediation if you find anything.

ASSEMBLYWOMAN LEVENBERG: And you actually just reminded me that -- the ISFSI pads, there's some -- there's some plan to actually move

that spent fuel, the dry casks at some point. Is that right? Is that correct?

MR. SPAGNUOLO: Well, that's the D.O.E.'s responsibility.

ASSEMBLYWOMAN LEVENBERG: Okay. Got it. But was that supposed to be moved to a Holtec site or something? No?

MR. SPAGNUOLO: The D.O.E., the federal government hasn't determined where that location will be.

ASSEMBLYWOMAN LEVENBERG: Okay. And -- and speaking of, you also mentioned that the D.O.E. has -- hasn't done any moving of anything yet, and you were expecting that they might have done it at some point? Like, where are they? Why haven't they moved this? I think you mention that.

MR. SIPOS: So, maybe I could hop in on that.

ASSEMBLYWOMAN LEVENBERG: Okay.

MR. SIPOS: When the federal government licensed the Indian Point reactors, it told the community -- the host community that the spent nuclear fuel would not be stored on site. And that is in the environmental impact statement that is

stated by the Atomic Energy Commission.

The Department, the -- the United States Department of Energy is the ultimate recipient and custodian of the spent nuclear fuel. It goes back to the federal government. However, the Department of Energy, since 1974, has not identified, constructed, or received a permit for the permanent disposal of spent nuclear fuel.

So that is why we have the ISFSI at Indian Point and at 70 other reactor sites across the country, and the waste is accumulating there. There is no Yucca for the fuel -- Yucca Mountain in -- in Nevada.

And it is not yet clear when -- I'm choosing my words carefully. I'm going to say when the United States Department of Energy will take title and control and custody of that.

So in the Holtec decommissioning plan, they note that, as does every other reactor owner in the country, that this is a, you want to call it a -- a doughnut hole on -- on the part of the United States Department of Energy.

They don't have a place for their -- for the waste that Congress has assigned them to

take.

CHAIR CONGDON: But interestingly, the Department of Energy is actively studying and working on the transport plan when they do have a place to go. And -- and they did come and give a presentation to us. I think it was before you joined the Board.

And so it's in our archives, and I think it's worth reviewing their presentation to us just for your -- for your information.

MS. FRYMIRE: They actually just published the report.

CHAIR CONGDON: Sorry?

MS. FRYMIRE: The updated report just came out recently from their many visits across the country.

CHAIR CONGDON: Good. So we'll -- we'll circulate that to the D.O.B.

I want to move on to -- I'm sorry, Richard. The -- the public signed up, they pre-registered, they came. I'm sorry, Senator Harckham, and I have a brief -- I -- I have a brief question for Arnie, as well, for clarification, but go ahead, Senator.

MR. HARCKHAM: Thank you. I'm not

going to be long. That was a very interesting presentation. John, I applaud your optimism by saying 60 years, I put that in the 'if' category.

THE REPORTER: I'm sorry; I can't hear you.

MR. HARCKHAM: You know, as a lawyer, I have to be careful.

UNIDENTIFIED SPEAKER: Pete, I think your microphone is turned off.

MR. HARCKHAM: Are we off?

THE REPORTER: You are off.

MR. HARCKHAM: We are off. All right. Where there is a will, there's a way. Thank you very much.

Quick question on -- on the finances. And -- and you kind of caveated that with the, you know, it was -- it was really confidential information and you cobbled together from -- from different sources.

So I -- I appreciate where you're coming from. You know, one of the points you made is, yes, this is technically feasible. Two, you sort of isolated a window of costs. Now, that -- that's just one ramification; right? Are the -- are the

costs and they're the, you know, the -- the -- the -- the -- the -- the trucking emissions and, you know, there are other things, qualitative factors and quantitative factors.

But I -- I think it would be interesting to -- to sort of see if we could quantify the cost differential between the methodology that you discussed, the methodology that -- that Arnie's talking about, you know, or -- or -- you know, and I -- I don't mean to be facetious when I say this, or eight years of litigation.

You know, that -- that all of these things have -- have a time implication, a cost implication, you know, and I think -- I think it would just be really interesting if we could put together a matrix of qualitative and quantitative factors dealing with all of the three options.

So thank you.

CHAIR CONGDON: Thanks -- thanks, Senator. It's a good suggestion.

I have a quick -- quick clarification question for Mr. Gundersen. You mentioned the concern about synergistic toxicity, and I'm interested in that. I believe I understand what that

is.

And for, you know, the viewing public, it is two contaminants of concern, each has health -- potential health consequences, but when combined, either one or both end up having worse health consequences; right?

And you mentioned the potential concern with tritium interacting with P.C.B.s. And I -- want to clarify whether that is based on any research you've done that showed or studied that potential synergistic toxicity, or is it more of a precautionary principle that you don't know, it hasn't been looked at, and -- and we should know the answer.

MR. GUNDERSEN: I -- I looked up synergistic toxicity, slash, tritium and -- and there's no research on -- on that. I -- I did talk to Dr. Arjun Makhijani about -- about it and -- and a P.C.B. molecule has a bunch of hydrogens that could easily be replaced by a -- by a tritium molecule.

So the amplification of the effect of -- of P.C.B.s with -- with tritium is entirely -- entirely feasible. But no, I'm 75 years old and working alone, so no, I don't have the research lab

to do that.

CHAIR CONGDON: Okay. Thanks for the clarification.

MR. SIPOS: Just two quick follow-ups, Mr. Gundersen. I was looking at a video, it was a different video actually, from last fall. This is the one with the white bookshelves in the background.

And I think I saw -- I jotted down that you said, for on-site storage, that they, quote, may start to leak over time, close quote. Do you recall that?

MR. GUNDERSEN: I didn't prep by reading -- by watching the old ones. If you wrote it down, I -- I believe you.

MR. SIPOS: Okay.

MR. GUNDERSEN: Yeah, which is why I wanted the berm.

MR. SIPOS: Okay.

MR. GUNDERSEN: You know, the -- the goal is to have that -- have that back-up.

MR. SIPOS: Just wanted to confirm that. Just one other point. You mentioned the seismic integrity of the -- of the turbine building. I think you're aware of a longstanding N.R.C. study

for plants in the central and eastern United States.

It's called Generic Safety Issue 199, and it goes back to the United States Geological Survey, identifying increased seismic hazard risks for the eastern plants. Do you recall that?

MR. GUNDERSEN: I -- I know that -- that Entergy was able to skate by those standards for -- for decades. So yes, there is a -- there -- there is a body of scientific evidence that suggests earthquakes may be worse than what the N.R.C. has suggested they could be.

MR. SIPOS: For the eastern plants, including Indian Point Site; correct?

MR. GUNDERSEN: Oh, I would put every plant in that category, not just the eastern plants.

MR. SIPOS: Thank you.

CHAIR CONGDON: Okay. I would like to do, we're -- we're about 10 minutes behind, so I'm going to ask the D.O.B. to stick 10 minutes late, so we can do 30 full minutes of public statement hearing.

And I'm going to turn it over to Tom to please run the show on that. Thank you.

MR. KACZMAREK: Thanks, Tom.

And I'll ask the first few individuals to come line up or be prepared. Jacquelyn -- Jacquelyn Drechsler, Tina Volz-Bongar, and Susan Shapiro, we'll begin with you in that order. Just as a reminder, we'll -- speakers will be cut off after three minutes.

We're going to try getting to as many as we can in the 30-minute period we have allotted. And we're going to try out a feature tonight. There's going to be a timer on the screen.

Please keep an eye on it. I will mention, at thirty seconds remaining, to begin wrapping up your remarks.

So with that, you may begin.

MS. DRECHSLER: I don't think I can keep an eye on the screen and on my words, so I'll rely on you to do that. So my name is Jacqui Drechsler. I live in Valley Cottage, New York.

Thank you to the members of the D.O.B. for tonight's meeting.

Thank you to Governor Hochul for signing the Save the Hudson Bill. The community stands behind you, Governor Hochul, and New York state in defending the Save the Hudson bill.

Thank you to Arnie Gundersen for coming to present on safe on-site storage as a potential option.

And thank you to Bridget as well for your presentation. I personally and others, many others do not believe that transportation is a viable or safe option.

However, tonight I speak words from Chief Dwaine Perry of the Munsee Ramapough Lenape Nation, who is also a board member of Riverkeeper. I quote. We are water protectors, protectors of rivers. Holtec has a job to do and must do it well. They must not toxify our river, the river that flows both ways, the Hudson River. We must protect our river for future generations.

What is proposed is environmental murder, which creates genetic and generational damage with serious health consequences for us, our children, and for future generations. Are you, we, more interested in having a healthy future with healthy children, or more interested in Holtec putting profits before people?

Not storing this radioactive wastewater and radioactive waste in general, seems to

be a fiscal opportunity for Holtec. Is Holtec's profit margin more important than our future? This must be resolved in a manner that allows safe decommissioning with the least harm.

The other option that is on the agenda tonight, transporting by tanker and rail, transporting this waste only offers dangers to the communities that these transports go through.

A final thought, a prayer. We are all responsible for all air, water, earth, for all plant life, aquatic life, wildlife, bird and insect life, and for human life to survive and to have good and healthy lives for all generations to come. End quote.

And a final thought from me. I insist that a citizens and experts group be created in light of so many environmental threats. And because this is basically a nuclear waste dump where there is nowhere to actually move the casks, we must create a panel a group dedicated to the safety --

MR. KACZMAREK: Thirty seconds.

MS. DRECHSLER: -- of the community and up to our environment. I think it needs to be similar to the Vermont Yankee panel that Mr.

Gunderson chaired.

I also think that it was wonderful that, before Indian Point was built, there was quite an environmental study, a 20-mile radius study of the soil, air, water, and animals, et cetera.

I believe there should be a 60-year review, a new environmental study to see what has changed and what has happened in the intervening 60 years.

MR. KACZMAREK: That's time. Thank you.

MS. DRECHSLER: So thank you very much.

CHAIR CONGDON: Thank you, Jacqui. Thank you.

MR. KACZMAREK: Tina Volz-Bongar, followed by Susan Shapiro, and Herschel Specter.

MS. VOLZ-BONGAR: So I really want to thank the Decommissioning Oversight Board for bringing Mr. Gundersen here. It's wonderful that we have an independent expert testifying to this Board. And so I thank you profusely for that.

So my question would be, since we have the presence of an independent expert here, is there

anything that you've heard tonight that you think is really important for the community to look at and to pursue, Mr. Gundersen?

MR. GUNDERSEN: Yeah, there were two things. First was the issue of evaporation, evaporating the -- the spent fuel pool water. There's another element in there called technetium 99.

Technetium 99 hooks up with oxygen and makes an oxide, which volatilizes at 104 degrees, so that if you evaporate this fuel pool water and there's tech 99 in it, you're likely to also volatilize the tech 99 with the tritium.

So it's -- it's a problem that also needs to be evaluated when you look at evaporation.

One real quick thing, the -- the -- the Hudson River flows by the plant and magically gets diverted with about 80,000 gallons of water get taken from the Hudson River. It gets relabeled as the circulating water.

That was the water that cooled the plant back when it needed cooling. It doesn't need cooling now, but the circulating water goes by the plant. Somehow, it's no longer the Hudson River.

And the -- Holtec will take the 70,000 gallons of circulating water, which is essentially the Hudson River, and dump into it about 150 gallons of tritiated water from the fuel pool and somehow claim that they're not contaminating the Hudson River.

The circulating water system is not safety-related, so that the N.R.C. has no jurisdiction over the circulating water system, which I think is an important thing, going forward.

MS. VOLZ-BONGAR: Okay. Thank you, Mr. Gundersen.

MR. KACZMAREK: Susan Shapiro?

MS. SHAPIRO: Thank you. Hi, I'm Susan Shapiro. First of all, I want to say this idea of shipping tritium off site is a total red herring. While we have the spent casks -- the spent fuel casks, the 76 or so spent fuel casks, this site is not being returned to any other use.

So let's be realistic about this. Right now, Holtec has decided that, instead of working with us, they're going to sue, and they're going to delay for eight years. They're going to sue for the right to pollute the Hudson River. That's

what they're asking for in this litigation.

They may very well be using our money for that lawsuit. So their claim that they're going to delay is just a -- a -- a ploy. So I don't think we should be moved by that. And Holtec has really shown its hand that they don't really care about this region or the people here.

Definitely, by their cursory inspection after the earthquake, they just did a visual inspection. Enbridge, the pipeline people, actually could do tests based on pressure, and they put a camera through. But Holtec's casks are designed, so they cannot be inspected.

We currently have casks that can never be inspected. So we don't know the integrity of what happened with the spent fuel inside those casks, and nor can we ever. So and the -- yes, and the N.R.C. approved those casks.

And the N.R.C., as have been said here tonight by many people, is not doing their job, nor as you said, the doughnut hole, Mr. Sipos. It's more like a black hole for nuclear waste.

There is no place that the federal government has figured out, after 70 years, what to

do with this nuclear waste. So what's happening? The State is being held responsible. We, here, the people in the state are being held responsible.

So one of the things I'd like to ask is that you bring back to the governor that the State needs to do comprehensive, real-time monitoring. Not just the remaining four monitors around the plant, but we need real-time monitoring that the State runs independently and not relying on Holtec to do it.

I also think that the State should be petitioning the D.O.E. to give the State the funds that have been put -- that they are giving to reactor owners. Because that lawsuit has already been won, that if you're holding spent fuel on your property, which is our -- the State's property, that this waste is now standing on. We are now -- Indian Point now is a nuclear waste, maybe it's an interim dump, or maybe it's a permanent dump. But right now, that waste isn't going anywhere. It has nowhere to go.

MR. KACZMAREK: Thirty seconds.

MS. SHAPIRO: So that's what I'm asking is that we, now as the State, take on this role, because we know what's happening. You know, we can't keep putting blinders on and saying there's

going to be a solution. There is no solution.

The only solution is for us to use the best technology available to keep this waste as safely away from human and people and the environment. And so it's really our turn as a State to do this.

MR. KACZMAREK: Thank you.

MS. SHAPIRO: Your -- thank you. And New York state has the right to do this. So please, I -- I ask -- one -- can I just ask one last question? I do not know why there's not been a discussion about moving the tritium all into the spent fuel pool three. So at least if we need a hot cell, we'll still have a hot cell.

There's a -- why -- why not get it out of the leaking pool, which is two, and put it into spent fuel three, and store it there until --

MR. KACZMAREK: Ms. Shapiro?

MS. SHAPIRO: -- there's a solution.

MR. KACZMAREK: Thank you.

Herschel -- Herschel Specter, followed by Nancy Vann and Courtney Williams. Is Mr. Specter here? Oh, thank you.

MR. SPECTER: Good evening. I'm

Herschel Specter. I'm a professional engineer in the State of New York. I've been coming to these meetings, on and off, for quite a while. And what I always come away with is that we're not dealing with the fundamental issue.

And the fundamental issue is the fear of radiation. I've come to meetings. And let me say, if people are afraid, and many of the people here have expressed this to me, the natural result of that is resentment, distrust.

So I think one of the things I decided to do, between the last time I came and -- and tonight, was to try to close the gap in terms of knowledge. And I'm not a radiation specialist. So I'm going to try. And forgive me; I'm not perfect.

But when I first thought about it, I thought about a person like a cook doing things which we've all done, and he cuts himself. But he knows, like we all know, that within a short time, you'll get healed. The body repairs itself. That's the truth that we all know.

But what if the cook had really messed up and cut his wrist? He could possibly bleed to death. So what is really important is are we dealing

with a small cut, radiologically, or a big cut? I'm going to tell you we're dealing with a very small cut.

And it's -- the issues that we're talking about are not like radiation from a nuclear bomb, like Hiroshima or Nagasaki. It's not like the radiation from an accident like Chernobyl or Fukushima or Three Mile Island. It's much smaller. These are low-level wastes and low radiation levels. What do we know about them?

Well, actually, what we do know is that we can't find any discernible radiation health effects at low doses. It shocks people. There are none after Chernobyl. They can't find them after all these years.

What we also know is that there are locations on this earth, like in Iran, which the radiation levels is 70 times higher than what it is for background here. No increase in health effects.

MR. KACZMAREK: Thirty seconds.

MR. SPECTER: So what we really need, I think, is missing. It is let's get somebody down here, perhaps the N.R.C. or D.O.E., who knows about radiation, who then can say here's our standards and

here's why, and here's why you're protected.

We don't have that now, but until you do that, you're going to have fear and distrust and anger. Thank you.

MR. KACZMAREK: Thank you.

Nancy Vann, followed by Courtney Williams and James Rogulski.

MS. VANN: Hi, I'm Nancy Vann, and I live in Peekskill, approximately, 2.8 miles, as the crow flies, from Indian Point.

Recently, on April 18th, the New York Times ran an article called The Fantasy of Reviving Nuclear Energy. What we've heard here tonight about shipping this water off to Texas, I would call the fantasy of getting rid of nuclear reactions or nuclear dangers here.

And on -- in March of 2023, the State of New Mexico passed legislation blocking Holtec from establishing a consolidated interim storage in the State of New Mexico. Despite that, on May 9th, 2023, Holtec received a license from the N.R.C. for interim storage.

However, on March 27th, the Fifth Circuit Court of Appeals vacated Holtec's license.

They said that the N.R.C. doesn't have the ability to license that type of storage facility. And that was the same thing that happened for a comparable Texas storage facility where, in August 2023, the D.C. Court said that the N.R.C. could not grant licenses for storing nuclear waste in Texas.

We are not going to be able to ship this waste to Texas. We're not going to be able to ship the water to Texas. These -- these particular lawsuits -- I'm a retired Wall Street lawyer and I've looked at these lawsuits. They are in -- very much in coordination with the current Supreme Court rulings that limit the ability of government agencies to do things which they haven't been specifically permitted to do by Congress.

MR. KACZMAREK: Thirty seconds.

MS. VANN: So Congress, when we hear that Congress has to act to stop this, well, Congress hasn't acted so we can't do this. It's exactly the opposite.

There's just no place that we're going to be able to ship this water to. We need to deal with that fact. Thank you.

MR. KACZMAREK: Thank you.

Courtney Williams?

MS. WILLIAMS: Okay. Thank you for the opportunity to speak and for this meeting. I've got a few different things and then maybe, at the end of my three minutes, folks can answer.

Not mentioned at this meeting so far, school monitoring. Parents had asked for that in September. We still have nothing. I would ask that the -- the State do what they can to expedite things because we were supposed to have this at the start of the school year. It's now the end of the school year. We have nothing.

Nancy Vann brought up the findings. Holtec's appeal was lost. They can't send the spent fuel anywhere. Well, how does that impact? Because they've been telling us all along, they're going to ship it off, change federal law, et cetera, et cetera. None of that's happened.

In terms of the synergistic effects that Mr. Gundersen brought up, off the top of my head, I can think of Indian Point, which has been leaking, not just little cuts kinds of radiation into groundwater for decades. The gas pipelines. We have Wheelabrator, the largest industrial air polluter in

the county. We have the gypsum plant that sprinkles us with gypsum dust on a nightly basis. The B.A.S.F. chemical plant, we have the Hudson River full of P.C.B.s, and the Bowline fracked gas power plant on the other side of the river.

And those are just what I could think of off the top of my head, all within less than five miles of Indian Point. So we can synergize that.

I did mention to Mr. Specter, who thinks that the -- the National Academies of Science is some kind of Rockefeller conspiracy. But they did put out a report saying we have not done enough to study low-level radiation.

So I'm looking at a headline right now, U.S. needs new $100 million research program to study health effects of exposure to low doses of radiation, says new report.

So -- and then, one thing that I was totally flabbergasted by is the considerations for the report on transporting the wastewater. Missing from the list, we had transport, we had fiscal, we had wastewater storage and disposal, we had licensee.

You know what wasn't on the list? Residents, either the ones that live here or that

live -- the schmucks that get stuck with whatever gets shipped to Tennessee. Also, not on the list, public health and safety.

So if we're going to make the matrix that Senator Harckham brought up, maybe we can consider like those of us that live here and the health impacts of --

MR. KACZMAREK: Thirty seconds.

MS. WILLIAMS: -- of this. So that's what I got.

MR. KACZMAREK: Thank you.

Next is James Rogulski, followed by Suzannah Glidden and Kim Fraczek.

CHAIR CONGDON: We will answer every question that's posed, as we always do in our -- in -- in our follow-up to the meetings. It's a public statement hearing.

MS. WILLIAMS: (unintelligible)

CHAIR CONGDON: On the school monitoring, we can bring that to the June meeting and we can -- I assume you can have communications with the school that has their contract, as well.

And just one point of clarification, the original urgency around that was prior to the

schedule change on decommissioning when heavy demolition was going to be commencing. The concern around the monitoring was around the heavy demolition and the plan was to get the monitoring in place before that occurred.

The State contracted a monitoring contract. We're not commencing that until the heavy decommissioning goes forward.

MS. WILLIAMS: (unintelligible)

CHAIR CONGDON: The baseline data, if you recall, we agreed to take the $500,000 that was originally for monitoring -- in response to the community concerns around getting baseline data, we said the State will pay for the contract that we already secured and procured for the monitoring and will give the $500,000 to the school district to secure a separate contract to do baseline assessment at B.V. and to do further community monitoring that they agreed to do in partnership with the community.

So I don't know if the superintendent wants to add anything to this, but we can provide a fuller presentation at the June meeting on the agenda.

MR. TROMBLEE: Courtney, as we

discussed before, we do have a meeting with the vendor for both the equipment and also with the baseline that's upcoming. And I did invite the D.E.C. as well. I think I did that just before I came this evening in approximately two -- on April 30th, we'll have that meeting.

CHAIR CONGDON: Sorry about that.

MR. KACZMAREK: You may begin.

MR. ROGULSKI: Thank you. Members of the Indian Point Decommissioning Oversight Board, thank you for having me. My name is James Rogulski.

I'm a 20-year veteran English teacher at Hendrick Hudson High School, and I am the president of the Hendrick Hudson Education Association, the 250-plus member teachers union that serves the students and community of the Hendrick Hudson School District.

Along with the secretaries, custodians, teachers' aides, and administrators, over 400 people have a career here. I come today to ask for the Board's consideration for my members and the school district's future.

Currently, the district faces possible financial peril. Indian Point provided approximately

30% of the district's budget. Holtec, in its stead, is only providing a small fraction of that with their PILOT payments.

Because of this, the district is currently being held afloat by using funds from the New York State cessation fund. And at $60 million, it made up for just two years-worth of Indian Point revenue. And the district's also using its local fund balance.

These two funds are set to run dry in about five years. During these next five years, the district must raise taxes, cut services and programs, or both, to remain solvent. This year, the tax levy for the community was approximately $50 million.

According to the district's business manager’s calculations, that number must rise to approximately $75 million in that 5-year span, a 50% increase. This will require multiple years of tax levy increases over the New York State tax cap and will be difficult and contentious, if even possible.

And this is all happening on the heels of Covid's insidious effect on schools. Esteemed colleagues of mine have already left Hen-Hud and others are currently applying for work elsewhere.

Perhaps, a longer-term financial plan to help create a soft landing is in order.

The H.H.A. would like the opportunity to meet with you and other stakeholders to help work to secure Hen-Hud's future. To best serve the community, our schools need stability. Financial insecurity is the antithesis of that. Indian Point's reactors, once thrummed with prosperity, helping to provide opportunity for our local community.

MR. KACZMAREK: Thirty seconds.

MR. ROGULSKI: We beared the risk to reap the reward. Now its spent concrete casks of radioactive fuel represent an albatross for Buchanan and the Hendrick Hudson School District.

The risk is still present. And the future is now uncertain. I believe that should be rectified. Thank you for listening.

MR. KACZMAREK: Thank you.

Suzannah Glidden, followed by Kim Fraczek and Marilyn Elie.

MS. GLIDDEN: Good evening. United for Clean Energy and Stop Holtec Coalition have always promoted not sending our nuclear waste to other communities, which also endangers the states

through which it passes, but to take care of it ourselves where it was generated.

This doesn't mean dumping it into and harming the Hudson River where, as Arnie explained, there's synergistic toxicity, combining a huge load of spent fuel pool wastewater with P.C.B.s.

The river provides drinking water for towns, habitat for living species, subsistence fishing, and is the mainstay for tourism and the economy.

As Arnie Gundersen clearly explains, it can easily and safely be stored inside tanks in a turbine building, not requiring a permit.

Testing the groundwater that has tritium and testing the fuel pool water by an independent lab, as Arnie recommends, is also very important to have the sampling taken correctly and the extra contaminants revealed beyond what the New York State lab tests for.

If alarming sea rise in the future is taken into consideration, store the tanks on the roof of the tallest turbine building, or build a second story to enclose them.

Let's be realistic and acknowledge

that the country will never come to agreement on a permanent or temporary storage area for the spent fuel rods that would endanger indigenous people, communities, and the environment.

To avoid catastrophe of sea rise reaching Indian Point stored fuel rods, transfer the rods into safer casks, create higher ground pads on site, and move the stored fuel rods to them.

Finance it by cutting down on the military pentagon defense weapon manufacture budget, and tax the rich. Compensate the host town, Buchanan, generously to replenish their tax base.

It is way past time to prevent corporations from ruining our environment, ruining our health and our lives with their waste. May New York State prevail over Holtec's behavior to avoid responsible and easy onsite storage.

MR. KACZMAREK: Thirty seconds.

MS. GLIDDEN: Let us get on with our lives and resolve these matters and not allow delay. Let it set precedent for other nuclear plants. Let the people and environment prevail over corporate bottom line profit incentive. And may it be so. Thank you.

MR. KACZMAREK: Is Kim Fraczek here? Marilyn Elie? Okay.

MS. ELIE: Thank you to the Board for this meeting and for your oversight, and I'll get back to oversight later, of -- of Indian Point. There have been people concerned with Indian Point with what it would do to the community since the '50s.

It's not a new thing for, I will say, it was a small minority, but there are those of us who have advocated against Indian Point since then. I stand on the shoulders of many who have gone before. Al Warren was one who carried a petition saying, do not allow this plant to come into my town. He lived in Buchanan.

And what happened is what happened. And all the decades since, people said we need the jobs, we need the money, and Al was blown aside. And I, as one who'd been working on this for the last 35 years, understand that because I experienced a lot of it myself. There -- and it's been a difficult struggle.

Finally, the plant is closed and that's a good thing. And here we are, looking at

what to do with the remains, which were very visible from the very beginning. This is not a shock or a surprise to those of us who have looked at it and followed the -- followed the development and come to this Board, come to these meetings to talk and say, look at this.

I was shocked and surprised when the Town actually hired somebody to say, oh, how can we use the -- the property at Indian Point, and got back things about condos and riverwalks and things like that. And that was despite the fact that many of us had stood before here and said, look at what you have, look at how deadly for how long it is.

So I don't need to -- I don't need to go on about that. But what I do want to bring to the point -- to bring to this point is that I think what's happening with the tritiated water is just a foretaste, a forecast of what's going to happen with the spent fuel pools.

The federal government lied. They said they would take it away and -- and it wouldn't be a problem. Well, it was a lie.

MR. KACZMAREK: Thirty seconds.

MS. ELIE: And I -- and not only that,

but there is no plan B. And I'm really -- as the Mayor of Buchanan is tired of hearing people beat up on the N.R.C., I'm tired of hearing that, oh, that's another route you have to take. There is no other way to reach the N.R.C. It's not possible. You cannot -- you cannot do anything about them because they are a fortified institution.

We can talk about that if you want to, but not now.

MR. KACZMAREK: That's -- that's time, ma'am.

MS. ELIE: So my time is up. What I want to say and what I want to remind you about --

MR. KACZMAREK: Ma’am --.

MS. ELIE: -- is that the N.R.C. is -- we all -- it's very apparent tonight, corrupted by its ties to the industry.

MR. KACZMAREK: Ms. Elie?

MS. ELIE: And it cannot be changed by the people in this room, and there is no way to do that. And I just want to leave with you the fact that --

MR. KACZMAREK: Ms. Elie, we're -- we're over time.

MS. ELIE: -- you are the Decommissioning Oversight Board. You're not an advisory board. I -- I know. I know what Tom says, and I hear you. I hear you when you're saying that and you've got a lot of bureaucratic regulations you have to follow.

But I just want to remind you about your name. You are the Decommissioning Oversight Board. And just as tritiated water needs to be maintained on site --

MR. KACZMAREK: Ms. Elie?

MS. ELIE: -- so does high -- high -- so does the high-level radiation waste. Thank you.

I'm sorry I went over.

MS. KNICKERBOCKER: I'm just going to --.

MR. KACZMAREK: Our final two speakers this evening will be Nate -- Nate --.

MS. KNICKERBOCKER: One second? Marilyn, I -- I -- I -- I don't care if you beat up on the N.R.C., but I'm just -- all I wanted to say is that, if we need to remedy -- remedy it, if there's an issue, if there's a problem, people -- it's not --

it's not done here. We need to take it more on a federal level with our elected officials. That's all I'm saying.

MS. ELIE: Well, it starts here. Let’s --.

MR. CONGDON: Okay. Let's keep -- keep going. We have two more speakers.

MR. KACZMAREK: Our final two speakers this evening will be Nathan Plummer and Tracy Brown.

Nathan Plummer, are you with us still this evening?

All right. Tracy Brown? And while Tracy's coming up, I'm -- I'm aware there's some other online individuals who are hoping to speak. We'll provide other opportunities for you after Ms. Brown. Thank you.

MS. BROWN: Okay. Thank you. Thank you to the Decommissioning Board for bringing Arnie Gundersen and thank you for coming and doing this work and presenting your expert opinion for all of us. Much appreciated.

I'm Tracy Brown. I'm with Hudson Riverkeeper. Riverkeeper is dedicated to protecting the Hudson River from source to sea and safeguarding

drinking water. We've been a leader in addressing the many environmental impacts of Indian Point for decades throughout its operation, into its closure, and we're proud members of the D.O.B.

Riverkeeper is appalled by Holtec's disingenuous tactics to blame the Save the Hudson Act for the proposed five-year delay in the decommissioning timeline when it is clear that Holtec itself artificially has manufactured the circumstances for the delay in challenging this law that has such overwhelming public support and refusing to consider onsite storage for the tritiated water.

We have spent enough time on this issue and New York has made it clear that a discharge into the Hudson is not acceptable for our communities. Decommissioning is a complex process and we must move on to the many other issues still outstanding.

Starting with the contaminated radioactive groundwater that is currently already migrating into the Hudson River that has been putting the river and nearby communities at risk for decades, D.E.C. and Holtec must prioritize addressing this

groundwater.

Riverkeeper strongly calls on Holtec to keep the decommissioning process moving forward and looks forward to continuing working collaboratively with the D.O.B. entities to ensure a safe, timely, and thorough decommissioning and site restoration. Thank you.

MR. KACZMAREK: Thank you.

Thank you all very much.

CHAIR CONGDON: Thank you. I believe that is all of the in-person registered speakers.

Tom, is that correct?

MR. KACZMAREK: That's correct.

CHAIR CONGDON: So I see someone raising their hand. I'm sorry. You want to do a three-minute? We can take. Thank you. Great.

MS. SIMS: Hello. Thank you, everybody for spending your time and energy on this project, since it will keep us all alive, hopefully.

The main thing that cannot be overlooked, although I appreciate the idea of corporate -- you know, corporate profit. That's why you do it. More important than that is public safety and public health.

There is nothing that is more important than that. That includes all of us here. That includes everybody at wherever something would be shipped, and everybody in between this point and that point because they are endangered when things are shipped.

One thing that really caught my eye, I appreciate Mr. Spagnuolo, your showing up and talking to us. But I'm really curious as to what was so humorous with your -- your friend who grabbed the mic when -- when law ideas came up.

You were smirking and laughing almost the entire time he was speaking, and I'm really looking for the humor in this because I'm missing it. Would you please share with us what was so outrageously humorous to you?

I don't know your name, so I -- or I would. Yeah, you, yeah, you. You were the one who was laughing and --.

MR. O'BRIEN: (unintelligible)

MS. SIMS: Oh, and that -- that was funny? Okay. Thank you. That's your answer then. Well, it's a shame that our welfare is such a dang joke.

I am also a Vermontster. Now, I live in Westchester, but I was in the thick of the Vermont Yankee stuff. And you know, the Connecticut River will never be the same.

We cannot let that happen to the Hudson River. The Hudson River is the life blood, not only of New York State and the Hudson Valley, but also of the surrounding bays, water, groundwater, everything.

I mean, there -- there's so much life and so much -- so much important -- important, not just historically, but just biologically. The Hudson River Valley is one of the most beautiful places there is. I think we all agree on that or we wouldn't live here.

But please, please let us work together to do whatever is the least harmful because, you know, even low-level radiation, you don't -- you don't get cured from it. Once you are poisoned by radiation, you are poisoned.

MR. KACZMAREK: Thirty seconds.

MS. SIMS: And it doesn't really take a $100 million study to know that. That is basically common knowledge that's already been found out

accidentally. So thank you for your time and your attention.

CHAIR CONGDON: Thank you. Thank you. Please state your --

MS. SIMS: And keep living.

CHAIR CONGDON: Please -- please state your name for the record, please?

MS. SIMS: Oh, my name is Jane Sims. I live in Mohegan Lake, which is -- oh, it's got to be -- my house has got to be a good three-and-a-half miles from here.

CHAIR CONGDON: Thank -- thank you very much.

MS. SIMS: Thank you.

CHAIR CONGDON: So folks, we -- we do offer many other opportunities to submit comments and questions. Any comments -- I'm sorry -- questions that were raised at the mic tonight during the public statement hearing, we will endeavor to answer. We have Q and A on our website. You can submit questions or comments written, in written form, through the D.O.B. website.

UNIDENTIFIED SPEAKER: (unintelligible)

CHAIR CONGDON: Yeah. We -- we -- we are overtime. We had 30 minutes scheduled out. We already went past that.

And if -- Tom, you can go to the next slide. Next meeting is June 13th. And with that, we are adjourned. Thank you very much.

(The meeting adjourned at 9:20 p.m.)

STATE OF NEW YORK

I, DANIELLE CHRISTIAN, do hereby certify that the foregoing was reported by me, in the cause, at the time and place, as stated in the caption hereto, at Page 1 hereof; that the foregoing typewritten transcription consisting of pages 1 through 169, is a true record of all proceedings had at the hearing.

IN WITNESS WHEREOF, I have hereunto subscribed my name, this the 2nd day of May, 2024.

DANIELLE CHRISTIAN, Reporter

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