



**Department
of Public Service**

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July 28, 2023

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 June 15, 2023 Indian Point Decommissioning Oversight Board meeting transcript. Should you have any questions regarding this filing, please contact me. Thank you.

Respectfully submitted,

A handwritten signature in blue ink that reads "Tom Kaczmarek".

Tom Kaczmarek
Executive Director
Indian Point Closure Task Force
Indian Point Decommissioning Oversight Board

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2 NEW YORK STATE

3 DEPARTMENT OF PUBLIC SERVICE

4

5 Matter No. 21-01188 - In the Matter of the Indian Point
6 Closure Task Force and Indian Point Decommissioning
7 Oversight Board.

8

JOINT MEETING

9

DATE: June 15, 2023 at 6:00 p.m.

10

VENUE: Zoom

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14 Reported by Danielle Christian

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2 (The meeting commenced at 6:00 p.m.)

3 (PLEDGE)

4 MAYOR KNICKERBOCKER: That is our tradition
5 here in the village that we do the pledge before
6 every meeting. And I also want to mention I have
7 Trustee Dan Stewart here with us this evening. And
8 Tom, I'm going to turn it over to you.

9 CHAIR CONGDON: Okay, thank you very much,
10 Mayor. My name is Tom Congdon. I'm the chair of the
11 Indian Point Closure Task Force and the
12 Decommissioning Oversight Board. Welcome everyone.
13 I'll begin tonight with a roll call. Senator Pete
14 Harckham?

15 SENATOR HARCKHAM: Here.

16 CHAIR CONGDON: Assemblywoman Dana
17 LEVENBERG, I think is on her way.

18 MS. SPEAR: She's -- yeah, she's parking.

19 CHAIR CONGDON: She's parking, great.
20 Excellent. John Sipos?

21 MR. SIPOS: Here.

22 CHAIR CONGDON: Tom Kaczmarek D.P.S.?

23 MR. KACZMAREK: Here.

24 CHAIR CONGDON: Kelly Turturro --

25 MS. TURTURRO: Here.

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2 CHAIR CONGDON: -- Department of
3 Environmental Conservation. Alex Damiani, Department
4 of Health?

5 MR. DAMIANI: Here.

6 CHAIR CONGDON: Rachel Adler, Department of
7 Labor?

8 MR. CAREY: She's downstairs.

9 CHAIR CONGDON: Down in the overflow room,
10 thank you. Mark Pattison, Department of State, may
11 be online? Mark Massaroni, Department of Tax and
12 Finance? Also potentially online. Jennifer Wacha,
13 DHSES? Tom Scaglione --

14 MS. WACHA: Hi.

15 CHAIR CONGDON: -- E.S.D.? Thank you,
16 Jennifer. Tom Scaglione?

17 MR. SCAGLIONE: Here.

18 CHAIR CONGDON: I know Joe Leary sent a
19 replacement person from New York Power Authority.
20 Just introduce yourself.

21 MR. LEARY: Joe Leary.

22 CHAIR CONGDON: Thank you very much. Alyse
23 Peterson from NYSERDA?

24 MS. PETERSON: Here.

25 CHAIR CONGDON: Our environmental technical

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2 experts, and I'll start with Dave Lochbaum, who we
3 know is online?

4 MR. LOCHBAUM: Yeah, I'm here in
5 Chattanooga.

6 CHAIR CONGDON: Thank you, Dave. Dave made
7 it as far as Atlanta today I believe, and flights
8 were canceled. Sorry for the difficult travel today.
9 But thank you for joining via the virtual. Richard
10 Webster, Riverkeeper?

11 MR. WEBSTER: Yeah, I'm here.

12 CHAIR CONGDON: Hi, Dana, welcome.

13 MAYOR KNICKERBOCKER: You're way up here.

14 CHAIR CONGDON: Right up here. For Rich
15 Becker, I think we have Jim Creighton?

16 MR. CREIGHTON: Yeah, Thank you.

17 CHAIR CONGDON: Welcome. Mayor
18 Knickerbocker?

19 MAYOR KNICKERBOCKER: Here.

20 CHAIR CONGDON: Susan Spear from --

21 MS. SPEAR: Here.

22 CHAIR CONGDON: -- County Executives
23 Office. Catherine Borgia? And I know Dr. Lauro from
24 Hendrick Hudson School District couldn't be with us
25 tonight. Our Labor Representatives Bill Smith, --

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2 MR. SMITH: Here.

3 CHAIR CONGDON: -- Tom Carey --

4 MR. CAREY: Here.

5 CHAIR CONGDON: Is Lou here, Lou Picani?

6 MR. CAREY: No.

7 CHAIR CONGDON: Okay. And that is our roll
8 call. Did I miss anyone? Okay. I'm just going to
9 go over a few meeting logistics. If we could go to
10 the next slide, please. Oh, if you could run the
11 slides.

12 MR. KACZMAREK: Yeah.

13 CHAIR CONGDON: Sorry.

14 MAYOR KNICKERBOCKER: He's trying to do two
15 things at the same time.

16 CHAIR CONGDON: So it's important for the
17 in-person folks to please speak into the mic. This
18 will ensure that our court reporter gets an accurate
19 transcript. And it will ensure that people tuning in
20 virtually can hear us.

21 The panelists who are joining by zoom,
22 please keep your mics muted until you want to speak.
23 And for the Zoom participants, please reserve the
24 chat feature for reporting technical issues, such as
25 audio or visual issues, and only use the Q&A field

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2 for questions because that's the only place we will
3 be able to capture them and log them for handing out
4 to our experts to answer in between meetings.

5 All Panelists and participants please
6 remember to indicate your name before speaking. Next
7 slide please. So as is often the case with these
8 meetings, we are holding a joint meeting. This is of
9 the Indian Point Closure Task Force, as well as the
10 Decommissioning Oversight Board. The membership of
11 the two entities overlaps entirely with the
12 exceptions of Dave Lochbaum and Richard Webster who
13 serve exclusively on the Decommissioning Oversight
14 Board.

15 Very quickly one slide for some task force
16 business, which, you know, the task force for those
17 of you tuning in more recently to these meetings, was
18 focused since 2017 on largely the economic impacts
19 that the closure had on the community and the taxing
20 jurisdictions. We also worked on developing projects
21 to be funded out of the closure settlement fund, \$15
22 million fund set aside by Entergy.

23 Just a very quick update, last meeting in
24 April, we announced some adjustments to the grants
25 that were made out of that fund. And I'm pleased to

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2 report that contracts have been signed for two out of
3 the three updates.

4 First, the 250,000 for the plumbers and
5 steamfitters to do welding training. So thank you
6 for your partnership Tom Carey. And we're also
7 pleased that we worked with the B.V. elementary,
8 actually the Hendrick Hudson School District to sign
9 a contract for the \$500,000 they will use to perform
10 an environmental assessment at B.V. Elementary.

11 And we're working together with the town
12 and the village to amend their existing contract for
13 the 250,000 adjustment. And that's going along well
14 with and -- and we're making progress there. So next
15 slide please. Switching over now to the
16 Decommissioning Oversight -- Oversight Board
17 business. We have a full agenda again this evening.
18 I know a number of us have a hard stop. And I'm --
19 I'm going to endeavor to keep us on schedule.

20 We have presentations planned by the
21 Nuclear Regulatory Commission, we're really pleased
22 to have you back with us, joined us in April. And
23 there were a number of questions that emerged from
24 the April meeting that we thought would merit, you
25 know, a follow-up presentation. So we'll be hearing

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2 more about the N.R.C. radiological limits and the
3 process by which those limits are regularly reviewed.
4 Getting a little feedback, Tom.

5 Okay. We're getting a little feedback.
6 Okay. We will also hear from N.R.C. an update on
7 their oversight role, and specifically with respect
8 to when violations are found, how they go about their
9 enforcement activities. We will then turn to David
10 Lochbaum, our independent technical expert on the
11 D.O.B. Dave has refined the options analysis with
12 respect to the disposal methods for the wastewater on
13 site.

14 As folks recall, Dave presented a detailed
15 presentation of the options analysis in February.
16 Since that time, I think there have been -- there's
17 been a larger focus on an option that is storage on
18 site. And so Dave did a deeper dive on that option.
19 And he's going to present those findings.

20 What Dave did with this -- this analysis
21 is, he also provided it to a number of peer
22 reviewers, other experts that reviewed his work,
23 provided comments, and Dave responded to those
24 comments as part of his presentation. So we're
25 looking forward to that.

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2 We're also going to hear from Department of
3 Health on a protocol they've been working on.
4 Assuming the discharges go forward, we've been
5 working to create a protocol whereby the State would
6 independently sample the wastewater prior to
7 discharges recommencing. And so we'll be hearing
8 from them an update on how that would work. We'll
9 then turn to a State oversight update.

10 The agencies involved in the State
11 oversight aspects of decommissioning are doing a lot
12 that, you know, in -- in -- in past meetings, we
13 haven't had a chance to get to so I'm hoping we have
14 sufficient time to be able to hear from them. Thank
15 you for that. We also have an operational update
16 from Holtec. And -- and we'll have discussion
17 throughout. Next slide please.

18 So before I turn it over to N.R.C., I just
19 want to say a word of thanks. We have a number of
20 State agency, public servants who have had to work
21 overtime in answering all the questions we're
22 throwing at them, they're absolute professionals at
23 the D.E.C., at the Department of Health, at the
24 Department of Public Service, NYSERDA and -- and all
25 the agencies involved in the D.O.B., just have

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2 enormous respect for all the work everyone's doing.

3 And as well, the federal officials who are
4 here with us today. There have been a lot of meetings
5 that we've had, between these public meetings, where
6 we've posed a number of questions to our federal
7 partners. They've been extremely responsive to our
8 questions and -- and we're grateful for the
9 partnership.

10 And lastly, I want to do a special shout
11 out and thank David Lochbaum, who is unpaid,
12 volunteer, independent expert, who is dedicating an
13 enormous amount of time to helping us navigate and
14 understand the important issues at play. So my
15 gratitude to all of you, and my gratitude as well to
16 Mayor Knickerbocker for hosting us this evening.

17 MAYOR KNICKERBOCKER: My pleasure.

18 CHAIR CONGDON: While your facilities are
19 excellent, and you have a spillover room, I am
20 acknowledging it's -- we have spillover, we have an
21 overflow crowd. I know many people wish they had
22 seats. And so to folks that are in the standing room
23 only, I want to let you know we will look for larger
24 spaces for future meetings, and appreciate your
25 attendance tonight. So with that, Bruce Watson from

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2 the U.S. N.R.C.

3 MR. WATSON: Mic on.

4 MAYOR KNICKERBOCKER: Is your mic on?

5 MR. WATSON: I really guess it's on.

6 MR. SIPOS: Get in closer.

7 MR. WATSON: And I will get in closer.

8 Okay, there we go. Well, first of all, let me say
9 thank you for inviting me. It's been, I think a
10 couple of years since I was last here. We held a
11 P.S.D.A.R. post shutdown decommissioning activities
12 report here in the local area post COVID. So I think
13 it was our first N.R.C. public meeting post Co --
14 post COVID. And so we were happy to be here then and
15 get that public meeting completed.

16 As mentioned, I'm Bruce Watson. I'm with
17 the Office of Nuclear Materials Safety and Safeguards
18 in the Division of Decommissioning Uranium Recovery
19 and Uranium -- and Waste Programs. As a matter of a
20 thumbnail sketch of myself, I'm -- have been a health
21 physicist for over 40 years, over 35 years as a
22 certified health physicist. I'm certified by the
23 American Board of Health Physics.

24 I was the -- I operated nuclear power
25 plants for 20 years and most of that was a -- as a

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2 Radiation Protection Manager at Calvert Cliffs. So -
3 - and then after that I spent some time with the
4 Department of Energy decommissioning the weapons
5 complex in particular in the nuclear weapons area.

6 And after that, I spent some time doing
7 some domestic and international decommissioning work,
8 and have spent the last 20 years with the N.R.C.
9 doing both decommissioning domestically oversight
10 from a regulation standpoint and working with the
11 international community.

12 So -- so again, I thank you for the
13 opportunity to speak here tonight. And I'd like to
14 provide you with some information on the radiation --
15 N.R.C.'s radiation dose standards.

16 Next topic -- next page. These are the
17 general topics I plan to discuss with you this
18 evening. Our topic is dose -- N.R.C.'s dose
19 standards and the relevance of those standards in the
20 decommissioning projects such as Indian Point. I
21 also plan to discuss liquid effluent discharges since
22 it's a subject of high public interest.

23 Next slide, please. The N.R.C. regulations
24 are entitled 10 Code of the Federal -- Federal
25 Regulations Part 20. The last major revision of the

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2 regulations was in 1991. I'm sure you're wondering
3 why the regulations have not changed over the past
4 few decades.

5 Well, the reason is -- is not much has
6 changed in the Radiation Science area, even though
7 there are a significant amount of work on -- of
8 ongoing work in this area by various U.S. and
9 international experts.

10 Next slide, please. I provided you here a
11 list of organizations and their reports which formed
12 the basis for the radiation protection standards.
13 N.R.C. helps businesses review all new technical
14 reports as consideration for revising the regulations
15 in our standards for the -- in -- in our regulations.

16 So over the years, the N.R.C. also has been
17 well-represented with -- at the I.C.R.P. by a fellow
18 -- by my friend -- an old friend of mine, Dr. Donald
19 Cool, who was with the N.R.C. for many years and
20 retired, and recently he has announced his retirement
21 as the vice chair of I.C.R.P.

22 Next slide, please. So the I.C.R.P.
23 provides a system of radiological protection, and
24 it's the world -- and provides the worldwide basis
25 for all radio -- radiological protection standards.

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2 And this is for protection of patients, workers, the
3 public, the environment from ionizing radiation.
4 These standards take into account all populations,
5 including children, fetuses, and women.

6 So the N.R.C. did a thorough job of
7 reviewing I.C.R.P. 103, and other published expert
8 reports and one of items of interest that the -- the
9 I.C.R.P. did not rec -- recommend was changing the
10 public dose limit of 100 millirem per year. To put
11 that in context, the average American is exposed to
12 620 millirems of radiation each year from both
13 natural and manmade sources.

14 Natural sources include radon and -- and
15 are in certain foods. While manmade sources involve
16 nuclear medicine treatments, cellphone use, and other
17 things.

18 Next slide, please. In 2012 the staff
19 advised the Commission. Those are the people that
20 are designated by the President and confirmed by the
21 Senate to be Commissioners. They informed that --
22 they advised the Commission that the N.R.C. standards
23 could be -- could be revised to the new dosimetry
24 models based on the changes to the I.C.R.P.
25 recommendations.

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2 In response, the Commission determined that
3 the N.R.C. standards that were presently in effect,
4 were found to be -- provide reasonable assurance and
5 protection of the public, and did not need to be
6 revised based on the I.C.R.P. and other expert
7 organizations recommending changes at that time. And
8 this is still the case today.

9 In 19 -- in 2016, the N.R.C. Commission
10 also reviewed this issue again, and came to the same
11 conclusion that the current dose standards are
12 adequately protecting the public health and safety,
13 the environment. And so there we are.

14 One provision in the regulations I do want
15 to remind everybody is that the -- the regulations
16 require the practice of ALARA, which is as low as
17 reasonably achievable. And actual doses in the
18 industry are -- generally result in small fractions
19 of the regulatory limits. These ALARA requirements
20 are codified in Part 20, specifically in 10 C.F.R.
21 20.1101(b).

22 A good example of this -- of the -- good
23 example of the ALARA principle is that even the
24 regulatory limit of 100 millirems a year to the
25 public -- even though the regulatory limit is 100

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2 millirems to the public, the actual exposures to the
3 public living in the vicinity of a nuclear power
4 plant are less than one millirem per year.

5 So our review of our liquid release limits
6 -- effluent releases from the Indian Point over the
7 years indicate that they have been aligned and with
8 the current regulations and these concerns -- these
9 limits are conservatively set. Sorry, I'm skipping
10 around here a little bit.

11 Next slide please. So what would it take
12 for the N.R.C. to revise the regulations? Well, as
13 shown in this slide, there would need to be a
14 significant safety issue for the N.R.C. staff to
15 recommend revising the agency's radiation standards
16 to the Commission. The bottom line is that the
17 I.C.R.P. and other experts change their
18 recommendations.

19 They do it frequently, but not in any sub -
20 - substantive manner that would warrant a change in
21 the N.R.C. regulations. They may tweak a few
22 things here and there, but the bottom line is,
23 they're pretty much not much different.

24 With the recommendations that the I.C.R.P.
25 and any other scientific body, N.R.C. is always

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2 reviewing and considering the adoption of new
3 dosimetry models. Such changes remain under ongoing
4 review to -- in consideration, however, they're not
5 changed in a significant way to warrant revising the
6 regulations.

7 Next slide, please. I thought it would be
8 good to recap the environmental regulations. As
9 noted in this slide, E.P.A. rep -- E.P.A. -- U.S.
10 E.P.A. Environmental Protection Agency regulates the
11 environment, and the N.R.C. regulates all types of
12 licensees using radioactive material, including
13 nuclear power plants.

14 In general, though, the N.R.C. adopted the
15 E.P.A. federal radiation protection guidance for
16 environmental issues for radioactive discharges to
17 the environment. The E.P.A. guidance was endorsed by
18 the National Council on Radiation Protection and the
19 National Academy of Sciences.

20 Next slide, please. The E.P.A. regulations
21 are in 40 C.F.R. 190. In the E.P.A. regulations, the
22 N.R.C. has set a drinking water concentration limit
23 for tritium at 20,000 picocuries per liter.
24 Consuming drinking water at this level of tritium for
25 a year would result in individual -- in an individual

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2 receiving about 4 millirem in one year.

3 The E.P.A. and the State's roles -- primary
4 role in nuclear facilities is to regulate the non-
5 radioactive releases from through the use of national
6 pollution -- national -- always get this one mixed
7 up. National Discharge Pollution Elimination System
8 or N.P.D.E.S. permits. And I believe New York
9 regulates -- provides that permit in -- in the State,
10 right?

11 Next slide please. So as I mentioned, the
12 N.R.C. regulates the radioactive effluent from
13 nuclear power plants and does so by including
14 environmental and -- environmental and effluent
15 requirements in each of the State in each of the
16 plant's license. Regional decommissioning inspectors
17 are required to inspect the site's environmental and
18 effluent programs at least annually.

19 In the licensing requirements, the plant
20 owner, in this case Indian Point, Holtec is required
21 to limit the liquid effluents doses to less than
22 three millirem per year. These -- these releases are
23 performed in accordance with the N.R.C. approved
24 offsite dose calculation manual, which is publicly
25 available.

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2 Every nuclear power plant -- every nuclear
3 reactor is -- licensee is required -- required to
4 provide an annual report on the effluents from the
5 plant. These reports are compiled by the N.R.C. and
6 are made publicly available. And -- and in all
7 cases, these liquid effluents are well below the
8 N.R.C. and the E.P.A. limits.

9 Next slide please. One issue of public
10 interest that I keep hearing is that -- is the water
11 -- does decommissioning water change? Does
12 decommissioning change the water? Well, the answer
13 is -- in reality is, the water is the same as it was
14 used during operations. So principally the answer is
15 no.

16 The water is the same water used during
17 operations to refuel the reactor, keep spent fuel
18 pool cooled, and serve as a source of shielding the
19 water -- water is served as a source of shielding for
20 decommissioning the plants such as dismantling the
21 reactor internals.

22 And of course during operations, the water
23 is available for use in emergency situations. The
24 major difference is -- in decommissioning is that the
25 plant is no longer in operation, is no longer

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2 producing neutrons. Therefore the fissioning has
3 stopped, producing new fission products, and the
4 impurities in the water are no longer being activated
5 by the neutrons that were there.

6 So the only radioactive materials that are
7 created into this water are the activities associated
8 with decommissioning. So as the plant is the
9 segmented and parts are cut up, the other probably
10 some metal particulate matter that enters the water
11 but those are filtered out, and they're fairly large
12 particles. So there is some changes, but they're
13 maintained and cleaned up.

14 Light-water reactors have been operating
15 for almost 75 years. And in an -- in this water
16 environment, just mainly water and metal. There are
17 no new chemicals produced other than basic chemical
18 compounds. And these behave as if they are a non-
19 radioactive species if they enter the environment.

20 So we're not creating anything new. We're
21 not doing any exotic organic chemistry that would
22 create new compounds, it is basically water
23 chemistry, and the nuclides behave as they would in a
24 non-radioactive environment.

25 So another question. Next slide, please.

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2 Another question I have seen is, does decommissioning
3 change the liquid effluents? Well, pretty much the
4 answer is no. As previously noted, the same water is
5 -- was used that was used to operate the plant. The
6 only significant difference of course is that the
7 radioactivity is slowly being reduced after the
8 reactor ceases operation, and enters the
9 decommissioning phase.

10 The same slightly contaminated water that
11 was used to cool the spent fuel is used to -- to --
12 to cool spent fuel until the spent fuel is
13 transferred to the dry storage, and is also used as
14 shielding as I mentioned, to dismantle the highly
15 radioactive components in -- like such as the reactor
16 internals. Well, when the water is no longer needed,
17 the water is filtered and treated, and released in
18 small batches using the same process that was used
19 during operations.

20 In this case, to discharge the liquid
21 effluents, the water is treated to reduce the level
22 of contaminants consistent with the ALARA principle,
23 and the water is sampled before it is discharged, and
24 of course, it is monitored as it is discharged.
25 Should any discharges exceed conservative set limits,

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2 the release -- release will -- will alarm and halt
3 the flow of the water being discharged.

4 Next slide please. So let's put tritium in
5 perspective. Tritium or tritiated water is a natural
6 occurring radioactive element produced in the Earth's
7 upper atmosphere. Tritium can be found in low
8 concentrations in lakes, streams, and even in some
9 rivers. Tritium is produced by reactors in a very
10 low concentration levels, and are released to the
11 environment in fractions of the regulatory limit.

12 Tritium is used in medicine, industry,
13 research, and in the defense complex. It is used in
14 many applications such as exit signs and, you know,
15 for its luminescence. Exit signs have sufficient
16 quantity of tritium that are regulated by the N.R.C.
17 under a specific license. Tritium does not
18 bioaccumulate in plants, humans, or animals since it
19 is water. Biological half-life with tritium in
20 humans is about 10 days.

21 And of course, the tritium is dispersed in
22 the human tissues and are cleared rapidly from the
23 body since they are continuously replenished -- we --
24 we continuously replenish the water of our body on a
25 daily basis.

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2 Next slide please. So in closing, the
3 N.R.C. radiation standards are adequately protective
4 with the public health and safety and the
5 environment, to ensure the radiation protection
6 standards remain pro - protective of the public --
7 the public, the environment.

8 The N.R.C. continuously reviews, considers
9 new scientific information provided from the experts
10 such as the I.C.R.P. and N.C.R.P. As a point of
11 reference, I've provided the Board with a copy of the
12 health physics tritium fact -- fact paper for your
13 consideration and use.

14 And so there's a tremendous amount of -- of
15 tritium information on the N.R.C. website, and -- and
16 it was just publicly available and hopefully you can
17 find it of use. So with that, thank you for -- for -
18 - very much for letting me speak tonight. And I hope
19 I've provided some good information for you to
20 consider.

21 CHAIR CONGDON: Thank you very much, Bruce.
22 And we've been joined by County Legislator, Catherine
23 Borgia, welcome. Thank you.

24 MS. BORGIA: Sorry I didn't realize there
25 was a change in venue.

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2 CHAIR CONGDON: Well, that's okay. Any
3 questions for Bruce before we move to the next --
4 yes, sir, go ahead?

5 MR. WEBSTER: Yes.

6 CHAIR CONGDON: Say again? State your name
7 please.

8 MR. WEBSTER: Richard Webster, DOB member.
9 A couple questions for you. One is I don't see any
10 mention of actual health in here. Right, so this 100
11 millirem per year how does that translate into cancer
12 risk for different -- different --.

13 MR. WATSON: It is calculated that the
14 incremental increase in exposure would probably be
15 around less than 0.1% over your lifetime due to the
16 exposure from the power plant -- living near a power
17 plant.

18 MR. WEBSTER: Point 1% of what?

19 MR. WATSON: Less -- of the average like
20 typically, I think the cancer rate for men is like
21 40%. I think women is slightly less, but. So you're
22 less than 1% of increasing that limit.

23 MR. WEBSTER: Okay.

24 MR. WATSON: So we have tremendous amount
25 of natural cancer cases, and this is highly unlikely

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2 it would cause any additional cases.

3 MR. WEBSTER: This causes a small number,
4 right?

5 MR. WATSON: Right, right.

6 MR. WEBSTER: And is that the same for --
7 for women, children?

8 MR. WATSON: Yeah, yeah, the regulations
9 take into account, as I said, the women --

10 MR. WEBSTER: No, I don't mean the
11 regulations.

12 MR. WATSON: -- the unborn and children.

13 MR. WEBSTER: The additional cancer risk,
14 it can't be the same surely for each one?

15 MR. WATSON: It is about the same, yes.

16 MR. WEBSTER: Really? Okay. The changes,
17 yeah, the change --

18 MR. WATSON: The change, yeah, they don't.

19 MR. WEBSTER: Thank you.

20 MR. WATSON: Right.

21 MR. WEBSTER: And then my other question
22 is, I understand that N.R.C. started doing some can -
23 - some studies of cancer risk around reactors and
24 then canceled those. Is that right?

25 MR. WATSON: Well, typically the N.R.C.

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2 does not do the epidemiology studies you're talking
3 about. What we do is we collect the data from all
4 the licensees. There's a report called the annual
5 radiation the REIRS is called the radiation exposure
6 report that is provided to the N.R.C., it's like it's
7 NUREG-0713.

8 We produce the radiation data -- actual
9 data of doses around the nuclear -- at the nuclear
10 power plants and other scientific communities use
11 that data to do the epidemiology studies. So maybe
12 the National Academy of Sciences or the N.C.R.P. will
13 look at those type of things, not the N.R.C.

14 MR. WEBSTER: Okay. So was it -- was there
15 a government study that was cancelled?

16 MR. WATSON: It could have been, I don't
17 know. But it -- it -- the N.R. -- and it's not our
18 purview to do that. We're an independent safety
19 regulator. That would be covered by another --
20 either government agency or another independent
21 science agency.

22 CHAIR CONGDON: Richard, it seems like you
23 have some knowledge --

24 MR. WEBSTER: I study --

25 CHAIR CONGDON: -- of the study.

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2 MR. WEBSTER: -- I know the study, which
3 was cancelled, but I'm not sure whether N.R.C. was
4 taking it or another -- another government body, but.

5 MR. WATSON: Well, I know -- I know the
6 Electric Power Research Institute was going to do a
7 big study back in the 1980s.

8 MR. WEBSTER: Uh-huh.

9 MR. WATSON: And -- yeah so. But no, the
10 N.R.C. does not do that. That's -- they leave that
11 up to the independent science community to do that.

12 MR. WEBSTER: Okay, thank you..

13 CHAIR CONGDON: Senator?

14 SENATOR HARCKHAM: Thank you very much,
15 Tom. And Bruce, thank you and your team for being
16 here. Thank you very much. Quick question. You
17 know, we've been talking a lot about different
18 options for the wastewater and Vermont, there was
19 solidification. I believe Three Mile Island was
20 evaporation, here we're talking discharge.

21 So my question is, does the N.R.C. have a
22 preferred method or are you sort of silent on the
23 method as long as the method meets your safety
24 requirements?

25 MR. WATSON: Well, first of all, you're

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2 right, it has to be done safely, no matter what it
3 is. The N.R.C. leaves that up to the licensee to do
4 --

5 CHAIR CONGDON: In the mic.

6 MR. WATSON: Yeah, the N.R.C. leaves those
7 processes up to the licensee that they choose to --
8 to do the thing as long as it's within the
9 regulations, and we -- and they maintain the safety
10 of it. The second part of your question, though, I
11 want to make sure you understand that the N.R.C.
12 requirements are -- is that the plant must be
13 completely decommissioned within 60 years.

14 SENATOR HARCKHAM: Well, that -- that we
15 know. I -- I --

16 MR. WATSON: Yeah, I -- I --.

17 SENATOR HARCKHAM: -- what I was talking
18 about is just -- just getting rid of the liquid from
19 the --

20 MR. WATSON: Yeah.

21 SENATOR HARCKHAM: -- site.

22 MR. WATSON: We have -- yeah, we have
23 regulations that allow the licensee to discharge it.
24 And we have -- they can do evaporation but you know,
25 evaporation of tritium goes into the atmosphere,

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2 becomes part of the water cycle. So you -- you --
3 you're just changing the form in which it enters the
4 environment, correct?

5 SENATOR HARCKHAM: Yeah.

6 MR. WATSON: You know, so -- you know, so.
7 It's really up to the licensee how they want to do
8 it. Vermont ships a lot of water. They don't
9 necessarily solidify all of it, but they do ship
10 tremendous volumes, and they agreed with the state to
11 do that when they -- when the company that's doing
12 the decommissioning accepted that the -- I guess the
13 -- the state issues a, what's it called? Certificate
14 of common good or public good, and that was part of
15 that decision making by them.

16 SENATOR HARCKHAM: All right, so as long as
17 it's a method that's already accepted by you and it
18 meets your safety requirements?

19 MR. WATSON: Yeah.

20 SENATOR HARCKHAM: Okay. Thank you.

21 MR. WATSON: Yeah.

22 CHAIR CONGDON: Assemblywoman?

23 ASSEMBLYWOMAN LEVENBERG: Thank you so much
24 again for coming in this -- for this presentation.
25 You talked a lot about the difference in the water or

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2 the -- the effluent from the spent fuel pools being
3 different or the same during -- you know, when the
4 plant was operational versus now.

5 Yesterday, we had the pleasure of visiting
6 Holtec, and they talked a lot about sort of moving
7 the water around and using it for different purposes
8 as part of the decommissioning process. And it seems
9 like maybe that's different than maybe what would
10 happen during the operation of the plant.

11 I mean, they were using it at one point to,
12 you know, the lowering and raising the level of the
13 pool water so they could clean the boric acid from
14 the sides and -- and then the -- the effluent moved
15 around to a different place. Is there any -- are we
16 really, you know, comparing apples to apples when
17 we're looking at what the effluent would be from
18 during this process as during operational?

19 MR. WATSON: I'm -- I'm going to go back to
20 my -- my slides, and it's -- it is the same water.

21 During this --

22 ASSEMBLYWOMAN LEVENBERG: I guess --

23 MR. WATSON: -- during --

24 ASSEMBLYWOMAN LEVENBERG: -- that's not

25 exactly --

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2 MR. WATSON: Yeah, during --

3 ASSEMBLYWOMAN LEVENBERG: -- what I'm
4 saying.

5 MR. WATSON: Yeah. Well, during refueling,
6 you use the same water and you --

7 ASSEMBLYWOMAN LEVENBERG: Yeah.

8 MR. WATSON: -- raise the water level, you
9 drop the water level. You have to raise it to -- to
10 -- to move the fuel under water. They raised the
11 water to segment the internals of the reactor because
12 it's highly contaminated or radioactive.

13 So the water levels are going to change,
14 and eventually they're going to reach a point where
15 they decommission the spent fuel pool after they
16 removed the fuel, and they'll be decommissioning that
17 so they will lower the water level. Okay.

18 So you know, it's the same water, it's
19 going to get -- get mixed with all the other water
20 that's onsite so that can be all processed. So it
21 would be processed in small batches. They're going
22 to be sampled and -- and filtered and treated just
23 like it would any other water that -- from the plant
24 operation.

25 The biggest difference is it's not

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2 circulating through their -- the inactively -- active
3 reactor core, where it could be having new
4 radioactive material entered into it in the fission
5 process or from activation of the products,
6 impurities in the water.

7 ASSEMBLYWOMAN LEVENBERG: Okay. I guess
8 the question is, are there other contaminants that we
9 need to concern ourselves with?

10 MR. WATSON: Well, I think the radioactive
11 components are pretty well documented. The -- the
12 operators of the nuclear power plants do their best
13 to keep all impurities that they can out of the
14 water, because they want -- they don't want to create
15 a radiation issue they don't -- going to have to deal
16 with. So you know, when they don't -- the water is
17 kept as clean as it can be. It's continuously
18 cleaned up.

19 There's a system called the letdown system
20 where they refurbish the water, so to speak, clean it
21 and put it back into the system. So you know, from -
22 - from a reactor operation standpoint, they want the
23 best water they can have in here, which is if they
24 could -- if they could have the distilled --
25 distilled water, that's what they would use.

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2 But -- so water chemistry is extremely
3 important because they want the reactor components to
4 last forever, so to speak, obviously beyond the
5 license time. And so things like steam generators
6 and reactor internals they want to last -- have them
7 last a very, very long time, because they're very
8 expensive to replace.

9 CHAIR CONGDON: I believe Dave Lochbaum has
10 a question virtually.

11 MR. LOCHBAUM: Yeah, this is Dave Lochbaum.
12 I wanted to follow up on Richard Webster's comment
13 about the -- the cancer study. A few years ago, the
14 Nuclear Regulatory Commission was going to fund a
15 study that was done by -- going to be done by the
16 National Academy of Sciences or the National Cancer
17 Institute, one of those organizations. They did the
18 Phase-I study, which scoped out the Phase-II study,
19 which was epidemiological study, looking at routine
20 releases and whether they caused harm.

21 But the N.R.C. cancelled the Phase-II study
22 because it costs too much, about a million dollars a
23 year for eight years, which is less than the cost of
24 the N.R.C.'s annual regulatory information
25 conference. But the N.R.C. decided not to do that

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2 study, or fund that study, excuse me.

3 CHAIR CONGDON: Thanks for the -- for the
4 context, Dave.

5 MR. WEBSTER: Can you tell me why?

6 MR. WATSON: That wouldn't be our call.
7 That would be the Commission's call.

8 MR. WEBSTER: Did the Commission offer an
9 explanation at the time?

10 MR. WATSON: I --

11 MR. LOCHBAUM: Costs too much.

12 MR. WATSON: -- I -- I don't know. Other
13 than it cost too much, I guess it's -- and I'll take
14 David's word for it, yeah. Like I said, we're not in
15 the epidemiology business, we're in the --

16 MR. WEBSTER: Well --

17 MR. WATSON: -- safety business so.

18 MR. WEBSTER: -- when you say that -- when
19 you say -- let me read from their website here. In
20 2010, the N.R.C. sought to address these concerns by
21 asking the National Academy of Sciences to perform
22 state of the art study on cancer risk in population
23 surrounding N.R.C. facilities. So with respect it
24 sounds like the N.R.C. is in that business. You may
25 not be personally, but the agency is.

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2 MR. WATSON: Well, I -- I -- I think
3 there's a big difference between contracting and
4 having someone independently do it and not doing it
5 ourselves. So.

6 MR. WEBSTER: Well, a lot of things are
7 done by contract. I mean if the agency commissions a
8 study, it's an agency study?

9 MR. WATSON: Okay. I'm just saying it was
10 -- as I mentioned, it was decided by the Commission
11 not by the staff, so.

12 MR. WEBSTER: Right, the N.A.S. didn't
13 cancel it, the N.R.C. decided to cancel it, correct?

14 MR. WATSON: Okay. For -- for whatever the
15 Commission's reasons were, I'd have to agree with
16 you.

17 MR. WEBSTER: Okay. Thank you.

18 CHAIR CONGDON: John -- John Sipos.

19 MR. SIPOS: Thank you. Can you hear me,
20 Bruce?

21 MR. WATSON: Yeah.

22 MR. SIPOS: Well, and again, thank you for
23 coming here tonight. Just a couple of questions
24 about the tritium. So I understand there's tritiated
25 water inside Indian Point right now. Is that

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2 correct?

3 MR. WATSON: Yeah, the water contains some
4 element of some concentration of tritium.

5 MR. SIPOS: And that tritium is the result
6 of the fission process from when the reactors were
7 operating. Is that correct?

8 MR. WATSON: Yes. Principally, yes.

9 MR. SIPOS: And so the tritium that's in
10 the water that's inside the plant is the result of
11 Indian Point generating electricity. Is that
12 correct?

13 MR. WATSON: That's correct.

14 MR. SIPOS: Thank you.

15 CHAIR CONGDON: Tom Carey, did you have a
16 question?

17 MR. CAREY: Yes. Are you aware of any
18 other separation or extraction process something new
19 that's been talked about to release the tritium?

20 MR. WATSON: I honestly don't know the -
21 haven't been keeping track of all the technology and
22 research going on on that area. I know it's -- you
23 know, tritium is tritiated water. It's very
24 difficult to remove water from water so to speak.
25 And so I'm sure there's people trying to figure it

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2 out. But, you know, I don't -- I really can't say
3 that I'm aware of any.

4 MR. CAREY: Okay.

5 CHAIR CONGDON: Tom we -- we -- as part of
6 Dave Lochbaum's work of evaluating options, we were
7 sent a flyer by supervisor Becker, who learned of a
8 process being demonstrated in I believe the State of
9 Washington by a company called Veolia, which is now a
10 company that owns a water utility, Rockland and
11 Westchester, the Suez water company. We've reached
12 out to Veolia to learn about that technology.

13 And Dave could speak to this probably
14 better than I, but what I learned is, just to briefly
15 answer your question is that the tritium removal
16 technology is commercially available for heavy water
17 applications, where there is a higher concentration
18 of radionuclides, tritium in particular.

19 For the light-water reactors it is not
20 commercially available, but Veolia did demonstrate
21 that technology can work for light-water systems, but
22 it's -- it's never been deployed commercially for
23 that type of application. And they said it would be
24 extremely expensive to do it. And it does not result
25 in an elimination of tritiated water. It results in

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2 a highly concentrated, much lower volume.

3 So it's a way to take a large volume of
4 tritiated water, remove -- it's an electrolysis
5 process that removes the -- the tritium from most of
6 the water, but it then concentrates it on a smaller
7 volume. That's how it was explained to me.

8 MR. CAREY: So it is -- in essence, it's a
9 extrication process, right?

10 CHAIR CONGDON: Yeah, it's an electrolysis
11 process.

12 MR. CAREY: Separation, yeah.

13 CHAIR CONGDON: Yes.

14 MR. CAREY: Okay.

15 CHAIR CONGDON: Yeah -- yeah. And they're
16 -- in the process, there is some air emissions
17 associated with that. And by making it into a higher
18 concentration, they could further -- they could
19 further work with the water to then extract it
20 further and -- and -- and solidify it on metal
21 plates. But that would be on top of an already very
22 expensive process.

23 Dave Lochbaum, do you want to add to
24 anything I said, because I know that you looked at
25 that as an earlier option that you evaluated?

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2 MR. LOCHBAUM: Yeah. When I looked at it,
3 I looked -- it's being used in Canada and some places
4 in Europe. And the volume that they were dealing
5 with was much larger, so we got the economy of scale
6 effect.

7 And as you say, they -- those were heavy
8 water plants, where it is a little bit easier to deal
9 with than light-water reactors so that -- that's why
10 the cost is a little bit higher. Not a little bit
11 higher, why it was higher for -- if you try to apply
12 it to our type of reactors.

13 CHAIR CONGDON: Yeah, and that's a good
14 point. And -- and the reason it was being
15 demonstrated was in response to Fukushima, because
16 the volume there is so much greater than what you're
17 seeing with -- with other, you know, light-water
18 applications --

19 MR. WATSON: Yeah, I --

20 CHAIR CONGDON: -- right. So -- so that
21 was why it was developed. But the decision makers in
22 Fukushima chose not to pursue that as their option.

23 MR. WATSON: I was going to bring up the
24 Fukushima example which you just did, but they have a
25 tremendous problem, yeah.

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2 CHAIR CONGDON: Other questions?

3 MR. CREIGHTON: Yeah.

4 CHAIR CONGDON: Other questions? Yeah.

5 MR. CREIGHTON: So just following up on
6 that then, how -- how does that fit into the ALARA
7 principle if -- if we're talking about as low as
8 reasonably achievable, doesn't that show that it is
9 reasonably achievable to get a lower rate? And --
10 and I'm -- I'm struggling with the ALARA principle
11 and the cost principle.

12 MR. WATSON: Yeah.

13 MR. CREIGHTON: I -- I know it costs money.
14 I think the question is, is it reasonably achievable?
15 Can we get that number down? Can we get it out of
16 the river? And I think that's the goal if it can be
17 done. And I -- I -- you know, I think that somewhere
18 I saw that -- that the -- the expectation is that you
19 want it as low as possible, and if you could get to
20 zero, that would be what you would want. But it
21 needs to be reasonably achievable.

22 So where does this new technology fit in?
23 I know it hasn't been around 50 years, but it seems
24 to be around now, and it's been demonstrated that it
25 works. So is it worth a shot?

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2 MR. WATSON: Well, that would be up to
3 Holtec to do the cost benefit analysis and for
4 possibly the State to oversee that -- that review.
5 So it'd be up to them to determine how they want to
6 process the water. We would just make sure that it
7 was done safely, whatever technology they chose. And
8 so you know the -- we would not be doing the cost
9 benefit analysis for them.

10 Our regulations allow the discharge of the
11 water, and plain and simple. And that's been the
12 ALARA practice to minimize the amount of
13 radioactivity into the environment.

14 MR. WEBSTER: Bruce --

15 MS. WARNER: I'm going to --

16 MR. WEBSTER: -- I don't quite understand
17 that.

18 MS. WARNER: -- add something here.

19 MR. WATSON: Yeah, absolutely.

20 MS. WARNER: Katherine Warner, Senior
21 Health Physicist with N.R.C., I'm the lead
22 decommissioning inspector for Indian Point. I would
23 add to that that ALARA is as low as reasonably
24 achievable, not as low as reasonably attainable. And
25 also in our regulations in 10 C.F.R. 50 Appendix

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2 Indigo, that's where we define the ALARA design
3 objectives for liquid release.

4 And those design objectives are
5 incorporated into the sites -- offsite dose
6 calculation manual. So as long as they're meeting
7 those dose, about three millirem, then we consider
8 them meeting our ALARA standards, so.

9 MR. WATSON: Does that make sense to you?

10 MR. CREIGHTON: I definitely understand the
11 three millirem. But if -- if there was a process to
12 get it to zero, or to get it to one, is it worth
13 pursuing?

14 MR. DIMITRIADIS: And the limit is three.

15 MR. CREIGHTON: I -- I understand. Just
16 because the limit has been stated as three, if it
17 could get to one, and it's reasonable, isn't that
18 worth pursuing?

19 MR. DIMITRIADIS: No.

20 MR. CREIGHTON: Okay.

21 MAYOR KNICKERBOCKER: You know, I'd like to
22 comment also on the zero because I have heard the
23 zero to get it to zero. And I -- and I think you
24 need to look at the whole picture here too. We have
25 medical facilities, through -- up and down the Hudson

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2 River we have people who do testing, cancer testing,
3 cancer treatment.

4 So what are we going to say to them zero
5 also? All the hospitals and medical facilities,
6 research facilities? You know, so -- you know, we're
7 --

8 MR. CREIGHTON: If you want --

9 MAYOR KNICKERBOCKER: -- we're --

10 MR. CREIGHTON: -- them to be reasonable,
11 you want them --

12 MAYOR KNICKERBOCKER: Absolutely.

13 MR. CREIGHTON: -- to be as much --

14 MAYOR KNICKERBOCKER: -- I'm not -- Jim,
15 let me state this. I want a safe decommissioning.
16 I'm not looking to hurt the Hudson River. It's a
17 majestic river, so let me put that out there because
18 I've been accused of a few things. I learned -- just
19 like Warren Smith, I learned -- and Tom Carey, we
20 probably learned the same day, learned how to swim in
21 that river. I love the river. I'm not looking to
22 hurt it. I don't think there's anybody looking to
23 hurt it.

24 We want the safe, prompt, decommissioning
25 of the Indian Point facility. But what I just want

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2 to say to you even in the atmosphere, it's in the
3 atmosphere. So how -- you'll never going to get a
4 zero anywhere. It just -- it's -- it's not going to
5 happen. I do understand you want the lowest -- we
6 all, that would be great. But it's never going to be
7 zero anywhere. Because even in the water now, you're
8 still going to have this stuff.

9 MR. CREIGHTON: Totally understood, but --

10 MAYOR KNICKERBOCKER: So it's natural, it's
11 manmade --

12 MR. CREIGHTON: If you can keep it --

13 MAYOR KNICKERBOCKER: -- it's there.

14 MR. CREIGHTON: -- closer to background,
15 that would be great.

16 MAYOR KNICKERBOCKER: Absolutely. So we
17 keep it at ALARA.

18 CHAIR CONGDON: I think the -- the -- the
19 point of trying to keep it closer to background, you
20 know, we -- we heard from the N.R.C. at the last
21 meeting where they went through and the measured
22 actual. And maybe Katherine you could refresh the
23 D.O.B. on your conclusion slide that you know went
24 through -- I'm sorry to put you on the spot --

25 MR. DIMITRIADIS: April.

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2 CHAIR CONGDON: -- but from the April
3 meeting, you know what the measured calculated dose
4 was from the liquid effluent highest dose from the,
5 you know, historical discharges? Do you recall that
6 -- that number?

7 MS. WARNER: Of course, off the top of my
8 head, Tom.

9 CHAIR CONGDON: Yeah.

10 MS. WARNER: All right, so I'll -- I'll go
11 through a couple of the numbers here. So just for a
12 touch point for occupational workers, 5000 millirem
13 is our occupational total effective dose limit.

14 MR. DIMITRIADIS: 5000?

15 MS. WARNER: 5000.

16 CHAIR CONGDON: In a year?

17 MS. WARNER: In a year.

18 MR. DIMITRIADIS: In a year.

19 MS. WARNER: I got it. And then 620
20 millirem is the average that a person gets just
21 existing in the United States. And then we have a
22 100 millirem, that is the overall dose limit to a
23 member of the public from all pathways, that's
24 including ingestion, inhalation, direct exposure,
25 everything.

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2 And then 25 millirem a year is the E.P.A.
3 dose limit for releases, including for the nuclear
4 fuel cycle. And then three millirems a year is the
5 O.D.C.M. design objective that the site is to meet
6 per their license.

7 CHAIR CONGDON: That's from all types of
8 releases liquid, air, everything?

9 MR. WATSON: Just liquid.

10 CHAIR CONGDON: Just liquid? Okay, sorry.
11 Go on.

12 MS. WARNER: And then the actual dose from
13 2021, if I'm recalling correctly from liquid releases
14 was like .0011 millirem somewhere around there. I
15 might have mixed the zero up, but well below all of
16 those limits. Does that help?

17 MR. CREIGHTON: That is -- that's --

18 CHAIR CONGDON: So when you say, could we
19 get it to zero, or to one, it's from historical
20 discharges .001?

21 MR. CREIGHTON: Right, but these discharges
22 are discharges of -- of storm water, right? Storm
23 water that's collected on site and filtered. I mean,
24 it was described yesterday.

25 MS. WARNER: So --

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2 MR. CAREY: This -- this was -- this was
3 from a fuel dump -- a fuel pool dump?

4 MR. BURRONI: Our -- our discharge from any
5 source will be less than 1%. So if you want me to
6 get to one, I can, but we were at less than 1%.

7 MR. WEBSTER: Let me -- let me ask you a
8 question. If you're -- if the discharge is at less
9 than 1%, why is ALARA three? It seems like ALARA
10 should be lower?

11 MR. WATSON: Generally, a good -- pretty
12 good question. Well, considering -- considering --
13 considering that we used to have a general limit of
14 10 millirem, three is much, much lower.

15 MR. WEBSTER: But it's not ALARA, is it?

16 MR. WATSON: Well, it is ALARA because when
17 you consider what it could be, you know.

18 MR. WEBSTER: Obviously, it's achievable to
19 go to point one or -- or --.

20 MR. WATSON: Well, no, the operation -- the
21 design operation is that we will be below three.

22 MR. WEBSTER: I know.

23 MR. WATSON: After you -- after you do all
24 the ALARA steps, filter it, run it through resin
25 columns, whatever it is, to remove the amount of

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2 radioactive material that you can, then it's ALARA.

3 MR. WEBSTER: Okay.

4 MR. WATSON: So -- so you're not just --
5 you're not -- they're not just dumping the raw water,
6 they are treating the water, they make it ALARA to --
7 to --.

8 MR. WEBSTER: I'm not complaining about
9 them, I'm complaining about --

10 CHAIR CONGDON: Right.

11 MR. WEBSTER: -- the -- the terminology.
12 If the terminology is as low as reasonably
13 achievable, then it seems like what's achievable is
14 what Holtec actually achieved.

15 MR. WATSON: Three millirem is our ALARA
16 design objectives. You got to be below three.

17 MR. WEBSTER: What -- what -- how is that --
18 -- how is that ALARA?

19 MR. WATSON: Because it's less than three.

20 CHAIR CONGDON: I think -- I think --.

21 MR. WATSON: You know, what I'm answering
22 is like -- like you said --

23 CHAIR CONGDON: Yeah. But I think the
24 point -- the point, though, that Richard's making is
25 that if in the field, and for decades, Indian Point

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2 has been able to achieve less than one, maybe that's
3 an example that --

4 MR. WATSON: It is.

5 CHAIR CONGDON: -- N.R.C. could take back
6 to consider whether the three should be lowered
7 again, based on actual experience in the field, I
8 think. Is that fair to summarize? But -- but we
9 don't have to -- this -- this could be --

10 MR. WATSON: Yes.

11 CHAIR CONGDON: -- you know -- I'm -- I'm
12 time sensitive. Tom Kaczmarek, did you want to do a
13 time check or what?

14 MR. KACZMAREK: Yeah. So Tom Kaczmarek.
15 Just a reminder everyone, I'm getting some feedback
16 from folks on Zoom. Please introduce yourselves
17 before you speak. And make sure you're speaking into
18 the mic. So --

19 CHAIR CONGDON: Thank you.

20 MR. KACZMAREK: -- thank you.

21 CHAIR CONGDON: I'd like to try to get back
22 on schedule. The next presentation is also by the
23 N.R.C. Tony Dimitriadis from the N.R.C. is here to
24 talk enforcement and oversight. Thank you for being
25 here. And go ahead.

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2 MR. DIMITRIADIS: Thank you, can you hear
3 me?

4 CHAIR CONGDON: Yes.

5 MR. DIMITRIADIS: Okay, thank you. Good
6 afternoon. My name is Anthony Dimitriadis. I'm the
7 branch chief responsible for oversight of Indian
8 Point. We have decommissioning ISFSI, that means
9 Independent Spent Fuel Storage Installation, that's
10 the spent fuel casks, and also operating reactor
11 health physics.

12 Thank you to the Decommissioning Oversight
13 Board for inviting me and us to make this
14 presentation to discuss our oversight program as
15 Indian Point undergoes decommissioning. We value
16 these interactions and want to emphasize that we have
17 a common goal to ensure that Indian Point is
18 decommissioned safely and effectively.

19 I will be talking about our inspection
20 program, how we process issues of concern, how we pro
21 -- process those issues of concern that may turn into
22 violations. The enforcement process, a little bit
23 about that. Intentional violations. I'm going to
24 talk a little bit about public notification on urgent
25 matters.

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2 And finally, ISFSI inspections as asked by
3 the Decommissioning Oversight Board. I have about
4 nine slides to go over and that should take about 15
5 minutes. Next slide please. So our inspections
6 involve communication, coordination, a lot of
7 planning and scheduling, conference calls, plant
8 walk-downs, interviews, and review of procedures and
9 records.

10 Our staff use inspection manual chapter.
11 That's a terminology that we use for our documents
12 that we follow, which outline our inspection program.
13 Our inspectors like Katherine, the lead inspector for
14 Indian Point, have unfettered access. That means
15 that they have access to the site.

16 They don't need to be invited to the site
17 like other federal agencies may need to be invited
18 like the Department of Labor, for example. The
19 inspections are multidisciplinary, and they are very
20 intrusive. Procedures, logs, and records are
21 reviewed before, during, and after our onsite visits.

22 Inspections can involve one inspector or
23 multiple inspectors as you can see in the slides.
24 The inspection program includes many items such as
25 for example, spent fuel pool maintenance, fire

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2 protection, occupational radiation exposure, that is
3 for radiation workers and radiation areas, and
4 radioactive waste treatment and effluent and
5 environmental monitoring as we lightly talked about
6 in previous presentations.

7 Next slide please. Now we will talk a
8 little bit about the N.R.C. pro -- how the N.R.C.
9 processes issues of concern that may result in a
10 violation and how that process works. The
11 enforcement process begins with the identification of
12 violations either through N.R.C. inspections or
13 investigations, a licensee report perhaps, or
14 substantiation of an allegation.

15 When an inspector identifies or becomes
16 aware of an issue of concern, we process that issue
17 to determine if there's an associated violation as to
18 a non-compliance issue. In the decommissioning
19 program, we do not follow the reactor oversight
20 process. We implement our, what we call traditional
21 enforcement process. That process follows our
22 enforcement policy as shown on the slide here.

23 If the issue is a violation, then we use
24 the enforcement policy shown here to determine the
25 severity level of the violation. The N.R.C.'s

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2 enforcement process, as it applies to decommissioning
3 reactor sites, is fully described in the enforcement
4 policy available from our public website.

5 As described in the policy, the severity
6 level of a violation is based on the N.R.C. staff's
7 assessment of its significance, with a severity level
8 one being the highest significance, and severity
9 level four being the least significant, while still
10 being more than minor significance.

11 We can also assess a violation as being
12 minor significance, which is the lowest
13 classification. Minor violations are not documented
14 in inspection reports typically, but licensees are
15 still required to correct them. Violations are as --
16 as severity level one, two or three are considered
17 escalated enforcement actions and are subject to
18 evaluation for potential civil penalty, that -- that
19 -- that means a fine.

20 The N.R.C. staff evaluates the violation's
21 severity level considering -- through consideration
22 of four factors. 1) Actual safety or security
23 consequences, 2) Potential safety and security
24 consequences, 3) Impacts of the N.R.C.'s regulatory
25 process, and 4) Willfulness, that is a violation

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2 determined through an N.R.C. investigation to have
3 been committed due to deliberate misconduct or
4 careless disregard.

5 The N.R.C. enforcement policy includes
6 examples of severity level outcomes based on
7 consideration of these four factors for different
8 types of violations, and the staff considers these
9 example violations whenever possible to ensure
10 consistent application of the N.R.C. policy.

11 Next slide please. Our licensees are
12 typically aware that the N.R.C. staff is evaluating a
13 potential violation during the course of an
14 inspection, or inspection period based on the
15 information being reviewed and the questions that our
16 inspectors asked the licensee staff. The N.R.C.
17 staff formally informs the licensee of potential
18 violations during the inspection exit meeting, at the
19 end of the, for example, the quarter.

20 The public is made aware of violations when
21 the N.R.C. staff issues the inspection report, which
22 we typically issue about 30 to 45 days after the exit
23 meeting. Our enforcement actions are normally made
24 publicly available. Occasionally some security
25 related information and certain other information

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2 such as, for example, medical records and things like
3 that sort will not be made available to the public.

4 Sometimes we also issue press releases when
5 an order or if a civil penalty is issued at the same
6 time as a notice of violation. The N.R.C. Office of
7 Public Affairs is responsible for making final
8 decisions as to whether press releases will be
9 issued. If we identify a licensee has declining
10 performance when there are numerous violations, we
11 would increase our inspection activities.

12 Next slide please. To illustrate how we
13 process violations, I have chosen two violations to
14 talk about. The first involves a Hi-Lift crane. You
15 could see in the picture here from Indian Point Unit
16 3. The Hi-Lift crane, this is basically a very
17 robust, heavy duty crane that was installed in the
18 unit three refueling floor to move the canisters
19 designed to store the spent fuel.

20 So the inspector -- our inspectors
21 identified one severity level four non-cited
22 violation of the requirements because design control
23 measures do not provide for verifying the adequacy of
24 design of a portion of the crane. Specifically,
25 Holtec staff did not review the suitability of the

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2 Unit 3 Hi-Lift crane, hydraulic system, and crane
3 structure to affirm single failure design capability
4 in the event of a postulated strand jack
5 counterbalance failure.

6 So Holtec implemented corrective actions as
7 a result of this and performed an engineering
8 evaluation that found the stresses on the crane that
9 could occur due to this assumed failure were below
10 design limits. The N.R.C. staff reviewed the
11 evaluation and found it acceptable.

12 The violation was determined to be a
13 severity level four non-cited violation in accordance
14 with the N.R.C.'s enforcement policy that I mentioned
15 in the previous slide. Because no modifications of
16 the crane were required.

17 A second example involves the waste holdup
18 tank violation. One severity level four non-cited
19 violation identified by Katherine here, 20.1501 was
20 documented for failing to perform adequate radiation
21 surveys to evaluate radiological conditions
22 associated with an overflow of the waste holdup tank
23 in unit two cubicle.

24 Specifically, surveys were not performed in
25 accordance with the H.D.I. procedures in the waste

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2 holdup tank cubicle after an overflow had been
3 identified, resulting in a failure to adequately
4 assess the radiological conditions and conduct -- and
5 conduct operations to minimize the potential, the
6 potential introduction of residual radioactivity onto
7 the site.

8 So Holtec entered the issue into its
9 corrective action program and took a number of
10 corrective actions. Now, having said all that, I
11 just wanted to point out that upon identification of
12 a violation of any violation, our inspectors would
13 not leave the site until the issue or issues have
14 been addressed and entered into the corrective action
15 program. Next slide.

16 MR. DIMITRIADIS: Now, I'm going to talk a
17 little bit about intentional issues or wrongdoing.
18 Sometimes we receive information that indicates a
19 potential willful conduct. In such cases, we have an
20 allegation process where a board is held to discuss
21 the issue and a decision is made whether enough
22 information is available to inspect or investigate.

23 Violations that are potentially caused by
24 wrongdoing are evaluated through an investigation of
25 our N.R.C.'s office of investigations. Our

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2 investigators on staff are special agents, who are
3 specially trained to investigate issues of
4 wrongdoing.

5 Upon conclusion of any investigation,
6 violations could result to the individual or
7 individuals, the company or criminal referral could
8 be made to the Department of Justice. The results of
9 an O.I. investigation are reviewed by our office of
10 general counsel, the attorneys, to determine if
11 there's sufficient evidence of wrongdoing.

12 As described in the enforcement policy that
13 I showed you a couple slides ago, violations
14 involving wrongdoing can be assigned a higher
15 severity level than they would otherwise be. This is
16 to demonstrate that the N.R.C.'s intolerance for
17 willful violations. As a result, violations
18 involving willfulness are more likely to result in
19 escalated enforcement action, which can include civil
20 penalties.

21 Next slide, please. We have a very
22 different protocol for issues that have an immediate
23 risk to the public. And I wanted to stress this a
24 little bit. In such an instance, which would be
25 rare, we would work with our partners from the State

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2 of New York like Alyse Peterson, thank you for being
3 here. For example, to provide notification.

4 Now, let me stress this would be rare. And
5 it would be very rare for a shutdown plant that's in
6 decommissioning. For example, after one of our
7 violations that I just mentioned, was issued related
8 to the waste holdup tank leak, some parents were
9 somehow led to believe that this was an urgent matter
10 and as a result pulled their children from school
11 that day. This was not an urgent issue, nor an issue
12 of immediate safety. I want to stress that.

13 I just want to assure you that if there was
14 -- if there's an immediate safety issue, the N.R.C.
15 staff would implement our emergency plan. And we
16 would work with the state of New York and local
17 organizations to notify the public in a timely
18 manner.

19 Next slide, please. Now, I'm going to talk
20 a little bit about our ISFSI inspections at Indian
21 Point due to some questions that were asked of us.
22 The N.R.C. staff began to inspect the ISFSI program
23 at Indian Point in 2008, when the site was loading
24 fuel from unit one, and then, from unit two.

25 At least 14 inspection reports are

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2 our ADAMS system. That's our database system that's
3 available to the public. We are searching our
4 databases just to determine how many staff hours
5 were spent inspecting the ISFSI program because we
6 got that question.

7 And I have to tell you, we changed our
8 system over the last 15 years, three times. So
9 we're looking at that to -- to come up with a
10 number of hours. To give you a higher level
11 description. The following are examples of what
12 our inspectors look at during ISFSI inspections.

13 And they include fuel assembly selection
14 for being loaded into a canister, loading, and
15 unloading activities. That means use of cranes and
16 heavy equipment like the Hi-Lift that I showed you
17 a picture of, drying, welding operations,
18 occupational and public radiological exposure,
19 safety, and things of that sort.

20 The ISFSI training program is as outlined
21 in our manual chapter designed for training was
22 established in late 2011. Before that, region one
23 implemented an in-house regional qualification
24 process for our ISFSI inspectors.

25 Region one ISFSI inspections at Indian

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2 Point have had, at a minimum, a qualified lead
3 inspector with accompaniments by other lead -- by
4 other inspectors who were either fully qualified or
5 working towards full qualification.

6 Region one also has received support from
7 our headquarter staff on certain ISFSI related
8 activities, such as structural reviews for ISFSI pad
9 expansions and other engineering analyses. And
10 before I summarize, I just wanted to -- one more --
11 address one more thing, Mr. Chairman.

12 At the last meeting in April, there was
13 some comments or suggestions made that the N.R.C. has
14 a cozy relationship and something about a tainted
15 process. I am here to assure you that there is
16 nothing cozy between the N.R.C. staff and any of our
17 licensees including Holtec.

18 Our -- our -- our relationship is
19 professional and cordial. But there's nothing cozy
20 about it. And we call balls and strikes. And we --
21 we do not get cozy with any licensee including
22 Holtec. And I think it's comical to suggest that
23 without -- that without basis in fact.

24 Next slide please. In summary, we inspect
25 and become very intrusive in the licensee's

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2 decommissioning activities. We assess our findings
3 and conclusions in an objective and consistent manner
4 using our enforcement process that is publicly
5 available.

6 Our inspection results are publicly
7 available, the majority of them, we notify all of our
8 stakeholders via notifications or publication of our
9 inspection reports. We will continue our
10 decommissioning inspections of risk significant
11 activities until the decommissioning process is
12 completed.

13 We also continue our ISFSI security
14 inspections as long as the fuel remains on site.
15 Further, ISFSI remain robust and are secured around
16 the clock 24/7. And we assure that by our rate --
17 our oversight process. Our violations are processed
18 through our enforcement policy in an objective and
19 consistent manner.

20 Notifications to the public have a
21 different protocol. And we would work with our
22 partners from the State of New York and -- and local
23 organizations to make sure that we have any urgent or
24 emergency notifications, although this would be rare.

25 As part of our program, we continue to

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2 inspect ISFSIs for safety and security for as long as
3 the fuel is on site. Thank you.

4 CHAIR CONGDON: Thank you. So we're --
5 we're running about five minutes behind, which is
6 really quite good for us. So why don't I -- why
7 don't I say we should take about five minutes of
8 questions for -- for N.R.C. so we can try to get back
9 on track. Yes, Richard.

10 MR. WEBSTER: I just have a couple of
11 questions. One, for the waste holdup tank. What was
12 the lag time between the exit meeting and the issue
13 of the report?

14 MR. DIMITRIADIS: I'm sorry?

15 MR. WEBSTER: For the waste holdup tank
16 violation, what was the lag time between the exit
17 meeting --

18 MR. DIMITRIADIS: The what time, I'm sorry?

19 MR. WEBSTER: The lag time.

20 MR. SIPOS: I think he means delay.

21 MR. DIMITRIADIS: Delay of what? I'm not
22 sure.

23 MR. WEBSTER: What was the -- what was the
24 time interval between the exit meeting and the
25 issuance of the inspection report.

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2 MR. DIMITRIADIS: It's usually like I said,
3 30 to 45 days.

4 MR. WEBSTER: For that specific violation.

5 MR. DIMITRIADIS: I'd have to look it up, I

6 --

7 MR. WEBSTER: I think you'll find it's
8 considerably longer.

9 MS. WARNER: I don't know the exact date.
10 But I can tell you that this was a team inspection.
11 So that's greater than two inspectors making it a 45-
12 day report. So from the date of the exit, which I
13 believe to be early February, we would have 45 days
14 and the inspection report was released within that
15 time.

16 MR. WEBSTER: The violation occurred, I
17 think more than a year before the -- before the
18 report went out.

19 MS. WARNER: The violation is by identified
20 by the N.R.C. So the inspection period for this was
21 the fourth quarter of 2022. So that's October to
22 December of 2022. We exited, I believe in early
23 February. And so we have 45 days from there.

24 MR. WEBSTER: Okay.

25 MS. WARNER: So that is our process.

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2 MR. WATSON: Just to clarify, the event
3 happened before the inspector determined it to be in
4 a violation.

5 MR. WEBSTER: Is that what -- well, I'm
6 trying to get -- all right.

7 MR. WATSON: And then -- and then -- and
8 then after the determine -- determination that it was
9 a violation the report was issued about 45 days after
10 --

11 MR. WEBSTER: The exit.

12 MR. WATSON: -- the exit meeting.

13 MR. WEBSTER: Right.

14 MR. WARNER: No, I --

15 MR. WATSON: We keep -- we keep metrics on
16 this. And we meet, I think over 90% of our metrics -
17 -.

18 MR. DIMITRIADIS: 95.

19 MR. WATSON: Yeah.

20 MR. WEBSTER: No, I --

21 MR. WATSON: 95 for meeting that timeframe.

22 MR. WEBSTER: I think what the public wants
23 is --.

24 MR. WATSON: We might have missed one.

25 MR. WEBSTER: The metric the public really

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2 cares about is what's the time that can lapse between
3 a violation occurring as the event and being reported
4 on to the public.

5 MR. DIMITRIADIS: Well, as I said, the --
6 that might be an irrelevant question in the sense
7 that when it's identified, the inspector ensures that
8 the licensee takes appropriate corrective actions.

9 So when we report on it in writing in a
10 report is, is kind of, you know, I'm not sure what
11 you're getting at.

12 MR. WEBSTER: Well, --

13 MR. DIMITRIADIS: But the -- the actions
14 are taken as soon as it's identified --

15 MR. WEBSTER: --let me --.

16 MR. DIMITRIADIS: -- with -- to the
17 licensee.

18 MR. WEBSTER: The -- what I'm getting at is
19 public transparency, right, that the public should
20 know what's going on, on the site. So let me ask you
21 another question.

22 MR. DIMITRIADIS: No, excuse me, I'm sorry,
23 excuse me, excuse me. We are the most transparent
24 agency that you can name, okay. So I think -- I
25 believe that our publication of our inspection

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2 reports are -- is -- is an outstanding record.

3 MR. WEBSTER: Well, you can believe
4 whatever you want, with due respect to me.

5 MR. DIMITRIADIS: You too.

6 MR. WEBSTER: I mean, I'm not trying to
7 make any general statements. I'm trying to get
8 specifics about when -- when the violations occur and
9 how long does it take for them to work their way
10 through the system and get notified to the public.
11 And my observation is, it can take over a year.

12 MR. DIMITRIADIS: No, no, like, as I said
13 in my presentation, when the violation is identified,
14 we engage with a licensee to take corrective actions
15 immediately and they enter it into the corrective
16 action program.

17 MR. WEBSTER: I don't think what the two
18 statements are incompatible. Let me ask you another
19 thing. Did you say that when -- when a minor
20 violation is identified, it's not put into the --
21 into the inspection report?

22 MR. DIMITRIADIS: When a violation is
23 identified, we assess to see whether it's more than
24 minor or less than minor. If it's a minor violation,
25 typically we don't document it. We engage with a

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2 licensee and they have to correct it regardless.

3 MR. WEBSTER: Right. And -- and why is
4 that?

5 MR. DIMITRIADIS: That's our process.

6 MR. WEBSTER: Right. But that's because it
7 is, I mean, --

8 MR. DIMITRIADIS: Well, no, I mean --.

9 MR. WEBSTER: -- why is it -- why doesn't
10 the public need to know about that?

11 MR. WATSON: Let me be very clear here, you
12 know, there's violations and there are severity of
13 violations. And something that is classified very
14 minor is of low safety significance. And the
15 licensee, once identified is issues that their
16 corrective action report or plan, and then, they fix
17 it and that's it.

18 But it's of such minor inconsequence to
19 safety, that it's not -- it's raised our level of a
20 true violation of safety significance. But a
21 violation, I know, you're trying to equate all of
22 them as the same.

23 MR. WEBSTER: Some of you -- you have, you
24 put a non-cited violations into the report, right?

25 MR. DIMITRIADIS: Right.

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2 MR. WEBSTER: Yes, why?

3 MR. WATSON: But that's still another
4 severity level.

5 MR. WEBSTER: Right. What I'm saying is,
6 you put low severity level violations or non -- non-
7 cited violations in the report.

8 MR. DIMITRIADIS: Yes.

9 MR. WEBSTER: So why not put the minor
10 violations in?

11 MR. DIMITRIADIS: Because we've assessed
12 that there -- there -- the severity level is -- is
13 minor.

14 MR. WEBSTER: It sounds circular. That
15 sounds like circular reasoning to me.

16 MR. WATSON: I would characterize it as
17 pretty trivial.

18 MR. WEBSTER: Right. So you say that --.

19 MR. WATSON: But it's still identified as a
20 deficiency so.

21 MR. WEBSTER: Let me just give you some
22 context here. I think there's a lot of people who
23 think that there are things happening that they don't
24 get to know about. And so transparency is a good
25 thing. When you say you're the most transparency

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2 agent -- most transparent agency ever when you don't
3 put a sentence into your report that says by the way,
4 there was a minor violation. It doesn't make you
5 look very transparent. Let me ask you what --.

6 MR. DIMITRIADIS: That's relative with,
7 excuse me, I meant relative to other federal
8 agencies.

9 MR. WEBSTER: Oh. I see. Okay.

10 MR. DIMITRIADIS: Yes.

11 MR. WEBSTER: So on the Hi-Lift crane
12 example --

13 MR. WATSON: That's not good enough for
14 you?

15 MR. WEBSTER: I mean, I'm not judging
16 whether that's good enough or not. I'm just trying
17 to get some information out here. So -- so on the
18 Hi-Lift crane.

19 MR. DIMITRIADIS: Yes.

20 MR. WEBSTER: My understanding of the
21 violation was, it was to do with a single point of
22 failure, is that right?

23 MR. DIMITRIADIS: That's part of it.

24 MR. WEBSTER: Okay. So why weren't
25 modifications needed to make it so there was not a

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2 single point of failure?

3 MR. DIMITRIADIS: I'm not sure I understand
4 your question.

5 MR. WEBSTER: If there was a single point
6 of failure on the crane, right, I would have thought
7 you would need to modify the crane so that there
8 wasn't a single point of failure?

9 MR. WATSON: No, I think -- I think the
10 point of the violation was, there was an unanalyzed
11 part of the crane with a hydraulic system, which is
12 not analyzed to the same degree that you would use
13 for a single point failure issue for the design.

14 And so it was just mainly a paperwork issue
15 to go and verify that the actual configuration of the
16 crane met the design criteria and also met, not only
17 the design criteria but the single failure point
18 criteria for the safety consideration for the crane.

19 MR. WEBSTER: Okay.

20 MR. DIMITRIADIS: So yeah, the assumed
21 failure was below the design limits. And once the
22 analysis was documented, the N.R.C. found that
23 acceptable.

24 MR. WEBSTER: So for a single point of
25 failure, what are the criteria?

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2 MR. DIMITRIADIS: I'd have to get you
3 specialists on that.

4 MR. WEBSTER: Okay. Final question. For
5 the -- for the waste holdup tank violation,
6 obviously, the licensee deliberately didn't do any
7 surveys, right?

8 MR. WATSON: I wouldn't use the word
9 deliberate. I don't think they understood that the -
10 - what happened and that they should do a survey in
11 accordance with our procedures.

12 CHAIR CONGDON: Well, the licensee is here.
13 Do you want to comment on that?

14 MR. BURRONI: Sure. We didn't do the
15 survey in the area of the tank. We did a survey in
16 an area right next to the tank. So don't accuse us
17 of not doing a survey. That was the deal.

18 MR. WEBSTER: Okay. So why didn't you do
19 the tank?

20 MR. BURRONI: Excuse me?

21 MR. WEBSTER: Why didn't you do it right
22 areas?

23 MR. BURRONI: Because we classified it as a
24 high rad area. And so to save dose on our personnel,
25 we went to a room next to the tank.

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2 MR. WEBSTER: Why?

3 MR. BURRONI: We discussed this last time.

4 MR. WEBSTER: Wait. So the worry was that
5 there was a release of radiation, but you're worried
6 that your workers will be exposed to radiation if
7 they made the survey.

8 MR. BURRONI: No, no, no. We know there was
9 no relation.

10 MR. WATSON: Violation is for the lack of a
11 survey in the tank. He's correct.

12 MR. WEBSTER: Right.

13 MR. WATSON: And it's for the potential
14 release, not a release, potential release.

15 MR. WEBSTER: Was it then that there was
16 not a release?

17 MR. BURRONI: There was no -- no release.

18 MR. WATSON: There was no release.

19 MR. WEBSTER: There was a release --.

20 MR. WATSON: The tank overflowed.

21 MR. WEBSTER: Yeah, the tank overflowed and
22 released --

23 MS. WARNER: The tank overflowed in
24 essentially what is --

25 CHAIR CONGDON: Sorry, go ahead, yes.

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2 MS. WARNER: -- essentially what's in like
3 a concrete bunker. And they've taken measurements in
4 the surrounding groundwater monitoring wells and have
5 -- have found no increase in radioactivity. And also
6 I would offer that when we're assessing our
7 violations for whether or not for severity level
8 four, it's going to be a non-cited or cited
9 violation.

10 One are those criteria to make it a non-
11 cited violation is willfulness. The N.R.C.
12 determined that willfulness did not occur in this
13 case.

14 MR. WEBSTER: Right. And that's what I'm
15 trying to understand is, why wasn't it willful, they
16 made -- they made the decision, right, about where to
17 survey, it was a wrong decision.

18 MS. WARNER: So generally speaking, I'll
19 say people are trying to do the right thing, that
20 generally speaking.

21 MR. WEBSTER: Right.

22 MS. WARNER: Willfulness is a very small
23 portion of our violations. So in terms of not
24 understanding what supposed to do versus willful,
25 it's a very, very different territory.

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2 MS. WEBSTER: So you're -- what you're
3 saying is willful, doesn't mean intentional. You're
4 saying willful means that I know the regulations say
5 X. And I'm going to do Y.

6 MR. DIMITRIADIS: Willfulness, as I
7 explained in my presentation, has to do -- has to
8 involve evidence and our investigators determining
9 that there's either a deliberate action or careless
10 disregard. We did not have that in this case.

11 MR. WEBSTER: Right. Why was there no
12 careless disregard in this case?

13 MR. DIMITRIADIS: I'm sorry?

14 MR. WEBSTER: Why was there no careless
15 disregard in this case?

16 MR. DIMITRIADIS: Because we felt that --
17 that there wasn't based on the inspectors and the
18 interactions of the licensee we just did not see that
19 there.

20 MR. WEBSTER: What would it take -- what
21 would it take for you to see that?

22 MR. DIMITRIADIS: I don't want to get into
23 hypotheticals. That --.

24 MR. WEBSTER: No, no, give me an example
25 from another reactor, where you've got it.

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2 MR. DIMITRIADIS: We've had cases where the
3 inspectors have evidence that there's potential
4 willful misconduct. We get our investigators
5 involved. They do an investigation and they come
6 back and write a report.

7 The N.R.C. staff looks at it with the
8 attorneys and we make a determination whether there's
9 willfulness or not.

10 MR. WEBSTER: Can you send me one of those
11 reports that finds willfulness?

12 MR. DIMITRIADIS: I will look to see if I
13 can do that.

14 MR. WEBSTER: Thank you.

15 CHAIR CONGDON: Thank you. I'd like to
16 move on to the next item on the agenda, which is the
17 options analysis, by Lave -- Dave Lochbaum. Dave,
18 welcome. And you may begin.

19 MR. LOCHBAUM: Well, first, I want to
20 follow-up on Richard Webster, just comment on
21 willful. A good example is a lot of falsified fire
22 protection rounds, where -- if fire equipment is out
23 of service, you have a worker go around and be a
24 human smoke detector.

25 Sometimes people falsify those records,

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2 they say they did the rounds when they didn't. So
3 that's a willful violation, you're supposed to do
4 something that you clearly choose not to do it. So
5 there's quite a few of those.

6 Tom, okay, could you call up my slides
7 please and slide two, please. What I did this time
8 was I looked at the two leading options for disposing
9 of the contaminated water at Indian Point. What the
10 practices has been used for decades, and one
11 alternative which is storing contaminated water on
12 site to allow decay of the tritium.

13 In both cases, I assumed that the water
14 would be treated first to remove as much of the other
15 radioactive material, the strontium, that the cesium
16 and so on. And the only thing left -- largely, the
17 only thing left will be the tritium in that water.

18 And what I tried to do with the discussion
19 earlier about ALARA and an approach to zero, I didn't
20 try to see which ones match the three millirem per
21 year or the 20,000 picocurie. I wanted to see which
22 of those two options was likely to achieve the lowest
23 amount of tritium exposure to the public.

24 Next slide please. As Tom Congdon
25 mentioned at the onset, we did invite -- I did invite

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2 six individuals to peer review the project, three of
3 those persons were able to do so, one like -- wanted
4 to remain anonymous.

5 And did, Paul Blanche also agreed to do a
6 peer review and Jeff Mittman did a peer review and I
7 benefited from all three, from the comments from all
8 three. Their written comments are attached to the
9 slides that will be posted on the D.O.B. website.

10 I was particularly glad to have Jeff
11 Mittman review the material because I do a risk
12 analysis. And Jeff spent a lot of his final part of
13 his career with the Nuclear Regulatory Commission as
14 a risk analyst for the agency.

15 And I wanted to make sure that I didn't get
16 the context wrong. And so that was appreciated.
17 Also benefit -- benefited from Paul and the anonymous
18 person as well, but. So they all added value to this
19 presentation and if any mistakes were made, they're
20 mine.

21 Next slide, please. Also invited Arnie
22 Gunderson, Lucas Hickson and Martin Resnikoff to
23 review it, but they were unable to do so in the -- in
24 the timeframe. Lucas was actually in Fukushima
25 sampling the environment around the accident site

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2 there as he's done in this, some places in the United
3 States as well as Chernobyl.

4 And Arnie provided some written comments to
5 a different group that I received today or yesterday,
6 a little bit too late to factor in today's
7 presentation. Next slide, please. I did look
8 previously on February 2nd, during the D.O.B. meeting
9 of February 2nd, I looked at these two options, I'm
10 revisiting today as well as evaporation and transport
11 off site, as was or will be done at Vermont Yankee.

12 Since February 2nd, also looked at removing
13 tritium from water which Tom Congdon mentioned
14 earlier, is being done with heavy water reactors,
15 vitrification, both here and in France, ocean dumping
16 and onsite injection wells. And for the very
17 summarized reasons here, none of those options seem
18 to be a leading candidate.

19 Next slide, please. Paul Blanche did
20 provide a comment that I missed an option that needed
21 to be evaluated. And that was simply to retain the
22 water in the spent fuel pools on site, at least one
23 of the spent fuel pools.

24 The real reason for doing that would be to
25 allow retrievability of dry cask or the canisters

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2 within dry cask, in case they needed to be unloaded.
3 Paul and the N.R.C. have a disagreement over what
4 that regulation says.

5 Paul, almost alone, believes that it means
6 you have to be able to retrieve individual fuel
7 assemblies. The N.R.C. and the rest of the world
8 believe that it means you have to be able to remove
9 the canister and transport it off site if and when
10 D.O.E. is able to take them.

11 But there's other reasons why that would
12 not be a great idea. Even if the N.R.C. had a
13 different definition. Most importantly, was the last
14 one. If you have to unload a canister, it's probably
15 because the canister degraded.

16 And all the mechanisms for moving canisters
17 assumes that canisters are pristine or undamaged,
18 lifting it up and putting it in the spent fuel pool.
19 If you were to drop it would be an unanalyzed
20 condition that probably wouldn't be good. So why
21 take the risk.

22 Next slide, please. This is information
23 from Holtec's presentation at --at the April 27th,
24 D.O.B. meeting. The amount of water that's available
25 in the various places that's in unit two, unit three,

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2 spent fuel pools and reactor cavities.

3 In that presentation, Holtec indicated that
4 because of the Hi-Lift crane, water was going to be
5 transferred from unit three over to unit two for
6 processing in tanker trucks. I've since heard that
7 Holtec is considering a skid to treat the water in
8 unit three so those transfers won't happen have to
9 happen.

10 So there's a potential change in how that
11 water is -- is handled. Next slide, please. I also
12 -- from that information, he provided dates on target
13 dates for disposing of the water, I also have some
14 updates on -- on those, the spent fuel pool dates,
15 best I can tell are still on target.

16 The reactor cavity dates have both slipped
17 about two years. For unit two, it's -- the current
18 date is August of 2027. And for the unit three
19 cavity, it's September of 2026. And Rich Burroni, if
20 I committed you beyond that, please correct me. But
21 that's my understanding of the current schedules.

22 MR. BURRONI: No, that's correct.

23 MR. LOCHBAUM: Thank you, Rich. Next
24 slide, please. There's been some discussion, the
25 unit one spent fuel pool at Indian Point was disposed

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2 -- treated and disposed of in September of 2008.

3 This is information from that campaign that showed
4 the radioactivity in the water before the treatment,
5 the radioactivity in the water after the treatment.

6 In basic, it's filtering in the treatment
7 is pretty good at removing cobalt and strontium 90
8 and so on, but didn't remove any of the tritium from
9 the water. It's -- as somebody said earlier, it's
10 difficult to remove water from the water.

11 So it did not filter and did not do
12 anything with the tritium in that water. And there's
13 about 400 curies of tritium in those four volumes to
14 be dealt with at Indian Point. Next slide, please.
15 I looked in the past, those annual reports that Bruce
16 Watson's mentioned, actually went all the way back to
17 1966, which shows I really don't have much of a life
18 and looked at those annual reports.

19 And this is a table from the early '16.
20 And most of the filtering is pretty effective at
21 removing everything but the tritium. So the major
22 element that's going out in the water being
23 discharged to the Hudson River is tritium.

24 Mostly the other stuff has been removed by
25 the filtering. So that 2008 spent fuel pool campaign

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2 wasn't an isolated case. It's pretty much the rule,
3 not its exception. Next slide, please. As the water
4 is being treated and processed, as it's been done for
5 decades, if there was to be spill as the holdup tank
6 of May 2020 showed, it would be kept in the building
7 housing that equipment and it wouldn't likely make it
8 into the environment.

9 If it were to leak out somehow, there are
10 monitoring wells around the buildings that would
11 detect the radioactivity redirect the water, you
12 know, getting into the ground. If it leaked, if any
13 of the water evaporated because tritium is basically
14 invisible to the detectors used like the Reuter-
15 Stokes, you wouldn't see it as it went by.

16 Next slide. After the water is processed
17 to remove virtually everything but the tritium, it's
18 stored in a tank of nominally 18,000 gallons, the
19 water inside that tank is circulated to get a uniform
20 mixing before it is sampled.

21 The sampling then determines its isotopic
22 content, how much strontium and cesium, whatever if
23 there's any in it, the sampling determines what the
24 contents are. If it's suitable for discharge, if it
25 meets the 3% ALARA or 1% goal, whatever the limit is

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2 of the day then it's able to be discharged.

3 If it's able to be discharged it's pumped
4 at a rate of about 150 gallons per minute into the
5 discharge canal at Indian Point where it's mixed with
6 the dilution flow of at least 80,000 gallons per
7 minute, before it enters the Hudson River.

8 In that 120 minutes to get rid of the
9 18,000 gallons, the dilution flow will be close to 10
10 million gallons of water. An average of -- as the
11 N.R.C. pointed out in April 27th, an average of over
12 100 batches were discharged annually between 2005 and
13 2021.

14 Next slide. This slide was plagiarized
15 from the N.R.C.'s presentation on April 27th. The
16 bars show the amount of water discharged, the green
17 line shows the number of batches per year. To get
18 rid of 1.3 million gallons at 18,000 gallons per
19 batch, would take about 75 batches.

20 So there's less than the average number of
21 batches left to be dealt with at Indian Point. Next
22 slide please. The yellow across the bottom of this
23 graphic shows the discharge canal that the Hudson
24 River is off the slide to the bottom.

25 And basically one of the circulating water

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2 pumps that were used during reactor operation
3 provides at least the 80,000 gallons per minute of
4 dilution flow into the discharge canal with which the
5 treated water would be mixed before reaching the
6 Hudson River.

7 Next slide, please. With this dilution,
8 the concentration of tritium in the water reaching
9 the rivers averaged 518.7 picocuries per liter. In
10 comparison the E.P.A. drinking water limit is 20,000
11 picocuries per liter.

12 So it was a small fraction, not zero but a
13 small fraction of the E.P.A. drinking water limit.
14 Also point out that Holtec and Entergy before them,
15 did not take credit for further dilution by the
16 Hudson River, which is a pretty large river, both
17 long and flow.

18 And but Entergy doesn't take credit for
19 that, they only look at the dilution flow, they
20 provide that approximately 10 million gallons and
21 whatever is mixed with it. Next slide, please. The
22 other option, the alternative I looked at was, what
23 is being talked about or advocated most often
24 recently and that's storing it on site after it's
25 been treated before doing something else down the

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2 road.

3 Next slide. The question associated with
4 that is how many tanks would be needed. It depends
5 on how big the tank is, one very large tank could
6 hold all the water. If we had 22,000 gallon tanks,
7 it would take 60 of them. And that's important for
8 the next slide.

9 Next slide. This is the off-site dose
10 calculation manual for Indian Point that Bruce Watson
11 mentioned. It's the Bible that controls what they
12 do, and how they do it, and their regulatory limits.
13 They're not just desires, they're regulatory limits
14 that the N.R.C. finds that they're not being met.

15 One of those violations from the
16 enforcement policy would -- would determine what kind
17 of sanction, if any, was applied. Paul Blanch,
18 during his peer -- peer review caught a mistake of
19 mine that's been corrected on this slide.

20 It has to deal with that footnote that's
21 highlighted in yellow. Paul caught the point that I
22 missed that there's a -- the -- the off-site dose
23 calculation manual limits the amount of tritium or
24 the amount of curies that can be stored in an outside
25 tank to 10 curies unless it's tritium.

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2 There is no limit if -- if the water is all
3 tritium, in that case all the curies could be put in
4 one very large tank. Otherwise, you'd have to break
5 it into a bunch of smaller tanks to meet the 10
6 curies. Paul caught my mistake and fortunately,
7 before now.

8 Next slide, please. The reason for the 10
9 curie limit for outside tanks is that they can leak.
10 They could rupture, they could overflow, they could
11 do all kinds of things that water goes to places it
12 shouldn't be.

13 So unless you had a surrounding liner,
14 dike, or wall or some way to keep spilled or leaked
15 water from reaching the environment you -- the ODCM
16 limit your tritium content or your curie content to
17 10. It doesn't apply to tritium, you could put it
18 all there, whether it's got a protective features or
19 not.

20 Next slide, please. And this is the part I
21 had Jeff Mittman review it because I wanted to make
22 sure I got this right. If -- if I assume a 99%
23 chance that tanks do not fail during their storage
24 period. And I'm assuming a storage period of 12 to
25 15 years, if I assume that there's a 99% chance of a

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2 tank not failing and below shows the chances of
3 failure over that storage period. If you have one
4 tank, 99% chance of not failing means you have a 1%
5 chance of failure.

6 If you have 10 tanks, the chance of failure
7 is just under 10%. If you have 50 tanks, you're now
8 approaching a 40% chance that at least one of those
9 tanks fails during that storage period.

10 In -- what I don't understand is Holtec
11 isn't trusted in a number of ways. If you can't
12 trust them to treat and discharge water to the river
13 according to our one percent ALARA standard or 3%
14 percent. I don't know how you expect them to store
15 water in tanks with a 40% chance of failure over 15
16 period.

17 It just -- I don't understand that logic.
18 But we'll move along. Next slide, please. Risk is
19 defined as the probability of something bad happening
20 and the consequences if it does happen. Turns out it
21 even though the chance of failure varies between one
22 tank and 50 tanks, the overall risk is about the same
23 because if one tank fails, it's a very large tank and
24 discharges all its contents.

25 The fact that it's 1% chance, the risk is

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2 13,400 gallons, 50 tanks, it's 10,500 gallons, so the
3 risk is about the same. I need to point out that the
4 consequences are the assumed worst case release of
5 the entire contents of the tank, which is the least
6 likely thing to occur.

7 So I looked at what it is likelihood of the
8 least likely thing happening. Next slide, please. I
9 looked at water storage at Hanford and Fukushima.
10 Hanford has both single-walled tanks and double-
11 walled tanks, 38% of the single-walled tanks have
12 leaked, only 4% or 3.5% of the double-walled tanks
13 have leaked.

14 But that's still higher than the 1% failure
15 that I assume. At Fukushima six of the first 305
16 tanks installed there have leaked. I had trouble
17 finding more recent data. They talk about leaks but
18 they don't tell about how many tanks have leaked and
19 how many tanks are there.

20 So we know that they had a lot of incentive
21 to try to get it right. They came up somewhat short.
22 My next slide explains how some of these leaks have
23 occurred or could occur. These are real plants in
24 the United States in reported history, Vermont
25 Yankee, before they trucked it off to Idaho they

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2 managed to overflow one of their tanks and dumped
3 83,000 gallons of contaminated water into the
4 Connecticut River, took them two days to figure out
5 that was happening.

6 It had a net 140,000 gallons leaked into
7 the discharge canal when a truck ran into the -- one
8 of the storage tanks. The truck won, the tank lost.
9 In Vermont more recently they overflowed a condensate
10 storage tank because the level instrumentation failed
11 and they put more water in it, than the tank was
12 designed to hold or could hold. That happens a lot.

13 That was a contributing factor to the May
14 2022 event at -- at Indian Point. The level
15 instrumentation for the holdup tank was inaccurate.
16 And they tried to put too much water into it. This
17 is a very abridged list, a longer list is about six
18 pages long. It happens quite a bit more often than
19 you would think. But it's a reality.

20 Next slide, please. There's been some talk
21 about using bladders inside the storage tanks to
22 basically provide a second barrier, both the bladder
23 and the tank would have to fail for the contents to
24 leak into the environment.

25 So the question is how good are these

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2 bladders. Next slide, please. According to the
3 state of Washington, the average bladder last five to
4 seven years, which is good if you're storing it for
5 four years. It's not so good if you're storing it
6 for 12 to 15 years.

7 Next slide, please. And at Indian Point
8 it'd be looking in the rearview mirror because the
9 condensate storage tanks at Indian Point in the
10 primary water storage tanks originally had bladders.
11 The bladders removed because they failed.

12 So bladders are a nice idea that don't work
13 exceedingly well in practice. Next slide, please.
14 Now, the question is whether you have one tank or 50
15 tanks or whatever how many tanks, where would you put
16 them?

17 If you had five tanks and each tank was 20
18 foot tall, they would need the diameters of nearly 24
19 feet in order to store the water they would need to
20 hold. That's a pretty big footprint. Next slide,
21 please.

22 I used the Oak Ridge study, the natural gas
23 pipelines presumably wouldn't want to put the tanks
24 within the potential impact radius of a pipeline
25 rupture. If one pipeline has crossed the top is --

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2 would that impact zone highlighted in blue, you'll
3 notice at the very top of the screen, top center is
4 the ISFSI or dry storage cask in a parking lot
5 slightly to its right.

6 Next slide shows the same thing for the
7 other pipeline. So pretty much the center of the
8 property would not necessarily be a good place to
9 store cask, if you're worried about natural gas
10 pipelines or tank ruptured might be able to put out
11 the natural gas fire, maybe that's a good thing, I
12 don't know.

13 Next slide, please. Another consideration
14 if you're putting tanks that have are known to leak,
15 you might want to be able to know when that leakage
16 occurs. This is a slide, it's difficult to read but
17 it shows the monitoring well locations.

18 Most of them are located around the
19 buildings because that's where the water was. If you
20 build tanks in the southern plain zone, there's not
21 many monitoring wells that would alert you to a
22 leakage from a tank in the formerly clean zone in the
23 south.

24 So maybe you want to move the monitoring
25 wells or install different monitoring wells or avoid

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2 the tank storage site risk altogether. Next slide.
3 Now, I looked at there's two options delay versus
4 discharge, discharge is what's being done now in the
5 past 50, 60 years and the onsite storage is a delay
6 feature.

7 If you do the discharge option, you're
8 getting rid of about 400 curies into the Hudson River
9 after treatment, well below the E.P.A. drinking water
10 standard of 20,000 picocuries per liter. If on the
11 other hand, you stored on site for 12.3 years, that's
12 just the half life of tritium.

13 That means that approximately 400 curies
14 would decayed only 200 curies of tritium left in that
15 water. So 200 curies would no longer be a hazard to
16 anybody because it's decayed away. So we have and I
17 -- I made it as big as I could because it's a big if,
18 none of the tritiated water leaks or evaporates or
19 spills from the tanks during this 12.3 years.

20 Then it would yield -- and then the water
21 after that 12.3 years is then released to the Hudson
22 River, it would be lower closer to zero but not zero
23 hazard to public health. Next slide, please. I then
24 looked at what would happen if a gallon of water
25 today being treated and released to the Hudson River

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2 compared to storage for up to 12.3 years.

3 You -- if you wait, it's going to indicate
4 that curies per gallon drops to half of what it is
5 today by the decay of tritium. Next slide. If
6 you're doing 74, roughly 75 batches to get rid of the
7 1.34 million gallons, that'd be about five curies per
8 batch.

9 And it'd be a whole bunch of zeros 559
10 curies per gallon in the water that's being
11 discharged to the Hudson River. Next slide. If on
12 the other hand, you store it on site for 12.3 years,
13 then it would be half of that discharge to the Hudson
14 River after the 12.3 years.

15 But if it evaporated or leaked in the
16 meantime, from those storage tanks, the concentration
17 of tritium in the each gallon being leaked or
18 evaporated would be 267 to 534 times greater than the
19 concentration in the gallon being discharged in the
20 Hudson River today.

21 It's a big bet in my mind, if you avoid
22 evaporation leaks and spills of storage on sight.
23 History does not show that that's a likely outcome.
24 Next slide please. If it did leak or spill from the
25 storage tanks, the topography as with the buildings,

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2 it would likely migrate into the river.

3 But it wouldn't be mixed with 80,000
4 gallons per minute to dilution flow so it'd be a much
5 more highly concentrated form of content of tritium
6 reaching that water. So the swimmer, the drinker,
7 the kayaker, whatever, would not benefit from a much
8 lower concentration.

9 The analogy I use however appropriate or
10 inappropriate is, by sad experience, I can survive a
11 bee sting. I don't know if I could survive a bee 267
12 to 534 bee stings in a short period of time. I don't
13 -- I don't attempt to try to find the answer to that
14 question.

15 So I think my conclusion that is a gallon
16 of water treated and released today poses lower risk
17 to public health than storing it on site and hoping
18 that it doesn't evaporate, leak, or spill during that
19 storage period, whether it's 12.3 years or longer.

20 That history just says that those are long
21 odds with -- with too much at stake to -- to up the
22 ante. Thank you.

23 CHAIR CONGDON: Thank you, Dave. So, can
24 you hear me, Tom Congdon, any questions for Dave?

25 MAYOR KNICKERBOCKER: Yeah, I have one,

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2 Theresa Knickerbocker. Dave, hi, how are you?

3 MR. LOCHBAUM: Fine, thanks.

4 MAYOR KNICKERBOCKER: You had also said
5 with these storage tanks that they have to be
6 ventilated, so they would -- they would vent through
7 the top of the tank.

8 MR. LOCHBAUM: Yes, the tanks are vented to
9 both prevent a collapse. If a vacuum forms inside
10 the tank and the water cools or bursting if pressure
11 gets too high inside the tank. So there's a --
12 there's a vent that allows air in to prevent a vacuum
13 and air out to prevent overpressure.

14 If it's the converse, with air is being
15 vented out, some of that air will be tritium vapor,
16 which is -- could go far and wide or fall into
17 reservoirs, fall anywhere.

18 MAYOR KNICKERBOCKER: So it would be vented
19 through the top. It's a windy day, wherever the wind
20 takes it. It could also be distributed around the
21 ground. I think you said at one point.

22 MR. LOCHBAUM: Yeah, it's -- I think it's
23 for the February 2nd, when I looked at evaporation
24 which was done at Three Mile Island. And the
25 N.C.R.P., the National Council on Radiation

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2 Protection analyzed the evaporation versus treat and
3 release to the Susquehanna River.

4 And because of tritium falling back to the
5 ground tritium vapor falling back to the ground,
6 getting into foodstuffs, drinking water, et cetera.
7 The dose to the public from evaporation was three
8 times -- 300 times higher than the dose to the public
9 from discharge to the river. So it seemed like it
10 was paying a lot for less protection.

11 MAYOR KNICKERBOCKER: So it's not sounding
12 like the tanks are a viable solution for us.

13 MR. LOCHBAUM: I -- I wouldn't -- if -- if
14 the goal is to reduce the -- the radiation dose to as
15 low as achievable, that would not be the best way to
16 do it, unless you're very, very lucky and none of the
17 tanks ever leak, evaporate or spill, which even a
18 blind squirrel finds a nut. I'm just not sure that's
19 going to happen in this case.

20 MAYOR KNICKERBOCKER: That's a good
21 analogy, I guess, thanks. Thank you, Dave.

22 MR. LOCHBAUM: You're welcome.

23 CHAIR CONGDON: Richard?

24 MR. WEBSTER: Thanks, Tom. Hey, Dave,
25 thanks. How're you doing? Sorry, couldn't be here

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2 in person.

3 MR. LOCHBAUM: All right.

4 MR. WEBSTER: Seems like this analysis --
5 seems like this analysis, the critical variable here
6 is the failure rate of tanks.

7 MR. LOCHBAUM: That's correct.

8 MR. WEBSTER: And I think you did have some
9 peer review that says the failure rate that you've
10 used is kind of high. And that if you look at an
11 analysis of failure rates in industry, they should be
12 considerably lower than one percent.

13 MR. LOCHBAUM: Yes, that was -- with that
14 person who made that -- that was the anonymous peer
15 reviewer, who was unaware of the leaks at Vermont
16 Yankee, St. Lucie, Browns Ferry, had no awareness of
17 any of those leaks, did not even know the leak that
18 occurred in February of 2009, at -- at Unit 2 Indian
19 Point, where the leak rate was 14,000 gallons per
20 day, did not know about that.

21 So and that's why I had Jeff Mittman, who
22 is a risk analyst, looks at events, looks at history,
23 gave me a thumbs up where the other person used a
24 different finger.

25 MR. WEBSTER: Right. I was going to say,

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2 is there -- is there any actual data on this that
3 you've looked at?

4 MR. LOCHBAUM: No, after that first comment
5 that I needed, I went back and looked at the Nuclear
6 Regulatory Commission and other websites. The
7 Nuclear Regulatory Commission has initiating rates on
8 fires, broken pipes, mispositioned valves, et cetera.
9 But not on storage tanks, no.

10 MR. WEBSTER: Right. You might -- you
11 might find some, I mean, I used to do risk assessment
12 of oil facilities and gas facilities.

13 MR. LOCHBAUM: I did find it for the
14 American Petroleum Institute does have a failure rate
15 for petroleum tanks but I wasn't sure. I was fearful
16 of doing the apples and oranges thing.

17 MR. WEBSTER: Why?

18 MR. LOCHBAUM: Because this is petroleum.

19 MR. WEBSTER: Well, talking about that the
20 Hanford tanks really, I mean, the Hanford waste is
21 pretty corrosive, right, so that's really not a good.
22 And the tank -- most of those single walled tanks are
23 very old.

24 MR. LOCHBAUM: Yeah.

25 MR. WEBSTER: So then the Hanford aren't

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2 really comparable, right?

3 MR. LOCHBAUM: Well, they're very old, but
4 they -- they didn't wait until now to leak.

5 MR. WEBSTER: No, no.

6 MR. LOCHBAUM: They did leak shortly after
7 the --.

8 MR. WEBSTER: But -- but I mean, this, the
9 service life is the type of the waste and the service
10 life is important, right?

11 MR. LOCHBAUM: Yes, yes.

12 MR. WEBSTER: So those --.

13 MR. LOCHBAUM: Go ahead, I'm sorry.

14 MR. WEBSTER: That's all right. The last I
15 want to ask you really is obviously Indian Point have
16 a lot of tanks on the site, right, the condensate
17 storage tank, other tanks. Are there no tanks around
18 that we could repurpose for the purpose of storing
19 this water?

20 MR. LOCHBAUM: The condensate storage
21 tanks, I believe were about 600,000 gallons each
22 capacity. So even in the unit two the northern tank,
23 I can't remember which unit it was, it's been
24 removed. So it's no longer available.

25 The other tank has not yet been removed.

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2 There -- some of the other tanks that weren't built
3 to withstand earthquakes have been removed are still
4 there. But they're not designed to withstand an
5 earthquake, the condensate storage tanks were
6 seismically designed.

7 MR. WEBSTER: Right. So there's one of
8 them still left, is it full of water?

9 MR. LOCHBAUM: I don't know for sure.

10 MR. BURRONI: Yes.

11 CHAIR CONGDON: Sorry is there an answer?

12 MAYOR KNICKERBOCKER: He said yes.

13 MR. SIPOS: Could you repeat that, please,
14 Rich?

15 MR. BURRONI: Yeah, it is full of water.
16 But if you want to use additional tanks onsite, then
17 you're expanding the protected area of the site. And
18 so partial site release as far as acreage is
19 concerned, gets reduced.

20 CHAIR CONGDON: I think Senator Harckham
21 had a question.

22 MR. HARCKHAM: Yeah. Thank you, Dave.
23 First of all, thank you for all you do for the
24 oversight board. You're --

25 MR. LOCHBAUM: Yeah.

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2 MR. HARCKHAM: -- you're not compensated
3 and you do a ton of work for us. And, you know,
4 whether people agree with you or disagree with you,
5 no one can doubt your -- your commitment. And we
6 thank you for that.

7 MR. LOCHBAUM: Thank you.

8 MR. HARCKHAM: Someone wanted me to ask you
9 a question. If we can jump back just a little bit,
10 you know, we spoke about vitrification at one point,
11 which was a different process than what I'm going to
12 talk about now.

13 But I believe in -- in Vermont, the water
14 was mixed with clay. And then, it was taken to one
15 of the two nuclear waste sites in the country and
16 used as a cap. Did you -- did you do any analysis of
17 that as -- as a possible, you know, it was certainly
18 done once. So do you think it's viable or is it
19 safe?

20 MR. LOCHBAUM: That was -- I did look at
21 that for the February 2nd, D.O.B. presentation. And
22 my understanding was the concept was to transport the
23 water to Idaho, and then, mix it with clay and bury
24 it in Idaho.

25 And it was like 47 million pounds of

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2 radioactive mud that was developed. In order to get
3 the water there, they had to - they being the the
4 owner had to get the N.R.C.'s permission because
5 federal regulations don't allow you to transport
6 water because of the risk of an accident in route.

7 But they did get -- the N.R.C. approved the
8 exemption from the regulation, assuming that no
9 accidents could occur, which is -- is a tenuous
10 assumption. I'm not sure I'd bet -- particularly the
11 number of shipments they had, it was over, it's like
12 2 million gallons of water.

13 MR. HARCKHAM: Right. So the mud -- the
14 mud concoction was not done onsite. It was the issue
15 I'm talking thousands of truckloads of water.

16 MR. LOCHBAUM: You see, I think it was rail
17 shipments. But yeah, it took a lot of rail shipments
18 to get it out Idaho.

19 CHAIR CONGDON: And senator --

20 MR. HARCKHAM: We trust C.S.X. so much.

21 CHAIR CONGDON: And senator, Vermont Yankee
22 has a rail spur off the site, I believe and that is
23 not the case at Holtec. But N.R.C. is here. Do you
24 want to speak at all to the exemptions that were
25 provided to Vermont Yankee or can you?

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2 MR. WATSON: I can speak in general terms,
3 yes. We -- we did issue an exemption, I think the
4 most recent one was up to 2 million gallons. It
5 shipped by rail. And it is shipped water. Our
6 analysis showed that if the water was to leak from
7 the tank car, the safety significance would be very
8 low in the dose consequence but you would know about
9 it.

10 But the point is, is that they're shipping
11 the water to -- to Idaho. It's a semi-arid facility.
12 So we have an exemption for that, we also have a
13 what's called a 20.202 alternative disposal criteria
14 we use, which we analyze the dose not only from the
15 material that's disposed of, but also the effect on
16 the doses to the workers that do that kind of work.

17 And we also approve that for -- for the
18 transport of the water and the disposal of the water.
19 The Idaho site is really a RCRA landfill facility.
20 It's not a state license low-level waste disposal
21 site. So it's -- they accept this, Idaho approves
22 it. The state of Idaho approves the -- the disposal
23 also. It's just not a unilateral decision by the
24 N.R.C.

25 MR. HARCKHAM: Can I follow-up real quick,

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2 and then, again, just for my edification, what did
3 they do with the water once it gets to the site in
4 Idaho?

5 MR. WATSON: They mix it with the clay and
6 may -- they may either use it as a cap, they -- they
7 have different methods they use whether they can also
8 put it and put clean soil over it, which is generally
9 what they must do with most materials.

10 There is a cost with that, I can tell you
11 that. And --.

12 CHAIR CONGDON: Do you know the cost?

13 MR. WATSON: No, I don't. But it is not an
14 inexpensive proposition. I can tell you that.

15 CHAIR CONGDON: Do you know how long it
16 took for the N.R.C. to review the exemption requests?

17 MR. WATSON: We had an exemption request, I
18 want to say six to nine months on the first one. And
19 the second one was just the larger volume. So it's
20 just, you know, extending it out over time. So in
21 the amount of activity that was going to be disposed
22 of, so I don't recall taking that.

23 CHAIR CONGDON: I believe it was about 18
24 months --

25 MR. WATSON: Yeah.

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2 CHAIR CONGDON: -- on the second one.

3 MR. WATSON: Yeah.

4 CHAIR CONGDON: Assemblywoman LEVENBERG,
5 did you have a question?

6 ASSEMBLYWOMAN LEVENBERG: I have a couple,
7 yes. Thank you. And thanks, Dave. I appreciate
8 your volunteerism.

9 MR. LOCHBAUM: You're welcome.

10 ASSEMBLYWOMAN LEVENBERG: You had mentioned
11 that Krypton-85 that the treatment process only
12 removed 80% of this. And I was wondering if you
13 could comment at all if we can expect this to be
14 present in the effluent from Units 2 and 3 and how
15 many total curies of Krypton-85 exist in the effluent
16 onsite, if you know that?

17 MR. LOCHBAUM: I don't -- I'm afraid I
18 don't know those numbers. One that similar, but not
19 exactly the same is tritium. Krypton-85 is a noble
20 gas. And it's kind of difficult to filter out.
21 That's why it wasn't as effective as the cesium and
22 the strontiums, which were basically 100% removed,
23 Krypton's a little bit more challenging.

24 ASSEMBLYWOMAN LEVENBERG: But we don't know
25 and maybe I don't know, the health person can comment

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2 on what the health and environmental impacts are of
3 Krypton-85, not getting all completely filtered out?

4 MR. WATSON: By health person you mean us?

5 ASSEMBLYWOMAN LEVENBERG: Is that -- I
6 don't know is that, you said --

7 CHAIR CONGDON: N.R.C., you want to --

8 ASSEMBLYWOMAN LEVENBERG: N.R.C.

9 CHAIR CONGDON: -- tackle that?

10 MR. WATSON: Yes, this Krypton-85 is a
11 noble gas. We look at it pretty much from an
12 inversions in -- immersion dose, it's typically a
13 beta emitter. And it -- like I said, it's not -- it
14 is a noble gas. So therefore, it's not really needed
15 by the body for to use.

16 So it's pretty benign from that standpoint,
17 from a biological standpoint. But it is a noble gas
18 and it has no real biological use in the human body.
19 So we -- typically we look at noble gas as though as
20 in a gas form as an immersion beta dose to the skin.

21 And so it's -- it's pretty insignificant
22 from a dose consequence standpoint so.

23 ASSEMBLYWOMAN LEVENBERG: And what about
24 for the environment?

25 MR. WATSON: Same thing, it's a inert gas.

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2 It's a -- that's what emitted all the Kryptons and
3 Xenons are emitted during reactor operations. It's a
4 fission product. And those are emitted into the
5 atmosphere through the gaseous effluents. And
6 they're measured and monitored, so.

7 ASSEMBLYWOMAN LEVENBERG: Thank you.

8 MR. LOCHBAUM: Perhaps what I can do is go
9 back see the older reports and see how much Krypton-
10 85 was released to the air and water over the past
11 three or four years because I just don't know the
12 numbers off the top of my head, but I can get that
13 for you.

14 ASSEMBLYWOMAN LEVENBERG: Okay. And Dave,
15 one of the questions I asked earlier the N.R.C., I
16 just wanted to ask you as well. Do you think that
17 there's a difference between the effluent that was
18 released as part of the normal operations as -- as
19 compared to what would be released from the spent
20 fuel pool from Units 2 and 3?

21 MR. LOCHBAUM: It's -- I would agree with
22 Bruce -- I think was Bruce Watson that answered that
23 question. It's pretty much the same water. There's
24 -- that he also pointed out that because of the
25 timespan that some of the radioactivity has decayed

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2 over that period of time.

3 So it's -- it's the same type of water,
4 just with radioactive content. The one you also ask
5 a follow-up question about the non-radiological
6 content. Because sometimes decommissioning involves
7 chemical flushing of tanks and other equipment.

8 There can be some non-radiological chemical
9 elements in the water that have -- that are dealt
10 with separately. But I mainly focus on the
11 radioactive content.

12 CHAIR CONGDON: Oh, go ahead.

13 MR. CREIGHTON: Excuse me. Go ahead, I'm
14 sorry.

15 ASSEMBLYWOMAN LEVENBERG: Yeah.

16 MR. CREIGHTON: Yeah.

17 ASSEMBLYWOMAN LEVENBERG: Did you want to
18 follow-up on that?

19 MR. CREIGHTON: No, I had a separate
20 question.

21 ASSEMBLYWOMAN LEVENBERG: Okay.

22 MR. CREIGHTON: I'd like to ask Dave.

23 ASSEMBLYWOMAN LEVENBERG: Okay. I had --
24 yeah, I just had some more. So the -- one of the
25 peer reviewers had said the entire evaluation rests

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2 on the assumption that the quantity of tritium that
3 needs to be discharged is 400 curies. How can be --
4 we be confident in this assumption --?

5 MR. LOCHBAUM: Yeah, that was Jeff
6 Mittman's comment. I remember that. I took it on
7 Rich Burroni's slide from April 27th. Some
8 confidence that I have that that's in the ballpark is
9 it's consistent with what was treated from various
10 volumes in the past, 459,000 gallons were discharged
11 from the unit one spent fuel pool. And the tritium
12 content was in it.

13 So I -- I have no reason to doubt it based
14 on past experience but I wouldn't swear on a Bible
15 that 400 -- 400 was the right number. But I think
16 it's -- I have no reason to doubt that it's not in
17 that ballpark.

18 ASSEMBLYWOMAN LEVENBERG: Okay. Thank you.

19 MR. LOCHBAUM: Thank you.

20 MR. CREIGHTON: I have a quick follow-up
21 question.

22 CHAIR CONGDON: Yes, Jim.

23 MR. CREIGHTON: You just mentioned the --
24 the non-radiological items that might be leftover in
25 the water. It -- was there any review or do you have

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2 any -- any thoughts on -- on P.F.A.S. and whether or
3 not that would be filtered out of the water before
4 it's discharged into the Hudson?

5 I know that wouldn't be an N.R.C. issue.
6 But P.F.A.S. is certainly something we're very
7 concerned about in New York State.

8 MR. LOCHBAUM: I, to be honest, I'm a one-
9 trick pony. I've looked at the radioactive side. I
10 just don't really, couldn't even pretend to be an
11 expert on this. So I just -- I just don't know one
12 way or the other. Sorry.

13 MR. CREIGHTON: But that's something we
14 should study, I assume, right?

15 CHAIR CONGDON: Jim, we're going to, in the
16 next presentation, talk about the D.O.H. sampling
17 protocol. And I think we can get into that a little
18 bit.

19 MR. CREIGHTON: Great.

20 CHAIR CONGDON: In fact, if there are no
21 other questions for Dave, perhaps we should -- I'm
22 sorry. Bruce Watson had a question.

23 MR. WATSON: Yeah. I really liked your
24 presentation, David, really appreciate it. The one
25 question I have is, if you're looking at storage of

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2 water in tanks for long term, I know there's some
3 A.S.M.E. codes and other requirements for doing weld
4 inspections and inspecting the tanks for leaks.

5 I know during an operating plant, when the
6 refueling water tank is emptied and is in -- the
7 waters in the refueling pool, you know, the operating
8 plant normally does the in-service inspection, well
9 checks of the tank during that time period.

10 So if you have, you know, X number of
11 tanks, you know, I don't know if you looked at the
12 time period for those requirements for doing tank
13 inspections and weld inspections. And would that
14 make possibly, you know, I don't know if you looked
15 at it but, you know, it could possibly require you to
16 have extra tanks to transfer water around while you
17 inspect another tank.

18 Which would also eat up that footprint of
19 the -- that from the partial site release, so --.

20 MR. LOCHBAUM: It's a good question.

21 MR. WATSON: More storage for water.

22 MR. LOCHBAUM: It's a good question.

23 MR. WATSON: For water.

24 MR. LOCHBAUM: I haven't looked at that. I
25 did look at various requirements for the A.S.M.E. and

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2 American Society of Mechanical Engineer and other
3 standards. Some states have standards for tanks in
4 their -- in their states.

5 I didn't look at it from the aspect of
6 would that require you to change how many tanks you
7 had in order to meet those requirements, it's a --
8 it's a good question. I'll do some follow-up. I
9 just hadn't looked at it.

10 MR. WATSON: Yeah. Thank you.

11 CHAIR CONGDON: Senator.

12 MR. HARCKHAM: Thank you, very quickly, I -
13 - I just want to follow-up on what the deputy
14 supervisor was saying about the other elements. And
15 you don't have to answer me now. But maybe in the
16 D.O.H. presentation or the D.E.C. presentation.

17 Are those other elements, the non-
18 radiologicals covered in the SPDES permit, where we
19 know the radiologicals are not. But again, you can
20 wait to get your report or you can answer now,
21 thanks. Thank you.

22 MS. TURTURRO: I can answer now. Kelly
23 Turturro from D.E.C. So senator as part of our SPDES
24 renewal process, those are all things that we're
25 looking at in terms of the non-radiological

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2 components. In addition to what -- what Alex will
3 present in terms of our sampling for all the SPDES
4 permit limits, as well as the E.P.A. priority
5 pollutants.

6 And just while I have the floor, if I could
7 respond to the P.F.C. question, I know, Assemblywoman
8 LEVENBERG asked the same question. That is something
9 that that we are also looking at through our SPDES
10 permit renewal process.

11 MR. HARCKHAM: Thank you.

12 CHAIR CONGDON: Excellent, thank you.
13 Mayor?

14 MAYOR KNICKERBOCKER: Thank you, Tom. We
15 have discussed this several times at -- the D.O.B.
16 meetings about the tanks on the property. I've had
17 conversations with our village board. I've had
18 conversations also with our building inspector Dan --
19 Dan Stewart, our trustee Dan Stewart is here this
20 evening.

21 I think, we are taking that off of the
22 table. There will be no tank stored there. We're
23 talking about, you know, all we hear about is gas
24 pipeline. During the operation of the plant, we've
25 heard earthquake possibilities. For anyone to even

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2 think and the people that either have said this
3 before about the gas pipeline, the earthquake, the
4 Ramapo Fault to even suggest that is ludicrous.

5 And I'm just shocked that the same people
6 that beat that drum actually would recommend
7 something like that. So I will tell you the village
8 of Buchanan will not, at all, ever issue a permit for
9 any tanks. So as of this evening you can take that
10 off of the checklist. Thank you.

11 CHAIR CONGDON: Thank you. So moving on to
12 the next item on the agenda. Thank you, Dave.

13 MR. LOCHBAUM: You're welcome.

14 CHAIR CONGDON: Alex Damiani is here from
15 the New York State Department of Health. As we
16 discussed at the April meeting, you know, based on
17 the State's assessment of the Holtec plan to
18 discharge to the river, we've talked about the D.O.B.
19 role in looking at how we can fill, what we can
20 recognize as potential oversight gaps within, you
21 know, jurisdictional limitations.

22 And one thing that came through, and I
23 think some folks have -- have commented on that among
24 the D.O.B. and from community is, the concern about
25 what is actually in the water and how we can be sure,

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2 you know, Holtec's reports or Holtec's sampling is
3 accurate.

4 And so given that, we've had for some time
5 a Department of Health's surveillance program where
6 there have been split samples taken at the site and
7 at environmental locations on the river, we felt that
8 there was an opportunity to really ramp that up. And
9 we've talked about a new sampling protocol that would
10 basically, you know, really enhance what has been
11 done in the past.

12 And D.O.H. and D.E.C. have together worked
13 on developing such a protocol and Holtec has
14 voluntarily agreed to provide for split sampling.
15 And so to present where we are on that assignment,
16 Alex is going to take -- take this part. So Alex.

17 MR. DAMIANI: Thank you.

18 CHAIR CONGDON: Thank you.

19 MR. DAMIANI: Thank you. I'm Alex Damiani
20 with the New York State Department of Health.

21 CHAIR CONGDON: Speak up, Alex.

22 MR. DAMIANI: Sure -- sure. I'm Alex
23 Damiani with the New York State Department of Health
24 and I want to go over the independent sampling
25 protocol that we have. If you could do the next

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2 slide, Tom. So thanks to Kelly, we did enter into an
3 agreement with Holtec that will outline a protocol
4 for sampling both radiological and non-radiological
5 effluence from the Indian Point facility. Next
6 slide, please.

7 So what are we going to sample? That's
8 kind of the first question, right? So looking at
9 what effluence we are going to sample, we are going
10 to take two samples from both unit two and three
11 spent fueled pools, unit two and three, reactor
12 cavities. And unit two and three, refueling water
13 storage tanks.

14 Now, this is in addition to the routine
15 surveillance we do as well, right? So that -- that
16 at the site discharge canal, the Ralston control.
17 And we do a Verplanck Marina collection as well. So
18 those ones will still remain. Next slide, please.

19 So how will the sampling occur? Well, the
20 effluent will get treated. It'll be transferred to
21 the liquid waste processing system. And there it
22 will be processed before it is sent to the discharge
23 canal, right.

24 So what we will be doing is, is we will be
25 taking a sample at that point after it's been

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2 processed and that will be initially before they want
3 to discharge anything. And then, at the 50 percent
4 mark after they've been discharging for a point and
5 they -- they hit about 50 percent in that -- that
6 given partition of water. Next slide, please.

7 So how is this going to be taken? Well, we
8 will go onsite. We will observe the Holtec staff.
9 Actually, take the sample using their equipment. We
10 will get a sample, they will have a sample. Our
11 sample will go to our labs, Wadsworth labs in -- in
12 the State Health Department.

13 And they have a commercial lab that they
14 use for their service. Both labs go through very
15 similar E.P.A. approved protocols for testing most of
16 these things. And Holtec has agreed to wait no more
17 than 12 business days from the time we get that
18 sample to the time we get results. It takes us one
19 to two weeks to get results for most everything.

20 A few things do take longer and I'll
21 mention that on the next slide if we can go there.
22 So what are we looking at? That's kind of the -- the
23 critical stuff, right? What are we actually testing?
24 So tritium, straightforward, we do that generally,
25 gross alpha/beta strontium 89 and 90, those ones take

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2 longer and they take one to three months to get
3 accurate results for, we're doing an in-growth count
4 on the Yttrium-90 actually, for that.

5 And we also do Gamma Spectroscopy. So the
6 tritium, the gross alpha/beta, and the Gamma Spec are
7 generally done within seven to 10 days a very typical
8 turnaround time. And I think we list -- yeah, we do
9 have a -- in footnote here, we do have a list of the
10 E.P.A. methodologies, if you're interested. Those
11 are all published on the E.P.A. website. All right,
12 so -- and next slide, please.

13 Okay. And Kelly can slap me if I get
14 anything wrong here. So as far as the -- the non-rad
15 component D.E.C. will use a contract lab and these
16 are the list of the items. The E.P.A. priority
17 pollutant list there is a big, long list. It's not
18 shown here on this page, it's 26 -- 126 different
19 chemicals that are done through mass spec, typically
20 there.

21 But the P.C.B.'s, the total suspended
22 solids, the boron, and the oil and grease components
23 are -- are pretty stand -- I think standard elements
24 of most SPDES. So not -- not -- maybe not the boron,
25 too. So this will be a separate analysis.

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2 So there will be two -- two separate
3 reports. One for the rad component and -- and one
4 for the -- the non-rad component. With that, I think
5 I would open up for any questions.

6 CHAIR CONGDON: Thank you, Alex. And --
7 and Alex and Kelly, one of you, is this where the
8 PFAS is going to be tested in this slide?

9 MS. TURTURRO: So we're -- we're looking at
10 the PFAS requirements through our -- our SPDES
11 renewal process.

12 CHAIR CONGDON: So in the E.P.A. priority,
13 pollutants is -- is PFAS not among those?

14 MS. TURTURRO: No, I don't believe so.

15 CHAIR CONGDON: Okay. So how will we get
16 PFAS analyzed?

17 MS. TURTURRO: So that's something that
18 we'll -- we will do through the renewal process. We
19 would require something like that to be sampled. But
20 again, that's still something that we're -- we're
21 working through the process on and we'll be having
22 discussions with Holtec on.

23 CHAIR CONGDON: Got it. Thank you. Is
24 that helpful to Jim and if someone else inquired?

25 MR. CREIGHTON: Would it -- would it be

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2 sampled before a discharge in September or are we
3 talking about a renewal sometime after? Or can we
4 add it to the split sample testing?

5 MS. TURTURRO: We can certainly take a look
6 at doing that.

7 MR. CREIGHTON: Okay.

8 MS. TURTURRO: I can talk to our technical
9 team about that, certainly.

10 MR. CREIGHTON: Thanks.

11 CHAIR CONGDON: Thank you. Other questions
12 for Alex or Kelly?

13 MS. LEVENBERG: Yes. Is the -- is the
14 Krypton 85 also part of that or that is not?

15 MR. DAMIANI: Krypton 80 -- Krypton 85
16 would most likely not remain in the water samples
17 that we're taking. It is a noble gas, so it's most
18 likely not going to be something we would be able to
19 measure. Typically, you'd measure that at the point
20 of generation. That would really be it. It's going
21 to go up in the air pretty quickly.

22 CHAIR CONGDON: So from the slide Dave
23 presented on Krypton showing the previous analysis,
24 and I believe that was the Spent Fuel Pool One that
25 showed 80 percent removal of Krypton. That was based

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2 on -- and maybe this is a question for Dave. That
3 was based on the analysis of that pool water and
4 report to the N.R.C. by Entergy at that time. Is
5 that correct?

6 MR. LOCHBAUM: This is Dave Lochbaum. That
7 is correct, yes.

8 CHAIR CONGDON: Thank you. Any other
9 questions? Excellent. Thank you all very much. I
10 really think it's important to get to the Holtec
11 operational update. We've unfortunately not provided
12 a verbal update on State oversight. We have been
13 providing written briefs on the State oversight and
14 it's included as part of this slide deck.

15 There are a number of activities the State
16 agencies have been performing and we're really
17 pleased with how the resident inspector is working
18 out who's on site attending, you know, Holtec
19 meetings, eyes, and ears on site daily. And we
20 really appreciate that.

21 I don't mean to disrespect you or any of
22 the agency work that's gone into the oversight work.
23 But I think in the interest of time, we want to move
24 to Holtec to get us -- get us back on schedule. We
25 do have a hard stop tonight. So with that, I'm going

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2 to skip over the State agency oversight updates and
3 go right to Rich Burroni for a Holtec operational
4 update. Rich?

5 MR. BURRONI: Thanks, Tom. Next slide,
6 please. So the agenda here I'll follow is, we'll
7 talk about the dry fuel project which incorporates
8 our ISFSI pad status. The unit two spent fuel pool
9 status and the status of our Hi-Lift crane. We'll
10 talk about discharge discussion.

11 The split sampling MOU you've already
12 covered that. We'll talk about vessel segmentation
13 at units two and three, N.R.C. inspections and
14 activities. I did note the violation that Mr.
15 Dimitriadis talked about, but we can discuss that
16 further if you'd like and our recent safety record.
17 Next slide.

18 So from the independent spent fuel storage
19 installation, which is our ISFSI pad, that
20 construction has been completed as previously noted.
21 A 127 casks are needed for the units two and three
22 spent fuel systems and they will be stored on the
23 pads.

24 Since the last oversight board meeting, the
25 vehicle barrier wall installation is in progress.

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2 The security support structure is in progress. An
3 additional fence line installation is in progress.

4 CHAIR CONGDON: Okay.

5 MR. BURRONI: And prior to September 21,
6 which is the next D.O.B., all construction activities
7 will be completed. So the next slot -- the next
8 slide is intended to provide an overview of the
9 construction in progress. So we'll go through that
10 real quick.

11 So there's a new security building being
12 built. The E.E.C. is the Energy Education Center
13 that was used to educate the public back in the day.
14 We had to demo some of the structure on that to -- to
15 accommodate the vehicle barrier wall.

16 The vehicle barrier wall was also being
17 installed along with the additional fence line. All
18 this should wrap up, like I said, in the September
19 timeframe. Next slide. Excuse me.

20 For the unit two spent fuel pool, the
21 defuel status, as I reported previously is complete.
22 896 units, two fuel assemblies and 28 casks are later
23 -- located on the ISFSI pads.

24 Since the last oversight board meeting,
25 unit two non-fuel material was transported to the

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2 ISFSI pad using a HI-SAFE canister and the spent fuel
3 racks, 12 in total are being cleaned as we speak.
4 Projected activities through September 21, we'll also
5 complete the cleaning of the spent fuel racks. We'll
6 remove them and then we'll transport them to our
7 waste facility in Texas.

8 Going to unit three, spent fuel pool
9 activities -- excuse me, and the Hi-Lift. The high
10 lift is the lifting device. We've completed the site
11 acceptance test and that was observed by the N.R.C.
12 We have also trained operators and performed dry runs
13 of the equipment.

14 And the V.C.T. is a Vertical Cask
15 Transporter. The HI-TRAC is the cask that will be
16 moved, that'll contain the fuel. And we've completed
17 the Hi-Lift training. N.R.C. also observed the dry
18 run of the system this week and that was
19 satisfactory.

20 Our projected activities through the next
21 D.O.B. meeting, we will commence unit three's fuel
22 offload on June 19th, which is Monday. And we'll
23 have the fuel offload completed by the end of
24 November. So if we look at the next photo on the
25 next page, it's just the -- it's the Hi-Lift in

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2 action. It's -- it goes very slowly, right?

3 But you could see as we -- we've tested
4 that it'll go into the pool and get loaded in the
5 pool and come back out and then get transported to
6 the ISFSI pad. Next slide.

7 MR. SIPOS: Rich, could you get a little
8 closer to the mic?

9 MR. BURRONI: Sure. Thanks. Well, for our
10 discharge discussion, we did kick off a -- the
11 meeting with the H.D.I. New York State Department of
12 Health, D.E.C., and D.P.S., and Westchester County
13 Executive's office rep to discuss the split sampling
14 techniques. And -- and Alex went through that.

15 We -- the M.O.U. has been developed and we
16 signed that off this week. Unit two discharge is
17 scheduled to start mid-September. From mid-September
18 early October, the expected discharge duration is
19 going to take four to five months.

20 I'll go to unit two, vessel segmentation
21 now. Excuse me. Segmentation of both vessels is
22 considered a second critical path, right? Like I've
23 described before, we want to try to capture all our
24 radionuclides through the canisters or segmentation
25 and transport them off site. And then, it becomes

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2 more of a construction site as we move forward.

3 So since the last oversight board meeting
4 at unit two, a steam generator, primary inlet, and
5 outlet piping is being prepped to support chemical
6 cleaning. We're actually going to chemically clean
7 the steam generated tubes in unit two and unit three.

8 For the next D.O.B. meeting, we'll complete
9 the steam generator primary preps for cleaning and
10 that cleaning activity will start in November. We'll
11 start the equipment set up to support segment --
12 segment act -- segmentation activities. And the
13 upper react -- in the upper reactor vessel, guide
14 tubes, and support columns. And we'll do a partial
15 cavity flood up.

16 Going to unit three and unit one. Since
17 the last oversight board meeting, we have completed
18 the unit three segmentation of the reactor vessel
19 upper support plate and the top core plate. Both of
20 those plates were four-foot thick in diameter, they
21 were cut into segments.

22 The reactor vessel upper support plate has
23 been boxed and transported and we're working on the
24 B.C. waste, which is the top core plate. So we're
25 going to start boxing that soon. Projected

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2 activities through September, we'll complete the
3 boxing. Overall, the unit three B.C. waste.

4 We'll commence cutting the unit three
5 R.C.S. piping for the chemical decontamination
6 activities like I just described and we'll commence
7 preparation for the unit three core barrel removal,
8 which will occur in the fourth quarter.

9 So we did the upper internals, and now the
10 next thing to -- to segment in the reactor is the
11 core barrel itself. So that'll come out, we'll go to
12 the lower cavity and that's where we'll start
13 dismantling that. And then, at unit one, we've -- we
14 actually cut a hole in the top of the head to provide
15 an analysis, the activation analysis for the vessel
16 itself.

17 And that'll provide us with information to
18 properly classify the levels of waste of the reactor.
19 It could be level alpha, bravo, Charlie, or greater
20 than Class C waste. So that's what the
21 characterization is doing now.

22 We'll go to N.R.C. inspections activities.
23 Basically, no change on the L.A.R.s that we have
24 submitted to the N.R.C. I will say on the
25 permanently defueled emergency plan. I -- I've said

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2 this before, but the condition of the fuel in the
3 plant right now, right?

4 We will talk -- if we would enter the
5 emergency plan, we would not require either
6 sheltering in place or evacuation. That's the energy
7 that's left in the fuels. It's -- it doesn't even
8 drive us to those two extreme functions in the
9 emergency plan.

10 And then, on the bottom, you could see how
11 we have our upcoming N.R.C. inspections. A lot of
12 these are done by Katherine. We completed the ISFSI
13 dry run this week. Fire protection, rad waste, and
14 financial assurance inspection was done this week.

15 Next week, the N.R.C. will begin to watch
16 the initial loading of the cask. And then, we'll do
17 our REMP and RETS and E-Plan inspection in July.
18 ISFSI inspection in July and Q.A. safety culture
19 inspection in August. Excuse me.

20 We talked about the violation and -- and
21 Mr. Dimitriadis described that basically, we just did
22 not verify the suitability of the Hi-Lift crane
23 hydraulic system and crane structure to affirm a
24 single point of failure capability. The crane
25 assembly did not have supporting calculations or

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2 design analysis properly documented prior to the
3 N.R.C. inspection activities.

4 We entered the issue into the corrective
5 action program. The evaluation was formally
6 performed and confirmed a single point design
7 capability of the crane. The N.R.C. inspection
8 violation was then complete and satisfactory. I --
9 I'll wrap up with a safety discussion. Want you to
10 know that we have safety discussions every single
11 day. We have union-driven safety meetings on a
12 monthly basis, so we take safety very seriously.
13 Since the last D.O.B., we've had two first aids.

14 One whereas a worker sprained his ankle
15 while working on the 95 foot of the unit containment
16 building. Stepped over a barrier, twisted his ankle,
17 that resolved in the first date to his ankle. And
18 then, we had a supplemental worker drop a warehouse
19 material on their foot, mishandled the -- the device
20 itself.

21 So those were two first aids. With regards
22 to dose year to date at unit two, our goal for -- for
23 our employee dose is 58 rem, 58.2 rem. And year to
24 date, we're at 31.9. And at Indian Point 3 you can
25 see our goal was 167 with a year to date, 12.67.

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2 That'll go up actually as we start moving fuel in the
3 unit three spent fuel pool up to the ISFSI pad.
4 That's all I have, pending questions.

5 MR. DIMITRIADIS: Mr. Chair, just --

6 CHAIR CONGDON: Yes.

7 MR. DIMITRIADIS: -- one item? Thank you.
8 Anthony Dimitriadis, N.R.C. I just wanted to just
9 outline two things. Number one, the inspection
10 schedule that is there is contingent. Our -- our
11 inspections are scheduled according to risk-
12 significant activities that are happening on site.
13 So if the schedule changes, then we change our
14 scheduled inspection. That's number one.

15 Number two, Katherine is the lead inspector
16 and she's there sometimes by herself, but all with a
17 -- a team of inspectors. So I just wanted to turn to
18 you to just -- we work together with that. You want
19 to talk a little bit about how you decide to --.

20 MS. WARNER: Sure. So what we do is, we
21 take a look at the schedule of activities upcoming
22 and determine which risk-significant activities we
23 want to review in addition to our annual programmatic
24 reviews. So we do a combination each time we're on
25 site.

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2 So when you see an inspection schedule like
3 that, they are preliminary and we'll move them around
4 as necessary to ensure that we're reviewing risk-
5 significant activities. Any questions on that?

6 MR. HARKHAM: Just -- just a quick follow-
7 up. Not Holtec specific, but in -- in any plan that
8 you're reviewing, you -- aside from the plan
9 inspections, do you ever do surprise inspections?

10 MR. DIMITRIADIS: We can and we have in --
11 in -- in -- in various places, yes. In -- in the --
12 in the decommissioning world, in the decommissioning
13 inspection, we have the -- we -- we -- we can do
14 unannounced inspections, if that's what you're
15 asking. And we've done that in the past. Not often,
16 but we have.

17 MR. WEBSTER: Can I -- quick question? Is
18 the state level of oversight here unusual?

19 MR. DIMITRIADIS: Sorry?

20 MR. WEBSTER: Is the State level of
21 oversight here unusual, State level?

22 MR. WATSON: Yeah. Let me answer it. Yes.
23 This is Bruce Watson. States can do what they really
24 want to do. I -- I -- I don't know that I would call
25 it overreaching or anything like that, that they have

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2 the right to do what they want to do.

3 But you know, at various -- at various
4 sites, we've had significant, even more State
5 presence at sites. Maine Yankee had a -- generally
6 had a three main -- excuse me, the State of Maine had
7 a three-man team at Maine Yankee for pretty much the
8 duration of the -- of the decommissioning.

9 There's been other inspectors that show up
10 from time to time at the various sites from various
11 states just showing an interest in knowing what's
12 going on and also, you know, looking at things from
13 their perspective. So it's -- it's not unusual to
14 have state involvement.

15 Maybe not necessarily having a resident
16 inspector, but we are talking three units here.
17 We're not just talking, you know, a single unit.
18 It's a lot of going -- lot of going -- lot of
19 activities going on at -- at basically at least two
20 of the three units at this time. So yeah. So -- .

21 MR. BURRONI: Well, we're picking up on
22 unit one also.

23 MR. WATSON: Yeah.

24 MR. BURRONI: But I think to answer your
25 question, Richard, I believe Illinois and I believe

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2 Nebraska have a state inspectors at their nuclear
3 plants.

4 MR. WATSON: Yeah. I know Illinois will be
5 there periodically, just like we do at --.

6 CHAIR CONGDON: Yeah. You guys can say
7 we're -- we're top of the list.

8 MR. WATSON: No, I -- I -- I -- I'm not
9 going to judge by --.

10 CHAIR CONGDON: It's not -- I -- I'm
11 joking.

12 MR. WATSON: Honestly, I don't want to
13 judge.

14 CHAIR CONGDON: No.

15 MR. WATSON: But Maine Yankee did have
16 three time -- three full-time inspectors there. I
17 mean, we -- we -- it was great because we got to
18 share data.

19 CHAIR CONGDON: Right.

20 MR. DIMITRIADIS: Do you think it's unusual?

21 MR. WEBSTER: I mean, I think we have more
22 oversight than most decommissioning reactors, which I
23 think is a good thing.

24 CHAIR CONGDON: Tom Carey had a question.

25 MR. CAREY: Just a quick. It's more N.R.C.

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2 than -- than Holtec. I'm curious of the accuracy of
3 this inspection report. It says at least 14
4 inspections since 2008 when the site began loading
5 the ISFSIs, the date, they began loading them back in
6 '08?

7 MR. DIMITRIADIS: That's correct, yes. And
8 then, that's only -- that is inspection reports
9 related to ISFSI inspections alone.

10 MR. CAREY: Specifically?

11 MR. DIMITRIADIS: Yeah.

12 MR. CAREY: Okay.

13 MR. DIMITRIADIS: The plants were
14 operating, so we have other reports that, you know,
15 for the operating, you know --.

16 MR. CAREY: Okay. Thank you.

17 MR. DIMITRIADIS: Construction of the pad,
18 I believe, started in 2004. And then the first cask
19 was issued to the pad in 2008.

20 MS. LEVENBERG: Just quickly on page --
21 this is Dana Levenberg. On page eight, you mentioned
22 the M.O.U. was developed and under review. Is that
23 the M.O.U. for --?

24 MR. BURRONI: Split sampling.

25 MS. LEVENBERG: The split sampling. Okay.

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2 And is that pub -- a public document? Is that
3 available to the public, that M.O.U.?

4 CHAIR CONGDON: We will make that public.
5 It's only just getting completed.

6 MS. LEVENBERG: Got it.

7 CHAIR CONGDON: So yes, we will post that.
8 A member of the community had also requested that we
9 post kind of a spec sheet of how we are doing the
10 sampling. And we've -- we're developing a one-pager
11 for that as well, so that will be posted as well
12 following this meeting.

13 MS. LEVENBERG: Okay. Thank you. And
14 then, can you just clarify Q.A. safety culture
15 inspection, Q.A.?

16 MR. BURRONI: I'm sorry, I can't hear you.

17 MS. LEVENBERG: What is Q.A.? A quality --

18 MR. BURRONI: A Quality Assurance.

19 MS. LEVENBERG: -- a Quality Assurance
20 safety culture inspection, what is that -- what is
21 that inspection?

22 MR. BURRONI: Are you on the N.R.C. slide?

23 MS. LEVENBERG: Upcoming N.R.C. inspection
24 is the last one.

25 MS. WARNER: This is Katherine. I can

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2 answer that. It's our inspection.

3 MS. LEVENBERG: Okay.

4 MS. WARNER: Sorry. I'll give the
5 inspection procedure number. That way, you can look
6 it up if you want to. It's N.R.C. inspection
7 procedure 40801, 40801. That's the P I and R Safety
8 Culture and Quality Assurance. So what we did was we
9 picked a couple of programmatic areas such as safety
10 culture.

11 So what we do with that is to walk around
12 the site, take a look at various levels of management
13 and workers to determine if they feel free to raise
14 any nuclear safety concerns. Also, in addition,
15 whenever we're on site, we take a look at any
16 activities going on.

17 So there might be some programmatic areas
18 listed there, but when I get on site or whoever's
19 doing the inspection at that time, again, we have a
20 variety of inspectors. They'll take a look at the
21 activities and also pick some of those to observe as
22 well. Does that help?

23 MS. LEVENBERG: Yeah. Thank you.

24 MR. BURRONI: The acronym Q.A. just stands
25 for Quality Assurance.

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2 MS. LEVENBERG: Yes, I -- I think somebody
3 said that. Thank you.

4 CHAIR CONGDON: Other questions? Yes,
5 Richard.

6 MR. WEBSTER: So Rich, can you explain this
7 -- this crane thing to me. I still don't understand
8 it which is -- it seems like, is -- was it supposed
9 to be designed for not having a single point of
10 failure?

11 MR. BURRONI: Absolutely.

12 MR. WEBSTER: Okay.

13 MR. BURRONI: See, the -- the violation was
14 this, is, they didn't formally do the calculation
15 like they should have done to demonstrate single
16 failure capability. N.R.C. picked that up, demanded
17 that they do a formal calculation. That was done and
18 it did demonstrate single failure capability of the
19 crane.

20 MR. WEBSTER: Okay. So what do you mean by
21 single failure capability?

22 MR. BURRONI: Well, actually it looks at
23 the strands. The -- the -- the strands on the high
24 lift, I think there is 64. And I think the analysis
25 determines that you could actually fail 32 strands.

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2 Don't quote me on the numbers exactly. And still not
3 have a disruption or you -- you could still safely
4 secure the cask. I can get you the exact numbers --

5 MR. WEBSTER: Okay.

6 MR. BURRONI: -- but I think it's 64 and
7 32.

8 MR. WEBSTER: All right. That's helpful.
9 Thank you for that clarification. So now, I just
10 want to get to the -- so if I heard right, you pushed
11 the schedule back. Is that correct?

12 MR. BURRONI: Pushed the schedule back?

13 MR. WEBSTER: I think Dave said the
14 discharges for the -- for some of that later.

15 MR. BURRONI: No, we always said it was
16 September. What I wanted to do, and I explained in
17 August in there at one point. I'm sorry?

18 CHAIR CONGDON: I'm sorry to interrupt.
19 There was an August in there at one point, in the
20 previous --

21 MR. BURRONI: Yeah. And -- so -- and I
22 explained this to -- to Assemblywoman Levenberg and
23 Senator Harckham yesterday. The only intent to do an
24 earlier semi or -- or partial discharge of the unit
25 two pool was to clean off some of the boric acid that

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2 plates out on the stainless-steel liner.

3 We used boric acid to control reactivity in
4 the pool itself. Just wanted to get a head start on
5 the cleaning. That was the only intent.

6 MS. LEVENBERG: There were some other dates
7 that --

8 MR. WEBSTER: Yeah.

9 MS. LEVENBERG: -- that you mentioned
10 earlier when, I think, when -- was it when Dave was
11 presenting?

12 MR. WEBSTER: Yes.

13 MS. LEVENBERG: You said something about
14 2026 and 20 --

15 MR. WEBSTER: Right. It says unit two
16 react to cavity, August 2 2022, right?

17 MS. LEVENBERG: Yeah.

18 MR. BURRONI: Those are the other -- the
19 other discharges.

20 MR. WEBSTER: You said those are moved
21 back.

22 MR. BURRONI: What -- Mr. Richard, what --
23 what -- what -- what are you looking? Are you
24 looking at Dave's?

25 MR. WEBSTER: I'm looking at slide eight of

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2 Dave's slides.

3 MR. BURRONI: You're looking at Dave's
4 slides?

5 MR. WEBSTER: Yes. And you said he got
6 them moved if I'm not mistaken.

7 MR. BURRONI: What page are you on again,
8 Richard?

9 MR. WEBSTER: Slide eight of Dave's
10 presentation..

11 MR. BURRONI: Okay. So slide eight --

12 MS. LEVENBERG: Yeah.

13 MR. BURRONI: -- the spent fuel pool
14 September of 2023 for unit two.

15 MR. WEBSTER: Uh-huh. But he said --.

16 MR. BURRONI: So unit three spent fuel
17 pool, that would be ready probably in May, but June
18 of 2024.

19 MR. WEBSTER: Right. Now, he said those
20 dates have slipped back though. But -- is that not
21 correct?

22 MS. LEVENBERG: He did say that.

23 MR. BURRONI: They slipped back?

24 MR. SIPOS: No. I -- just for --

25 MS. LEVENBERG: He -- he said 2026 and

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2 2027.

3 MR. SIPOS: -- clarification for the
4 record, I think Dave was speaking about the reactor
5 cavity items. Unit two reactor cavity. Unit three
6 reactor cavity.

7 MR. BURRONI: Okay. They're not spend fuel
8 pools --

9 MR. WEBSTER: Okay.

10 MR. BURRONI: -- because we rescheduled
11 some of the segmentation work --

12 CHAIR CONGDON: All right.

13 MR. BURRONI: -- that drives those dates
14 later.

15 MR. WEBSTER: Okay. So the schedule has
16 slipped on the them then?

17 MR. BURRONI: It's been re -- it's been
18 rescheduled. The end date hasn't slipped.

19 MR. WEBSTER: Okay. So -- okay. So the --
20 so I just want to be very clear on this because it's
21 kind of confusing, right? So what you're saying is,
22 some of the work -- some of the arrangement of the
23 work during the decommissioning has changed?

24 MR. BURRONI: Yeah.

25 MR. WEBSTER: Gone back in time?

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2 MR. BURRONI: If we scheduled, we -- we
3 look at -- we look at lessons learned and -- and how
4 we could do things better. And there's always a
5 dynamic in any schedule, especially when you're
6 decommissioning a unit.

7 MR. WEBSTER: Okay. But you still expect
8 to finish within the original time period?

9 MR. BURRONI: Yes.

10 MR. WEBSTER: And so -- and how are you
11 doing on budget?

12 MR. BURRONI: And how what?

13 MR. WEBSTER: How are you doing on budget?

14 MR. BURRONI: We had a financial discussion
15 this week. And if you look at the budget line, I can
16 get you the numbers, but we're within our budget.

17 MR. WEBSTER: Okay. So if I remember
18 rightly, you had plenty of headroom. If you -- if
19 you met your budget projections, you had plenty of
20 headroom in the decommissioning trust fund. Is that
21 right?

22 MR. BURRONI: If that was a question I
23 didn't get it.

24 MR. WEBSTER: Yeah. I said, is it correct
25 that there was -- if you -- as long as you hit

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2 budget, basically there's plenty of money in the
3 decommissioning trust fund. Is that right?

4 MR. BURRONI: That's correct.

5 MR. WEBSTER: So what I don't understand is
6 why was this -- there was this rumor that, well, I
7 think you stated to the press, which that -- if the --
8 -- if we put tanks on the site, it could push the
9 schedule back or force workers to be laid off.

10 MR. BURRONI: We said, if we cannot
11 discharge to the river, right, we would have to
12 potentially reschedule our work, which would
13 potentially require layoffs of individuals because in
14 the sequence of -- the sequence of work for
15 decommissioning gets changed.

16 MR. WEBSTER: Right. But you said you just
17 changed the sequence of work. You said that's
18 something that you do routinely.

19 MR. BURRONI: We change the sequence of
20 segmentation, right, to be more efficient with the
21 people that we have on site right now. It's still
22 allowed to discharge. But if you change the game
23 plan that we've all agreed upon in 2017, or whenever
24 the joint proposal was signed by Riverkeeper and
25 everybody else --

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2 MR. WEBSTER: Well --

3 MR. BURRONI: -- let's -- let -- hold on.

4 Let's stay with the game plan.

5 MR. WEBSTER: Well --

6 MR. BURRONI: So you stay with the game
7 plan, it's 12 to 15 years.

8 MR. WEBSTER: Right.

9 MR. BURRONI: If we want to stop discharge,
10 which was part of the game plan, then that's going to
11 have an overall effect on the schedule.

12 MR. WEBSTER: We can -- listen, we can --
13 we can pick out that the game plan is definitely 12
14 to 15 years. We don't believe that we signed an
15 agreement that said that discharges could go forward.

16 MR. BURRONI: Well, you should read the
17 agreement. When's the last time you read the
18 agreement?

19 MR. WEBSTER: I -- I read it actually,
20 Rich.

21 MR. BURRONI: Yeah. Well, you should keep
22 reading it again.

23 MR. WEBSTER: And I read it when we signed
24 it.

25 MR. BURRONI: I'm trying to calm down, but

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2 --

3 MR. WEBSTER: So --

4 MR. BURRONI: -- Katherine's telling me to
5 calm down.

6 MR. WEBSTER: So what -- what you're saying
7 is, just to be clear, there isn't a shortage of
8 money. Like, you could afford to, if -- if it was
9 required to draw on the decommission trust fund to
10 store on site, you could afford to do that, right?

11 MR. BURRONI: Rich, if you want to have a
12 financial discussion, I'll get the right financial
13 people to come to the next meeting or we can have it
14 offline.

15 MR. WEBSTER: Let's have it offline.

16 MR. BURRONI: Okay.

17 SENATOR HARCKHAM: Just to follow-up on
18 that point, if I may. Just on financing in general.

19 MR. BURRONI: Please.

20 SENATOR HARCKHAM: In general, not the
21 finances today. But I think Assembly Member Galef
22 before she'd left, had required that we do a regular
23 reporting at these meetings. I know they -- the
24 documents may have been posted, but I think a
25 periodic reporting to -- to the oversight board, I

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2 think would be beneficial for the public.

3 CHAIR CONGDON: That's a good reminder and
4 she did request that. And I think we can -- we can
5 accommodate that.

6 MR. BURRONI: Let me say one thing.

7 CHAIR CONGDON: Yeah, please.

8 MR. BURRONI: The N.R.C. does require us to
9 review the financials once a year.

10 CHAIR CONGDON: Right. There's publicly --
11 publicly filed information. And why don't you talk
12 about that publicly filed report because I think that
13 that --

14 MR. BURRONI: Right. We just -- we just
15 filed that in March. We just had the N.R.C.
16 discussion this past week.

17 CHAIR CONGDON: Right.

18 MR. BURRONI: -- on our financials.

19 CHAIR CONGDON: You want to talk about, you
20 know, the balances and any --.

21 MR. BURRONI: I -- I -- I don't have the
22 numbers in front of me. But --.

23 CHAIR CONGDON: Okay. I have the numbers
24 in front, we can -- we can make -- that's a public
25 document.

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2 MR. BURRONI: Are you saying that there's -

3 -

4 CHAIR CONGDON: Public document.

5 MR. BURRONI: -- oh, absolutely.

6 CHAIR CONGDON: And were there -- were
7 there market losses to the decommissioning trust
8 fund?

9 MR. BURRONI: Absolutely. There's --.

10 CHAIR CONGDON: Okay.

11 MR. BURRONI: In 2022, there were market
12 losses.

13 CHAIR CONGDON: Yeah, one of -- one of the
14 -- one of the issues, Richard, is, you know, the
15 decommissioning trust fund is not a static --

16 MR. WEBSTER: No, I understand. Yeah.

17 CHAIR CONGDON: -- thing, right? So when
18 you talk about headroom on a 10 to 15 year project
19 that is subject to some market volatility, there is
20 risk.

21 MR. WEBSTER: Absolutely.

22 CHAIR CONGDON: Okay.

23 MR. WEBSTER: I mean, there -- there's risk
24 on both ends, as far as I can tell, which is there's
25 risk on both --

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2 CHAIR CONGDON: Yeah, absolutely.

3 MR. WEBSTER: -- there's risk on funding.

4 CHAIR CONGDON: Correct.

5 MR. WEBSTER: So let me go to the -- let me
6 just go to the -- my final question here, which is,
7 you know, you guys handle some of the most dangerous
8 waste in the world, right?

9 MR. BURRONI: Absolutely.

10 MR. WEBSTER: And you do it safely?

11 MR. BURRONI: Absolutely.

12 MR. WEBSTER: And so could you handle this
13 tritiated water safely if you had to store it on
14 site?

15 MR. BURRONI: We -- we are handling it
16 safely right now with the discharge to the river.

17 MR. WEBSTER: Right. If you had -- if you
18 had to store it for 12 years, could you do it safely?

19 MR. BURRONI: If I had to store it, like I
20 said, right, we would be expanding our protected
21 area, which further lessens the partial release --
22 the partial release that we would do at the end of
23 the time.

24 MR. WEBSTER: Right. But you're not
25 answering my question. Can you answer my question?

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2 MR. BURRONI: Your question is, can I store
3 it safely?

4 MR. WEBSTER: Yeah.

5 MR. BURRONI: That's a hypothetical. I
6 can't answer a hypothetical question.

7 MR. WEBSTER: Well, let me ask you -- let
8 me ask you another hypothetical. Can you store the -
9 - the -- the --

10 MR. BURRONI: I could -- I could tell you
11 right now, I could discharge it --.

12 MR. WEBSTER: -- tritiated water on site
13 for the next 20 years?

14 MR. BURRONI: I could tell you I could
15 discharge it safely. Let me -- let me just say that.

16 CHAIR CONGDON: Let me just perhaps pose a
17 different question. And -- and to Richard, do you
18 trust Holtec to store it safely on site?

19 MR. WEBSTER: I mean, I think with -- with
20 adequate oversight from the State, yes.

21 MS. KNICKERBOCKER: Okay. I -- I do have
22 to comment again. As I have said before, I'm hoping
23 this is our last discussion this evening about
24 storing the water in tanks on the property. The
25 Village of Buchanan will not issue any permits which

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2 are needed to store that water. It is not a viable
3 option.

4 Speaking to Dave Lochbaum, an independent
5 expert, what concerns me is the potential failure.
6 And that'll be, holy cow, if that ever happens, oh my
7 God, Richard, you -- you'll be doing like a handstand
8 all over the property.

9 Number one, the failure. Number two,
10 everyone's concern, it gets vented. It gets vented
11 and that could possibly be airborne. How would that
12 be? So you know what? And another thing I have a
13 huge issue with and I have to say this, is that
14 everybody has suddenly become a nuclear, whatever
15 expert and they're always telling the Village of
16 Buchanan, what's the -- what their thoughts are, what
17 their desires are.

18 So this evening, I'm telling you what the
19 Village of Buchanan will not be issuing a permit for
20 those huge water tanks. So that's it -- that's it.
21 So if you want to figure out whatever, then that's
22 fine. So that's off the table. I thought I made
23 myself pretty clear before.

24 MR. WEBSTER: Can ask you a quick question,
25 Theresa?

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2 MS. KNICKERBOCKER: Sure.

3 MR. WEBSTER: Has the village board voted
4 on that?

5 MS. KNICKERBOCKER: We don't have to vote
6 on that.

7 CHAIR CONGDON: Well, there's nothing
8 proposed to them. In fact, it's --

9 MR. WEBSTER: No. I'm just saying that,
10 there is -- is there some sort of Village of --

11 MS. KNICKERBOCKER: Do you want to bring
12 that for a vote so we can totally close that chapter?

13 MR. WEBSTER: I mean, I understand. I
14 understand how there's a lot of people in --

15 MS. KNICKERBOCKER: I think it's not a
16 viable solution.

17 MR. WEBSTER: There's a lot of people --.

18 MS. KNICKERBOCKER: Do you understand that,
19 that becomes airborne or could it be spread out
20 through the property?

21 MR. WEBSTER: Teresa, I'm more than happy
22 to have a discussion with you --

23 MS. KNICKERBOCKER: I am --

24 MR. WEBSTER: -- about it offline.

25 MS. KNICKERBOCKER: -- looking to finally,

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2 eventually, I hope to God, I'm still alive 12 to 15
3 years from now, I would like to see that property
4 restored.

5 MR. WEBSTER: Yes.

6 MS. KNICKERBOCKER: I don't know. You
7 know, there's all different kinds of things. My
8 crystal ball is broken right now. I don't know what
9 the future holds. But if we're going to do things to
10 hurt the property further, then what are we doing?

11 And it was always about the rest. It was
12 the safety decommissioning, the prompt
13 decommissioning. We've had these conversations and
14 also the final restoration. This is very important
15 to the Village of Buchanan.

16 But not only what goes on that property, we
17 do understand what goes on that property over there,
18 what happens there not only affects the Village of
19 Buchanan, we get it, it affects everyone. So we kind
20 of need to work together and have not people telling
21 us what to do and we need to be able to communicate.

22 And so I'm communicating to you tonight,
23 that is not the direction the village is going in.

24 MR. WEBSTER: With -- with respect to it,
25 it sounds like you're saying everybody should be

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2 involved, we should all have a discussion. But then,
3 you're telling us what to do.

4 MS. KNICKERBOCKER: Well, we've been having
5 the discussion. I've been telling you what my
6 thoughts are and the village board, but people are
7 refusing to listen to what I'm saying.

8 MR. WEBSTER: This is what you're saying,
9 that if -- if the public and the process concludes
10 the answer that you like, that's fine. But if it
11 doesn't, then you'll say you'll override?

12 MS. KNICKERBOCKER: Well, that's the same
13 with you, with everything, Richard too.

14 MR. WEBSTER: Well I'm not actually.

15 MS. KNICKERBOCKER: Yes, now, Richard
16 (unintelligible).

17 MR. WEBSTER: (unintelligible)

18 MS. KNICKERBOCKER: I've known you too many
19 years now.

20 CHAIR CONGDON: Tom -- Tom Carey has a
21 question. Tom?

22 MR. CAREY: Yeah, I just have couple of
23 questions for Rich. I see you got a good turnout
24 here tonight. Do you know what -- what your complete
25 workforce is right now, Rich?

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2 MR. BURRONI: Yes.

3 MR. CAREY: Do you have a number?

4 MR. BURRONI: Union about 400. Total,
5 about 690.

6 CHAIR CONGDON: 690?

7 MR. BURRONI: 690.

8 MR. CAREY: Have those numbers altered
9 since the beginning? I mean, I'm sure you had a ramp
10 up to a certain point.

11 MR. BURRONI: We've ramped up to get the
12 fuel out of unit three's pool, right. And then,
13 we'll come to some, you know, some medium --.

14 MR. CAREY: You'll see a ramp down again at
15 some point?

16 MR. BURRONI: I don't know if it'll ramp
17 down, but there's plenty of work.

18 MR. CAREY: So -- and -- and that's kind of
19 important. Do you think you can avoid layoffs if you
20 don't -- if you're not able to discharge the water,
21 is there other work you can do, say unit one, unit
22 two all around the property to avoid layoffs?
23 Because I -- I -- I hate when I hear the word layoffs
24 --

25 MR. BURRONI: So do I.

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2 MR. CAREY: -- when it's such a large
3 project.

4 MR. BURRONI: So do I. And I guess, you
5 know, we have a great team. These guys are great.

6 MR. CAREY: No doubt.

7 MR. BURRONI: They're out there every day
8 doing work.

9 MR. CAREY: No doubt in my mind, you got
10 the best of the best here.

11 MR. BURRONI: And I -- and I fully respect
12 what they do, right? But you know, projects are
13 going to come and go, right? And at the end of the
14 day, we're trying to work ourselves out of a job, me
15 included, right?

16 MR. CAREY: Uh-huh.

17 MR. BURRONI: So that's what the whole
18 decommissioning thing is all about, right? So
19 potentially, you know, we'll -- we'll see what we
20 could do with the schedule. But if we're not able to
21 discharge to the river, right?

22 And we've had this discussion yesterday
23 with Senator and Assemblywoman, right? That just
24 changes the whole game plan. And that just changes
25 how we can take buildings down, right? So we have to

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2 look at that.

3 MR. CAREY: Right. Because my fear is,
4 there -- there's a ton of work going on all
5 throughout the county, right? All throughout
6 Westchester-Putnam. If -- if -- if, you know, we
7 talk about layoffs and you let some people go, are
8 you ever going to get that crew back?

9 MR. BURRONI: That's --.

10 MR. CAREY: And they go to other jobs.

11 MR. BURRONI: I agree.

12 MR. CAREY: So my big concern is, when --
13 when you talk about layoffs, and -- and we've had
14 this discussion, is there enough work on that
15 facility to keep these people working if you're not
16 able to discharge it?

17 MR. BURRONI: It's -- we'll -- we'll have
18 to look at the schedule, Tom. That's the best I
19 could tell you.

20 MR. CAREY: Okay.

21 MS. LEVENBERG: Can I ask something?

22 CHAIR CONGDON: Assemblywoman Levenberg?

23 MS. LEVENBERG: Rich, yesterday when we
24 were talking, you had said that in phase one there
25 were 312 --

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2 MR. BURRONI: Yeah.

3 MS. LEVENBERG: -- folks working for HDI.
4 Then, 230 in phase two. And then, you're going down
5 to 50 in phase three that -- that of the U.W.A.
6 workers. You said the other workers were hired by --
7 were working for Champion and I think B.H.I., is that
8 right?

9 MR. BURRONI: B.H.I., Champion and
10 Giordano.

11 MS. LEVENBERG: Okay. And Giordano. And
12 you said that in most cases, many of those workers
13 when you had a change of phase where there was less
14 work, that they were able to find other work except
15 for, I think you said, there were five to six that
16 were laid off or otherwise retained after phase two.

17 But that, you're coming up on phase three.
18 So for the H.D.I. workers or I think that was mostly
19 what you were referring to that, that was down to 50.
20 So I just want to be clear about how many workers you
21 said 700 badged on site that was a combination of all
22 of these different folk --

23 MR. BURRONI: Right.

24 MS. LEVENBERG: -- of all of these
25 different groups. Not everybody's working for,

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2 specifically for Holtec?

3 MR. BURRONI: Correct. So the 50 is the
4 core group we'll keep, right?

5 MS. LEVENBERG: Yeah.

6 MR. BURRONI: But then, there'll be people
7 with Champion who are trying very hard.

8 MS. LEVENBERG: And you said 50 was part of
9 whatever that was part of the proposal, the original
10 proposal, the phase one, phase two, phase three?

11 MR. BURRONI: Yeah, the core group. The
12 core group that will stay on. But we're trying very
13 hard to get everybody a job, right? Once we get our
14 fuel on pad protected, right? Because at that point
15 in time, once we get the PDEP approved, right, and
16 we're allowed to just operate as the ISFSI only,
17 right?

18 The -- the number of security guards will
19 be decreasing, right, and our core group of H.D.I.
20 people reduced. But what we're trying to do is the
21 U.W.A. contract expires, once fuel on pad -- once we
22 get to fuel on pad protected, that wasn't negotiated,
23 right.

24 But what we're trying to find all of the
25 U.W.A. people jobs with either Champion, Giordano or

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2 B.H.I. And I think we've done a pretty good job of
3 that, right. I think there's only like five people
4 left that were trying to get jobs.

5 MS. LEVENBERG: But again, not all of those
6 jobs are -- are with you, with this particular site.
7 Some of those jobs with Champion and B.H.I. there,
8 where you're getting jobs for other folks, it's not
9 necessarily on site here. They could be getting jobs
10 at other Champion jobs or --.

11 MR. BURRONI: Like -- like Tom said,
12 there's work all around the county, right. So even
13 the I.B.E.W. is helping. I.B.E.W. is looking at --
14 I'm sorry guys, taking the electricians, right, and
15 technicians, right. And so they can go to another
16 job site within Westchester County. Operating
17 engineers are doing the same. Carpenters are doing
18 the same.

19 The -- the -- the unions are being great
20 and -- and taking most of the U.W.A. people. And if
21 it's not Indian Point, it could be at another
22 position within Westchester County. We also have a
23 job fair in August, the Department of Labor is coming
24 down. And we'll see if anybody wants to do that.

25 MS. LEVENBERG: Thanks for that

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2 clarification. The other thing -- the other two
3 questions I had about, in -- in this whole
4 evaluation, you were only talking about the
5 decommissioning of units two and three. And the
6 whole schedule for unit one hasn't even been
7 incorporated into this yet?

8 MR. BURRONI: No.

9 MS. LEVENBERG: But there's a lot more work
10 to still be done --

11 MR. BURRONI: Yeah.

12 MS. LEVENBERG: -- for unit one to be --
13 decommissioned, right?

14 MR. BURRONI: Yeah. So then, the reason
15 for that is this. Is when unit two and when unit
16 three was shut down, we were able to characterize
17 these parts. So to -- to classify Alpha waste,
18 Bravo, Charlie waste, greater than Class C waste. We
19 weren't able to do that with unit one, right. It's
20 been shut down.

21 The head was tensioned, right. So we had
22 to get into the head, right, which we just recently
23 did to characterize the core. And then, that'll set
24 up the game plan as to how we disassemble the
25 internals within the unit one ball, actually, right.

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2 Once we strip out the ball, see, you're not
3 going to see a lot of buildings coming down because
4 we have to strip a lot of stuff outside -- inside the
5 buildings. Once that get stripped out, then we could
6 take the buildings down. And now we could start
7 putting together a plan for unit one once we get the
8 characterization study back.

9 MS. LEVENBERG: And is that -- can you just
10 clarify again, is that dependent on unit two and unit
11 three, unit one?

12 MR. BURRONI: No. Unit two and unit three
13 -- well, we, again, we're stripping in -- we're doing
14 the reactor segmentation.

15 MS. LEVENBERG: Right.

16 MR. BURRONI: Right. Which is the critical
17 path for both of those units. Plus, we're doing the
18 chemical cleaning of the steam generator tubes for
19 decontamination purposes, right. Again, it's
20 stripping the insides of these buildings before we
21 can take them down.

22 MS. LEVENBERG: But just again, to clarify,
23 there's plenty of work still to be done with unit one
24 decommissioning, the taking apart of unit one?

25 MR. BURRONI: Can you repeat that back?

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2 I'm sorry.

3 MS. LEVENBERG: There's plenty of work to
4 still be done with unit one --?

5 MR. BURRONI: There is -- there -- there'll
6 always be work.

7 MS. LEVENBERG: Okay. I wanted to just
8 make sure. And then, finally, in terms of the
9 release times, I think one of the peer reviews, and I
10 don't know, Dave, if you want to chime back in again
11 about this, mentioned that the better times to do the
12 release if you were to do the release would be when
13 the Hudson levels are high.

14 And right now, the ones that you would
15 ident -- the times that -- that have been identified
16 or not when the -- when the river would actually be
17 highest. So less dilution. So I don't know if you
18 could comment on that. Or Dave if you wanted to
19 chime in about that as well. I forgot to ask that
20 question earlier.

21 MR. LOCHBAUM: Well, this is Dave Lochbaum.
22 As I -- as I alluded to in my presentation, Holtec
23 and Entergy before them doesn't take credit for the
24 Hudson River flow. When they're calculating whether
25 they're meeting the E.P.A. drinking water standard,

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2 they just assume their own discharge flow, which they
3 control.

4 And in addition, the sampling that's done
5 is year-round. And the -- the sampling for tritium
6 hasn't shown that it varies significantly with the
7 river flow, high or low.

8 So I -- it is -- it was a comment made in
9 why, actually not a peer reviewer, somebody else, but
10 it's a valid comment, but I don't think it has that
11 big of significance in timing. If -- if you got a
12 choice, it'd be better to do it during high flow.
13 But during a low flow wouldn't be a show stopper.

14 MR. BURRONI: We'll control dilution with a
15 certain water pumps through the discharge canal.
16 Already done that.

17 CHAIR CONGDON: Of course. If the
18 discharge is only a couple hours based on Dave's
19 presentation earlier, is that right?

20 MR. BURRONI: Typically, on a batch, it's
21 18,000 gallons, about 120 Gpo and 150 Gpm pump.

22 CHAIR CONGDON: We could do the math. It
23 would take --.

24 MR. LOCHBAUM: 120 minutes.

25 CHAIR CONGDON: Okay. Yeah. Thank you.

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2 Couple hours. My point I guess, is -- and it's a
3 question. I mean, I think this question was a good
4 one. They were looking at flow in the river, I
5 believe, the comment.

6 But could we not also -- to Dave's point,
7 you're not considering the -- the dilution effect of
8 the river, but we know the tidal schedule. And could
9 you not time a two-hour discharge to coincide with
10 the tide going out?

11 MR. BURRONI: I'll have to take that back
12 to my manager.

13 CHAIR CONGDON: Right.

14 MR. BURRONI: I mean, we -- we -- we -- we
15 --.

16 CHAIR CONGDON: Senator Harckham needs to
17 take some credit for that one. I think that Senator
18 Harckham had a good question on that in a previous
19 meeting. You're right.

20 MR. BURRONI: I know what it'll take. It
21 will take four to --

22 MR. HARCKHAM: And I -- I yelled.

23 MR. BURRONI: -- five months. Right now --

24 CHAIR CONGDON: It's for --

25 MR. BURRONI: -- coming clear to me now.

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2 Sorry.

3 CHAIR CONGDON: I'm sorry. Go ahead.

4 MR. BURRONI: The unit two is the spent
5 fuel pool. It's going to take four to five months to
6 get that discharge -- to get it to a discharge,
7 right. But each batch is only a couple hours. Yeah.
8 But then, we have to wait also for P.C.B. We have to
9 verify concentrations of P.C.B.'s. That takes about
10 five days, I think also.

11 CHAIR CONGDON: I -- I had a clarifying
12 question for Assemblywoman Levenberg because I wasn't
13 -- and maybe it's for Rich. I'm trying to understand
14 the significance of the question on the amount of
15 work because there's a huge amount of work to finish
16 decommissioning on the entire site, right? We're
17 far, far, far from completing the work. So what is
18 the --

19 MS. LEVENBERG: Well, it's based on --

20 CHAIR CONGDON: -- what were --

21 MS. LEVENBERG: Yeah.

22 CHAIR CONGDON: What -- yeah.

23 MS. LEVENBERG: I was getting at that
24 because Holtec had sent a letter around to, I think,
25 to various bargaining units saying that if the

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2 discharge were to be stopped based on the
3 introduction of the legislation by Senator and
4 myself, that would disallow it. That there would be
5 a loss of, I think, 40 carpenter jobs and 60
6 operating engineer jobs. I believe that -- those
7 were the numbers.

8 CHAIR CONGDON: 40 carpenter and 60?

9 MS. LEVENBERG: And 60, yeah. And I -- I
10 just wanted to clarify because I -- I don't know, it
11 seems like Rich tonight you said, there's still
12 plenty of work. There's plenty of work so it didn't
13 work.

14 CHAIR CONGDON: I didn't see this letter.
15 I -- I don't know what you're talking about.

16 MS. LEVENBERG: Oh. Okay.

17 CHAIR CONGDON: I'm not aware of a letter
18 either, but I'd like to see it if --

19 MS. LEVENBERG: Sure.

20 CHAIR CONGDON: -- this exists.

21 MS. LEVENBERG: Happy to share that with
22 you.

23 CHAIR CONGDON: Yes.

24 MS. LEVENBERG: Yeah, absolutely. Yeah.
25 And then -- and then, the various groups had sent

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2 letters in opposition to the legislation based on
3 what they saw as a threat to their -- to their
4 workforce. And obviously, neither senator nor myself
5 is looking to roll back any jobs. We want to make
6 sure that jobs are protected.

7 And again, based on what we've been
8 hearing, certainly the conversation yesterday, the
9 conversation today, it seems like there's plenty of
10 work on the site for -- for many years to come for
11 many people. And if not on this site, then elsewhere
12 through the various subcontracted companies. So I --
13 that -- I thank you for clarifying that this evening.

14 MS. KNICKERBOCKER: But I -- I think -- and
15 -- and also continuing that, I -- I think if going
16 back for the pause, now, we all know Holtec has put
17 other facilities on a pause. So I mean, there might,
18 I'm not speaking for Holtec, but I'm just thinking
19 just, you know, there's only so much work.

20 Like, so if there's a pause, there's no,
21 you know, you could go forward to at some point but,
22 you know, if there's a pause and -- and you -- then
23 that's, you know, that was one of my concerns, if
24 there is a pause. Could it be four years, could it
25 be five years? I don't know.

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2 But the biggest concern is losing the
3 workforce that we have here that is dedicated,
4 they're experienced, they know the site better than
5 anyone else. So those are the big concerns, you
6 know, how we go forward here.

7 Did -- does, you know, does everything gets
8 stopped, goes on pause and there's only so much
9 interior work you can do. And the big part of the
10 project is demolition in the end. So you can't do
11 the demolition until you do the inside. See what I'm
12 saying?

13 MS. LEVENBERG: Sure.

14 MR. BURRONI: There's so much work that
15 could be done. But again, if we stop the discharge
16 rate, the whole sequence, right, gets changed. You
17 changed the whole sequence, you're going to have an
18 effect on resources. It's that simple.

19 MS. LEVENBERG: Well, I'm just -- .

20 MR. BURRONI: And then, what do I do with
21 rainwater or what do I do with snow?

22 MS. LEVENBERG: Yeah. I mean, just to
23 comment on that you had mentioned, that --

24 MR. BURRONI: No, did --.

25 MS. LEVENBERG: -- you know, I -- I'm going

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2 to respond. I am going to actually, just based on
3 what you had said. Again, yesterday when we were
4 talking originally, you wanted to discharge some
5 water from one spent fuel pools to get six feet down
6 so you could clean the sides of the pools, right? Is
7 that -- is that true?

8 MR. BURRONI: Yeah.

9 MS. LEVENBERG: And -- and -- and then,
10 that didn't happen. You agreed to delay that, but
11 the work didn't stop. You actually found a
12 workaround, you found another way to do that. So --.

13 MR. BURRONI: There's one instance, yeah.

14 MS. LEVENBERG: Okay. Well, I mean, again,
15 --

16 MR. BURRONI: How often can we do that?

17 MS. LEVENBERG: -- you -- you -- there --
18 there's alternatives that you've been able to find to
19 continue to move -- to move forward. So just as you
20 know, again, we're trying to find alternatives, to
21 find what is the safest for, you know, which I think
22 that was the first thing that you said, Mayor
23 Knickerbocker safest, right? That was something that
24 we were starting with the safest.

25 And then, we -- we wanted to do, you know,

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2 everything efficiently, but we wanted to start with
3 safest. So you know, if we're looking at what's
4 safest and finding that maybe, you know, there's
5 still questions about what is safest and you're able
6 to find alternatives to continue the work, then, you
7 know, that seems like a more productive approach than
8 just threatening to lay off workforce while the
9 public is trying to wrap their heads around this
10 process.

11 MR. BURRONI: I -- I -- I'm going to say
12 this and I -- this is the last time I'm going to say
13 it, right. We will have to totally change our
14 approach to decommissioning if we can't discharge to
15 the river. That will definitely have an effect on
16 resources. I can't --

17 MS. LEVENBERG: Immediately, I can't --

18 MR. BURRONI: -- I can't be --

19 MS. LEVENBERG: -- discharge the river ever
20 or can't discharge to the river in six months, one
21 year, I understand. 12 years or more?

22 MR. BURRONI: We can work with --
23 potentially, we can work with a timeframe, right?
24 Nobody's even asked me about that, right. We could
25 work on -- potentially work on a timeframe, right?

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2 But if we're not going to be able to
3 discharge to the river, I'm trying to be transparent,
4 right. I'm not trying to B.S. anybody. You're going
5 to have -- you're going to have an effect, excuse me,
6 on the overall decommissioning schedule of the
7 station. End of story.

8 CHAIR CONGDON: Dave Lochbaum --.

9 MR. BURRONI: And I can't be more clear
10 than that.

11 CHAIR CONGDON: Yeah. Dave Lochbaum has
12 had his hand up for a while. Dave, you had a
13 question?

14 MR. LOCHBAUM: Yes. On Rich -- Rich
15 Burroni's next to last slide there was some
16 information provided about safety and rem worker
17 exposures. I went to a nuclear regulatory commission
18 public meeting about six years ago and these kind of
19 factors were cited as very good leading indicators of
20 a plant that's having safety culture problems or work
21 control problems.

22 And so I guess my question would be, Rich,
23 could you sustain providing this information in
24 future updates because I think it's very insightful.

25 MR. BURRONI: Sure.

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2 MR. LOCHBAUM: Thank you.

3 MR. BURRONI: Thank you. I'll do that.

4 CHAIR CONGDON: Tom Carey?

5 MR. CAREY: Yeah. Just -- Rich, you
6 mentioned a job fair somewhere down the road.

7 MR. BURRONI: August.

8 MR. CAREY: What -- what -- can you explain
9 that, what -- what type of job fair are you going to
10 have?

11 MR. BURRONI: We're going to bring in
12 vendors. We -- I think we're going to need to also
13 bring in some other nuclear plants. That's what
14 Pilgrim did. We're going to try to mimic what
15 Pilgrim did, right.

16 MR. CAREY: What do you mean nuclear
17 plants? Nuclear workers?

18 MR. BURRONI: You know, Seabrook,
19 Millstone, those type of plants. See if they could -
20 - see if they want to hire some folks.

21 MR. CAREY: Okay. You want to take folks
22 from here to there?

23 MR. BURRONI: It would be people that would
24 want to stay in the nuclear industry, have a long-
25 term permanent position.

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2 MR. CAREY: All right. But not the
3 construction end, you're talking?

4 MR. BURRONI: No --

5 MR. CAREY: Okay.

6 MR. BURRONI: -- the -- A side guys.

7 MR. CAREY: Okay.

8 CHAIR CONGDON: John Sipos had a question.

9 MR. SIPOS: Rich, I think I heard you said
10 you had 290 -- I'm sorry, 690 badged workers now at
11 the site.

12 MR. BURRONI: Correct.

13 MR. SIPOS: And they are experienced and
14 familiar with the site, isn't that correct?

15 MR. BURRONI: Correct.

16 MR. SIPOS: And if there was a pause and
17 you had to furlough some of them and -- and they were
18 no longer at the site, that experience would walk out
19 the door, would it not?

20 MR. BURRONI: Absolutely.

21 MR. SIPOS: And when we all together agreed
22 for the joint proposal for a prompt, safe, and
23 efficient decommissioning, that was one of the
24 considerations that we all took into account. Isn't
25 that correct?

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2 MR. BURRONI: Absolutely.

3 MR. SIPOS: The idea to maintain a trained,
4 experienced, dedicated professional workforce like
5 you have.

6 MR. BURRONI: Yes, sir.

7 MR. SIPOS: And if there ever came a time
8 that decommissioning was to start again, it would be
9 difficult to find such a trained, experienced, and
10 professional workforce, wouldn't that be?

11 MR. BURRONI: We would've to go through
12 retraining all over again. MR. SIPOS: And that would
13 be detrimental for decommissioning and site
14 restoration, wouldn't it?

15 MR. BURRONI: Yes, sir.

16 MR. SIPOS: Thank you.

17 CHAIR CONGDON: I -- I -- that was a --
18 thank you, John. And thank you. I -- I am reminded
19 of our sort of 2017 meetings of the closure task
20 force and there was a lot of angst and concern and
21 uncertainty.

22 I mean, the town, the village, school
23 district, the loss of tax revenue and the loss of
24 jobs was very much a major -- major concern in the
25 community. It took years of our meetings at the task

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2 force to -- to develop some transition plans.

3 And one of the things that, you know, we
4 talked about for the workforce was the fact that we'd
5 be moving into decommissioning and that there'd be
6 opportunities for the existing employees. And so I -
7 - I think that was an important -- an important
8 point.

9 MS. LEVENBERG: Tom, I know you're going to
10 end soon --

11 CHAIR CONGDON: Yeah.

12 MS. LEVENBERG: -- but just one last point
13 on that.

14 CHAIR CONGDON: Yeah.

15 MS. LEVENBERG: Which is the other thing,
16 Rich, that you had mentioned yesterday is that you --
17 you needed to bring a lot of people in -- out of
18 retirement to -- to do some of this work.

19 So I just wanted to clarify that people
20 came in out of retirement. It's not like you were
21 training necessary new people. You were taking
22 people out of retirement to work here, so.

23 MR. BURRONI: You're going to take a
24 handful, yeah.

25 MS. LEVENBERG: Okay.

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2 CHAIR CONGDON: And some of those folks
3 were, you know, retiring with the phase down of
4 operations. And then, were pulled back in for
5 decommissioning, which is sort of -- that was like
6 one of the things we talked about with the closure
7 task force was, you know, there are people in the
8 community that know this plant and know the -- know
9 the work. And that was -- that was excellent. Rich
10 Webster, I have a question for you too. Like, well,
11 you know when we --.

12 MR. WEBSTER: Sure.

13 CHAIR CONGDON: Okay. When we, you know,
14 when we were back, you know, in that 2017 timeframe,
15 when we did the closure, right, that was in the
16 context where we were settling longstanding
17 litigation that the state had brought against
18 Entergy, that Riverkeeper was a party in the
19 litigation.

20 There was opposition to license renewal
21 prior to the closure agreement, right? Entergy
22 wanted to continue operating, you know, with another
23 20 years from an environmental standpoint on the
24 river standpoint. What is Riverkeepers view of sort
25 of the closure agreement and the effect that that had

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2 on the river?

3 MR. WEBSTER: Right. Well, first of all, I
4 want to say actually on that, let me, I -- I've got a
5 question for Rich, but let me just answer to Tom's
6 question first, which is, first of all, I think what
7 people may not know is that John Sipos here holds the
8 record for not losing in front of the N.R.C. He
9 litigated a relicensing proceeding for many, many
10 years.

11 I was hanging around in the background
12 litigating one -- one or two things for Clearwater at
13 the time actually. And Riverkeeper were litigating
14 their contentions. And I say, John did an
15 exceptional job using a process that was extremely
16 arduous.

17 I think John once described it as not for
18 the faint of heart. I described it as like -- it's
19 like a game of chutes and ladders, except there are
20 no ladders, right? You say the wrong thing, you are
21 out.

22 CHAIR CONGDON: Uh-huh.

23 MR. WEBSTER: Okay. So -- so that -- that
24 was an extremely good result achieved with a
25 partnership of the State and community groups. Oh,

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2 well, so these extremely good results from my
3 perspective because the -- the cooling water
4 discharge, water treatment discharge, which Entergy
5 did not want to improve was having a huge effect on
6 the river.

7 And then, of course, we had the
8 radiological risks, which are much reduced already as
9 a result of the -- of the closure. And we are over
10 time eliminating more risk.

11 So we are in a much better position than we
12 were before, and I don't think people should lose
13 sight of that. But that doesn't mean to say that
14 life's perfect, right?

15 CHAIR CONGDON: Right.

16 MR. WEBSTER: It means that we've made a
17 lot of progress. I mean, we keep making progress and
18 if we keep working together, I think we can make that
19 progress.

20 So now, Rich, my question for you is, you
21 said segmentation of both vessels is considered the
22 second critical path, right? So if I understand it,
23 the critical path is the one that could delay the end
24 result, right?

25 MR. BURRONI: Say it again.

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2 MR. WEBSTER: The critical path is the --
3 the task that could delay the end result.

4 MR. BURRONI: Correct.

5 MR. WEBSTER: So that's the second critical
6 path. So what's the first critical path?

7 MR. BURRONI: Fuel -- fuel on pad.

8 MR. WEBSTER: Fuel on pad. Okay. So -- so
9 discharging this water is not on the critical path
10 then?

11 MR. BURRONI: Well, I'll say this, right.
12 Fuel on pad, right, also requires me to empty the
13 pools.

14 MR. WEBSTER: Why?

15 MR. BURRONI: Right. Why do I have to keep
16 the --?

17 MR. WEBSTER: No, I.P. two, the fuels on
18 the pad.

19 MR. BURRONI: Let me -- let me finish. All
20 right. So we drain the pool, we coat the -- we coat
21 the liner and then we could start taking that liner
22 apart for segmentation. I -- I -- we get done with
23 segmentation, I drain that and I could start taking
24 the reactor cavity apart.

25 MR. WEBSTER: Right. But so -- but -- but

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2 fuel on pad, you get the fuel on the pad. That --
3 that's what you've already -- you've already achieved
4 fuel on pad at I.P. two, right?

5 MR. BURRONI: That's correct.

6 MR. WEBSTER: And the fuel pool is still
7 full, right?

8 MR. BURRONI: Yeah. And that's -- that's
9 going to get discharged in September.

10 MR. WEBSTER: I mean, but -- but what my
11 point is, it's not on the critical path. So if you
12 delayed this discharge, it wouldn't actually delay
13 the job. Is that correct?

14 MR. BURRONI: Would it delay? I -- again,
15 you're asking me to look at a sequence on the --

16 MR. WEBSTER: No -- no.

17 MR. BURRONI: -- you're -- let me finish
18 the sentence. All right. You're asking me if we
19 don't discharge, is it going to change. I'm telling
20 you this, right. If I can't discharge to the river,
21 it changes our game plan on decommissioning.

22 MR. WEBSTER: I understand that, but --

23 MR. BURRONI: I keep telling you this and I

24 --

25 MR. WEBSTER: And I've heard you, Rich.

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2 MR. BURRONI: -- that -- that's going to be
3 that.

4 MR. WEBSTER: I've heard you.

5 MR. BURRONI: I know you heard me, but you
6 keep asking me the same question.

7 MR. WEBSTER: No, I don't. Because you've
8 identified two critical paths. Neither of those
9 critical parts is discharge of this water.

10 MR. BURRONI: Rich.

11 MR. WEBSTER: As one Rich to the other, you
12 know.

13 MR. BURRONI: I'm sorry.

14 MR. WEBSTER: As one Rich to the other.

15 MR. BURRONI: As one Rich to the other, all
16 right. And this is not personal. I know it's
17 professional, right. My -- my point here is this, if
18 I can't discharge, it's just -- it's going to change
19 the whole game plan on how Holtec joined with the
20 whole State organizations up to the Attorney
21 General's Office, right, on a joint proposal on
22 decommissioning the units.

23 Part of that joint proposal includes
24 discharge to the river. Everybody signed off on
25 that, including Riverkeeper. Let's just be honest.

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2 Okay.

3 MR. WEBSTER: No. We -- we've -- I -- we --
4 -- we've -- we've already agreed to disagree on that
5 point, okay.

6 MR. BURRONI: I'll show you the -- want me
7 to show you the -- I'll show you the signature.

8 MR. WEBSTER: I -- I -- I --

9 MR. BURRONI: Let's follow up. Let -- we
10 can side -- side by this.

11 CHAIR CONGDON: We -- we -- we need to move
12 on.

13 MR. WEBSTER: Yeah.

14 CHAIR CONGDON: We're -- we're close to
15 finishing on time.

16 MR. BURRONI: I like this bantering back
17 and forth.

18 CHAIR CONGDON: I know you do. I know you
19 do.

20 MR. BURRONI: The Bickersons. I enjoy it.

21 CHAIR CONGDON: Tom, can you move on to the
22 next slide, please? Wrapping up. So as -- as I know
23 there's tremendous interest in -- in these issues as
24 evidenced by the attendance tonight and want to, I --
25 I saw some signs going up with some questions and

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2 some observations, which we welcome. We welcome
3 written comments and questions at any time through
4 our website.

5 But we're -- we're working on a public
6 forum where there will be an opportunity to ask
7 questions and get answers live from N.R.C. and the
8 U.S.E.P.A. who will be joining us in Cortland on July
9 11th. We will administer the public forum as we have
10 in the past with an administrative law judge.

11 Questions, we request be submitted in
12 advance so we can organize them and ensure we have
13 the right people to answer them and -- and have a
14 robust discussion. The way it has worked well in the
15 past is the individuals that submitted the questions,
16 get an opportunity to come up to the mic during the
17 public forum.

18 The question will be read, it will be
19 answered, then that individual can ask follow-up
20 questions. We found that this is a great opportunity
21 for meaningful public engagement. It's not to say
22 that public statement hearings are not meaningful, we
23 welcome that too. We've used that at almost every
24 one of our D.O.B. meetings.

25 We've also held standalone public statement

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2 hearings. And the standalone public statement
3 hearing we held in April was focused on this water
4 discharge issue. And given the N.R.C. jurisdiction
5 there, we've -- we created a transcript of that
6 public statement hearing and we submitted to the
7 N.R.C.

8 But we are grateful that N.R.C. has
9 accepted our invitation to come back to the community
10 July 11th. Wanted to advertise that loudly and
11 welcome everyone's participation. Next slide,
12 please. I think we missed a couple of the other
13 slides. Going back, yes.

14 Submitting comments, I mentioned, there's
15 written comment on our website. Next slide. We
16 really encourage folks to sign up at our website. It
17 -- it -- any time a document is posted on our
18 website, if you are signed up, you will get
19 notification of that new document.

20 N.R.C. said they're very transparent. I
21 think our D.O.B. is the most transparent governmental
22 body I've been part of. I've worked in government 20
23 years. Guest presenter's presentations are also put
24 up on this website.

25 Dave Lochbaum does slide shows, slide

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2 decks, presenting new information to us on a regular
3 basis without even a request. In some instances,
4 there's something that sparks his interest, he sends
5 us a -- a -- a slide deck. We post all of his
6 material that he submits to the D.O.B., we post on
7 this website.

8 And so I really encourage folks to -- to
9 acquaint themselves with the pre -- with -- with the
10 website and to subscribe to the service list. We
11 already talked about the public forum and now we can
12 adjourn. And thank you all very much.

13 MR. BURRONI: Thank you.

14 CHAIR CONGDON: Appreciate it. I'm sorry.
15 Oh, I'm sorry. Ms. Knickerbocker.

16 MS. KNICKERBOCKER: I just want to say one
17 thing. Thank you, Tom. And Tom, I -- I -- I want to
18 thank you because these are difficult meetings to
19 have. You have different factions here, different
20 agendas and it's difficult to have meetings like
21 this.

22 But what I'd like to say is the thank you,
23 because the expertise that this, you know, D.O.B.
24 board has. I mean, you know, we have the D.E.C.
25 here. So these are experts, professionals, and for

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2 us to make decisions, we need to rely on our experts.

3 So we have the N.R.C., I always -- I've
4 worked with you guys for many, many years, you've
5 always been professional. I respect you. You have
6 the expertise, you have the knowledge. So we need to
7 use that knowledge. We have the E.P.A. that spoke
8 last time.

9 So, you know whether you want to agree with
10 what the experts are saying, the data is there, the
11 facts are there. So for us on this board, we really
12 need that information to be able to make the right
13 decisions. So thank you to all our experts.

14 Dave Lochbaum, you are -- you're
15 invaluable. You, I -- I mean, thank God he is with
16 us. He's an independent technical expert. And Tom,
17 you have done a great job. You really, you know,
18 move these meetings along and bring in the experts
19 and -- and have the discussions.

20 CHAIR CONGDON: Well, thank you.

21 MS. KNICKERBOCKER: So thank you everyone
22 and I apologize for the people that had to stand. It
23 was a -- I guess, it was a sold-out meeting.

24 CHAIR CONGDON: It was a good closing.
25 Thank you very much. Yes.

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(The meeting concluded at 9:09 p.m.)

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2 STATE OF NEW YORK

3 I, DANIELLE CHRISTIAN, do hereby certify that the
4 foregoing was reported by me, in the cause, at the time
5 and place, as stated in the caption hereto, at Page 1
6 hereof; that the foregoing typewritten transcription
7 consisting of pages 1 through 196, is a true record of all
8 proceedings had at the hearing.

9 IN WITNESS WHEREOF, I have hereunto
10 subscribed my name, this the 22nd day of June, 2023.

11

12 DANIELLE CHRISTIAN, Reporter

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