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2                   that we have responded to in writing that we put on  
3                   the D.O.B. website. And that doesn't include the  
4                   questions that were submitted as part of this public  
5                   forum. We're going to get to as many of those  
6                   questions as we have time for.

7                   But as in the past, we will endeavor  
8                   to answer all of the questions that were submitted  
9                   and post those answers in writing in the coming weeks  
10                  to our website. Next slide.

11                  So as I said, our hallmark is really  
12                  that, you know, through this information exchange,  
13                  having our meetings publicly -- having the regulatory  
14                  agencies talk about our work in a transparent way and  
15                  then giving opportunity for the public through public  
16                  statement hearings and public forums is to really  
17                  have a feedback loop and -- and -- and talk and  
18                  engage with the community and try to be responsive to  
19                  the community interests.

20                  Just to list a few things that have  
21                  come about really from that stakeholder involvement,  
22                  there was a desire to move up the number of meetings  
23                  that we were having from roughly three a year to now  
24                  just about every other month. We've improved our  
25                  hybrid meeting platform.

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2 Many of you have been at this with us  
3 for -- for many of the meetings know that we had a  
4 number of technical glitches with earlier platforms  
5 and -- and we've really focused on improving that  
6 process. We've overhauled our website to improve  
7 navigability.

8 There is a wealth of information on  
9 our website, all the documents, regulatory documents,  
10 correspondence, all of the meetings that we've held.  
11 They're meeting -- both meeting transcripts and video  
12 archives of all of our previous meetings and public  
13 forums.

14 We were also listening to the public  
15 when we changed the format to invite from time to  
16 time community guest speakers and as well as bring in  
17 our federal agency partners to regularly present.

18 To date, we've had a number of guest  
19 presentations, a member -- leading member of the  
20 community, Courtney Williams, another leading member  
21 of the community, Tina Volz-Bongar, Michelle Lee, Dr.  
22 Catherine Falvo, Richard Kuprewicz, an independent  
23 pipeline expert, the Nuclear Regulatory Commission,  
24 of course, the E.P.A., Pipeline Hazardous Materials  
25 Safety Administration, and the Department of Energy

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2 have all been guest presenters from previous  
3 meetings.

4 We also certainly want Holtec and from  
5 time to time the owner of the pipeline to also come  
6 before us, give us updates from their points of view.  
7 The activities that go on with Holtec have been  
8 really a -- a critical piece of these meetings.

9 Having Holtec here answering the  
10 questions of our decommissioning oversight board  
11 members, the regulatory agency, I think has been  
12 incredibly important as part of our oversight  
13 function, but also in the information sharing that is  
14 so important to us. Next slide.

15 So again, through the -- through the  
16 information exchange, we -- we -- we have identified  
17 gaps that we felt were important for the state to  
18 step in and fill where we could and where the federal  
19 government wasn't able to or wasn't filling.

20 So as I said, when the Public Service  
21 Commission originally approved the sale from Entergy  
22 to Holtec, we were able to include a number of public  
23 interest conditions, some of which will be discussed  
24 later in the public forum.

25 For example, we required financial

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2           assurances protecting the decommissioning trust fund.  
3           We required specific timeframes by which they had to  
4           move the spent fuel to dry cask storage and other key  
5           public interest provisions. We have discussed issues  
6           that merited agency -- state agency submission of  
7           comments to the Nuclear Regulatory Commission.

8                   For example, Holtec has requested a  
9           number of license exemptions that they believe apply  
10          to a decommissioning site. Many of the regulations,  
11          they have argued, really are only applicable to an  
12          operating nuclear plant. So they've submitted  
13          requests for exemptions.

14                   The state has submitted comments  
15          opposing those license exemptions. The N.R.C. has to  
16          date not acted on those. Also, the N.R.C. pulls the  
17          resident inspectors from a power plant when it ceases  
18          operations. This is to reflect the reduced risk at  
19          the site, which we agree the risk has reduced at the  
20          site.

21                   But that was a concern that was  
22          clearly articulated by residents in the community  
23          that having no resident inspector on site on a day-  
24          to-day basis seemed to prevent or seem -- seemed to  
25          create a new gap in regulatory oversight.

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2 The state then stepped in and hired a  
3 resident inspector that works out of Holtec offices  
4 is on site daily. And so that's eyes and ears that  
5 the state now has on the operations of  
6 decommissioning. And to the extent there are issues  
7 raised, they can raise them to relevant regulatory  
8 jurisdictions, whether that be the N.R.C., the D.E.C.  
9 or the state.

10 A huge issue early on in, you know,  
11 our work as a D.O.B. was in acknowledging the co-  
12 location of gas pipelines near the Indian Point site.  
13 There was a lot of controversy around the siting of a  
14 new pipeline. There were pipelines that were long in  
15 existence that do crisscross the facility.

16 And so the state had raised some  
17 concern about when decommissioning commences that  
18 there needed to be good protocols established to  
19 ensure the safety and integrity of those pipelines.  
20 And you get that through a number of things,  
21 including physical protections of the pipeline that  
22 protect the -- the pipe from heavy load crossings and  
23 strong inter corporate communications between owners  
24 of those facilities.

25 And we established a -- a memorandum



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2           of understanding that guides those communications  
3           between the companies so that they're regularly  
4           meeting, discussing each other's operations. And we  
5           at the Department of Public Service actually convene  
6           quarterly meetings of Holtec and enter -- I'm sorry,  
7           of -- of Enbridge to ensure that that communication  
8           is regular and thorough.

9                   Another concern raised through these  
10          meetings has been the migration of potential dust  
11          that could come from the site, especially during  
12          heavy demolition, which really has not yet commenced.  
13          But really any of the decommissioning activities that  
14          could generate dust.

15                  When we considered the issues  
16          associated with that -- first of all, N.R.C. rules  
17          prohibit dust leaving the site. But to the extent  
18          that there's not eyes and ears on the site 24/7,  
19          having our resident inspector was a key provision  
20          that helps to ensure that that remains the case.

21                  But secondly, there's actually a local  
22          regulatory role and the village is a member of the  
23          decommissioning oversight board. They actually have  
24          to issue building permits for construction or  
25          demolition of buildings in the village, that includes

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2 on the site of Indian Point.

3 So also, Department of Environmental  
4 Conservation, which is another member of the D.O.B.,  
5 has regulations that guide the public nuisance that's  
6 created by dust and other types of activities at  
7 facilities like a cleanup site.

8 So we requested two of the members of  
9 the D.O.B -- and again, one of the roles of the  
10 D.O.B. is to have the different entities coordinate  
11 and -- and -- and communicate their various roles and  
12 responsibilities.

13 But by having that issue raised by the  
14 public at these meetings, and then discussing what we  
15 could do differently in terms of the village's role  
16 in coordination with the state D.E.C. role, we fold  
17 the D.E.C. regulations into the village demolition  
18 permitting process.

19 So that there's now a dust migration  
20 program that is incorporated right into the  
21 regulations at the local level. So in addition to  
22 the federal level, in addition to the state having a  
23 resident inspector, and then having the building  
24 demolition permit wrap in those conditions, that was  
25 important.



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2           done in our previous public forums, we reached out  
3           and -- and requested to the public through a meeting  
4           notice, questionnaires to submit questions in advance  
5           so that we could pull the right subject matter  
6           experts together to answer those questions.

7                   We've done so and we're really pleased  
8           to have with us today a number of subject -- subject  
9           matter experts based on the questions that were  
10          submitted. With us, we have Bruce Watson, the  
11          special assistant, Division of Decommissioning,  
12          Uranium Recovery and Waste Programs at the N.R.C.

13                   Paul Krohn, Director, Division of  
14          Radiological Safety and Security, N.R.C. Tony  
15          Dimitriadis, Branch Chief Decommissioning, ISFSI and  
16          Reactor H.P. Branch, N.R.C. Rick Ruvo, Director of  
17          Air and Radiation Division, Region 2 E.P.A.

18                   Lisa Burianek, Deputy Bureau Chief of  
19          the Environmental Protection Bureau of the Attorney  
20          General's Office. Josh Tallent, an Assistant  
21          Attorney General at the O.A.G. Rachel Adler, Project  
22          Coordinator of Workforce Development, Department of  
23          Labor.

24                   Alex Damiani, Director of the Bureau  
25          of Environmental Radiation Protection at Department

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2           of Health -- State Department of Health. And Susan  
3           Peer -- Spear, the Deputy Commissioner, Department of  
4           Emergency Services, Westchester County.

5                   Virtually, we have a number of folks  
6           with us as well. Lynne Jennings, Supervisor, Water  
7           Permits Branch, Region 1 E.P.A. Virginia Wong,  
8           Supervisor, Clean Water Regulatory Branch, Region 2  
9           E.P.A. Christine Ash, Acting Deputy Director, Water  
10          Division, Region 2 E.P.A. And a number of state  
11          agency representatives as well.

12                   So general logistics. In-person  
13          panelists, please remember to use your mic. That is  
14          the way that the folks who are watching us virtually  
15          can hear you and the folks in the room through our  
16          speaker system.

17                   Panelists joining by Zoom, please keep  
18          your mics muted unless speaking. For the Zoom  
19          participants, please reserve the chat feature for  
20          reporting technical issues. Only questions captured  
21          in the Q&A field are able to be saved for review.

22                   And I mentioned before, we've -- we've  
23          responded to questions. Some of those questions come  
24          through this Q&A function. So to the extent you're  
25          watching virtually, the discussion triggers a

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2 question, put it in the Q&A.

3 We document that, we give it to our  
4 subject matter experts, and that gets posted with our  
5 responses to other questions we get in the way of  
6 public comment. Virtual participants are encouraged  
7 to use custom video layout features to enhance the  
8 view of speakers and presentation content.

9 Go to support.zoom.us to learn how.  
10 All panelists and participants indicate your name  
11 before speaking. Next slide. So we've taken all the  
12 questions, we've organized them by topic area. The  
13 pre-submitted questions will be read aloud for the  
14 panelists to respond.

15 We're joined by an Administrative Law  
16 Judge from the Department of Public Service, Anthony  
17 Belsito, sitting behind me. Anthony has the slide  
18 deck controls with the questions. He'll call up the  
19 questioner, read their question, and then the  
20 questioner can stay at the mic to ask a follow-up  
21 question to the expert panel.

22 In order to afford all individuals an  
23 opportunity for questions to be heard, Tony may ask  
24 that some discussions be paused until future  
25 meetings. Time permitting additional questions will

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2 be addressed.

3 The public forum will conclude at 9  
4 p.m. tonight. Questions not addressed during the  
5 meeting will be answered in writing. That includes  
6 all the questions that were submitted prior to  
7 tonight's forum. Some individuals submitted a lot of  
8 questions, and -- and we will endeavor to answer all  
9 of them, as I said earlier.

10 And some individuals asked a lot of  
11 questions, some individuals just posed the one  
12 question. Every individual that submitted questions,  
13 we intend to call up to the mic, time permitting.  
14 We've organized the questions by topic area, so some  
15 of the questioners may get called up to the mic  
16 multiple times.

17 And roughly speaking, if questioners  
18 posed more than two or three questions, we are  
19 endeavoring to get to roughly the same percentage of  
20 the questions from every speaker -- from every  
21 questioner.

22 So someone that submitted 100  
23 questions, you'll see tonight at the mic more than  
24 others. But we believe that some of those  
25 questioners with a long list of questions are





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2           to Tony, who will be calling up the questioners,  
3           again, with posing the question. And one of us on  
4           the panel will -- will field the questions.

5                   A.L.J. BELSITO: Thank you, Tom. I'll  
6           just remind everybody that we're here to answer  
7           questions and get as many questions answered as  
8           possible. So during follow up, if folks start to  
9           offer more of an opinion or a statement rather than  
10          asking a question, I will encourage you to try to get  
11          to that question quickly, again, so we can get as  
12          many answered as possible.

13                   So the first set of questions are  
14          administration. We have for questioners, Courtney  
15          Williams, I believe is in-house, and Susannah  
16          Glidden, who's virtual. The first question, why are  
17          you running the D.O.B. in an authoritarian,  
18          undemocratic way, shutting out public influence, not  
19          meeting our request for independent safety, health,  
20          and emergency preparedness experts, not meeting our  
21          request for frontline community representative on the  
22          D.O.B. and open chat during meetings.

23                   And the second question, can Dave  
24          Lochbaum prepare takedown -- a takedown presentation  
25          of Holtec's dry casks like he did for water tanks, or







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2 at Indian Point. Next question is, will there be a  
3 discussion of hardened on-site storage?

4 We have had a number of discussions  
5 about on-site hardened -- hardened on-site storage.  
6 There have been a number of discussions on that  
7 front. Richard Webster, another of our D.O.B.  
8 members, I think is attending virtually tonight, has  
9 posed a number of questions regarding that.

10 We've had a robust discussion. I'm  
11 sure there will be additional discussions. There are  
12 a number of questions that were fielded by Holtec and  
13 by Dave and others on that topic that are available  
14 in our Q&A on our website. Okay, Tony, back to you.

15 A.L.J. BELSITO: Do we have Susannah  
16 on the line for a follow-up question? Go ahead, Ms.  
17 Glidden.

18 MS. GLIDDEN: Yes, thank you.  
19 Susannah Glidden here. Well, it's good that you  
20 finally got to monitoring the air near the schools,  
21 but you go to many lengths to manufacture your self-  
22 promoting propaganda that try to deny you created an  
23 un-level playing field with a one-sided presentation  
24 by industry and oversight agencies.

25 Rather than honoring the public's

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2 major demands of having a community representative on  
3 the board and inviting independent experts on health,  
4 safety, and emergency preparedness to present at the  
5 D.O.B. Now, what we millions of New Yorkers want at  
6 Indian Point --

7 A.L.J. BELSITO: Ms. Glidden, do you  
8 have a follow-up question?

9 MS. GLIDDEN: Yes, here it is.

10 A.L.J. BELSITO: Thank you.

11 MS. GLIDDEN: What we want at Indian  
12 Point is for Governor Hochul to immediately sign the  
13 Save the Hudson Bill. Pro -- prohibits Holtec  
14 dumping radioactive wastewater into the Hudson, and  
15 we want established up to a two-year moratorium for  
16 independent testing of the wastewater and the river's  
17 ecosystem, a study on how to safely store the  
18 wastewater on site and declaring Indian Point a  
19 federal superfund site with health protective cleanup  
20 standards.

21 That is what I ask if the D.O.B. will  
22 establish.

23 A.L.J. BELSITO: Thank you.

24 MR. CONGDON: I can take that and John  
25 or the A.G.s Office can chime in, but I will just

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2           start by acknowledging the statements. So thank you,  
3           Susannah. There are many points of view in this  
4           community, and we've discussed before at previous  
5           meetings the representation on the D.O.B.

6                   We believe that through the  
7           democratically elected individuals who sit on the  
8           D.O.B. that they -- they represent all points of view  
9           in their communities and they do it well. They  
10          respond to the community interests and that feeds  
11          into the D.O.B. process.

12                   As to whether the D.O.B. would declare  
13          I.P. a superfund site or have influence over whether  
14          or not the governor signs the bill, that's beyond the  
15          D.O.B. We're here to be the forum for information  
16          exchange. I can assure you that the transcript and  
17          the meetings are certainly something that the  
18          governor's office is aware of.

19                   They're fully engaged on the issues.  
20          I think they're doing their due diligence, but at  
21          this point, along with the hundreds of other bills  
22          that passed last month through the legislature,  
23          they're still doing their due diligence on that  
24          legislation. But John or -- or A.G.s Office, you  
25          want to add to anything?

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2 MR. SIPOS: Yes, I -- I would just add  
3 for perspective from the follow-up question that the  
4 state of New York, its executive agencies, its  
5 attorney general's office where I worked for many  
6 years has been at the forefront of advocating on  
7 behalf of New York state residents.

8 I can personally tell you, Ms.  
9 Glidden, that for 10 years, I, you know, and my  
10 colleagues at this table worked tirelessly on the  
11 Indian Point license renewal. So you're entitled to  
12 say that, you know, we are engaged in propaganda or  
13 we are one-sided.

14 From where I sit and from the  
15 experience that I have lived personally, I have to  
16 share my view that I disagree and reject your  
17 characterization that the D.O.B. is engaged in  
18 propaganda and is one-sided. We are out there, state  
19 agencies representing the public interest and the  
20 interest of New Yorkers, and we do it fairly,  
21 objectively every day.

22 And just from a, you know, fairness  
23 doctrine perspective, we are fair and balanced, but  
24 we are also objective and informed and we will  
25 continue to do so. Thank you.



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2 MS. GLIDDEN: We object. We don't  
3 agree with you, Mr. Sipos, at all.

4 A.L.J. BELSITO: Okay. The next  
5 topic.

6 MR. CONGDON: Tony, before you move  
7 on, I believe that Courtney Williams has joined via  
8 Zoom. So if she has a follow-up question, you can  
9 give her an opportunity. And before you do move on,  
10 as part of my introduction, I should have made  
11 crystal clear that this is a public forum.

12 It's not a meeting per se of the  
13 Decommissioning Oversight Board. But our  
14 Decommissioning Oversight Board, most of them are in  
15 attendance, either in person or virtually, including  
16 Assembly Member Levenberg, Catherine Borja, Deputy  
17 Supervisor, Senator Harckham, Village Mayor Bill  
18 Smith and others via Zoom.

19 So I wanted to make sure I introduced  
20 the D.O.B. members who are here and listening. Thank  
21 you.

22 A.L.J. BELSITO: Ms. Williams, did --  
23 did you have a follow-up question?

24 MS. WILLIAMS: Yes. So my follow-up  
25 then would be, will the D.O.B. be asking Dave to do a

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2           presentation on Holtec's dry casks and hardened on-  
3           site storage and a presentation on who makes the call  
4           and what advocacy the state is doing to make sure  
5           that the way that the fuel is stored at Indian Point  
6           is as safe as possible versus what makes Holtec the  
7           most money by buying their own casks?

8                   MR. CONGDON: I'm hearing that as a  
9           request that we do ask Dave to make a presentation at  
10          a future D.O.B. meeting and we can take that under  
11          advisement and discuss with Dave that possibility. I  
12          think it's very possible.

13                   MS. WILLIAMS: And can we get a  
14          presentation on, you know, what advocacy the state is  
15          doing to ensure the best possible method of storage?  
16          And I know that we've gotten report backs from the  
17          work you all are doing advocating with the N.R.C. for  
18          different things.

19                   So, you know, how can we advocate that  
20          the N.R.C. put requirements in place so that  
21          companies -- decommissioning companies like Holtec,  
22          can't just use their own materials to make themselves  
23          -- like, pay themselves from the trust fund and  
24          instead are using the best possible products on the  
25          market that ensure public safety and environmental

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2 safety?

3 MR. CONGDON: Thanks Courtney. I  
4 think this -- I -- I alluded earlier to one thing the  
5 state is -- is looking into further, which is a  
6 recent I.G. report on N.R.C. inspection activities  
7 pertaining to dry casks. And so we'll have some  
8 follow up at our next meeting in September to discuss  
9 that further.

10 I think should Dave prepare some  
11 presentations on dry cask storage and hardened on-  
12 site storage, that there would be opportunity for  
13 further D.O.B. discussions at that point. I'd also  
14 consider, you know, in a future meeting inviting the  
15 N.R.C. to discuss their oversight as well.

16 And they're here. So I turn to them  
17 to see if you want to add anything to the question.

18 MR. KROHN: Sure. Can you hear me,  
19 Courtney?

20 MR. CONGDON: You have to get closer  
21 to the mic.

22 MR. KROHN: Can you hear me?

23 MS. WILLIAMS: Yes, I can. I was mute  
24 -- re-muted.

25 MR. KROHN: Yeah. Okay. My name is

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2 Paul Krohn. I'm a director at the N.R.C. The folks  
3 in my division have oversight of dry cask inspection.  
4 So I just want to give you some high level  
5 perspectives.

6 In order for Holtec or any other  
7 licensee to use a cask, they have to use an N.R.C.  
8 approved design. So what does that mean? It means  
9 we've spent a great amount of engineering analysis  
10 looking at these casks to make sure they're robust,  
11 they're put together properly. We inspect the supply  
12 chain for components that go into them. And somebody  
13 like Holtec can only use a licensed cask. So that  
14 what we call safety evaluation review is available  
15 publicly, right? So you can see the detailed level  
16 of analysis we do.

17 It includes all sorts of different  
18 external scenarios, severe weather events, and it  
19 describes numerous things. So we can present more  
20 detail on that later, but that is all publicly  
21 available. And we'll be answering some questions on  
22 dry casks later. Thank you.

23 A.L.J. BELSITO: Thank you. The next  
24 topic is workforce. The questioner is Elizabeth  
25 Castaldo. The question is, are there any available

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2           job retraining programs for former employees at  
3           Indian Point to retrain them on working with solar or  
4           wind energy equipment?

5                   MS. ADLER: Hi, Rachel Adler, New York  
6           State Department of Labor. Yes, the New York State  
7           Department of Labor, in partnership with NYSERDA and  
8           other agencies, is launching the Office of Just  
9           Energy Transition, known as O.J.E.T. That will --  
10          this office will connect workers with opportunities  
11          of quality jobs, upskilling, and training with focus  
12          on servicing those who are traditionally  
13          unrepresented, especially within disadvantaged  
14          communities.

15                   The office is in the process of being  
16          set up and engaging various stakeholders that include  
17          labor, businesses, other agencies, SUNYs, community  
18          colleges, BOCES, and vocational training schools.  
19          Beginning next year in 2024, it is anticipated this  
20          office will oversee a fund of up to 25 million  
21          dollars of annual for workforce training and  
22          retraining programs to prepare workers for employment  
23          in the renewable fields.

24                   NYSERDA has also dedicated more than  
25          170 million dollars in funding to support clean

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2           energy workforce and development trainings.  
3           Additionally, there are websites that are part of the  
4           written response that will show everything that's  
5           involved within those training programs.

6                   But I don't really want to read out  
7           the website U.R.L.s because they don't have short,  
8           like, back slashes. The D.O.L. also offers several  
9           training funds, including the Apprenticeship  
10          Expansion Grant, for programs outside of building and  
11          construction trades.

12                   That process just closed on June 30th,  
13          but we are expected to launch the new round for 2024,  
14          and we also have additional funding -- I mean,  
15          funding -- funding and training opportunities.

16                   Local workforce boards, which operate  
17          primarily on federal funds, are generally able to  
18          provide training assistance on individuals in the  
19          communities they serve through individual training  
20          accounts. And SUNYs and community colleges have  
21          degree programs available.

22                   But they also work within the  
23          communities they are in to create micro-credentialed  
24          programs in various fields. Additionally, I just  
25          want to mention our rapid response team that works



















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2           was designing -- creating a company to do. They  
3           would bring in the experts that knew how to do  
4           decommissioning. They believed the trust fund  
5           balance that existed at the time of sale was  
6           sufficient for them to commence decommissioning more  
7           immediately than Entergy.

8                   So that was their -- their argument  
9           for why the N.R.C. and the state of New York should  
10          approve the sale. N.R.C. approved the sale before  
11          the state. Under the state public service commission  
12          proceeding that reviews those sales under state law,  
13          parties can intervene and -- and review the case,  
14          submit testimony, and make an argument for whether or  
15          not they approve -- they support or oppose the sale.

16                   Most of the public comments and -- and  
17          party testimony came in expressing serious concerns  
18          about the sale to Holtec. And many of those concerns  
19          were about the financial assurance and -- and those  
20          kinds of things. So -- so when those parties then  
21          entered negotiations that the A.G.s Office led with  
22          D.P.S., that was to address the party concerns.

23                   And so N.R.C. approved it, no  
24          conditions. I don't believe there were any  
25          conditions. But Public Service Commission approved









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2 and take that. I think you have to excuse the  
3 lawyer's response here. I think there are almost  
4 innumerable assumptions built into that question.  
5 And there is a lot of speculation built in there.

6 I think --.

7 MR. MOKAY: Not my question, just --.

8 MR. SIPOS: I -- I -- I'm not  
9 commenting on it one way or the other. I think there  
10 are a number of assumptions built in there and it,  
11 you know, would not be appropriate today to delve  
12 into essentially a, you know, legal discussion on  
13 that.

14 MR. MOKAY: Yeah.

15 MR. CONGDON: If -- if I may ask the  
16 administrative law judge to try to limit the  
17 questioners to one follow-up only so that we can get  
18 to all the questioners.

19 A.L.J. BELSITO: Sure.

20 MR. CONGDON: Thank you.

21 A.L.J. BELSITO: What we'll do --

22 MR. CONGDON: Thank you.

23 A.L.J. BELSITO: -- is one of the  
24 last follow-up questions was actually another  
25 question we have on the next slide. So we are moving



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2 of bills passed last month. All of them are being  
3 reviewed by the governor's office. So the -- the  
4 legislation that's pending is still under review.

5 [AUDIENCE MEMBER:] It's not. That's  
6 not correct.

7 MR. CONGDON: I'm -- I'm the D.O.B.  
8 and I -- and respect -- respectfully, sir, we're --  
9 we're trying to have an information exchange. That's  
10 the answer that we're -- we're providing. And if you  
11 could please move to the, you know, to the speakers  
12 that pose the questions, and we'll answer them. This  
13 is the factual information that we have, okay? Thank  
14 you.

15 A.L.J. BELSITO: The next topic is  
16 economic impacts related to water discharge. The  
17 questioner is Ellen Weininger. What New York state  
18 agencies have been consulted to evaluate potential  
19 economic impacts of radioactive discharges to the  
20 Hudson River on recreation, tourism, property values,  
21 as well as employment and tax revenues from these  
22 multi-billion-dollar industries.

23 Please describe findings. Please  
24 describe any and all independent expert economic  
25 assessments that have been conducted. If not, why

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2 not? Please explain.

3 MR. CONGDON: I'm sorry. Excuse me,  
4 I'm being texted that we have an individual from  
5 E.P.A. virtually, who is going to need to sign off at  
6 seven. And I believe Ellen -- hi Ellen, has another  
7 question that was related to the Pilgrim site.

8 So if we want that question answered,  
9 we should probably move to that one. And since Ellen  
10 is already at the mic, go proceed to that one. And  
11 that way we can -- we can then turn back to the  
12 previous. Is that okay?

13 A.L.J. BELSITO: Yes, that was the  
14 water discharge --

15 MR. CONGDON: Yes.

16 A.L.J. BELSITO: -- related to  
17 Massachusetts. Okay. The water discharge testing  
18 and protocols. Question is, the Massachusetts  
19 Department of Public Health released several reports  
20 on May 19th, 2023, regarding independent testing of  
21 split samples from the Pilgrim nuclear facility that  
22 has been undergoing decommissioning by Holtec.

23 Among the two -- 239 non-radiological  
24 pollutants that were tested for, 22 were present in  
25 concentrations above the detection level. They

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2           include nine PFAS compounds, one semivolatile  
3           organic, and two volatile organic compounds, eight  
4           metals (boron, cobalt, copper, iron, nickel,  
5           potassium, zinc, and cyanide, and five general  
6           chemistry measures (nitrogen/nitrate, oil and grease,  
7           pH, total dissolved solids and chlorine).

8                   The Massachusetts Department of Public  
9           Health report also revealed five radioactive isotopes  
10          above the detection limit: manganese-54, cobalt-60,  
11          zinc-65, cesium-137, and tritium. According to Ken  
12          Buessler, a marine radiochemist at the Woods Hole  
13          Oceanographic Institute, who reviewed the results,  
14          samples of tritium, a radioisotope that cannot be  
15          treated, averaged about one -- 100,000 becquerels per  
16          liter, about a million times higher than the average  
17          background level in the ocean.

18                   The numbers for cesium-137 in the  
19          untreated water are 200 million times higher than  
20          what's in the ocean right now. Further tests would  
21          be needed to determine levels of other radioisotopes  
22          such as carbon-14 and strontium-90, plutonium and  
23          uranium, which require more advanced testing.

24                   Once you see these other isotopes at  
25          these levels, you know there's other forms of

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2           radioactivity than just five radionuclides.  
3           Buessler says the best solution for the wastewater  
4           is to store it onsite after it is treated.

5                   Describe the steps that the U.S. EPA  
6           Region 2, New York State Department of Health, and  
7           New York State Department of Environmental  
8           Conservation, and other state agencies are taking to  
9           ensure the implementation of comprehensive,  
10          transparent, independent expert analyses of the  
11          wastewater proposed for discharge from Indian Point  
12          are conducted.

13                   What analyses have been conducted to  
14          date? What is the inventory of radionuclides from  
15          the Indian Point fuel pools? What radionuclides will  
16          be tested? What nonradiological co-pollutants will  
17          be tested? What is the timeline for independent  
18          expert analysis?

19                   What protocols, specific testing  
20          equipment and certified laboratories are involved in  
21          the process? What qualified independent experts are  
22          involved in the process?

23                   MR. CONGDON: So first, if we could  
24          turn to our friend from the E.P.A. Region 1 office  
25          who's on the line.



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2 MS. JENNINGS: Yeah. Can you hear me?  
3 This is Lynne Jennings, just --.

4 MR. CONGDON: Yes, we can hear you,  
5 thank you.

6 MS. JENNINGS: Okay. Sorry. My video  
7 won't turn on. I think you guys might be blocking  
8 that, but that's fine. So yeah, there's -- there's a  
9 lot of questions in this particular slide. I think  
10 actually many of these are directed not to E.P.A.  
11 Region 1 in Boston, but rather others in Region 2 in  
12 the state, et cetera, about, you know, the testing of  
13 water at this particular facility.

14 So I just wanted to give a little bit  
15 of background about what's going on in Massachusetts  
16 with the Pilgrim facility. That's a facility located  
17 in Region 1, and it is also going through  
18 decommissioning also by Holtec with similar questions  
19 being raised.

20 Probably the most pressing in our  
21 region is the discharge of spent fuel pool water as  
22 part of the decommissioning process. And we've had a  
23 lot of conversations with the public and with Holtec  
24 regarding this discharge. And I -- the -- the  
25 situation in Region 1 is slightly different.





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2 Holtec's request to modify their existing permit,  
3 their state permit.

4 And we haven't had a chance yet to --  
5 to fully -- we're evaluating what that denial means  
6 for our federal permit. And we actually have  
7 meetings scheduled with the state of Massachusetts  
8 towards the end of this month to walk through how  
9 that will affect and whether we can -- whether E.P.A.  
10 can actually modify their permit.

11 The -- the state's decision is based  
12 on a state law called the Oceans Sanctuary Act. And  
13 it was put in place back in the 19 -- early '70s to  
14 protect Cape Cod Bay. And it has boundaries of an  
15 area that has been identified as a sanctuary.

16 And that act actually prohibits the  
17 discharge of municipal, industrial, commercial  
18 wastewater into that area, unless it meets certain  
19 exemptions. And this new discharge that Holtec is  
20 asking for modifications to their permit for is not  
21 one of the exemptions.

22 So the state has issued their  
23 tentative decision. They are seeking comment on  
24 that. The comment period on the decision will run  
25 until I think the end of August, August 28th. So

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2           again, we are in the process, we haven't had a chance  
3           to fully evaluate the impact of the state's decision  
4           on E.P.A.'s federal permit.

5                   But I did want to, you know, be here  
6           to answer any questions folks may have. Separate and  
7           apart, as you know, based on the slide, the state of  
8           Massachusetts did in fact go in and sample the  
9           wastewater that Holtec was proposing to discharge.

10                   Holtec knew they would need to submit  
11           to us an official application, which they have done.  
12           But because of public concern, the public requested  
13           split samples of this water. They didn't trust that,  
14           you know, Holtec would take the samples appropriately  
15           in the right locations and all of that.

16                   So the state went in and took  
17           independent samples. And these are the results that  
18           are on this -- this slide. So I'm going to pause  
19           there, because I spoke for a few minutes, and see if  
20           -- I -- I think somebody else will have to answer to  
21           whether the state of New York will do something  
22           similar.

23                   But I can certainly answer anything  
24           related to what's going on at the Region 1 Pilgrim  
25           site.

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2 MR. CONGDON: Thank you for that.

3 Does N.R.C. want to add anything to the split  
4 sampling that's been done?

5 MR. KROHN: Yeah. Just a short  
6 comment, Tom. This is Paul Krohn with the N.R.C. I  
7 compliment the questioner on the diligence of the  
8 question, very thorough. So I -- I appreciate that.  
9 The numbers and the context of this question is for  
10 what we would say is untreated water.

11 It hasn't been run through any cleanup  
12 systems to remove any products. What we would  
13 regulate from an N.R.C. standpoint is what gets  
14 discharged to the environment. So the numbers here  
15 are before any filter and remediation, if you will.  
16 And let me see if Bruce would like to add anything.

17 It's an important distinction to make.

18 MR. CONGDON: Yeah, thank you.

19 MR. WATSON: I was just going to  
20 reiterate, this is Bruce Watson, what Paul just  
21 mentioned. The numbers in here are great. They're  
22 unfiltered, unprocessed, the utility or the -- in  
23 this case, the licensee would be responsible for  
24 filtering, processing, and reducing these -- the  
25 contaminants, especially the radioactive ones that we

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2 regulate to as low as reasonably achievable.

3 And we would be monitoring and  
4 controlling the, excuse me, regulating the actual  
5 radioactive discharges. And that is done in  
6 accordance with the part of the license. It's  
7 incorporated into the license, the offsite dose  
8 calculation manual, which N.R.C. approves.

9 It's a very lengthy document on the  
10 steps they would take to -- to monitor, treat,  
11 monitor and discharge the water and calculate the  
12 dose to it in advance of the actual discharge. So  
13 everything in the radioactive area is -- is -- is  
14 comprehensive.

15 I've listened into the Pilgrim  
16 meetings. The Massachusetts Department of Public  
17 Health is doing independent or splitting samples with  
18 them to verify all the results that -- that's been  
19 reported to them, and we'll continue to do so as far  
20 as I know into the future for the nonradioactive  
21 components. Thank you.

22 MS. JENNINGS: Yeah, and if I could  
23 add one more -- one more thing regarding that,  
24 because -- and that's 100 percent accurate. When we  
25 issue a permit for the water, it is for the treated

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2 water. And we do have information from Holtec, you  
3 know, as part of their application for discharge on  
4 what they expect to be in the treated water.

5 And when we make our permit decisions,  
6 it is based on that data that we would establish  
7 limits, monitoring requirements, et cetera. And our  
8 permit, I think you probably know this, our permit  
9 would be for the non-radioactive components.

10 MR. CONGDON: Thank you. And to the  
11 questions pertaining to the state process for doing  
12 sampling, we've presented at previous D.O.B.  
13 meetings, the D.O.H. plan for doing a sample analysis  
14 of the treated water prior to discharges occurring  
15 should they go forward with that plan.

16 So that hasn't been done yet, but they  
17 would -- they have a protocol established by the  
18 D.O.H. and Holtec, which we've presented at previous  
19 meetings.

20 MS. WEININGER: So I -- may I follow  
21 up?

22 MR. CONGDON: Sure.

23 MS. WEININGER: Okay, first of all, I  
24 appreciate the responses from the various speakers.  
25 They didn't actually address the question that I



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2 posed in this particular question, which was very  
3 specific information about the testing.

4 And while there were -- was a  
5 presentation at the last D.O.B. meeting, there were  
6 many questions that I'm raising here that were not  
7 specifically described, you know, very specific  
8 information about protocols, specific testing  
9 equipment, the certified laboratories, you know, what  
10 qualified independent expert is involved in this  
11 process.

12 Also, you know, while we're bringing  
13 up that last meeting and that presentation, there was  
14 mention of -- of -- or at least there was some  
15 indication of, you know, the testing. And I noted in  
16 the, I believe it's a memo of understanding -- some  
17 of the items I don't have that here in front of me,  
18 that memo of understanding, but in terms of that  
19 agreed testing, it doesn't even mention PFAS  
20 chemicals.

21 And the testing that was done by the  
22 Massachusetts Department of Public Health was done in  
23 the spring, results came out in May, and there's no  
24 mention of testing for that. There are many other  
25 questions around that memo of understanding, but I

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2                   specifically asked for those details at the bottom of  
3                   the question.

4                   I decided to give the background of  
5                   the Massachusetts Department of Public Health's  
6                   findings specifically because it gives a framework,  
7                   and it informs the process for New York State. They  
8                   are a few steps ahead and we should be able to learn  
9                   from that and proceed from there, but it doesn't  
10                  appear to be the case.

11                  And I still don't have answers to the  
12                  questions that I asked, although I do appreciate  
13                  everyone pitching in. And in terms of treatment, I  
14                  did pose a question about the treatment systems and  
15                  oversight around that. I don't think -- I'm not sure  
16                  that it made it into your list of questions but given  
17                  the fact that someone did respond that this isn't  
18                  treated, I -- I would comment and ask the question.

19                  Again, according to Ken Buesseler, who  
20                  is a marine radio chemist at the Woods Hole  
21                  Oceanographic Institution, who reviewed the Pilgrim  
22                  analyses and the sophisticated cleaning system that  
23                  he mentions would be required and probably would  
24                  require more than one treatment.

25                  So he mentions even if treatment

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2           removed 99 percent of the cesium, the resulting  
3           wastewater would still have levels 2 million times  
4           higher than what's in the ocean. And so it would  
5           have to go through treatment again and again and  
6           again.

7                   A.L.J. BELSITO: Ms. Weininger --.

8                   MS. WEININGER: So here's my question.

9                   A.L.J. BELSITO: Okay.

10                  MS. WEININGER: Because it was  
11           referenced here. What kind of treatment system is  
12           Holtec planning to use and who's evaluating that  
13           treat -- treatment system? Who's verifying its  
14           effectiveness? What radionuclides will be treated?  
15           What independent experts are verifying and providing  
16           analyses over this treatment system?

17                  And here's the key. What are the  
18           results of those independent findings and how many  
19           rounds of treatment are planned for each batch of  
20           wastewater? And who makes that determination, Holtec  
21           or some independent expert? How is that  
22           determination made? And what radionuclides remain  
23           untreated in addition to tritium?

24                  And what agencies and by what means  
25           will those radionuclides be tracked if discharges are

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2 permitted? And what agencies or who provides  
3 oversight of the treatment process? And describe the  
4 oversight of the treatment process. And who -- what  
5 agencies provide oversight of the discharge process?  
6 Describe that discharge process.

7 So you referenced it, I didn't -- you  
8 didn't have it.

9 A.L.J. BELSITO: I --.

10 MS. WEININGER: I don't think it was  
11 in your list. But --

12 A.L.J. BELSITO: I'm going to turn it  
13 over to the panel to see if they can respond to your  
14 questions.

15 MS. WEININGER: -- you've got lots of  
16 -- lots of issues here.

17 MR. CONGDON: Thank you. No, thank  
18 you for the follow-up. And please stay at the mic  
19 because I think we'll turn back to the question --

20 MS. WEININGER: Okay, thank you.

21 MR. CONGDON: -- that you came up to  
22 the mic for. I'll start with N.R.C. and then we can  
23 go to the D.O.H.

24 MR. WATSON: Okay. This is Bruce  
25 Watson again from the N.R.C. What nuclides will be

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2           tested? Those tests -- the radionuclides are  
3           outlined in the offsite dose calculation manual,  
4           which is publicly available on our website for the  
5           Indian Point site and all the nuclear power plants  
6           countrywide.

7                   Like I said, it's a very thick  
8           document. It identifies all the radionuclides of  
9           concern that would be needed to be tested. Now,  
10          who's going to test those or analyze those samples?  
11          In the United States, there is a D.O.E. laboratory  
12          intercomparison program, which the D.O.E. runs at the  
13          Idaho National Lab, the Radiological Environmental  
14          Sciences Laboratory, which accredits all the  
15          laboratories in the country.

16                   And the country -- all laboratories,  
17          I'll say - I won't say all, but most laboratories, at  
18          least the ones that we hope our licensees use,  
19          participate in those intercomparison studies to  
20          analyze radionuclides to ensure they're making  
21          accurate results, providing accurate results.

22                   If the N.R.C. does samples, we send  
23          them directly to RESL in Idaho, which is the  
24          country's world-class laboratory for radiological  
25          measurements and for the analysis. So we will go to

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2 that independent laboratory for any of our results.

3 So that's how the system works.

4 Holtec will contract a company that is  
5 hopefully accredited or certified laboratory that is  
6 -- participates in the D.O.E. laboratory in  
7 comparison. You can look on the -- in the D.O.E.'s  
8 website and you can see how all the different  
9 companies line up in their performance of all the  
10 nuclides and -- and analytics that they do are  
11 permitted or are certified to perform.

12 So it's a very open system and it's a  
13 very analytical system that has lots of quality  
14 assurance requirements for the laboratory. And of  
15 course, there are labs that we use should we want a  
16 sample analyzed. Thank you.

17 MR. CONGDON: D.O.H. Alex Damiani?

18 MR. DAMIANI: Sure, my name is Alex  
19 Damiani. I'm with the State Department of Health.  
20 So with respect to the radiological analysis that the  
21 state will do, and we've been working with D.E.C.,  
22 who will cover the non-rad component. But the State  
23 Health Department's lab, Wadsworth Center for Lab and  
24 Research, will do the radiological analysis.

25 Generally speaking, most of their



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2 expert and --

3 MR. DAMIANI: Okay. So --.

4 MS. WEININGER: -- independent  
5 analysis and independent verification around all of  
6 these questions that are posed that are still here.

7 MR. DAMIANI: Okay. So the State  
8 Health Laboratory is staffed by a half dozen PhD  
9 radiochemists who are also faculty at SUNY Albany in  
10 general. They are published independent experts in  
11 the field, all right?

12 The laboratory is top-notch. It may  
13 not be the equivalent of the Idaho National Lab, but  
14 it's probably second only to a few of the national  
15 labs in their ability to detect low levels. And part  
16 of that is just a quirk of fate.

17 They have a 42-story building over  
18 them, so that gives them incredible shielding and  
19 they're able to detect very low levels that many  
20 other laboratories cannot. So with respect to their  
21 ability to detect, I think you're in very good hands  
22 with the State Wadsworth Laboratory doing those  
23 analysis, so.

24 MR. CONGDON: And -- and there is a  
25 one-page summary of the sampling protocols on the



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2 D.O.B. website, if you haven't seen --

3 MS. WEININGER: Yeah.

4 MR. CONGDON: -- that already. But if  
5 we could, in the interest of time, turn to your  
6 original --

7 MS. WEININGER: Yeah.

8 MR. CONGDON: -- question that you  
9 came up for.

10 MS. WEININGER: Well --

11 MR. CONGDON: Oh. I'm sorry, yeah?

12 MS. WEININGER: -- that -- that was --  
13 and then the other point that was made was, you know,  
14 again, in the course of various speakers speaking  
15 about the discharges. And again, I -- I -- so I'll  
16 follow up with a question. We're not arguing the  
17 N.R.C. jurisdiction over the concentration of  
18 tritiated water in the tanks and the fuel pools at  
19 Indian Point.

20 What we're going to follow up on that  
21 point is that N.R.C.'s legal jurisdiction ends at the  
22 moment that that water reaches the Hudson River. So  
23 my understanding here is that something on the order  
24 of 80,000 gallons of Hudson River water would have to  
25 be extracted quite frequently during the course of a

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2 day in order to dilute the radioactive material that  
3 is needed to discharge.

4 And it will have to go through that  
5 circulating water system in order to achieve the  
6 dilution. So again, there's this back and forth  
7 about who's responsible, who has authority --

8 A.L.J. BELSITO: What is --

9 MS. WEININGER: -- and so forth.

10 A.L.J. BELSITO: -- the question, Ms.  
11 Weininger?

12 MS. WEININGER: Well, I'm following up  
13 on someone's statement about N.R.C.'s authority here.

14 A.L.J. BELSITO: All right.

15 MS. WEININGER: What -- where --?

16 A.L.J. BELSITO: You just ask a  
17 question.

18 MS. WEININGER: And they always  
19 mention, yeah, so I'm -- I'm saying that the state  
20 has authority here over -- over these discharges  
21 because it has -- it's withdrawing so much water from  
22 the Hudson River in order to dilute it and then go  
23 through a circulation system --

24 A.L.J. BELSITO: Okay.

25 MS. WEININGER: -- and then discharge.

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2 A.L.J. BELSITO: I'm still not hearing  
3 a question.

4 MS. WEININGER: So I'm asking what --  
5 what is the state -- how is the state asserting its -  
6 - its authority here?

7 A.L.J. BELSITO: Okay.

8 MS. WEININGER: Because it -- it -- we  
9 keep hearing, and I just heard it moments ago, that  
10 the NRC --

11 A.L.J. BELSITO: Okay.

12 MS. WEININGER: -- has the authority  
13 over this.

14 A.L.J. BELSITO: Let's see if we can  
15 get an answer.

16 MR. KROHN: Paul Krohn, N.R.C.,  
17 hopefully this helps. You're right about this  
18 80,000-gallon number, but -- but let me try to give  
19 you some context to it. The licensee uses a process  
20 called batch discharges, so they do it in a batch.

21 So site V.P. for Holtec mentioned this  
22 last D.O.B. meeting, about 1800 gallons -- 18,000.

23 CHAIR CONGDON: 18,000 gallons in a  
24 batch.

25 MR. KROHN: 18,000. Okay. Thank you

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2 for that. In a batch, when you take a couple of  
3 hours to discharge that, you turn on a circulating  
4 water pump. It's a pump on the site when the plant  
5 used to be running, and that goes through the  
6 discharge canal, comes out of the river, and goes  
7 right back into the river.

8 It's just a re-circ in and out. And  
9 while that 18,000 gallons is flowing, you've got this  
10 other pump with the liquid effluent, potentially, if  
11 Holtec discharges, going into the river. So that's a  
12 dilution factor that's included in the calcs that the  
13 licensee has to do that, that we come back and  
14 verify.

15 So that's the process they use if  
16 batch discharges were to occur during the  
17 decommissioning process. Does that help?

18 MS. WEININGER: All right. Well, it  
19 seems to me like 80,000 gallons per minute of clean  
20 Hudson water -- river water would be extracted, and  
21 then it gets contaminated with the radioactive water  
22 on site.

23 MR. KROHN: Get's mixed and --

24 MS. WEININGER: Yeah, mixed.

25 MR. KROHN: -- to earn --.

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2 MS. WEININGER: That's right. It's  
3 contaminated.

4 MR. KROHN: That's why it's called a  
5 dilution factor. Now you have to understand that  
6 what we regulate, what we, the N.R.C., regulate is  
7 the amount of activity that goes to the environment,  
8 right? And all our regulations and the limits are  
9 built around those isotopes and that amount of  
10 activity.

11 So whether it's ten -- 80,000 G.P.M.  
12 and X curies, what we're trying to get to is curies,  
13 right? Concentration flow -- we're not -- we care  
14 about content of curies going out. And Bruce, I  
15 don't know if you want to elaborate.

16 MR. WATSON: This is all spelled out,  
17 as I mentioned, in the offsite dose calculation  
18 manual. The requirements for discharge, 18,000  
19 gallons are typically discharged at about two gallons  
20 per minute. And it's mixed -- the -- the circulating  
21 water system, I think, is around 180,000 gallons per  
22 minute.

23 So you're taking two gallons and  
24 diluting it with 180,000 gallons when it's discharged  
25 to the river -- back into the river. And so there is

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2 a significant dilution factor from that. We do  
3 calculate a dose at that point where the radioactive  
4 discharge is met, not where it's after it's really  
5 diluted in the river with all that water so.

6 MS. WEININGER: Right.

7 MR. WATSON: Thank you.

8 MS. WEININGER: But this is not part  
9 of the safety issues preempted by the N.R.C. This is  
10 under New York State's authority. This has to do  
11 with releasing these effluents through the  
12 circulating system, extracting 80,000 gallons per  
13 minute from the Hudson, so.

14 MR. CONGDON: Do any of the lawyers up  
15 here want to address the extraction of the water  
16 issue?

17 MR. SIPOS: Hi. It's John Sipos.  
18 I'll provide a response, but I actually have some  
19 questions for -- for N.R.C. For the release of  
20 radiological material to the Hudson River, what  
21 agency oversees and regulates that?

22 MR. KROHN: Radiological release is  
23 the N.R.C.

24 MR. SIPOS: Okay.

25 MR. KROHN: Non-radiological release



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2 what has the state -- what has the state done with  
3 respect to evaluating the potential economic impacts  
4 associated with the potential discharge?

5 MS. WEININGER: Yeah.

6 MR. CONGDON: And the answer is the --  
7 the state executive agencies have not done such an  
8 analysis of that. The legislature may have -- that  
9 supported their legislation that was based on that  
10 premise. The economic impacts that have been  
11 addressed by state work have -- go back to around  
12 2017 when there was the original closure agreement.

13 When we announced that publicly, we  
14 created the closure task force. And one of the very  
15 first issues some of the local electeds raised was,  
16 what the economic impact of the closure would be on  
17 the communities, the loss of tax revenue, the  
18 potential impacts on property values, the -- the  
19 potential future reuses of the site.

20 And -- and there was a request made at  
21 that time that we do a study, NYSERDA contracted with  
22 an outside entity that examined the potential reuse  
23 opportunities post decommissioning, and whether or  
24 not any part of the site that wasn't radio --  
25 radiologically contaminated might be released prior



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2 to decommissioning being completed.

3 So that work was done back in 2017-18,  
4 and that report is available online. We also had a  
5 number of presentations back at that time from real  
6 estate agents that had been concerned what closure  
7 might mean for the local economy.

8 And -- and after the closure  
9 agreement, and even maybe after the closure itself,  
10 we had real estate agents come and present whether  
11 there were any changes in the real estate market.  
12 And they reported none at that time.

13 MS. WEININGER: Right.

14 MR. CONGDON: But that wasn't  
15 pertaining to the water discharge, but that's the  
16 only economic analysis and work that I'm familiar  
17 with from the state D.O.B. or task force.

18 MS. WEININGER: Right, so there's been  
19 nothing, you know, along the lines of the impacts,  
20 for example, of the radiological discharges --  
21 potential radiological -- potential impacts to  
22 tourism as an example. We know that it's a multi-  
23 billion-dollar industry in the Hudson River.

24 There's plenty of reports out there  
25 that tourism economics shows in 2019, 4.5 billion in

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2           the Hudson River --

3                               A.L.J. BELSITO:   Ms. Weininger --

4                               MS. WEININGER:   -- Valley.

5                               A.L.J. BELSITO:   -- do I hear a

6           question in there?

7                               MS. WEININGER:   So again, that's the

8           question -- is that --

9                               MR. CONGDON:     -- yeah.

10                              MS. WEININGER:   -- the larger picture

11           --

12                              MR. CONGDON:     Yeah.

13                              MS. WEININGER:   -- has not been --

14                              MR. CONGDON:     There --

15                              MS. WEININGER:   -- addressed.

16                              MR. CONGDON:     -- there hasn't been --

17           I would -- I guess --.

18                              MR. WEININGER:   Is one plant?

19                              MR. CONDON:      Right. We've -- we've

20           not -- we've not evaluated this. That hasn't -- that

21           study has not been done.

22                              MS. WEININGER:   Is one planned?

23                              MR. CONGDON:     Is one planned.

24                              MR. WEININGER:   Is -- is -- are any

25           independent expert economic assessments planned?

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2 MR. CONGDON: No, I think that was the  
3 premise behind the legislation. So I think that the  
4 legislature may have done some analysis of that since  
5 that was the premise of the legislation, but I'm not  
6 aware of any analysis.

7 MS. WEININGER: Okay. Thank you.

8 A.L.J. BELSITO: Thank you. The next  
9 top -- topic is --.

10 MS. WEININGER: Thank you very much.

11 A.L.J. BELSITO: Testing and  
12 protocols. Please -- please provide the chemical and  
13 radiological content of the prior to treatment and  
14 then treated effluent, including levels of PFAS,  
15 PFOS, PCBs, boron, tritium, krypton-85, krypton-85m,  
16 cesium-137, strontium-90, and carbon-14. And the  
17 questioner is Susan Shapiro.

18 MR. CONGDON: And -- and Susan, keep  
19 in mind, you have a number of questions following.  
20 So in your follow up, we can stick to this topic.

21 MS. SHAPIRO: Okay, I will.

22 MR. CONGDON: Department of Health  
23 want to begin on this one?

24 MS. SHAPIRO: I just want to say it's  
25 krypton. That's a typo. There's a P in there.

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2 MR. DAMIANI: I was going to say that  
3 was my first thing. It's Krypton-85 and Krypton-85m.

4 MS. SHAPIRO: Krypton-85 -- krypton-  
5 85m.

6 MR. DAMIANI: So I can, again, speak  
7 to the radiological components and what we will be  
8 testing and what we have. Not specifically what is  
9 in the pool, that I wouldn't be able to tell you, but  
10 in terms of just what do we routinely assess for in  
11 our surveillance programs.

12 So a general assessment will be a  
13 gross alpha, gross beta. So that'll look for any  
14 alpha emitter.

15 MS. SHAPIRO: I'm have a hard time  
16 hearing.

17 MR. DAMIANI: I'm sorry. So our  
18 general first pass assessment will be a gross alpha,  
19 gross beta, looking for any alpha emitters, any beta  
20 emitters, and then a broad gamma isotopic analysis.  
21 We'll do very specific ones in the case of like  
22 Indian Point area.

23 Tritium is a special one. We do that  
24 only in a few locations. We do one at the discharge  
25 canal. That is a sample we received from Holtec. So

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2 we do do a tritium assessment on that. Tritium  
3 assessment would generally also -- or I'm sorry,  
4 water assessment would also be done by the water  
5 districts.

6 If you want to see what your water  
7 district is testing, you have to go to the locality,  
8 the town, county, village, whatever your water  
9 district is to find those testing results. So just  
10 very broadly, and going back to the agreement that  
11 the D.E.C., D.P.S., D.O.H. are working with Holtec  
12 for.

13 We would do a very broad spectrum,  
14 gross alpha, gross beta, isotopic gamma. And I do  
15 not remember the specific. There's about a dozen, 8  
16 or 10 different isotopes we'll be looking for under  
17 gamma spectroscopy. And I believe that document is  
18 posted on the --

19 MR. CONGDON: That one page on your --

20 MR. DAMIANI: -- the one pager that  
21 does list the isotopes we'll be checking, and that is  
22 on the D.O.B. website. That's on the nonrad side, or  
23 I'm sorry, on the rad side. I can't speak to the  
24 nonrad side specifically, what will be on there.

25 I believe they were going for the 200



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2 MR. CONGDON: I don't know if DEC  
3 wants to add to that answer at all. Hear -- hearing  
4 none, that's the D.E.C.'s plan as I understand it.

5 MS. SHAPIRO: Okay, so my -- my  
6 follow-up question is they're planning to dump,  
7 they're saying, September 15th. You're saying it's  
8 going to take 3 months for that to get results on  
9 strontium-85 -- 90.

10 MR. DAMIANI: 90.

11 MS. SHAPIRO: And so -- what?

12 MR. DAMIANI: Strontium-90.

13 MS. SHAPIRO: 90, I'm sorry. When is  
14 this testing going to be made available to the  
15 public? When are the results going to be made  
16 available? It seems illogical and sort of abhorrent  
17 that right now their testing hasn't already taken  
18 place. If in fact they're planning to dump on  
19 September 15th, testing should have happened months  
20 ago.

21 So where -- what is the status of the  
22 testing? Where are we?

23 MR. CONGDON: The testing --.

24 MS. SHAPIRO: Apparently it hasn't  
25 happened yet, right?

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2 MR. CONGDON: The testing is going to  
3 be done after the treatment and the treatment hasn't  
4 been done until -- when the treatment is done and  
5 they're preparing for the discharge is when we would  
6 grab the sample out of the treated effluent -- the  
7 treated water.

8 MS. SHAPIRO: But they're planning to  
9 dump before the strontium results come in. Strontium  
10 causes bone cancer in children. It causes leukemia.  
11 It cause -- it goes into the bones of children.

12 A.L.J. ESPOSITO: This question was  
13 whether they're planning to dump it before the  
14 results of the strontium are in?

15 MS. SHAPIRO: Yes.

16 MR. DAMIANI: That is correct.

17 MS. SHAPIRO: That's insane.

18 MR. DAMIANI: The results were --  
19 we'll cover everything else, the growth -- gross  
20 alpha, gross beta and other isotopes will be tested.  
21 And those are the ones that are more typical of what  
22 you would see in -- in the -- in the expected  
23 discharges.

24 MS. SHAPIRO: We know that there's  
25 strontium-90 in the water because at the desal plant



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2           in Haverstraw in the pilot plant, they found  
3           strontium-90. So we know it's already in the  
4           effluent that's released -- has been released  
5           historically or accidents at Indian Point.

6                   So it will be probably in there. So  
7           we want to know for sure it's not going to be  
8           released. You should be -- the D.O.B. should be  
9           saying this dumping cannot occur at all until the  
10          test results are in. That's simple logic. I mean,  
11          I'm not -- I don't think I'm asking for a lot.

12                   MR. CONGDON: The -- the N.R.C. may  
13          also want to weigh in on this matter?

14                   MR. KROHN: Strontium in particular,  
15          other isotopes -- I can -- first, it's good to have a  
16          chance to talk to you again. I know we've had a  
17          chance to talk before. If -- let -- let's talk about  
18          past experience and what you can look at as a member  
19          of the public.

20                   Every year, the licensee, in this  
21          case, Holtec, has to submit a report to the N.R.C.  
22          And I have a copy, I think, in my briefcase, I could  
23          share with you after. And it's for 2022. It says, I  
24          made so many discharges and it breaks down all the  
25          isotopes, including the ones you're talking about.

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2 And it says, here's the quantity. And  
3 then you can compare that to our limits for that  
4 isotope. And you can see that it was either within  
5 limit or not.

6 MS. SHAPIRO: That is irrelevant.  
7 Historic data on that is irrelevant.

8 MR. KROHN: No --.

9 A.L.J. BELSITO: Miss, can you let him  
10 finish.

11 MS. SHAPIRO: Okay.

12 MR. KROHN: If -- if -- and what  
13 you're saying is a hypothetical scenario, Holtec made  
14 this discharge, we would know the quantity and you'd  
15 be able to have -- find the results. And if  
16 enforcement action was necessary, you better believe  
17 we'd make it. But that's a hypothetical.

18 MS. SHAPIRO: It's after the fact.  
19 It's after they dump.

20 Mr. KROHN: No, no, no.

21 MS. SHAPIRO: It's after they dump.  
22 You're saying, let the -- let the results be found  
23 from the independent testing as well as from the  
24 N.R.C.'s testing before any dumping occurs. It's  
25 just simple -- simple protocol that you should have

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2 the results before you do the dumping. We have a  
3 history here -- we have a history in the Hudson River  
4 of P.C.B.s being dumped in the Hudson River.

5 And everyone said, no problem, no  
6 health impacts. We spent billions of dollars  
7 cleaning the Hudson. We're still cleaning the Hudson  
8 of PCB's. So we have a history here that we don't  
9 want dumping to occur until test results are in.  
10 It's not a big ask.

11 MR. KROHN: Okay.

12 MS. SHAPIRO: Wait, I have a question.

13 MR. KROHN: Let's take the higher --

14 MS. SHAPIRO: I have a question.

15 MR. KROHN: -- let's take the higher  
16 level here, Suzan. We, the N.R.C., are strong and  
17 independent regulators. If Holtec makes a mistake,  
18 we will call it on them, and you'll see it in  
19 enforcement.

20 MS. SHAPIRO: And how are you going to  
21 clean it up once it's in the river? Are you joking?  
22 Is -- I'm asking you a serious question. You're  
23 joking, right? You must be.

24 MR. KROHN: If they discharge within  
25 our limits, it's protective of the public.

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2 MS. SHAPIRO: What -- how do you know  
3 until the test results are in? You don't know ahead  
4 of time, unless you are a, you know, a -- a seer and  
5 can look into the future. I don't know how you know  
6 until the results are in.

7 MR. KROHN: You're asking me to speak  
8 for Holtec's actions. I will not do that.

9 MS. SHAPIRO: So then tell them they  
10 can't dump until the results are in.

11 A.L.J. BELSITO: Sir, sir.

12 MS. SHAPIRO: I am asking --.

13 A.L.J. BELSITO: You can't be --  
14 excuse me. I'll let you finish. We can't have  
15 outbursts either while people are asking questions or  
16 people are answering them. If you have another  
17 question related to this, I appreciate the fact that  
18 you didn't like the answer you got, but if you have  
19 another question, you can ask it.

20 MS. SHAPIRO: Yes, I do.

21 A.L.J. BELSITO: You also have another  
22 -- a number of other --

23 MS. SHAPIRO: I do.

24 A.L.J. BELSITO: -- questions coming  
25 up.

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2 MS. SHAPIRO: Sorry, I will -- I will  
3 save my other questions.

4 A.L.J. BELSITO: One more question and  
5 we're going to move on --

6 MS. SHAPIRO: Okay.

7 A.L.J. BELSITO: -- to the next topic.

8 MS. SHAPIRO: Okay. I want to -- I --  
9 going -- I first want to say, I'm asking very simply  
10 that you -- that the N.R.C., the E.P.A., the D.E.C.,  
11 the A.G.'s office say there can be no dumping until  
12 all test results are in. It's not a big ask, period.  
13 That's what I'm asking.

14 MR. KROHN: Thank you.

15 A.L.J. BELSITO: Okay. Well --

16 MS. SHAPIRO: And -- okay.

17 A.L.J. BELSITO: -- we're --.

18 MS. SHAPIRO: And -- and that should  
19 have been in the agreement. It still -- it doesn't  
20 make any sense at all.

21 A.L.J. BELSITO: We're going to move  
22 on to the next question --

23 MS. SHAPIRO: Okay.

24 A.L.J. BELSITO: -- related to water  
25 discharge. And again, Susan Shapiro, what is the



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2 and sum them up. I don't have that answer off the  
3 top of my head.

4 MS. SHAPIRO: Could you please provide  
5 that? It would be helpful.

6 MR. KROHN: Let me turn it over to  
7 Tony, see if he wants to add anything.

8 MR. DIMITRIADIS: Sure. So the -- the  
9 amount of tritium that was answered.

10 CHAIR CONGDON: State your name,  
11 please.

12 MR. DIMITRIADIS: I'm sorry, Anthony  
13 Dimitriadis. I'm the branch that responsible for  
14 decommissioning of Indian Point, Pilgrim, Oyster  
15 Creek. I apologize for my voice. I have a little  
16 cold. Almost over. But it's not -- but it's not  
17 contagious.

18 The -- the amount of tritium was  
19 already answered. The total amount of tritium, we  
20 can get that information. Indian Point has been  
21 releasing -- discharging, not dumping, discharging  
22 after analysis for 60 years. The -- the amount of  
23 radioactivity in relation to cancer risks is measured  
24 in millirem.

25 I know that's a fuzzy term and I

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2           appreciate the frustration. So our regulations  
3           outline in 20.1301, talk about 100 millirem. The  
4           E.P.A. regulation is 25 millirem. The O.D.C.M., I  
5           believe, is like three to nine millirem.

6                   And Indian Point has been releasing  
7           for 60 years and is proposing to release -- releasing  
8           less than one millirem, actually one-tenth or one-  
9           hundredth of a millirem for years. This relates to  
10          the other question that you had about what confidence  
11          do we have about strontium-90 and various other  
12          things.

13                   They've never come close to our limit.  
14          And so this is the level of confidence that we have  
15          about that, and we inspect that. Thank you.

16                   MS. SHAPIRO: I want to ask a question  
17          about how -- how this will be -- apparently, you're  
18          releasing -- it has been being released. How is this  
19          being monitored? Historically, there seems to be a  
20          very large contradiction. I'd like an answer to  
21          this.

22                   Historically, the monitoring at Indian  
23          Point was perimeter monitoring because we were  
24          repeatedly told at every N.R.C. hearing that the  
25          N.R.C. only monitors the perimeter because they're



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2           not responsible for any radionuclides that leave the  
3           site. It -- their jurisdiction ends at the  
4           perimeter.

5                   So now we're hearing a contradiction.  
6           It's a total flip. And the laws haven't changed.  
7           Something else has changed. So I'd like to get  
8           clarity. The N.R.C. has only ever monitored at the  
9           perimeter. That D.O.H. has only gotten data from the  
10          N.R.C.'s monitoring from the perimeter and never  
11          released off site.

12                   So now we're being told, no, the  
13          N.R.C. can release anywhere in New York state -- on  
14          any of New York state's waterways because they can  
15          release radionuclides wherever the hell they want.

16                   A.L.J. BELSITO: Can someone --

17                   MS. SHAPIRO: That's not true.

18                   A.L.J. BELSITO: -- respond to the --?

19                   MR. WATSON: I -- I'd like to respond  
20          to that. This is Bruce Watson. The actual release  
21          of this material is done in accordance with the  
22          safety analysis report for the site, along with the -  
23          - like I said before, the offsite dose calculation  
24          manual. So there are requirements to where that  
25          water or release can be done.

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2 If you want to consider it, the  
3 discharge conduit, which the water is released  
4 through is part of the site and the dose is  
5 calculated at the point of discharge. And so that's  
6 where we do things. You can -- you can disagree with  
7 me, but it's part of -- maybe part of the  
8 decommissioning plan if they pull the discharge  
9 conduit out.

10 But it's part of the -- it is part of  
11 the site and it's in the description of the safety  
12 analysis report. Now -- so we monitor --the offsite  
13 dose calculation monitor requires that the water be  
14 released in batches. It is pretreated. It is  
15 sampled before it is released.

16 It goes through an online monitor  
17 along with a pump, which is calibrated in the  
18 calibration to the detectors calibrated to make sure  
19 that it's set -- the water as it's being discharged.  
20 I think it's only a couple of gallons per minute is  
21 monitored by this radiation detector.

22 And if it goes above any preset  
23 limits, namely normally at administrative levels  
24 before -- they wanted to stop the discharge before it  
25 goes over any N.R.C. requirements. So the water is

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2 well monitored as it's being released along with it  
3 having been sampled before.

4 And then also on that, most sites have  
5 a composite sampler, which basically takes a few  
6 drips off of each two -- two -- the two gallon per  
7 minute pump. So that has been collected. And -- and  
8 then again, it's analyzed for what was the final  
9 product that was discharged from that tank.

10 And so that's another quality check  
11 that's done on the discharge to make sure it's  
12 meeting requirements in their offsite dose  
13 calculation manual. So Tony, did you want to add  
14 something?

15 MR. DIMITRIADIS: Can I just follow up  
16 a little bit? Yes, sir. May I answer your question,  
17 Susan? Anthony Dimitriadis, N.R.C. The reason the  
18 N.R.C. requires the licensees to monitor at the  
19 boundary is because that's the highest concentration  
20 it would otherwise be.

21 And therefore, if it meets the N.R.C.  
22 limits at the boundary -- at the highest -- at the  
23 highest point there, then if it goes offsite, it  
24 would actually be much lower. That's why we do that  
25 at the -- at the boundary. Does that answer your

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2 question?

3 MS. SHAPIRO: Actually --.

4 A.L.J. BELSITO: We're going to move  
5 on to related topic, water discharge, water storage  
6 tanks. Again, the questioner is Ms. Shapiro. Has  
7 Holtec submitted an application to the NRC for any  
8 storage tanks at Indian Point? If so when? And  
9 please provide the application.

10 Has Holtec submitted any applications  
11 to the NRC for storage tanks at any other facility?  
12 If so when? And please provide the applications and  
13 decisions. Approximately, how long would it take for  
14 the N.R.C. to grant approval of storage tanks once  
15 applied for? Please explain the application approval  
16 process.

17 And what is the difference between  
18 approval of radioactive effluent storage tanks and  
19 spent fuel casks?

20 MR. WATSON: This is Bruce Watson from  
21 the N.R.C. To the best of our knowledge, Holtec has  
22 not submitted any applications to the N.R.C. for the  
23 construction of any storage tanks to store liquid  
24 effluent water that could be discharged.

25 In accordance with their Part 50





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2           that will safely and securely manage those facilities  
3           out into the future. So there's a distinct  
4           difference.

5                   Now I just want to be clear on one  
6           thing, that the license for -- the part 50 license at  
7           the end of this -- at the end of the decommissioning,  
8           we will actually call it a termination of the  
9           operating site, but it's really a partial site  
10          release. So the license will be shrunk down to just  
11          the dry fuel storage facility.

12                   In this case, we will be issuing  
13          what's called a part 50 general license, which is  
14          basically the same thing as a part 72 license for the  
15          dry fuel storage facility. Just has a different  
16          name. But for whatever reason, those regulations  
17          were written in parallel and allows the licensees to  
18          do that.

19                   So I just want to be clear, there is a  
20          difference between a part 50 license for  
21          decommissioning and operating the plant and a 50  
22          general license, which means that they're allowed to  
23          possess -- possess the spent nuclear fuel.

24                   MS. SHAPIRO: Has --?

25                   A.L.J. BELSITO: Anything else from

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2 the panel on the storage tanks? Do you have a  
3 follow-up question related to storage tanks?

4 MS. SHAPIRO: Yes, I do. Has there  
5 ever been an environmental review on any level by any  
6 agency about the storing the spent fuel tanks at  
7 Indian Point indefinitely as a -- as in a temporary  
8 or permanent waste storage site? Has that ever  
9 occurred?

10 Or is the N.R.C. just approving it on  
11 their -- on their own, allowing the Indian Point to  
12 be turned into a waste storage site?

13 MR. WATSON: Well, there's a -- this  
14 is Bruce Watson, again, I'll just briefly mention  
15 that for the site, there was an environmental impact  
16 statement that covered most of the things we've  
17 talked about here tonight.

18 MS. SHAPIRO: It didn't -- it didn't  
19 cover the spent fuel storage.

20 MR. WATSON: I -- I know. I'm getting  
21 to that, please. Okay? There's also a current  
22 environmental assessment which talks about all the  
23 various changes that have happened since the  
24 environmental assessment impact statement was done,  
25 which there are changes in the environment,



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2 endangered species change during that.

3 So that looks at those types of  
4 effects. The ISFSI environmental assessment is done  
5 in conjunction with the existing environmental  
6 assistance -- assessment for the site. And it's  
7 licensed under this -- that similar document -- same  
8 document, I'm sorry, for the use of the site.

9 The site has already had an  
10 environmental assessment done.

11 MS. SHAPIRO: Not for spent fuel  
12 storage.

13 MR. WATSON: It includes --.

14 MR. CONGDON: Excuse me, Susan, we  
15 have other -- we have other topics later --

16 MS. SHAPIRO: Okay. Just go ahead.

17 MR. CONGDON: -- and you will be  
18 called back up to the mic --

19 MS. SHAPIRO: Okay.

20 MR. CONGDON: -- on some of these  
21 issues. So I --

22 MS. SHAPIRO: Can I just --

23 MR. CONGDON: -- want to stay on topic  
24 of these questions for follow up.

25 MS. SHAPIRO: -- I understand. It

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2           goes to these questions of spent fuel storage. Just  
3           a quick question that I didn't get to ask, just  
4           quickly, about the tritium. Is -- has there been an  
5           evaluation of the bioaccumulation over all these  
6           years and of this new amount being dumped into the  
7           Hudson River -- that you're planning to dump into the  
8           Hudson River?

9                   MR. CONGDON: Just -- just to correct  
10           the question, no one on this panel is discharging.  
11           This is a Holtec operation.

12                   MS. SHAPIRO: Understood.

13                   MR. CONGDON: So we --

14                   MS. SHAPIRO: Like you said --

15                   MR. CONGDON: -- we --

16                   MS. SHAPIRO: -- you're allowing  
17           Holtec --

18                   MR. CONGDON: -- we are not dumping  
19           just to clarify.

20                   MS. SHAPIRO: -- you're allowing  
21           Holtec.

22                   MR. CONGDON: Okay.

23                   MS. SHAPIRO: They are allowing  
24           Holtec.

25                   MR. CONGDON: So N.R.C. can take the

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2 question on tritium.

3 MR. WATSON: This is Bruce Watson  
4 again from the N.R.C. At our last meeting, we  
5 discussed bioaccumulation, and it does not occur. We  
6 also provided the panel or the board with a health  
7 physics position paper, a technical paper from the  
8 independent health physics society, which described  
9 the fact that -- that described the fact tritium does  
10 not bioaccumulate.

11 And there -- it continues to dilute  
12 with whatever water it is in. And so the  
13 bioaccumulation does not occur. Thank you.

14 MS. SHAPIRO: Thank you.

15 A.L.J. BELSITO: All right, next side  
16 please. So we're going to move on to regulatory  
17 standards. The questioner here is Susan Van Dolsen,  
18 and the questions are -- during the June 15th D.O.B.  
19 meeting, there was a question asked about cancer risk  
20 exposure to radionuclides.

21 Nuclear power facilities and the NRC  
22 representative said it was 0.1 percent for all  
23 populations. Where did this number come from? The  
24 representative went on to affirm that this number  
25 pertains to all populations, including fetuses and

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2 pregnant women.

3 It is critically important to  
4 understand the source and validity of this  
5 information, so I'm asking for proof that the  
6 regulations are based on all populations, including  
7 fetuses and pregnant women.

8 The N.R.C. commissioned a cancer study  
9 from the National Academy of Sciences. The phase two  
10 study was terminated due to cost. The termination of  
11 the study due to cost is very unfortunate. It  
12 creates a situation where the public doesn't have  
13 confidence that the regulations for radioactive  
14 releases from nuclear power facilities are based on  
15 the most protected possible standards.

16 Would the N.R.C. address this lack of  
17 confidence and provide more scientific basis for the  
18 current radioactive regulations that are being  
19 followed during decommissioning of Indian Point and  
20 other closed nuclear power facilities?

21 MR. CONGDON: This one's for N.R.C.

22 MR. WATSON: Yes, thank you. This is  
23 Bruce Watson again. And as a matter of fact, I'm the  
24 person who made the statement.

25 MS. DOLSEN: I know.

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2 MR. WATSON: That statement was based  
3 on the fact that our federal regulations, the 10  
4 C.F.R. part 20, are based on the International  
5 Council on Radiation Protection recommendations. In  
6 particular, they're based on I.C.R.P. 26, report 26.

7 And while some people may think it's  
8 dated, the -- the information there has not changed  
9 significantly because the commission has looked at  
10 our dose standards numerous times and determined that  
11 they are safe for the workers, the public, and the  
12 environment.

13 So our standards are good. I also  
14 mentioned the 0.1 percent cancer rate risk in  
15 association with the fact that people living within  
16 the vicinity of a nuclear power plant are likely to  
17 receive less than one millirem per year from the  
18 plant operations or the plant being decommissioned.

19 Now our -- our cancer risk in part 20  
20 is based on the I.C.R.P. risk of one times 10 to the  
21 minus four cancer risk for an exposure of one rem,  
22 which is 1000 millirem. So if you're receiving one  
23 millirem a year, you can just do the math. Ten times  
24 -- one times 10 to the minus four times 10 to the  
25 minus three is well below one -- 0.1 percent for

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2 anybody that lives in the vicinity of a nuclear power  
3 plant for attracting cancer.

4 Unfortunately, you know, about 30  
5 percent of us will -- will get cancer during our  
6 lifetimes and about 20 percent of us will -- will die  
7 from it. But I was just recently at a health physics  
8 society meeting last week. There's a big study going  
9 on called the million-person study, which is looking  
10 at the doses to workers.

11 Since I guess -- I'll just say since  
12 the atomic age came into effect, this includes not --  
13 not only the N.R.C. operational workers, occupational  
14 workers, but the Department of Energy, a whole host  
15 of different people, Navy nuclear people who have  
16 received exposures typically in excess of 10 rem.

17 And their preliminary conclusions are  
18 that, you know, there is no demonstrated association  
19 of radiation exposure even at the 10 rem level with  
20 cancer risk. Now we just agree that in principle  
21 that there is a -- a risk -- potential risk of having  
22 cancer from radiation exposure, but not certainly at  
23 the one millirem limit because or limit -- one  
24 millirem exposure level in a year.

25 I mean, in a year we get 620 millirem

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2           per year just existing on the earth, about 300 of  
3           that is from natural sources in our foods from the  
4           earth itself. And also from our man-made  
5           radioactivity, whether it's through medical or other  
6           means of getting exposure.

7                   So, you know, less than one millirem  
8           and natural background being around 600 exposure for  
9           the year. It's -- it's pretty insignificant of the  
10          risk.

11                   MS. DOLSEN: Well, I remember you  
12          saying all this the last time, but you're still not  
13          proving to me that the first statement included all  
14          populations. You're saying workers and people who  
15          live there.

16                   MR. WATSON: Well, okay.

17                   MS. DOLSEN: Does that include the  
18          populations I listed in my question?

19                   MR. WATSON: Well, okay. Let me  
20          rephrase that. At the meeting, I did mention that  
21          the I.C.R.P. recommendations, which the N.R.C. dose  
22          standards are based on, are -- are reflective of all  
23          sexes, ages, and I forget all the other criteria, but  
24          it includes all the parameters and maintaining the --  
25          those safety standards at a reasonably safe level. I

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2 say safe level.

3 And that's why the, our standards are  
4 well below a lot of the requirements in -- in the  
5 I.C.R.P.

6 MS. DOLSEN: Well, first of all, it's  
7 very old, the study you're talking about. And second  
8 of all, my second question goes to the trust factor  
9 or the distrust factor.

10 MR. WATSON: Okay. Well, I can't -- I  
11 can't make you trust what I'm telling you.

12 MS. DOLSEN: Well, why do you cancel  
13 the cancer study?

14 MR. WATSON: Just let me finish,  
15 please? You know, the policies of the N.R.C. are  
16 determined by a presidential appointed commission.  
17 And they set the policy for the N.R.C. They are the  
18 ones who approve the regulations that the staff  
19 provides.

20 And so over the years, they have --  
21 the staff has evaluated the different changes in the  
22 cancer risks in the I.C.R. -- I.C.R.P. reports. And  
23 the commission has continuously looked at those. And  
24 in particular, we'll talk about in the next question,  
25 determined that they have not changed that we would



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2 want to change the regulations.

3 So they are the policy setters. This  
4 presidentially appointed commission makes the policy,  
5 sets the policy and the staff follows their policies.  
6 And so that's why we have not changed since --

7 MS. DOLSEN: I can only --

8 MR. WATSON: -- the regulations.

9 MS. DOLSEN: -- tell you that the  
10 majority of Americans --

11 A.L.J. BELSITO: Miss --.

12 MS. DOLSEN: -- don't trust your  
13 organization, first of all. I don't care who's  
14 appointed there. They are not trusting.

15 A.L.J. BELSITO: We're going to move  
16 on. Okay?

17 MS. DOLSEN: Can I move on to my  
18 second question that he didn't respond to? He didn't  
19 answer the cancer study.

20 MR. WATSON: I was responding to the  
21 first question.

22 MS. DOLSEN: The cancer study.

23 MR. WATSON: Yeah.

24 MS. DOLSEN: He didn't respond to that  
25 about the cancer study.

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2 CHAIR CONGDON: Also for the N.R.C.?

3 MS. DOLSEN: First he said they didn't  
4 know --

5 A.L.J. BELSITO: Okay.

6 MS. DOLSEN: -- they had one. And now  
7 he said.

8 MR. WATSON: A.L.J. BELSITO: -- We're  
9 going to them a chance to respond, thank you.

10 MR. KROHN: No, I appreciate your  
11 passion and interest here. So let me try to answer  
12 the second question. So did we begin to look at the  
13 potential for a cancer study in 2010? Yes. We  
14 looked at some scoping and phasing of it. We worked  
15 on it for about five years, and we got to 2015.

16 We took the results we got in the  
17 N.R.C. and we said, what do we do next? What is  
18 justified? And in 2015, we had a proposal in front  
19 of us to go look at seven nuclear power plants,  
20 representative of different designs, et cetera.  
21 Seven being a small sample of about the 104 that were  
22 operating at the time.

23 And we looked at that and we said,  
24 look, it's going to take us three years to do that  
25 next phase and \$8 million. And the commission -- the

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2 commission, the presidential appointees looked at  
3 that and said, is that the best way to spend our, no,  
4 wait -- wait -- please wait.

5 Is that the best way to get bang for  
6 our buck for safety? And will we get usable results  
7 out of it? Will we have data that's definitive that  
8 we can use just like the I.C.R.P. report? By the  
9 way, I have a copy here. I'd be happy to discuss it  
10 with you and get to drill down on it like you want to  
11 on special populations.

12 The point is we're using the best  
13 engineering and science we have available. And we're  
14 constantly, to Bruce's point, looking at I.C.R.P. and  
15 what they're learning, National Cancer Institute, the  
16 Health Physics and Radiation Protection Societies.  
17 We're always looking to understand more, okay?

18 So we got to that point in 2015 and we  
19 said, what are we going to get out of this? And we  
20 even spoke and said, well, look, seven -- seven  
21 plants is not a lot. What if we did all of them,  
22 right? And if we did all of them, it would have  
23 taken several more years and tens of millions of  
24 dollars.

25 And we had to ask ourselves, were we

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2 going to get any definitive answers that would help  
3 us be a better regulator and improve safety? And we  
4 couldn't justify that we would.

5 MS. DOLSEN: I think it's very, very  
6 sad. I've had cancer. I'm sure if you ask these  
7 people in this room to raise their hand, they all --  
8 a lot of us have had cancer. And I think it was  
9 worth \$8 million. You say it takes X number of years  
10 to build any nuclear power plant.

11 That doesn't deter you from wanting to  
12 build more of them. So time isn't really a problem.  
13 It's three years --

14 A.L.J. BELSITO: Miss --.

15 MS. DOLSEN: -- in my opinion, for \$8  
16 million in the scope of what you're spending. I'm  
17 disgusted by that. I'm very sorry.

18 A.L.J. BELSITO: Miss, we're here to  
19 get some questions answered. So we're going to move  
20 on to the next topic.

21 A.L.J. .

22 BELSITO: Okay.  
23 MS. WEININGER: (unintelligible)

24 A.L.J. BELSITO: Okay. Ma'am, please.

25 MS. WEININGER: Okay.

A.L.J. BELSITO: The N.R.C. License

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2           Termination Rule. L.T.R. policy has a radiological  
3           standard for unrestricted use of 25 millirems per  
4           year, which is based on a cancer risk of 1 in 500  
5           people. This means the exposure to all remaining  
6           radioactive materials after remediation is estimated  
7           to result in 1 in 500 people contracting cancer.

8                   The E.P.A. has stated in 1997  
9           testimony, a 2000 letter, and a 2014 memorandum that  
10          the N.R.C., L.T.R. policy is not protective. E.P.A.  
11          requires a risk range of 1 in a million to 1 in  
12          10,000 cancer incidence risk. For instance, an  
13          E.P.A. official stated the N.R.C. policy would not  
14          adequately protect either the health of our citizens  
15          or our nation's natural resources. To put it  
16          bluntly, radiation should not be treated as a  
17          privileged pollutant.

18                   You and I should not be exposed to  
19          higher risk from radiation sites than we would needs  
20          from sites which contain any other environmental  
21          pollutant. I would like to ask the N.R.C. and E.P.A.  
22          to explain why an unprotective standard is allowed to  
23          exist and why the public should be subject to this  
24          risk.

25                   MS. WEININGER: Good.

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2 A.L.J. BELSITO: Why the E.P.A. -- why  
3 will the E.P.A. -- what will -- excuse me. What will  
4 the E.P.A. do to support a state-led approach to  
5 regulating waste from Indian Point so that New York  
6 State can require N.R.C. to use the risk range of 1  
7 in a million cancer risk.

8 MR. CONGDON: This is for N.R.C.?

9 MS. WEININGER: No, this is for --

10 MR. CONGDON: And -- and for E.P.A.?

11 MS. WEININGER: No. All state  
12 agencies how are they going to rectify this  
13 inconsistency for cleanup requirements between all  
14 other industries, all other polluters and nuclear  
15 waste cleanup.

16 MR. CONGDON: Okay. Let's start with  
17 the N.R.C. and E.P.A. and then we'll move on from  
18 there.

19 MS. WEININGER: N.R.C. is not.

20 MR. WATSON: Okay.

21 MR. CONGDON: Let's start.

22 MR. WATSON: Okay. Well, first of  
23 all, the License Termination Rule. I'm not sure  
24 where this one in 500 came from but I -- we looked  
25 for it. We couldn't find that citation anywhere.

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2 MR. CONGDON: And -- and I -- could I  
3 just add, because we researched these questions.  
4 There were citations provided in the questions. But  
5 those citations respectfully did not have the 1 in  
6 500. We searched for the 1 in 500 that doesn't -- it  
7 didn't exist in the citations that were provided, so  
8 if there is --

9 MS. WEININGER: It's part --.

10 MR. CONGDON: So it is --.

11 MS. WEININGER: Yeah, it's -- it's  
12 part of the E.P.A. testimony. There are letters from  
13 the -- from the E.P.A. I'm not saying region one or  
14 region two. From the E.P.A. they have testified on  
15 this issue several times.

16 MR. CONGDON: Yes.

17 MS. WEININGER: They've written  
18 letters. And they have cited these discrepancies.

19 MS. DOLSEN: It says right here 1997  
20 testimony 2000 --

21 MR. CONGDON: Yeah. Well, we -- we  
22 obtained the testimony. The 1 in 500 figure  
23 specifically.

24 MR. WATSON: Okay. That would be  
25 good. Yeah, that's -- that's what I'm seeking.

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2 MS. DOLSEN: Tom Kaczmarek had written  
3 to me and I gave the citation.

4 MR. CONGDON: We have the citations.  
5 We looked for the 1 in 500 in those citations.

6 MS. DOLSEN: Okay.

7 MR. CONGDON: Okay. But anyway -- but  
8 I'm sorry.

9 MR. WATSON: It's -- it's obviously  
10 not in the N.R.C. termination rule because we looked.  
11 But moving on, we do use a cancer risk of 10 -- one  
12 times 10 to the minus four which you quoted here.  
13 And so the N.R.C. came up with the License  
14 Termination Rule. And basically the release criteria  
15 for unrestricted use of a site, any -- any licensed  
16 facility in the United States is going to be 25  
17 millirem plus the practice of ALARA.

18 And so the commission decided that was  
19 the limit they were going to use or the criteria they  
20 were going to use. With the practice of ALARA, I'll  
21 just say almost all sites are significantly below the  
22 25 millirem. And as a matter of fact, we've  
23 terminated 12 nuclear power plants. And all of those  
24 have been terminated for only a few millirem per year  
25 as a residual dose.





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2 our policy and that 25 millirem for unrestricted plus  
3 the practice of ALARA is adequate for unrestricted  
4 use.

5 It takes into account that you may  
6 also get exposure from other places because we do  
7 have the 100 millirem per year limit for the pub --  
8 general public. And so it takes into account that --  
9 that would be one small fraction of that limit --  
10 that 100 limit. So thank you.

11 MS. DOLSEN: The -- the question was  
12 really directed actually to the E.P.A. --

13 MR. CONGDON: Okay. E.P.A.'s next.

14 MR. RUVO: Yes. Hi, I'm Rick Ruvo.  
15 I'm the Air Director from E.P.A. region two. And I -  
16 - I understand, you know, the question and -- and  
17 your reference to E.P.A.'s 1 in a million cancer  
18 risk. But in -- in this situation E.P.A. defers to  
19 N.R.C. when it comes to radiation pollution. But  
20 recognizing that we -- we collaborate with N.R.C. We  
21 have a memorandum of understanding.

22 We -- we consult with them on -- on  
23 the decommissioning plan, we'll continue to do that.  
24 And -- and encourage that we, you know, we -- we work  
25 towards the -- the lower threshold that -- that

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2           you're referring to in -- in the question. So -- so  
3           we're -- we're -- we really have no -- nothing to add  
4           to N.R.C.'s response other than we -- we will  
5           collaborate with them on the decommissioning.

6                   MS. WEININGER: Right. But that's not  
7           an -- I -- I appreciate very much your responses.  
8           But that's really not answering the question that's  
9           being posed. The question that's being posed is that  
10          these -- the cleanup standard, which is based on this  
11          very unacceptable cancer risk, is very different from  
12          the New York state.

13                   For example, New York State 2003,  
14          Brownfield Cleanup Program and State Superfund  
15          Statute. It -- it -- it's a very different cleanup  
16          standard. And the question is posed to state  
17          agencies, not to the N.R.C. It's post -- posed to  
18          New York State agencies. How will you rectify this  
19          inconsistency?

20                   The cleanup is -- standard is way  
21          different for this -- these cleanup sites than it is  
22          for other industries. It's a pointed question to New  
23          York State.

24                   MR. CONGDON: Okay, go ahead. Go  
25          ahead, John.



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2 MS. WEININGER: Right. It's more  
3 appreciating that you said it's a more protective  
4 standard than the 25 millirem. But it is still  
5 inconsistent and much less than the 2003 Brownfield  
6 Cleanup Program State Superfund Statute. And that's,  
7 the question is how will this inconsistency be  
8 rectified. It's a very serious -- very serious  
9 inconsistency. I appreciate your answer.

10 But it still does -- doesn't answer  
11 the question. And furthermore, the consent order  
12 that D.E.C. signed with Holtec is deeply flawed. And  
13 it -- it is completely unacceptable. And -- and  
14 really --

15 A.L.J. BELSITO: I think we're going a  
16 little far field here.

17 MS. WEININGER: We are --

18 A.L.J. BELSITO: Is there anyone --?

19 MS. WEININGER: -- we are --.

20 A.L.J. BELSITO: -- is there --.

21 MS. WEININGER: But it's -- it's the  
22 same question.

23 A.L.J. BELSITO: Is there -- is there  
24 further response to the question related?

25 MS. WEININGER: It's the same question



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2 standard than the New York State agencies imposed in  
3 this case, that no state goes below 10 millirem. I -  
4 - I -- I'd be open to be corrected on that. But I  
5 believe other states are at 20 and 15 and numbers  
6 like that.

7 I believe no state is better than New  
8 York, what New York has imposed here.

9 MS. WEININGER: But it's still not  
10 meeting that same reading -- remediation --

11 A.L.J. BELSITO: Okay, we're going to  
12 move on to the next question.

13 MS. WEININGER: -- limit of 1 in a  
14 million --

15 A.L.J. BELSITO: It's late, it's 10  
16 past 8 --

17 MS. WEININGER: -- cancer risk. Thank  
18 you.

19 A.L.J. BELSITO: -- we have a long way  
20 to go. Thank you. The regulatory standard. We have  
21 additional questions coming from Joel Gingold, Michel  
22 Lee and Ellen Weininger? Holtec has never before  
23 completed the decommissioning of a nuclear plant.

24 Yet, it is currently the contractor  
25 for several units. Until it has demonstrated that it

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2           can perform such decommissioning safely and  
3           efficiently, shouldn't Holtec be held to the highest  
4           regulatory standards and substantial oversight by the  
5           N.R.C.?

6                                If so why then has the N.R.C.  
7           continuously relaxed the regulatory standard for  
8           decommissioning and granted a number of exceptions to  
9           the regulations to Holtec.

10                              Can the N.R.C. elucidate how it  
11           applies the A.L.A.R.A or ALARA principle? In doing  
12           so can the agency explain the principle which guides  
13           such application -- especially where radioactive  
14           releases would be deemed within regulatory standards?  
15           In other words, how does the N.R.C. ensure principled  
16           application of the ALARA principle?

17                              What are the steps the New York  
18           Department of Health, the New York State D.E.C. and  
19           other New York state agencies are taking to exercise  
20           authority as an Agreement State and as empowered by  
21           the state -- state law to regulate pollutants?  
22           Please describe for each agency.

23                              MR. WATSON: I'd like to answer the  
24           first bullet, so you don't confuse it with answering  
25           all three at the same time. Yeah, we agree that the



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2           decommission -- Holtec has not completed a  
3           decommissioning of a nuclear power plant. And they  
4           did apply for a license with the N.R.C. and we do a  
5           technical review of the company.

6                   And so -- and also their financial  
7           review. And we found that they were technically  
8           qualified to become a licensee and decommission the  
9           plant. I think the state may have probably done a  
10          similar review during their assessment of the  
11          application. So the second part of this is Holtec  
12          and any licensee is held to the highest standards  
13          that we can have. And those are the N.R.C.  
14          regulations.

15                   And so there's no difference between a  
16          Holtec license holder being the whole license holder  
17          or any other company or utility being the license  
18          holder of a nuclear facility in the U.S. So everyone  
19          is treated the same. As far as continuously relaxing  
20          regulations, I think we've touched on this before at  
21          a number of different meetings.

22                   But the Part 50 regulations were  
23          intended for operating reactors. And so in -- in  
24          2014, the N.R.C. put together a group of people to  
25          look at the regulations and make them a chance --



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2 A.L.J. BELSITO: ...

3 MR. KROHN: I'm just going to add a  
4 little bit on. This is Paul Krohn N.R.C. what Bruce  
5 said and then I'll hand it back to him for -- for  
6 ALARA. The thing about regulatory standards for  
7 decommissioning and relax and context for that.  
8 After you stop operating a reactor after -- after X  
9 number of years or months, it's just physics. It's  
10 the decay chain, it's how elements behave and  
11 isotopes behave. They go away, right?

12 So when you look at things that can go  
13 wrong, less can go wrong, that is just reduced. They  
14 don't go away, it's reduced. So when you look at  
15 things that can go wrong, things that you need a --  
16 an emergency plan for, the risk decreases over time.  
17 So some of the exemptions you're talking about here  
18 are changes when appropriate after X period of time  
19 to things like the emergency program.

20 And -- and a site like Indian Point is  
21 no different in those exemptions than other plants  
22 across the country who after X period of time have  
23 done the same thing. Thank you.

24 MR. CONGDON: John, do you want to  
25 add?

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2 MR. SIPOS: So as to what is -- what  
3 is the role of the state, I believe that's the third  
4 question here. As an Agreement State what actions  
5 have -- has the state taken? The state, you know, is  
6 facilitating transparency on Holtec license  
7 amendments and Holtec exemptions.

8 These are posted on the D.O.B. website  
9 for community review and transparency. And -- no,  
10 that is what we do, we post those. And we review  
11 those carefully. And we comment on them. And when  
12 there are concerns that the -- when there are  
13 concerns about what Holtec has proposed, various  
14 state agencies, whether it's the Department of Public  
15 Service or NYSERDA or the Attorney General's Office  
16 or other agencies as appropriate, we weigh in on  
17 behalf of the state. We comment. We have opposed  
18 certain exemptions which we have discussed at prior  
19 meetings.

20 And we have, you know, shared those --  
21 those initiatives and those efforts with the  
22 attendees at these meetings. And also, you know, the  
23 N.R.C. has mentioned the decommissioning rule making.  
24 The state agrees that the decommissioning rule making  
25 is ripe for updating. The state for several years

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2           has provided several detailed comments, suggestions,  
3           and commentary on that decommissioning rule making.

4                   And we have been very involved in  
5           that. And there have been multiple comments that  
6           have been submitted. So the state is, you know,  
7           accessing the opportunities that are provided in the  
8           N.R.C. regulatory space and presenting very detailed  
9           comments there. And -- and it is -- and has made  
10          several objections, you know, over the last many  
11          years.

12                   A.L.J. BELSITO: Did the panel want to  
13          add anything to the -- about the ALARA principle?

14                   MR. KROHN: Yeah, we do.

15                   MR. CONGDON: Oh, N.R.C.?

16                   MR. KROHN: Yeah, ALARA. Try to  
17          accelerate this too. Paul Krohn again to be brief on  
18          time. So ALARA, here's the point, you have to be  
19          less than regulatory limits for sure, but you want to  
20          drive it as low as you reasonably can. So you're  
21          considering a number of factors. What's the best  
22          state of technology? Does something new come along?  
23          Can I drive it even lower?

24                   What if I have to take apart -- a pump  
25          and because I'm -- that's part of decommissioning.

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2 Can I practice on a mock up that's not in the plant  
3 to reduce my time in front of the pump when I take it  
4 apart? Those are things that are ALARA. So you're  
5 driving as low as you can get in a reasonable manner  
6 trying to optimize to the lowest exposure. And Bruce  
7 will give you one or two examples.

8 MR. WATSON: Yeah. The regulations  
9 are -- in Part 20 provide a system for limitations  
10 for workers and members of the public. As I said  
11 before, you know, we do this through our licensing  
12 activities. We do it through our inspection  
13 activities. And -- and so we were -- we're  
14 constantly looking for the ALARA principle to be  
15 used.

16 In the U.S., you know, the annual  
17 exposure limit for an occupational worker is 5,000  
18 millirem. The average exposure to an occupational  
19 worker in U.S. nuclear power plants is a 120  
20 millirem. That's practicing ALARA. You're using the  
21 best technology, using cameras where you don't have  
22 to go in and physically be in the room to get the  
23 exposure.

24 And so even in the offsite dose  
25 calculation manual there's a limit of three millirem

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2                   and we -- we practice ALARA. We try to get down to  
3                   one millirem or less for our effluent exposure. So  
4                   ALARA is ingrained throughout the entire operation of  
5                   these facilities. Not only nuclear power plants but  
6                   also our material sites and uranium recovery, the  
7                   fuel cycle facilities.

8                   And so it's -- you -- you -- you just  
9                   do the best you can, that's practical in -- in  
10                  practicing the ALARA principle. And it's -- it's  
11                  outlined in the Part 20. So thank you.

12                  MR. CONGDON: Thank you. Now move on  
13                  to questions related to Dry Cask Storage.

14                  MS. WEININGER: I did --.

15                  CHAIR CONGDON: Did you want to have a  
16                  follow up?

17                  MS. WEININGER: Yes.

18                  CHAIR CONGDON: Okay.

19                  MS. WEININGER: I came up. I -- I  
20                  have a third question.

21                  CHAIR CONGDON: Okay.

22                  MS. WEININGER: Related to the  
23                  Agreement State status of New York. And the question  
24                  was pertaining very specifically to regulate the  
25                  discharge and remediation of certain radiological

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2           materials for the protection of the public health and  
3           safety from radiation hazards which includes  
4           byproduct materials such as tritium.

5                   So again, this goes back to discharge  
6           and goes back to New York State's authority. And  
7           actually goes back to what I said earlier about  
8           onsite in N.R.C.'S jurisdiction over the tanks and  
9           fuel pools. But it ends where the water reaches the  
10          Hudson River, so it's kind of connected here.

11                   And I was looking for an answer more  
12          specifically not to the comments but also to the very  
13          specific aspect of discharge.

14                   MR. DAMIANI: Sure, I can -- see, I  
15          can --

16                   MR. CONGDON: The agreement -- the  
17          Agreement State status.

18                   MR. DAMIANI: Sure, I can begin.

19                   MR. CONGDON: By -- Department of  
20          Health, Alex.

21                   MR. DAMIANI: My name is Alex Damiani.  
22          I work with the State Department of Health.

23                   MS. WEININGER: Thank you.

24                   MR. DAMIANI: So to address the  
25          Agreement State, there's sometimes some





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2 That'll be an N R. C. licensees, excuse me.

3 MS. WEININGER: Right. But we're --  
4 we're talking about that -- that juncture of -- and I  
5 seem to recall this listed in the Part 380 materials  
6 when the draft regulations were coming up and the  
7 Agreement State was mentioned and was mentioned also  
8 having to do with the protection of public health and  
9 safety from radiation hazards which includes by-  
10 product materials.

11 I mean it's specifically by-product  
12 materials. And again, going back to the statement  
13 that I made earlier about discharges as an example  
14 going into the Hudson River. Again --.

15 A L. J. BELSITO What is the question?

16 MS. WEININGER: I'm -- I'm asking  
17 about asserting the authority as it pertains to the  
18 discharges by utilizing the Agreement State status as  
19 well as taking into consideration all the things that  
20 happen as I described earlier with the circulating  
21 water system the withdrawal of water from the Hudson  
22 River, which is not -- it does not come under the  
23 authority of the N R. C. It comes under the authority  
24 of the state.

25 And then, what happens from there to

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2 then turn around and discharge it because --.

3 A.L.J. BELSITO: Okay. Do you have a  
4 response to the -- is the question understood?

5 MR. DAMIANI: I -- I can only speak to  
6 the Agreement State status, not so much the water  
7 intake if you will. But I would go back to the  
8 Agreement State status or the agreement would exclude  
9 any material that was licensed by the N.R.C. We  
10 would not be regulating that.

11 MS. WEININGER: Right, right. But  
12 that's not --.

13 MR. DAMIANI: But if the N.R.C. wants  
14 to concur or correct me.

15 MS. WEININGER: Yeah. My question is  
16 should state --.

17 MR. SIPOS: So I think if I could just  
18 -- if I could weigh in, I think Alex has answered the  
19 first question. I think he's answered the second  
20 question, the follow-up question. And the federal  
21 statute that's applicable here, which is the Atomic  
22 Energy Act of 1954, and it carves out and in -- and  
23 reserves to the N.R.C. the regulatory authority over  
24 such facilities and their operations. And that's the  
25 end, you know, period full stop.

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2 MR. CONGDON: Okay. And N.R.C.

3 MR. WATSON: Let me just clarify a  
4 couple things here. The Agreement State status is an  
5 independent thing with each state what they want to  
6 regulate. And they're authorized to regulate  
7 licenses under Part 30 which are medical industrial  
8 - depends -- depends on what the state wants to do.

9 So the -- the state of New York has a  
10 variety of these types of licenses. They can reg --  
11 they -- they can administer the license for and  
12 regulate, inspect everything. So -- but be -- be  
13 very clear these are called material licenses.  
14 They're not reactor licenses. The N.R.C. is the  
15 licensor for all power reactors under Part 50. And  
16 non-power reactors for that matter too.

17 But -- but -- so the state of -- of --  
18 of New York -- and I don't want to say exactly what  
19 you're -- because I'm not familiar with. States are  
20 authorized to regulate material type sites under part  
21 what -- that we would regulate under Part 30. And  
22 those include industrial users, medical, as I said.

23 So there is byproduct material  
24 associated with those licenses. And so the state is  
25 -- has the authority to regulate those byproduct

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2 materials from those types of licenses. The -- the  
3 N.R.C. reserves the right to regulate the byproduct  
4 material from the reactors of Part 50 licenses. So  
5 does that kind of clarify it?

6 MS. WEININGER: Yeah.

7 MR. WATSON: It's two different types  
8 of licenses.

9 MS. WEININGER: Yeah. So just one  
10 quick follow up. Just --.

11 MR. CONGDON: I -- I apologize. But  
12 there are two --

13 MS. WEININGER: I just want to --.

14 MR. CONGDON: -- there are two other  
15 individuals that are on this slide. And they're  
16 virtual --

17 MS. WEININGER: Right.

18 MS. CONGDON: -- and they have follow-  
19 up questions to ask as well.

20 MS. WEININGER: Okay. I -- I just  
21 want to ask who would issue the permit? Who, the New  
22 York State or the N.R.C. for all the Hudson River  
23 water that must be extracted to go through this  
24 circulatory system? Who -- who -- who would issue  
25 that? New York State or the N.R.C.?

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2 MR. CONGDON: It's -- it's not a  
3 specific --.

4 MR. SIPOS: Again, the operation of  
5 the facility and its discharge operations are  
6 controlled under the Atomic Energy Act of 1954 and  
7 that is regulated by the Nuclear Regulatory  
8 Commission.

9 MS. WEININGER: Uh-huh. But that  
10 doesn't answer who authorizes the --

11 MR. SIPOS: This concerns --

12 MS. WEININGER: -- the intake of the  
13 Hudson River?

14 MR. SIPOS: -- the operation of a --  
15 this -- this is part of the operation of the  
16 facility. There's an operating license that has been  
17 issued by the Nuclear Regulatory Commission. It  
18 pertains to the operation of the facility and the  
19 discharges. And that is regulated under the auspices  
20 of the Nuclear Regulatory Commission. And that is --

21 A.L. BELSITO: Out of fairness --.

22 MR. SIPOS: -- that is the -- that is  
23 -- that is the answer.

24 A.L.J. BELSITO: Okay. Out of  
25 fairness to other folks, we do have to -- to move on.

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2 MS. WEININGER: Thank you very much.

3 A.L.J. BELSITO: Do we have other  
4 follow-up questions on this topic?

5 MR. CONGDON: Yeah, there are two  
6 virtual --.

7 A.L.J. BELSITO: Virtual. Joel  
8 Gingold?

9 MR. GINGOLD: Yes. Thank you. Can  
10 you hear me?

11 A.L.J. BELSITO: Yes.

12 MR. GINGOLD: Number one, thank you  
13 for this opportunity. Number two, I am not really  
14 satisfied with the answer I got. If in fact the  
15 N.R.C. is properly overseeing the site, why then was  
16 it necessary for the state to appoint a resident  
17 inspector? And why also has the state itself taken  
18 exception to a number of your exemptions?

19 I would point out to the N.R.C. reps  
20 that back in the 1960s I believe it was. When I was  
21 a young engineer, I was responsible for the licensing  
22 of what became the Donald Cook Plant in Michigan. I  
23 spent a number of hours sitting across the table from  
24 the N.R.C. staff. And I can assure you it was not a  
25 pleasant experience. But I do not --.

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2 A.L.J. BELSITO: Sir, we're going to  
3 get answers to the question that you posed.

4 MR. GINGOLD: Yeah.

5 A.L.J. BELSITO: So if the panel is  
6 prepared to answer the questions that were asked,  
7 please.

8 MR. KROHN: First, Joel, thanks for  
9 the question. I too have walked D.C. Cook many times  
10 so we share a common experience. On the N.R.C.  
11 inspector side in your comment about the the New York  
12 State inspector, as you knew we had resident  
13 inspectors. I'm sure you've met them at sites  
14 before.

15 We still send decommissioning  
16 inspectors in multiple areas of expertise up to the  
17 site several times per quarter. Our last public  
18 inspection report that documents that was issued  
19 March 13th. Do we stay in touch with the site, so we  
20 understand their work schedule and activities?  
21 Absolutely, very, very frequently we get updated  
22 schedules.

23 We know exactly when evolutions are  
24 going to occur. And we're on site when we need to be  
25 to watch something. So hopefully that helps. I



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2 don't want you to think that we don't have presence  
3 onsite. We very, very much do.

4 MR. WATSON: Okay. I was going to say  
5 --.

6 MR. CONGDON: I think Michele Lee has  
7 a follow-up as well.

8 A.L.J. BELSITO: Go ahead, Ms. Lee.

9 MS. LEE: Hi there. Can you hear me?

10 A.L.J. BELSITO: Yes.

11 MR. CONGDON: Yes.

12 MS. LEE: Okay. So my question did  
13 not really get answered. I had asked how the N.R.C.  
14 ensures principled application of the ALARA  
15 principles. So referring to one's standards and  
16 saying you have a standard is not saying how you  
17 ensure principled application of it. And I  
18 appreciate the rhetorical commitment.

19 But the -- the quote "do the best you  
20 can is practical" does not -- it is not really  
21 explanatory. And -- and if frankly what you're  
22 saying is you just do a sort of ad hoc, you know,  
23 when we can, when we'll try to do it as much as  
24 possible depending on how much money, the -- the  
25 licensee is going to spend it on it on any given day.

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2 That -- then you should be candid with  
3 the public and acknowledge that and not go on and on  
4 about it.

5 A.L.J. BELSITO: Okay. We're going  
6 try to answer that question.

7 MR. KROHN: Paul Krohn, N.R.C. And  
8 Tony, I'm going to ask you to provide some  
9 perspective here in a second. I -- I -- so I -- I --  
10 I hear what you're talking about, Michele, in terms  
11 of principaled application. Before I turn it over to  
12 Tony, we go out and we inspect how a licensee applies  
13 ALARA. In other words, we'll look at a specific job  
14 and we say, okay, you got a 100 millirem for that  
15 job.

16 But we will look at it in the -- in  
17 the lens of -- you could have done better. Your  
18 techniques could have been better. It could have  
19 been a quarter of that, it could have been 25. That  
20 type of thought process is written into our  
21 inspection procedures. It's what we look for. And  
22 in cases where a licensee does a poor job and could  
23 have done better, that you'll see written up in our  
24 inspection reports as a violation.

25 So that -- and Tony, I'll -- I'll turn

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2           it over to you, but yes, we looked at it in how it's  
3           physically applied.

4                   MR. DIMITRIADIS: Thank you, Paul.  
5           Tony Dimitriadis, N.R.C. I apologize for my voice.  
6           The ALARA principle is something that's taken to try  
7           to reduce a dose below a regulatory limit. Bruce  
8           indicated earlier that there is -- the I.C.R.P. talks  
9           about a 10 rem dose limit that it was studied on.  
10          And the evidence associated with cancer risks below  
11          10 rem, which is 10,000 millirem, is inconclusive.

12                   So let me just start there. The  
13          occupational dose limit is five rem, 5,000 millirem.  
14          Licensees impose an administrative limit of four rem,  
15          4,000 millirem. And they're allowed to -- they can  
16          have their workers get a dose up to four rem if they  
17          -- if they could -- if they wanted to. They don't do  
18          that.

19                   They actually impose individual jobs  
20          with an estimated dose for a given job like Paul  
21          indicated working a pump, a valve or something like  
22          that. And they estimate what that dose is based on  
23          experience. And when they do that, they say, well,  
24          we think this job is going to take about 200  
25          millirem.

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2 And then, they take that -- excuse me.  
3 They take that and they say, well, what engineering  
4 standards or -- or techniques can we do to reduce  
5 that from 200 millirem to, let's say a 100 or 120 as  
6 -- and as Bruce indicated an average dose to an  
7 occupational member who worked -- that means somebody  
8 who works at the plant has gotten an average of about  
9 120 millirem.

10 That is a direct result of applying  
11 the ALARA principles. That means taking engineering  
12 analyses, alternative methods, technologies like  
13 cameras and things like that to, so that they can  
14 protect their members of their workforce. I hope  
15 that answers your question.

16 MR. WATSON: I -- I'll just try to --  
17 kind of wrap it in a bow. As I said, the regulations  
18 require the practice of ALARA, the licensees do that  
19 through procedures on how to do work in evaluating  
20 the jobs that need to be done. And they look at how  
21 they can reduce the dose whether it's using as the  
22 classic examples are time, distance and shielding.

23 In more recent years, they've looked  
24 at better technologies using cameras, using remote  
25 tooling and other applications to reduce the dose.

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2 As I said before, the average dose to the average  
3 worker in a nuclear power plant is only about 120  
4 millirem per year. And that's well, well below the  
5 administrative limit or the regulatory limit.

6 And so the licensees do practice  
7 having administrative limits to -- as targets to make  
8 sure they don't exceed any occur -- any regulatory  
9 limits. Second thing I want to mention is that the  
10 industry including the operating plants and the ones  
11 in decommissioning are expected to learn -- le --  
12 expected to -- to take into account lessons learned  
13 from each other.

14 On May 2nd of this year, we hosted a -  
15 - a -- a lessons learned workshop. It was publicly  
16 announced and available for people to -- to listen in  
17 on. But we invited the -- all the licensees from the  
18 decommissioning plants to come in and spend -- they  
19 spent four hours going over license -- lessons  
20 learned that they have -- have come up with and did  
21 the dismantling and -- and decommissioning of their  
22 plants.

23 And this included the -- the Indian --  
24 Indian Point representation. And other plants that  
25 Holtec and other plants, I don't want to give -- make

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2           an infomercial. But all the key players were there,  
3           energy solutions and -- and the other A.D.P. were all  
4           there representing and provided information on  
5           lessons learned not only for radiation exposure but  
6           also that industrial safety issues where they've  
7           learned to do things safer and better. So I'll  
8           conclude it with that. Thank you.

9                   MR. CONGDON: Thank you.

10                  A.L.J. BELSITO: Thank you. The next  
11           topic is Dry Cask Storage. The questioner is Susan  
12           Shapiro. How long did it take the N.R.C. to approve  
13           Holtec spent fuel cask being used at Indian Point?  
14           Have any of the Holtec spent fuel casked leaked at  
15           Indian Point or any other site?

16                  What is the projected rate of leakage  
17           or damage of the spent fuel casks and our radioactive  
18           releases from the spent fuel casks monitored? And if  
19           so, how?

20                  MR. KROHN: Okay, thanks. Paul Krohn  
21           with the N.R.C. How long did it take to approve the  
22           spent fuel cask design? About a year. That's  
23           something Bruce mentioned before. Again, those  
24           results are available publicly, something called the  
25           safety evaluation report. Have any of Holtec's spent

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2 fuel tanks leaked? The answer is no. None that I  
3 know of.

4 And -- and that goes to the next  
5 question. What is projected rate of leaking? The  
6 answer is zero. These are seal welded shut. There  
7 are no openings on these casks. Picture, if you  
8 will, a big metal cylinder, several feet tall,  
9 several feet wide welded shut with helium inner gas  
10 inside. So that's -- that's what they are physically  
11 surrounded by shield.

12 MR. KACZMAREK: Paul, can you speak  
13 into the mic? This is Tom Kaczmarek.

14 MR. KROHN: Oh, I'm sorry. All right,  
15 all right. Thanks for that Tom. So let me go back  
16 and make sure everybody hears, how long did it take?  
17 About a year. The results and the specifics you can  
18 find in the safety evaluation report on the Holtec  
19 casks that is publicly available.

20 Have any casks leaked? The answer is  
21 no. Have they leaked at Indian Point or any other  
22 site? The answer is no. And then I had gotten to  
23 say, look, these configurations, these are welded  
24 shut. Stainless steel, tall cylinders, several feet  
25 tall, several feet wide with a lid at the top that's

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2 seal welded shut.

3 What's the projected rate of leakage?

4 They are sealed, so the leakage rate is zero. They  
5 have aging management programs, et cetera,  
6 inspections that we do on the monitoring by the  
7 licensee which goes to your fourth question. Are the  
8 releases monitored? Yes. There are monitors around  
9 what we call the ... pad that would measure anything  
10 that might potentially come out of the cask, but  
11 we've never seen that.

12 MS. SHAPIRO: Okay. Follow up --.

13 A.L.J. BELSITO: I'm just going to  
14 remind you -- you're -- the next slide is all your  
15 questions too.

16 MS. SHAPIRO: I know.

17 A.L.J. BELSITO: Dry Cask Storage. So  
18 if you could just keep your follow up to the --.

19 MS. SHAPIRO: I will. Very short.  
20 Okay. I believe that at San Onofre there was a leak,  
21 so I don't believe that's correct. And there was at  
22 least damage to the cask. What is -- my question is  
23 what's the corrosion rate of the casks? And they're  
24 made out of thin stainless steel. Have you - what --  
25 you must have a corrosion rate calculation. What's



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2 the corrosion rate?

3 MR. WATSON: First of all, there was  
4 no leak at San Onofre. There was a case where they -  
5 - when they were lowering one of the canisters into  
6 the shielded vault they go into, it rubbed against  
7 the edge. And there's been extensive information on  
8 that. It basically was a not even a scrape but a  
9 blemish on the outside of the cask. It was not  
10 really damaged at all.

11 There are ongoing studies on -- for  
12 aging management that are conducted by the Electric  
13 Power Research Institute. And I'm trying to remember  
14 what else we're talking about.

15 MS. SHAPIRO: Are those available to  
16 the public, the EPRI studies?

17 MR. WATSON: The EPRI -- EPRI  
18 information -- well, actually the inspection results  
19 from San Onofre it would be in the inspection results  
20 that were issued by Region 4.

21 MS. SHAPIRO: No, you just referenced  
22 EPRI studies. If you could provide that to the  
23 public.

24 MR. WATSON: I -- let me answer the  
25 question. The -- the first part of the question was

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2           about San Onofre. San Onofre, like I said, the  
3           inspection reports are publicly available as are all  
4           N.R.C. inspection -- inspection reports unless  
5           they're pertaining to security are available on the -  
6           - on the N.R.C. website or in Adams. And so EPRI  
7           though does publish materials. They are a private  
8           entity. And so I don't know the availability of  
9           their reports.

10                   MS. SHAPIRO: 80,000 dollars a year.

11                   MR. WATSON: Well --.

12                   MS. SHAPIRO: To be -- to be able --  
13           able --

14                   MR. WATSON: Well, I just said there -  
15           -.

16                   MS. SHAPIRO: -- get a copy of their  
17           reports.

18                   MR. WATSON: Well, that's --.

19                   MS. SHAPIRO: That you're relying on.  
20           So if you're relying on it, could you please provide  
21           it to New York State and to the public? If you're  
22           relying on these reports, I ask that you provide  
23           them.

24                   MR. WATSON: They are used in our  
25           formulation of regulations and inspection

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2 requirements. And I can't speak to that issue  
3 because I'm not knowledgeable in them. But they are  
4 at a private entity and their research is their  
5 research material. And they choose to share it with  
6 us as they see fit.

7                   And the -- but they do collaborate  
8 with us on a number of aging management issues. And  
9 -- and because we also do aging management studies in  
10 our office of research. So thank you.

11                  MS. SHAPIRO: Thank you for relying on  
12 studies that no one can see but yourselves.

13                  A.L.J. BELSITO: Okay. We're going to  
14 move on to your next set of questions related to Dry  
15 Cask Storage. Are the spent fuel casks vented? If  
16 so, is the venting monitored for radii --  
17 radionuclides? If not, why not? Please provide all  
18 monitoring data. What plan does the N.R.C. have in  
19 the event one of the spent fuel tanks leaks or needs  
20 to be replaced to prevent the unplanned release of  
21 radionuclides?

22                  What chemicals and radioisotopes are  
23 present in the spent fuel casks? And what plans does  
24 the N.R.C. have to fund replacement or repairs of  
25 spent fuel casks if needed? In the event replacement

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2 or repair of the spent fuel casks are required, who's  
3 responsible for the costs?

4 MR. KROHN: Okay. So first question,  
5 are the spent fuel casks vented, the answer is no.  
6 Told you they were just seal welded, right. So  
7 they're sealed shut. There's no vent on them. What  
8 plan does the N.R.C. have in the event of a spent  
9 fuel tank or cask leak? When you look at that safety  
10 evaluation report on that design, that includes a  
11 procedure whereby the licensee would take a cask, if  
12 it had an issue, back into the refueling building  
13 spent fuel pool and to be able to do any sort of  
14 operation on it.

15 So you have to have a procedure. You  
16 can find that in a safety evaluation report to deal  
17 with an issue with the cask or -- yeah, or go to a  
18 different cask design. What chemicals and  
19 radioisotopes are present? Same as in a reactor  
20 after time of decay, right. Fission products from  
21 the normal process decay over time. And get reduced  
22 in quantity.

23 So there's no difference, you know,  
24 it's -- you have to look at a -- at a -- at a  
25 isotopic chart but really it -- it comes from

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2                   operation. What plans does the N.R.C. have to fund  
3                   replacement or repairs if needed? That is the  
4                   licensee's responsibility. If any repairs were  
5                   needed, we would be very, very closely involved and  
6                   informed right away. But that cost goes to the  
7                   licensee.

8                   MS. SHAPIRO: Okay. How many years  
9                   are the casks licensed for? My understanding is that  
10                  they have to be replaced in a certain amount of time  
11                  per N.R.C. regulations. How many years is that?

12                  MR. WATSON: I believe it's currently  
13                  six zero, 60.

14                  MR. KROHN: ... again?

15                  MR. WATSON: Yeah.

16                  MR. KROHN: Yeah, go ahead.

17                  MR. WATSON: I -- I -- I believe the  
18                  casks are licensed in 20-year increments.

19                  MS. SHAPIRO: Correct.

20                  MR. WATSON: The design lifetime is 80  
21                  to 100 years. And so with aging management --  
22                  following of those who are an aging management issue  
23                  and ensuring that they maintain their integrity. I  
24                  have no idea how long they'll last, but probably well  
25                  belong -- beyond a hundred years.

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2 MS. SHAPIRO: Okay. So say in 20  
3 years -- in 20 years -- I want to ask you a question.  
4 You say, in 20 years, these need to be replaced.  
5 You've already released the site from decommissioning  
6 and let Holtec take all of our decommissioning funds.  
7 Who's responsible for paying for that replacement --?

8 MR. WATSON: Well, there is --.

9 MS. SHAPIRO: And let me finish my  
10 question. And you said previously that you need --  
11 if there was a replacement needed or if there was a  
12 damage, it would have to go into a spent fuel pool.  
13 Are you requiring that there remain an active spent  
14 fuel pool hot cell that can be used in the event this  
15 occurs, which we know it will occur because they're  
16 only licensed for 20 years.

17 MR. WATSON: Let me --

18 MS. SHAPIRO: Or maybe a hundred  
19 years.

20 MR. WATSON: -- let me -- let me  
21 revise the previous statement. If -- if the dry fuel  
22 storage was in its own standalone system, so to  
23 speak, a structure without a spent fuel pool there  
24 are means of handling those types of potentially  
25 leaking casks by putting in additional enclosures and

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2 casks and shielding them until they can well shut  
3 another cask over them.

4 MS. SHAPIRO: And who's responsible  
5 for paying for that?

6 MR. WATSON: Right now the licensee  
7 would be responsible for paying those, but that would  
8 be reimbursable from the Department of Energy because  
9 they're -- they maintain the responsibility for  
10 disposing of those casks. So this is -- the licensee  
11 is also required to maintain a spent fuel management  
12 fund for the maintenance and security of these  
13 facilities during the duration of them.

14 And so there is a separate fund for  
15 spent fuel management that's maintained by the  
16 licensee and reported periodically to the N.R.C. and  
17 I assume the state on -- on what the status of that  
18 fund is to ensure that it's reasonably adequate  
19 funding to make sure that the site -- safe is  
20 maintained safe and secure.

21 I'm trying to think of what else I  
22 needed to add to this. But there was something else  
23 in your question, but I'll quite a few of them in a  
24 row. So basically, the licensee would be responsible  
25 for ensuring the safety of the casks with our

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2           oversight, the N.R.C.'s oversight. And we would do  
3           that through our -- making sure things are done  
4           through the inspection process.

5                   These cask or the inspect -- the  
6           ISFSIs are inspected on a periodic basis. If there  
7           was issues, they would obviously have to notify us.  
8           We would get engaged with them, ensure they came up  
9           with a process for ensuring that the fuel remains  
10          safe. And of course, the responsibility for the  
11          immediate cost of those repairs or conditions would  
12          be with the licensee.

13                   And then, it would be reimbursable by  
14          the Department of Energy who has ultimate  
15          responsibility for accepting the ownership of the  
16          fuel.

17                   MS. SHAPIRO: As a taxpayer of New  
18          York State, my question has to do with after you  
19          release this site from Holtec and you say  
20          decommissioning is done and then there's a problem,  
21          who's paying for it?

22                   MR. WATSON: Well, the licensee is --  
23          there's still a license for the dry fuel storage  
24          facility. And so it reminds -- yeah, it's a separate  
25          entity from the decommissioning trust fund. And so



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2 it remains with an independent trustee, typically a  
3 bank. And that trustee can only use that money for  
4 specific reasons. In this case, it would be for  
5 spent fuel management.

6 MS. SHAPIRO: What percentage of the  
7 decommissioning funds are being put into that?

8 MR. WATSON: It's a separate fund.

9 A.L.J. BELSITO: Okay. We have a few  
10 more Dry Cask Storage questions also from Ms.  
11 Shapiro. Is the federal government responsible for  
12 monitoring and storing nuclear waste? If not who is?  
13 Is the host state, New York, responsible for the  
14 costs of long-term management of nuclear waste within  
15 the state, in the event long-term repository has not  
16 been approved before Holtec completes decommissioning  
17 of Indian Point?

18 Will Holtec be permitted to take the  
19 funds remaining after decommissioning if nuclear  
20 waste remains at the Indian Point site?

21 MR. KROHN: Okay. So the licensee  
22 Holtec has responsibility for monitoring storing the  
23 nuclear waste on site under the Part 50 license,  
24 we've talked about that several times, right. Now as  
25 a matter of national policy, we all know the word

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2 Yucca Mountain, right. The government is still  
3 debating where and if I think there will be a final  
4 repository for the country.

5 That is yet to be decided and is a  
6 political matter more to come on that. But I would  
7 say that that's under legislative -- it's a  
8 legislative topic not an N.R.C. topic.

9 MS. SHAPIRO: Are the casks approved  
10 at -- at being used by Holtec at Indian Point able to  
11 be transported? Are they designed to be transport  
12 casks?

13 MR. KROHN: With an overpack --

14 MS. SHAPIRO: Are they -- are they  
15 licensed as transport casks?

16 MR. KROHN: In the current state just  
17 standing up, no. Tony can talk to you about other  
18 things separately about extra packaging you have to  
19 have if you're going to transport it. But in a  
20 current state just standing up in the pad now, no.

21 MS. SHAPIRO: Transport packs have not  
22 been approved yet, have they?

23 MR. DIMITRIADIS: They have been but -  
24 -.

25 MR. CONGDON: Tony, I'm sorry. Could

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2 you take the mic please?

3 MR. DIMITRIADIS: Yeah.

4 MR. KROHN: Thanks Tony. That would  
5 help.

6 MR. DIMITRIADIS: The casks that are  
7 at Indian Point currently stored -- storing the  
8 nuclear waste are not authorized to transport that  
9 across the country to some final resting place.  
10 There are casks that are -- that have a certificate  
11 of compliance for transportation but that's not what  
12 they're stored there for. That's number one.

13 Number two, back to the thin walled  
14 casks that you mentioned, I think there's a -- a  
15 misconception out there, the casks are thin walled.  
16 But that's not all that there is. They are part of a  
17 whole system that are embedded inside an over pack  
18 that is composed of two-and-a-half feet of concrete  
19 and steel.

20 And therefore they're very, very  
21 robust, very robust. I can't stress that enough. So  
22 I think there's a misconception that you've been fed.  
23 There is an element of it. That's like saying my car  
24 bumper is very thin. But that's not part -- that's  
25 not the end of the story. The -- your car -- your

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2 protection system is composed of a whole system  
3 including airbags and A.B.S. and safety restraint  
4 systems.

5 Sim -- similar to that concept the  
6 casks are part of a whole system. And they're very,  
7 very thick and robust.

8 A.L.J. BELSITO: Okay. We're going to  
9 move ahead. We have very limited time left, so we're  
10 going to move to biological and health studies.  
11 Questioner again. Ms. Shapiro, please provide  
12 reports supporting how the protective standard was  
13 determined -- was determined.

14 In 2010, the N.R.C. contracted the  
15 National Academy of Sciences to perform such a study  
16 analysis of cancer risk nuclear facility phase two  
17 pilot planning and there is a citation. Why -- why  
18 in this health -- why did this health study commence?  
19 Why didn't it commence?

20 MS. SHAPIRO: I took -- I think I  
21 answered these questions previously, so I -- I don't  
22 want to waste time with that.

23 MR. CONGDON: Okay, ma'am. Thank you.

24 MS. SHAPIRO: I -- I -- but I do want  
25 to ask the question to New York State and to the New

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2                   York State agencies. How can you rely on the  
3                   N.R.C.'s outdated studies? And what they're telling  
4                   you is, well, it was going to take a little too much  
5                   time to do health studies. So now you guys all have  
6                   to trust us that something that was done from the  
7                   '70s data that was not done by actual epidemiological  
8                   study which we now have today.

9                   We've had nuclear reactors for many  
10                  years around the country here at Indian Point. We  
11                  now have epidemiological studies. They're relying on  
12                  hypothetical projections from the 1970s. I'm asking  
13                  New York --.

14                 A.L.J. BELSITO: Do you have a  
15                 question? Go ahead.

16                 MS. SHAPIRO: I'm asking New York  
17                 State agencies, how can you put us, New York state  
18                 residents, at risk based on reliance on these  
19                 outdated studies when in fact health studies do not  
20                 exist?

21                 A.L.J. BELSITO: Okay, we'll try to  
22                 give you the answer.

23                 MR. CONGDON: So I -- I would only  
24                 reiterate something that was stated earlier about the  
25                 JP obtaining the 10 millirem standard if they -- if

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2 that's enforceable under the commission order. But  
3 if D.O.H. or A.G.'s office wants to add anything.

4 MR. DAMIANI: I would say with respect  
5 to health studies. You are right, there are a lot of  
6 good recent epidemiology studies on radiation but I'm  
7 not sure.

8 MS. SHAPIRO: I can't hear you, I'm  
9 sorry.

10 MR. DAMIANI: Yes, I'm sorry. There  
11 are a lot of more recent epidemiological studies on  
12 radiation. But I'm not sure specifically what you're  
13 getting to studies on nuclear power plants or -- or  
14 what types of epidemiological studies are you  
15 referencing?

16 MS. SHAPIRO: On the real -- okay.  
17 We're dealing here with tritium releases. We are  
18 dealing here with krypton 85 releases that aren't  
19 necessarily health studies. Some of my other  
20 questions dealt with climate change issues. There  
21 are strontium-90 which you're going to allow them to  
22 release before you even have the data of what's --  
23 what's in the effluent.

24 There's all these radiological studies  
25 that -- yes, there are good epidemiological studies

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2           but instead New York State is bowing down and saying,  
3           no, we are going to let the N.R.C. use their 1970s  
4           studies. And we're not going to protect our people  
5           or our waters or our biota or our endangered species  
6           because we're relying on the 1970s idea that the  
7           N.R.C. had to promote nuclear as it's okay but it was  
8           just hypothetical.

9                   And today we have epidemiological  
10          data. And instead of using that data you are letting  
11          the N.R.C. dictate to New York State our health. And  
12          I'm asking you why you're letting that happen.

13                   MR. CONGDON: I -- I would -- I would  
14          add to my earlier statement. This D.O.B. had  
15          requested an options analysis to look at not what  
16          option is available for the tritium that would meet a  
17          standard. Your concern is what the -- is the  
18          standard protective or isn't it, right. And to  
19          inform the discussion, we asked our independent  
20          technical expert to present a relative risk  
21          assessment of the options.

22                   Again, not to see which option meets  
23          the standard. It's assumed that all would meet the  
24          standard. But his analysis was what option is the  
25          best from a relative risk standpoint. And that

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2                   presentation is available on our D.O.B. website. It  
3                   was presented by Dave Lochbaum. But from the state  
4                   agencies that run the D.O.B., the request of him was  
5                   what's the relative risk of the options, not what  
6                   option meets the standard.

7                   So we weren't even talking about what  
8                   goes into -- to the standard. And furthermore, no  
9                   one is talking about discharging even close to the  
10                  standard. Right. And so -- so the -- the historical  
11                  data show and the monitoring in the river shows that  
12                  the historical levels have been extremely small  
13                  relative to the standard.

14                  And -- and so from the state's  
15                  perspective, that's what information we asked for to  
16                  be presented that's been presented. Obviously, more  
17                  work and more discussion is ongoing, but that's what  
18                  we've done to date.

19                  MS. SHAPIRO: But the -- that's the  
20                  final what the -- on the site the 10 millirems.  
21                  We're talking about releases into the river. You are  
22                  not -- you are not project -- you're not using that  
23                  10 standard in the -- in the river. You're -- that  
24                  you're -- those are releases and so this is totally  
25                  different things. I -- okay. So I'm talking about



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2 that. I'm talking about the releases that are --  
3 we're discussing here.

4 MR. CONGDON: Yeah, so was I.

5 MS. SHAPIRO: Okay.

6 MR. CONGDON: So my first part of the  
7 answer was the 10 millirem which is -- what is the  
8 state doing that's different than the N.R.C.? 10  
9 millirem. The other question was, are you okay with  
10 their standard on the discharge? And I told you what  
11 we've done as a D.O.B. to inform that discussion.

12 And what went into that was not will  
13 the -- will the discharge options or the handling of  
14 the tritium options meet an N.R.C. standard that  
15 you're calling into question. It was what are the  
16 relative risks of the various options? And that was  
17 discussed. And the historical data was also reviewed  
18 on the water discharges themselves that have been  
19 going on now for some time.

20 And -- and that was -- that was  
21 compared to the standards and shown to be a very  
22 small fraction of the allowable limit. So when  
23 you're framing the --

24 MS. SHAPIRO: The allowable limit the  
25 N.R.C.'s giving you?

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2 MR. CONGDON: Correct. But -- but --  
3 but -- but the -- the discussion around this has  
4 been, you know, suggestive that the discharges will  
5 be at the standard which you're calling into question  
6 is unprotective. And I would just point out the  
7 factual discussions that we've tried to facilitate  
8 here have been around what has the historical  
9 evidence shown.

10 And -- and that has been historical  
11 shown to be a small, small fraction of the limit that  
12 you're calling into question.

13 MS. SHAPIRO: With all due respect to  
14 Dave Lochbaum, he's an engineer, he's not a health  
15 physicist. You don't have a health physicist looking  
16 at this. That's what we're asking for. We're asking  
17 for health experts to look at this, not just  
18 engineers. That's the difference. So that's really  
19 what we're talking about here.

20 And -- and we do know that there's  
21 already contamination in the river. That's a P.S.C.  
22 problem. Because the P.S.C. has -- well, it comes to  
23 one of my later questions, but I'll bring it up now,  
24 so we don't have to deal with it later.

25 MR. CONGDON: Yeah, please.

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2 MS. SHAPIRO: The P.S.C. has on the  
3 table still desalination for Rockland County which is  
4 three miles south of Indian Point.

5 MR. CONGDON: No, it's not on the  
6 table.

7 MS. SHAPIRO: Yes, it is on the table.  
8 It's as an option in case it is. John, I've read it.  
9 I've been participating in it. It's as an option if  
10 Rockland County still needs more water. The P.S.C.  
11 can't say yes on both sides. They can't say it's  
12 okay to discharge and it's okay that later at some  
13 point in time after it's bio-accumulated into the  
14 silt in the Hudson River that we're going to  
15 desalinate the Hudson River for drinking water for  
16 Rockland County.

17 You can't say yes to both. You have  
18 to say no to both. Or at least no to one.

19 MR. CONGDON: Yeah.

20 MS. SHAPIRO: It's -- it's really  
21 hypocritical.

22 MR. CONGDON: To -- to -- right. To -  
23 - to be clear, speaking for the P.S.C. And I'm the  
24 executive deputy of the Department of Public Service.

25 MS. SHAPIRO: I know.

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2 MR. CONGDON: There is no desalination  
3 plan on the table.

4 MS. SHAPIRO: It's still on the table  
5 in your order. In your order, which got rid of the -  
6 -.

7 MR. CONGDON: Our order -- our order -  
8 - our order explains that the provider of water has  
9 to always have sufficient supply. Whatever the  
10 supplies are have to meet D.O.H. standards. And to  
11 date they have not put desalination back on the table  
12 that --.

13 MS. SHAPIRO: But they can.

14 MR. CONGDON: That was pulled -- they  
15 -- they did have it. There's also.

16 MS. SHAPIRO: You left the -- the door  
17 open.

18 MR. CONGDON: There's always going to  
19 be the door open to any water supply option that the  
20 utility is required to then present. And that would  
21 have to go through a full permitting just like their  
22 original proposal did. So it's not something that  
23 the P.S.C. is saying we want desalina -- desalination  
24 plant. That's like a misrepresentation of what we  
25 said.

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2 MS. SHAPIRO: You the door on it.

3 MR. CONGDON: Any -- any water you --  
4 to any water utility has to have evidence that they  
5 have sufficient supplies. Whatever those supplies  
6 are. Then they would propose those supplies for  
7 valid permits. They would need D.O.H. approval, they  
8 would need D -- P.S.C. approval for the cost recovery  
9 associated with that supply.

10 And -- and -- and I want to speak to  
11 something else. With respect to the testing that  
12 they were doing when desalination was their proposal  
13 for supply, they did take water samples. And I --  
14 and I have heard a number of comments about things  
15 that they found. I asked our staff to go back to  
16 verify what was found because it was suggested that  
17 there were levels found that were of concern.

18 There were non-detects on the vast  
19 majority of radionuclides they looked for, non-  
20 detects. And what they did find, I think there was  
21 one hit that was way below the regulatory limit for  
22 drinking water standards. So the evidence that they  
23 documented on -- on the water testing is not as it  
24 has been portrayed that they found radionuclides in  
25 the water that was going to make it a risk for the

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2 drinking water supply.

3 The -- what they -- what they -- what  
4 they -- what they documented in their sampling was --  
5 was I believe one hit, I can't remember which  
6 radionuclide, that was way below the drinking water  
7 quality standard. All others were non-detect.

8 A.L.J. BELSITO: Okay, we're currently  
9 at nine o'clock.

10 MR. CONGDON: Okay. And if you have -  
11 - if you have -- Susan, if you have evidence to the  
12 contrary on that if -- because you -- you've been one  
13 of the folks who have cited it. I -- I'm all -- I'm  
14 all open to seeing what evidence you have on any  
15 findings of concern in their water testing.

16 MS. SHAPIRO: Okay. I'll share that  
17 with you.

18 MR. CONGDON: Thank you.

19 MS. SHAPIRO: Will -- the last  
20 question was will Holtec be permitted to take funds  
21 remaining from the decommissioning fund if nuclear  
22 waste remains at the site at Indian Point?

23 MR. WATSON: I believe that we  
24 answered that they have a separate fund for spent  
25 fuel management, yes.

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2 MR. CONGDON: Yeah. And the two  
3 cannot --

4 MR. KROHN: No.

5 MR. CONGDON: -- be co-mingled, one  
6 cannot take funds from one and put in the other.

7 MR. WATSON: They may be in the same  
8 fund, but they're designated by the trustee as  
9 separate.

10 MS. SHAPIRO: So how much is in that  
11 fund?

12 MR. CONGDON: The latest  
13 decommissioning trust fund report is available on the  
14 D.O.B. website.

15 MS. SHAPIRO: You -- are you talking  
16 about two different things? You're saying the  
17 decommissioning trust fund and then the spent fuel  
18 fund.

19 MR. CONGDON: It accounts for --.

20 MS. SHAPIRO: How much is in the spent  
21 fuel fund is what I'm asking.

22 MR. SIPOS: In March the -- the  
23 company Holtec provided a public report. It's on the  
24 N.R.C. ADAMS website available for all. It's also  
25 available on the D.O.B. website. I can't tell you

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2                   tonight the exact amount that is in that. But I  
3                   could easily readily tell you that by -- by tomorrow.

4                   The -- the decommissioning trust --  
5                   let me back up. So during the license transfer  
6                   process, Holtec and Entergy sought an exemption from  
7                   the N.R.C. regulation that requires decommissioning  
8                   trust funds to be used for decommissioning purposes.  
9                   And the state agencies vigorously opposed that  
10                  exemption request. Nevertheless --.

11                  MS. SHAPIRO: It was granted.

12                  MR. SIPOS: Despite substantial  
13                  efforts by the people at this table to oppose that  
14                  waiver, the N.R.C. staff and the N.R.C. Commissioners  
15                  granted that. So there is a possibility given that  
16                  waiver that decommissioning trust funds could be used  
17                  for spent fuel management purposes. Nevertheless,  
18                  and despite be -- despite having been called a  
19                  propagandist, a shill, a shill, one-sided, captured,  
20                  terms that I reject - in the state proceeding --  
21                  again, the people around this table up here on behalf  
22                  of the public negotiated minimum trust balances. And  
23                  also the possibility of replenishment from recoveries  
24                  in the federal claims court for breach of contract  
25                  claims against the Department of Energy, against the



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2 Department of Justice and against the United States  
3 for breach of statute and breach of contract.

4 So when folks say, oh, you're doing  
5 nothing or you don't care or you're not protecting  
6 the state, I would submit -- I would suggest  
7 respectfully the folks up here on this table are  
8 doing everything they can to advance the public  
9 interest of New York State. And despite having the  
10 waiver granted, the dedicated public servants up here  
11 found a way to provide additional assurance for the  
12 decommissioning trust fund.

13 So I want -- I -- I think there's been  
14 some discussion here tonight and I think it was  
15 important for me to clarify about the -- the 2020  
16 waiver that we opposed. And -- and the steps that  
17 the various New York State agencies took to protect  
18 the financial integrity of the decommissioning trust.

19 MS. SHAPIRO: That's appreciated.  
20 Very appreciated. My question is, can they still  
21 breach -- can they still go into the fund for the  
22 spent fuel?

23 MR. SIPOS: The question -- well,  
24 there is an N.R.C. waiver that was granted. There is  
25 also a replenishment or refunding aspect that the New

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2           York -- that the State of New York negotiated after  
3           the waiver. After the waiver was granted by the  
4           federal regulator, the state took additional steps to  
5           protect the financial wellbeing of the  
6           decommissioning trust and, you know, the record is  
7           clear on that.

8                   Your question at the end is really  
9           sort of speculation. You know, what will happen at  
10          the end of the decommissioning process. You know, I  
11          can't -- we will have to take -- we'll have to take  
12          that year by year.

13                   MS. SHAPIRO: Can they -- can the  
14          N.R.C. as they're doing now say federal preemption,  
15          the state doesn't matter that they -- they've created  
16          this thing. We get to preempt, we're the federal  
17          government. We're just going to ignore what the  
18          state did. And you know, we appreciate what you did.

19                   MR. CONGDON: We -- we -- yeah.

20                   MS. SHAPIRO: But it -- it seems to me  
21          like they've already granted the waiver. And then  
22          afterwards the state tried to protect us. But I'm  
23          not sure how you --

24                   MR. CONGDON: We did it with an  
25          enforceable order of the Public Service Commission.

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2 MS. SHAPIRO: But the N.R.C. is saying  
3 we preempt us. The state --.

4 MR. CONGDON: Not on this. On this  
5 issue, the licensee voluntarily entered a Joint  
6 Proposal that was so ordered by the Public Service  
7 Commission and is enforceable.

8 MS. SHAPIRO: Okay.

9 A.L.J. BELSITO: All right. We  
10 unfortunately have reached the end of time here  
11 before we reached the end of questions, now five past  
12 nine. I want to thank everyone for their patience  
13 and appreciate the panel and the public for  
14 participating and particularly our hosts here at the  
15 Town Hall.

16 MR. CONGDON: Thank -- thank you,  
17 Tony. And thank you to our guest panelists. I  
18 really appreciate your time and effort. And thank  
19 you to the audience.

20 MS. SHAPIRO: Okay.

21 CHAIRMAN CONGDON: We're adjourned.

22 (The public forum adjourned at 9:08  
23 p.m.)

24

25

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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 171, 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 7th day of July, 2023.

11

12 DANIELLE CHRISTIAN, Reporter

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