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 for VLLW Disposal Activities

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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SECOND MEETING ON DRAFT INTERPRETIVE RULE FOR VLLW
DISPOSAL ACTIVITIES

+ + + + +

WEDNESDAY,
JULY 1, 2020

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The Public Meeting convened via
teleconference and webinar at 12:30 p.m. EDT, Brett
Klukan, Facilitator, presiding.

NRC STAFF PRESENT:

- MARLAYNA DOELL, NMSS/DUWP/LLWPB
- TRISH HOLAHAN, NMSS/DUWP
- ADAM SCHWARTZMAN, NMSS/DUWP/RTAB
- BRETT KLUKAN, Region I

ALSO PRESENT:

- DIANE D'ARRIGO
- DAVID CARLSON
- MICHEL LEE
- HAAKON WILLIAMS

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MARVIN LEWIS

MARY JANE WILLIAMS

ERIC EPSTEIN

MARTIN O'NEILL

TAYLOR ALTENBERN

KEVIN KAMPS

RICH JANATI

JAN BOUDART

CONRAD MILLER

DONNA GILMORE

MICHAEL CALLAHAN

ELLEN THOMAS

IMORA DURAN

MARIA CAINE

JILL MCMANUS

LARRY CAMPER

DAN SHRUM

JAN BOUDART

KAY CUMBOW

P R O C E E D I N G S

12:33 p.m.

OPERATOR: Welcome and thank you for standing by. I would like to inform all participants that your lines have been placed on a listen-only mode until the question-and-answer session of today's call. Today's call is being recorded. If anyone has any objection, you may disconnect at this time. I would now like to turn the call over to Marlayna Doell. Thank you. You may begin.

MS. DOELL: Hi. Thank you, Amanda. Good afternoon and thank you for joining us today. My name is Marlayna Doell. I'm a project manager in the NRC's low-level waste and projects branch, and I'm here today with Trish Holahan, the director of my division which is the Decommissioning, Uranium Recovery, and Waste Programs Division in the Office of Nuclear Material Safety and Safeguards.

I'm also joined by Adam Schwartzman who is a risk analyst in the Risk and Technical Analysis Branch of Trish's division, as well as several other members of the NRC staff. In addition, the open portion of the meeting will be facilitated by Brett Klukan from our regional office in King of Prussia, Pennsylvania. So I would like to thank Brett for

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lending a hand today.

As always, I want to kick off with a few important items about the Webex meeting before we get started. The first is that this is an NRC Category 3 public meeting which means that the staff will make a brief presentation on the proposed interpretive rule and then open the line to comments or feedback on this topic. At the end of the presentation if you want to make a verbal comment, Brett or the bridge line operator will give instructions on how to place your call in the comment queue.

As a reminder, we are asking for comments on the proposed interpretive rule, including the five questions in the original *Federal Register* notice which we'll also go through during the presentation. But we also want to encourage everyone to continue to submit formal comments between now and the end of the comment period on July 20th.

While we will be addressing some of the overall questions we have been hearing since the proposed interpretive rule was published in March, we are primarily in feedback collection mode today and will not be able to respond to specific questions one-on-one in the time frame of this meeting. We would ask that anyone making comments attempt to limit

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their statements to a time frame that Brett will set based on the meeting participation. We will provide an opportunity for a second round of comments as time allows, but we want to make sure that everyone has the opportunity to speak.

The second is in order to successfully capture verbal comments and as the operator already noted, this meeting is being recorded so that the statements made today can be transcribed. So please make sure you clearly state your name and, if you wish, company or affiliation before starting your comments.

You can also provide written comments at any time through the Webex interface using the Q&A dial up box or chat window. Simply type in your comments which you should be able to locate in the menu at the -- oh, into either window which you should be able to locate in the menu at the bottom of your screen. I will electronically mail receipt of these comments and ensure they are captured as part of the record.

Finally, I would ask that we all be patient and a little flexible during today's meeting given the virtual nature of our current situation. Please forgive any delays in changing the slides or

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pauses between speakers or any of the usual background noises that I believe we've all come to live with over the last several months. We're attempting to confer from several individual locations. But we're hoping that this transition will go as smoothly as possible.

Should there be a technical issue with the Webex, the bridge line should not be affected and the meeting slides should by now be available as an attachment to the meeting notice on the NRC's public website or on the public website that describes the proposed interpretive rule itself. So if something were to happen, we should be able to continue the meeting in the new format as needed. Hopefully, this will not be the case, but it can't hurt to be prepared.

Also, a reminder to members of the NRC staff that we are on an open line as speakers. So please be mindful of the mute and unmute function of your phone as neither I nor the operator have control over the open portion of the bridge line. With that, I will say thank you again for joining us and turn the meeting over to our first presenter, Trish Holahan, to kick us off.

DR. HOLAHAN: Thank you, Marlayna. Once

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again, I'm Trish Holahan, Director of the Division of Decommissioning, Uranium Recovery, and Waste Programs with the NRC in the Office of Nuclear Material Safety and Safeguards. I'm pleased to be here to discuss our recent proposal to provide an alternative way to consider a licensee's desire to provide some forms of very low-level waste or VLLW in hazardous municipal waste landfills instead of one of the four licensed facilities that currently accept low-level radioactive waste.

Before we begin, I want to note up front that this proposed change will not release the nation's radioactive waste from regulatory oversight or allow waste to be disposed of in an unregulated facility or permit any disposed VLLW from being reused in any way. Disposals under this proposal will be permanent, and the change would create an alternative procedure for the disposal of very low-level waste that aligns with our current regulatory framework for the disposal of low-level radioactive waste while protecting public health and safety and the environment.

As Marlayna mentioned, we are looking forward to your feedback but will not be able to provide individual responses to comments made today.

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We will be taking all of your feedback into consideration as we move forward on making decisions regarding this proposed interpretive rule. Next slide, please.

This is the second public meeting on this topic. The first meeting occurred on March 30th, 2020. Based on your comments, on April 3rd, we extended the comment period to July 20th. So we'd appreciate any written comments by then. To enhance public participation opportunities, we also scheduled a second meeting. Consistent with our public participation policy, we issued the meeting announcement on our public meeting website on June 16th.

So the purpose of today's meeting is to continue to discuss the NRC staff's proposed approach to very low-level waste disposal under the interpretation of 10 CFR 20.2001 outlined in the *Federal Register* notice issued on March 6th and to collect your feedback on the proposed interpretive rule. Before we dive into details, I thought it would be helpful to cover what an interpretive rule actually means.

For the NRC, an interpretive rule is a rule or statement that advises the public of the NRC's

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construction or interpretation of its regulations and it's not legally binding. Some examples of interpretive rules include NUREGs, regulatory guidance, and notices of interpretation like this one. After the notice of interpretation is published, interpretive rules that we currently have on VLLW, VLLW disposal would be revised, specifically to clarify that authorized recipients could include persons exempted by the NRC or Agreement States. Next slide, please.

For further clarification of what we're talking about, here's a table that discusses what we are and are not proposing. We are not developing or changing any regulation. We are expanding the definition of authorized recipient currently found in NUREG 1736, the guidance document for 10 CFR 20.2001.

So that it includes both license disposal sites and specifically exempted facilities that have been evaluated and approved to accept VLLW for disposal by burial. We are also not impacting the ability to use other disposal methods currently authorized by the NRC, including 10 CFR 20.2002, alternate disposal request. Secondly, we're not approving the disposal of VLLW into unregulated disposal sites.

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Through the expanded definition, disposal sites not currently licensed by the NRC may request approval by an exemption to be considered an authorized recipient. The approval process requires consideration of, among other things, the requirements associated with its current regulatory oversight. Specifically, the NRC staff intends the disposal of VLLW by burial would only be allowed at facilities regulated under the Resource Conservation and Recovery Act, or RCRA.

Third, we are not creating new versions of the notion of below regulatory concern and clearance or making this material available for reuse or recycling. This proposed approach requires case-by-case reviews of each exemption request from each individual disposal site by the NRC or Agreement States using specific criteria. An approved exemption would include specific restrictions to the type, volume, and concentration of VLLW that can be accepted at the site to ensure the disposing of the very low-level waste at the facility does not impact health safety or the environment.

Although other regulatory agencies such as the EPA or equivalent state regulatory agencies will ultimately be responsible for overseeing the

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disposal sites that receive specific exemptions, the NRC will be developing the criteria used to determine whether regulated disposal sites are capable of acting as an authorized recipient without the need for a license. The NRC plans to work with these other agencies to define the requirements to ensure safe disposal. Next slide, please.

To touch on some of the other initial process issues that have been brought up, we want to highlight the expansion of the definition of authorized recipients in 10 CFR 20.2001 to include both licensed and exempted persons as being an ongoing process at the NRC and is not something that was quickly developed, nor was it something that was intended to be pushed through during this period when many are dealing with the COVID public health emergency. Internal NRC discussions and briefings on what would become the proposed interpretive rule began in June of 2019 while exploring various issues associated with the updating the 10 CFR 20.2002, alternate disposal request guidance document, which was issued at the beginning of April.

The NRC staff also discussed the possibility of granting specific exemptions to unlicensed disposal facilities so they could use this

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expanded definition with several Agreement States starting last year. These discussions ultimately led to the publication of the proposed interpretive rule in the *Federal Register* on March 6. We would also like to note that since publication, the NRC has taken numerous steps to assist the public while continuing to work through the regulatory process with minimal impacts.

This includes following up on the public request to add a separate email for collecting comments, holding multiple online public meetings to explain the proposal and collect comments, and extending the public comment period. Toward the end of the presentation, we will also revisit the specific questions and feedback that were posed in the March 6 *Federal Register* notice as responses to these questions will be extremely useful in developing our next steps for the proposed interpretive rule.

I would like to note that there may be a misconception that these five questions represent the evaluation criteria against which a specific exemption would be judged. This is not the case. These questions are intended to solicit feedback only and are not part of the technical criteria envisioned by this process which will be discussed by Adam

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shortly. So, the next slide, please.

I'd like to go over a little bit about what we mean by what is VLLW. VLLW, very low-level waste, is a small subset of low-level waste. The term, very low-level waste, is used to refer to waste with the lowest levels of radioactivity, including naturally occurring radioactivity.

Examples could include incinerator ash from research facilities, demolition debris like concrete and metal, soil, and other garbage from nuclear fuel facilities, or decommissioning nuclear power plants. The radioactivity level of VLLW is so low that it may be safely disposed of in RCRA facilities without the need for additional controls. The licensed low-level waste disposal sites would still be the destination for radioactive waste with higher activity. Next slide, please.

I would like to touch briefly on the options that currently exist for the disposal of very low-level waste during the current interpretation of the regulations. The first is disposal of VLLW in a licensed land disposal facility. Such disposals are governed by the requirements in Part 61 and 10 CFR Part 20 of the NRC's regulations.

Part 61 is the primary regulation for the

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disposal of low-level waste. It is a risk informed performance-based approach that uses institutional controls and performance objectives to ensure the safe disposal of radiological waste. Part 61 and its guidance or the equivalent state requirement are used by the Agreement States that actually regulate the existing commercial disposal sites. Currently, there are four licensed Part 61 disposal facilities in the United States, all located in Agreement States. Next slide, please.

The second option for the disposal of very low-level waste under the current interpretation of the regulation is to use one of the alternatives discussed in 10 CFR Part 20. Part 20 provides the regulations to control the receipt, possession, use, transfer, and disposal of licensed material. The disposal mechanisms authorized in this part include disposal by incineration and release into sanitary sewage.

The regulations in 10 CFR 20.2001 also include options for disposal that encompass the use of a land disposal facility, transfer to an authorized recipient, decay and storage, and release in effluents. In addition under 10 CFR 20.2002, the NRC can authorize waste disposal by means other than those

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already authorized in these regulations. 10 CFR 20.2002 is typically used to dispose of material in hazardous or municipal waste facilities or RCRA facilities permitted under RCRA.

The proposed rule interpretation would continue to improve the effectiveness of our program as described in the current regulations and would not replace the current disposal practices authorized under 10 CFR Part 61 or 20. The proposed interpretive rule would allow unlicensed RCRA disposal facilities to apply for a specific exemption in the requirement to possess a license to dispose the very low-level waste by burial. This exemption would enable them to be considered an authorized recipient for the purpose of waste transfer under the current 10 CFR 20.2001 requirements. With that, I will now turn the presentation over to Adam Schwartzman who will further discuss the details of this proposed interpretive rule. Adam?

MR. SCHWARTZMAN: Thanks, Trish. My name is Adam Schwartzman. I'm a risk analyst at the NRC, and I work on assorted very low-level waste issues. I will be using the next set of slides to walk through some of the details, excuse me, and considerations when implementing this updated

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approach. Next slide, please.

As previously noted, we are not creating any new regulations. We are only proposing to expand the interpretation of authorized recipient which is currently found in NRC guidance to allow for the approval via exemption of regulated but unlicensed RCRA facilities to accept very low-level waste for disposal by burial. Two key points in that statement, we are exempting already regulated facilities, and the disposal is by burial.

This proposal will not affect any of the other disposal methods currently authorized in NRC regulations, including 20.2002. And the proposed change would result in a revision to the current guidance documents related to very low-level waste disposal. Also, as I go through this section of slides, I will from a high level demonstrate how this process would work, as well as highlight some of the specific details that would be evaluated to ensure that the issues related to the health and safety concerns are considered. Next slide, please.

With this expanded interpretation, an already regulated disposal site may submit a request to the NRC for an exemption to allow them to possess and dispose of very low-level waste by burial. This

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is similar in many respects to the process currently used when evaluating unlicensed disposal sites via the 20.2002 alternate disposal process. This is not a process for allowing the disposal of very low-level waste in unregulated areas such as empty lots or playgrounds or on the back 40 of somebody's farm.

At a high level, the process would include -- excuse me -- would include the disposal site submitting a specific exemption request to the appropriate regulator with the NRC or the Agreement State, the regulator reviewing the request and then the regulator authorizing or rejecting the disposal site's request. For the sake of this discussion, we are talking from the perspective of the NRC.

Similar to the case-by-case reviews of the exemption requests associated with 20.2002, these authorized recipient exemption reviews would consider specific details like the volume of material and concentrations of radionuclides expected to be disposed of over a specific time frame proposed in the exemption request. However, instead of evaluating individual shipments, the review would consider total volumes and total concentrations that a specific disposal site is interested in accepting, as well as other details such as the proposed time

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period for accepting these disposals and any of the existing regulatory oversight for that facility. These details would be included in the disposal site's request and considered as part of the NRC's review process.

For example, the disposal site could come in with a request stating that they wish to receive and dispose by burial of 100,000 cubic meters of soil and concrete in a single year and they would accept material containing -- only accept material containing cobalt, uranium, and thorium. And they would like to accept this material annually for ten years. That would be the basis for the NRC's review.

One key stipulation is that this request would need to demonstrate that the cumulative dose associated with these burials should not exceed 25 millirem per year at any time. We're not interested in developing sites that we'll have to ultimately clean up in the future. Next slide, please. For some context on what the proposed dose limits mean, I grabbed this figure from the NRC's public website. I realize that it's a little difficult to read, but the graph can be found at the link at the top of the page.

By stipulating a cumulative limit of 25

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millirem per year at the disposal site, we are focusing on doses to the far right of this graph and doses similar to what an average American receives annually from the cosmic rays and the environment. These doses are a small percentage of the 100 millirem annual public dose limit imposed by the NRC. And this is an important consideration for unlicensed disposal facilities where the workers are considered average members of the public and not radiation workers.

Also on this site, on the website at the link above, is a calculator that the NRC has developed that any member of the public can use to calculate their estimated doses. The average American generally receives a dose of about 620 millirem per year with about half of that coming from the natural background radiation. In the case of someone like me that lives in Washington, D.C. area, I receive an annual dose of approximately 314 millirem per year from natural background.

This doesn't include additional sources such as food or medical treatments or plane flights or anything that does ultimately result in an increase in my annual dose. So I invite you all to go and explore that website as well for context on dose.

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But continuing on, next slide, please.

So what does it take to receive an exemption for disposal? In making a request to the NRC for an exemption to receive very low-level waste for a land burial, there are several pieces of information that we will be required to complete the technical review. We'll need a description of what you're proposing, the request, material that you're proposing to be accepted, for example, the volumes, the types of radionuclides, the concentrations.

A description of the regulatory requirements that your site is already being regulated by, for example, what are your acceptable processes and procedures? What are the regulations related to your recordkeeping? Unlike the case-by-case disposal reviews performed for 20.2002 requests, the disposal facility would be the one proposing these criteria for accepting very low-level waste, meaning that the exemption request would define the specific volumes of material, like I said, the concentrations and the established time period.

Additional concentrations could be associated with specific waste streams, accepting waste from only certain licensees or take into account state-specific requirements. Again, as I noted

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earlier from the perspective of this talk, we're only talking about from the perspective of the NRC. All these criteria would be proposed in the specific request and considered in the review. In other words, the disposal facility would be establishing its own waste acceptance criteria within the appropriate constraints, and the NRC would be performing its review based on this proposal. Excuse me.

One important note is that this proposal is for actual disposal facilities that already have regulated -- that already -- excuse me -- are already regulated and have procedures in place for the safe disposal of the material. The proposed interpretive role is not intended to be used by someone who just wants to allow very low-level waste to be disposed of in the field behind their house or in their regular garbage. A proposal such as this would be a nonstarter for any type of regulatory review. Next slide, please.

In addition to the criteria mentioned before, additional information that the NRC would require or would include the methods for which the burial would occur or proposing to dispose of it as loose material or is it going to be in a container.

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The description would also include information on other limiting factors such as the depth of the disposal. How long does the disposal facility intend to operate, or how long does it intend to accept the material would need to be included in the exemption request.

It's also noted that the calculations used in these analyses in general -- and in general dose modeling associated with disposal of very low-level waste are very conservative. Taking this conservatism into consideration, for a disposal site interested in becoming an authorized recipient, they would need to provide sufficient detail in their exemption request to support their proposed criteria and ensure that the expected doses will adequately protect public health and safety. Next slide, please.

So once the NRC receives all of this information from the disposal site, what will we do with it? NRC staff will conduct an evaluation of the information provided in the exemption to determine whether the proposed criteria are protective of public health and safety and the environment. The review would also consider whether the proposed waste acceptance requirement criteria is adequate to ensure

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that the cumulative dose to the facility can remain below 25 millirem per year and as low as reasonably achievable, ALARA.

An environmental analysis would be conducted for each facility wishing to be considered an authorized recipient to ensure that the cumulative impacts of the very low-level waste disposals proposed in their exemption request does not negatively impact the environment. I'll also note that the Agreement States could choose to adopt this interpretation and apply it to its current 2001 equivalent regulation. But they may also implement more stringent restrictions should they wish. This is in accordance with their compatibility requirements associated with the regulation. Next slide, please.

And just a quick high-level hypothetical example of how this would work. We have XYZ Regulated Landfill wants to be an authorized recipient, so they would submit their exemption request for review and approval. The NRC would review if appropriate and approve an exemption to dispose of the proposed specific types and amounts of material. And then the landfill would now be considered an authorized recipient under 2001(a)(1) of the NRC's regulations.

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Next slide, please.

Once a disposal site has received its exemption to operate as an authorized recipient, a licensee with very low-level waste for disposal -- or excuse me -- a licensee and the authorized recipient would then work together to determine if the material can be safely disposed of at the authorized recipient site. At this point, there would be no additional direct NRC involvement because this would be an NRC licensee to authorize recipient transfer in accordance with 20.2001. However, NUREG 1736, the guidance document related to 20.2001, states that it is the licensee's responsibility to ensure that the recipient of any licensed radionuclide material is authorized to receive the material being transferred.

In other words, it's the responsibility of the licensee to ensure that the proposed authorized recipient is capable of receiving the material that they wish to dispose. And at the same time, the proposal is that the authorized recipient would also have to confirm that the material that they are receiving is acceptable and within their waste acceptance criteria. As such, the proposed interpretation would include the mechanism for ensuring that all low-level waste that's being

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transferred to the facilities are both able and approved to handle the disposal.

The licensee for the material would be responsible, as I said, for ensuring the transfer is accomplished within the bounds of their waste acceptance criteria. And records demonstrating the information could be audited and inspected as part of the licensee's oversight process. Next slide, please. And in the end, the NRC -- the purpose here is to continue to provide a process that protects both public health and safety and the environment by developing a more efficient review process and in a matter that allows additional flexibility for waste generators to dispose of very low-level waste. With that, I'll turn the slide presentation over to Marlayna.

MS. DOELL: All right. Thank you, Adam. This is Marlayna Doell again. As Trish and Adam both mentioned early in the presentation, we have five questions to start out the discussion today that we really want your feedback on. I'm not going to read out each one, but just reiterate my request from earlier to provide specific feedback either today or through any of the other comment methods in these areas.

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The responses to these questions will help us fulfill our thoughts on implementation and other decisions that we're making moving forward with this proposed interpretive rule should that be the decision that we make. So please take these into consideration as you prepare your comments. Again, I'm not going to go over them in detail, but they are captured in the March 6 *Federal Register* notice if you would like more information on these five questions.

I wanted to put up the slide briefly just to talk about how you can provide comments between now and the close of the comment period on July 20th. The original *Federal Register* notice provided various methods of submitting comments. In addition, comments can be submitted at the email address noted on the slide. Please be sure to include the docket number on all correspondence because it makes it much easier for us to keep all the comments tracked and together and on the same part of the docket.

So I want to thank everyone again for your attendance and interest in this meeting today. With that in mind, we are prepared to hear your comments and other feedback that may help us determine the path forward for the proposed interpretive rule.

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We have about 150 participants on the Webex today, so please be brief and limit the scope of your comments to today's presentation.

We would like to be able to hear from everyone who has a comment. And if we have time, we'll allow for a second round of comments before the end of the meeting. As a reminder, you can also submit your comments via the Q&A dialogue or chat box in Webex.

I realize not everyone might have that pulled up. But if you hover your cursor down at the bottom of the Webex screen, presumably a list of different options will come up and the Q&A function or the chat function are both available there. The chat function looks like a little cartoon bubble, and the Q&A window is available by clicking on the three dots and is one of the submenus in that section. All right. With, I'm going to turn it over to Brett Klukan, our facilitator for the open portion of the meeting.

MR. KLUKAN: Next slide, please. Hi, everyone. Again, my name is Brett Klukan. I'm the regional counsel for Region I, the U.S. Nuclear Regulatory Commission. However, for purposes of this meeting, I'll be serving as the facilitator.

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Before we begin, just a very few meeting ground rules and considerations. First off, I would ask that you please respect other members of the public participating in the meeting tonight -- or meeting this afternoon in an effort to give as many people as possible an opportunity to speak during the meeting as well as be fair to all speakers. Please limit yourself to three minutes when speaking.

That time limit is based upon the number of people we have participating in the meeting today, as well as the time we have remaining to us before the close of the meeting at 2:30. I will keep track of your speaking time. I will let you know when your speaking time is about to end. You will then have 30 seconds to conclude your remarks. I have absolutely no desire to have anyone muted, but I will be forced to do so if you continue to speak well past your allotted time. Next slide, please.

So again, there are two ways to make a comment or to provide feedback during the meeting this afternoon. You can type your comments into the Webex app as Marlayna indicated. You can use the Q&A window in the Webex app, or you can use the chat function. Again, the hand raising function will not be monitored for the purposes of this meeting. Or

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if you'd like to pose your comments verbally, please indicate your desire to speak when prompted by the operator by pressing *1. Next slide, please.

All right. Before we begin with our public speakers, we'd like to start with any elected officials or their representatives who'd like to speak or offer any prepared statement. So if you are an elected official or representative of an elected official and would like to speak, please dial *1 at the moderator's prompt. And if you would open up the line, Moderator, for elected officials at this time. Thank you.

OPERATOR: Thank you. As a reminder, please press *1 if you'd like to ask a question. Please unmute your phone and record your name slowly and clearly when prompted. Your name is required to introduce your question. Again, that's *1 if you'd like to ask a question. Did you want to go directly into the audio questions?

MR. KLUKAN: Again, we're -- so for those of you, we're starting with members of the elected officials or representatives. So if you are an elected official, please -- we're going to start with them first and then we'll move into members of the public. But let's go forward with the people who

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have indicated they're elected officials. Thank you.

(Pause.)

MR. KLUKAN: Moderator, do we have anyone? I'm sorry. I apologize. I want to make sure that I hadn't misspoken. Do we have anyone who is an elected official who would like to speak?

OPERATOR: I'm not sure who is an elected official.

MR. KLUKAN: Tell you what. We'll just start off to conserve time. So we'll just go through the individuals you have currently queued up. Thank you.

OPERATOR: Okay. Diane D'Arrigo, your line is open.

MS. D'ARRIGO: Hi, I'm Diane D'Arrigo with Nuclear Information and Resource Service and tracking the concept of deregulating nuclear power radioactive waste since the earlier '80s. And we continue to oppose this newest attempt. This VLLW is really such a lie. To say that it's very low-level when in fact by allowing 25 millirems from one of these unlicensed facilities which is more than two of the licensed facilities -- at least two of the licensed facilities can give off, you are clearly opening up all of the so called low-level waste to go

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to unregulated for nuclear disposal.

The little trick of the term saying, well, RCRA is regulated. Therefore, it's not going to an unregulated place. We're specifically saying that nuclear waste needs to be under nuclear regulatory control. I've spent my career fighting a lot of these so called low-level nuclear waste dumps, these 10 CFR 61s, but they are now licensed. That's where the waste is legally supposed to go.

Now you're saying, oh, well, it's too much. We don't want to make it all go there. So let's let any landfill in the country that has a RCRA (b) or (c) -- I'm sorry, (c) or (d) subtitle eligible to take this waste.

I want to object to the very short notice that the public had on this meeting. Many of us are listed in the NRC's records as wanting updates. We only happened to find out about this the day before yesterday. So the fact that you got 150 people on now when you didn't even tell us about this is telling. This is an issue that the public is very concerned about it. So we object to the meeting not being well noticed or adequately notifying people who have active interest in this rulemaking.

Two, we appreciate the two-month

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extension that was granted but continue to call for a further extension because the COVID crisis continues to be very serious in many of our communities. And the call has been made for all of NRC processes and even for other agencies that after the crisis, six months. So we really do need more than the three weeks that are left for people to be able to comment and request an additional extension.

Third, the criteria for -- well, third, there needs to be both a programmatic environmental impact statement on this whole concept. We've seen estimates of as much as 60 or 90 percent of the volume of radioactive waste from decommissioning could go to unregulated places. There's no analysis here in the three-page, four-page *Federal Register* notice or the back-up materials. We need to have a generic environmental impact statement and, like with reactors, site-specific environmental impact statements. This is --

(Simultaneous speaking.)

MR. KLUKAN: You have about 30 seconds left.

MS. D'ARRIGO: Okay. So the reinterpretation, 180 degree change in interpreting rules, making it voluntarily, is very confusing. You

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want to allow states and facilities to take it or not take it, to reinterpret or not reinterpret. And it's very confusing and it's not enforceable. It's not verifiable, and it's a clear shift of liability from the nuclear waste generators to the general public and the communities to which it would go.

We ask for longer time. We ask for better notice on public meetings, another call. We ask that ideally the NRC drop the whole VLLW very large lie about nuclear waste.

MR. KLUKAN: Thank you very much for your comment. Moderator, do we have a Dave Carlson signed up to or requesting to speak? We had him represent the Agreement States and we would like to start with the Agreement States our elected officials first before you move into all the comments. If you signed up or raised his hand to speak, Dave Carlson?

OPERATOR: Yes, one moment, please. David Carlson, your line is open.

MR. CARLSON: Yes, and I don't represent the State of Texas. This is Dave Carlson. I'm the president of Waste Control Specialists [WCS], a Texas licensed facility. Do you want me to proceed or wait for someone in Texas?

MR. KLUKAN: No, it's fine. So as not

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to waste -- conserve time, just please go ahead.

MR. CARLSON: Okay. Thank you very much. WCS is opposed to the implementation of the interpretive rule regarding VLLW. We believe the proposal is an inadmissible rewriting of Agency regulations and an unsupportable change of well-established policy for disposal of low-level radioactive waste.

While we see many flaws in the proposed action, I'll limit my remarks to the most significant ones. First off, the use of an interpretive rule for this major action is not legally permissible. In fact, the proposal is in direct conflict with NRC regulations.

Let's start with the plain language of 10 CFR 20. 20.2001(a) describes the alternatives that are available to licensees for disposal of waste. Again, that's alternatives available to licensees for disposal of waste. 20.2001(b)(4) requires a licensee under Part 61 requires a license(audio interference). The only alternative to 20.2001 that's available to licensees is not to specific exempted persons and disposal of waste is the method described in 20.2002. The interpretive rule proposes to revise (audio interference) However, (audio interference)

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proposes a new interpretation that imagines that (audio interference) is independent of 20.2001(b).

Once compliance with 20.2001(b) for land (audio interference), then the rule proposes the transfer to an unlicensed person (audio interference) is suddenly acceptable. The proposed rule goes further and suggests that an unlicensed person may now apply for a specific exemption that, in fact, functions very much like a license but without the rigorous 10 CFR licensing process. If unlicensed disposal of low-level radioactive waste was the intent to Congress or of the Commission, it would be in statute or in rule.

(Audio interference) address the industry, public, or stakeholders from a health and safety perspective personal health and safety issues that (audio interference) rather than introduce new issues (audio interference). From a capacity perspective (audio interference). In fact, there's more than enough current capacity in licensed facilities for all U.S. facilities upon their decommissioning. From a cost perspective, there's no cost imperative in this proposal. (Audio interference) and flawed and current pricing for disposal of radioactive demolition (audio

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interference) lower than that.

MR. KLUKAN: Mr. Carlson, your time is about to expire.

MR. CARLSON: I appreciate that. But WCS recommends that the NRC withdraws March 6, 2020 proposal (audio interference).

MR. KLUKAN: Mr. Carlson, your line has broken up, and there's been a couple momentary pauses or lapses in our ability to hear you. I would suggest, sir, so that we can fully capture your comments that you submit your prepared remarks to us in writing to make sure that they're fully captured because there were a couple times about 20 seconds maybe in total where we couldn't hear what you were saying. But thank you for your comments. And again, we'll be happy to include your written comments as part of the transcript¹. Moderator, can I have the next speaker, please?

OPERATOR: Michel Lee, your line is open.

MS. LEE: Yes, thank you. I'm with the Council on Intelligent Energy and Conservation Policy and also with promoting health and sustainable energy. I would just like to point out that the

¹ Written comments were received from WCS on July 13, 2020, and will be added to the public record. In addition, Mr. Carlson was able to rejoin the meeting later, as noted in the transcript, so additional written comments were not provided.

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technical problems that Mr. Carlson experienced are precisely the reason why you need to have public meetings where members of the public who do not want to spend their lives going through NRC documents to try to find comments have the ability to hear what other people have to say on this extremely important issue. And I would also second what I did hear Mr. Carlson say is this is essentially you're changing license regulations. This is a license, but you're skirting all the license procedures.

I fail to see any even remote benefit to public health and safety from this proposed reinterpretation of your regulations. Where it is obvious there is a benefit is to the nuclear industry for the licensee operators of nuclear plants to unload the cost of properly and responsibly disposing of the radioactive waste, and of course, an unloading of the regulatory burden of the NRC upon what will probably be primarily state regulators who are notoriously ill equipped to -- and do not have the experts on hand to be able to properly analyze or monitor such facilities.

I would simply add the following because this is really unconscionable civil rights violation. As I'm sure NRC is well aware, the vast majority of

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landfills and regular waste dumps in this country are in low-income and minority communities and neighborhoods. These are communities that are already heavily burdened by a toxic load. They are also communities that are now heavily burdened by COVID, as well as other illnesses. And you just simply seem to be very willing to add to that burden.

I find it outrageous that the NRC officials and representatives are trying to use comparisons with natural radiation because natural radiation is very different kind of radiation than the kind of particulates that would be in these landfills and that would wash into the waterways which are already also heavily burdened, particularly in the low-income and minority communities.

(Simultaneous speaking.)

MR. KLUKAN: Your time is about to expire. I just want to let you know.

MS. LEE: And I strongly urge you to withdraw this rule. Thank you.

MR. KLUKAN: Thank you very much for your comment. I would just ask as well, and I apologize for saying this earlier, is if you could just spend the first couple seconds spelling your name when it's your turn to speak. I won't start your speaking

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clock until after you've spelled out your name. And that really helps our court reporter for the transcript accuracy. So Moderator, can we have the next speaker, please?

OPERATOR: So our next comment comes from Mr. Williams. Your line is open.

MR. WILLIAMS: Hello. My name is Haakon Williams. It's H-A-A-K-O-N, last name Williams. And I'd like to start by saying thank you for holding this meeting and providing an opportunity for the public to comment. I'd like to say that, but I can't because this meeting was clearly planned without any regard for public process. You provided essentially no notice that this was happening. This failure to notify people is a completely inappropriate and clear attempt to stifle attendance and public oversight.

You're proposing the most consequential and damaging nuclear regulatory shift in recent memory and would clearly like to carry this out in the dirty backrooms of the NRC as far from the public eye as possible. And it's not hard to see why you would want to hide what you're doing. This proposal would put millions of Americans at greatly increased risk by bringing unprecedented amounts of radioactive waste right into our communities.

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Nuclear waste anywhere is dangerous which is exactly why we have the 10 CFR Part 61 regulation to safeguard the public, requiring licenses and safety measures appropriate to the storage of radioactive waste and requiring environmental review and public input under the new regulation, the NRC - - excuse me, the new interpretation, the NRC could and would allow any old garbage dump to start accepting nuclear waste with zero public input. And the fact this rescinds the entirety of the Part 61 regulation for land disposal of nuclear waste. Yet by calling it interpretive rulemaking, NRC is trying to dance around the statutory requirements for changing or rescinding regulations.

Your claim is this only apply to very low-level waste and that NRC would only allow this if the dump operator could demonstrate the public exposure to radioactivity wouldn't exceed 25 millirem which needs some unpacking. NRC has admitted that there's no legal definition for very low-level waste. So it's a marketing term essentially designed to trick people into thinking this is no big deal.

What about the 25 millirem per year exposure limit? Gosh, where to begin? Perhaps by pointing out that this dose over a lifetime would

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give cancer to 1 in every 500 people according to the National Academy of Sciences and that [Environmental Protection Agency] EPA has long declared this dose limit nonprotective, even for considerably shorter periods of time.

Or maybe I should mention the NRC 25 millirem, not as a measurement of actual radiation but as a calculated estimate based on the model produced by the dump operator before the exemption is granted. Of course, this gives ample opportunity for dump operators to massage the model input to produce estimates that appear to be at 25 millirem but actual radiation doses are much higher. It would be near impossible for us in the public to ever know because these models and the NRC's review of them are typically called proprietary and shielded from the public.

What's more, after this initial review, NRC under this proposal would retain zero enforcement or oversight authority of the site, zero ability to ensure the 25 millirem limit is not being exceeded, zero NRC inspections, and zero fines or other enforcement for violations. Taken altogether, the picture this produces is terrifying. Dump sites could be granted the exemption based on faulty models

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on radiation exposure that never receive public scrutiny, and dump sites could accept as much radioactive waste as they want because the NRC isn't going to come after them with enforcement actions.

(Simultaneous speaking.)

MR. KLUKAN: You have about 30 seconds left. Thank you.

MR. WILLIAMS: -- unlicensed municipal landfills would have higher levels of radioactive waste than actual licensed nuclear waste sites. NRC says this isn't the intent of the proposed regulation. But if this rulemaking goes forward, there'd be nothing to stop it from happening.

That NRC would even consider proposing such a rule and try to push it through in a world of tension that's focused on the coronavirus pandemic really speaks to the decrepit state of our society. I implore you to find a place in your heart where you know this is wrong and not allow the rule to go forward. Thank you.

MR. KLUKAN: Thank you very much. Moderator, could we have our next speaker, please?

OPERATOR: Thank you. Our next comment comes from Marvin Lewis. Your line is open.

MR. LEWIS: This is Marvin Lewis. Can

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you hear me?

MR. KLUKAN: Yes, we can, sir. Thank you.

MR. LEWIS: Thank you very much, and I do appreciate getting on a little earlier than I thought I would. I called in really late thinking that I'd be the last one. But obviously due to some screw up in the notification, I was one of the first ones to be put on. All right. Here's what I'm saying.

I'm in Philadelphia, Pennsylvania. We've got plenty of Superfund sites. And believe it or not, not one of them was found out a priori. They all had to be found out way down the line. In fact, the site along Delaware River north of Philadelphia, the Roman Hoth (phonetic) Site or the Hoth site, whichever one you want to call it, was found out many, many decades after it was contaminated. And it took plenty of decades after that before it was cleaned up and a lot of people are screaming it isn't cleaned up well enough. Of course, that's chemical.

What I'm pointing out, this is not necessarily chemical. This is radiological. But I got news for you. It's chemicals put in the earth that are radioactive chemicals and radioactive metal

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that produce this radioactivity. And if we can make that mistake in history, we won't learn nothing yet. And your proposed regulations proved we ain't learned nothing yet.

I'm not saying that the staff is without merit. The staff (audio interference). But when it gets down to the printing, somehow all merit ceases. I am very, very worried about what all this is doing. There's a long history of radioactive materials going in the wrong place. If you don't believe me, check the air meters around Three Mile Island in March '79 of last century during a meltdown.

Yes, a lot of radioactives went into the wrong place, and it's just as easy to put the wrong radioactives in the wrong place when it's diluted on purpose in order to get it in a waste site. And now it won't even be a radioactive waste site that it's going to. It won't go into any waste site as the previous caller has already pointed out where there's poor people, where there's black people, where there's brown people.

And they won't have the money, the time, or the ability to fight. Well, that's wrong because there are a few people like me who do have the time, who do have the ability, who do have the VC to fight.

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And this is what we're going to come up against. But hopefully --

MR. KLUKAN: You have about 30 seconds left.

MR. LEWIS: -- in time before the radioactivity start there, kill it. Are you ready to throw me off yet?

MR. KLUKAN: You have about 15 seconds left if you want to have any closing remarks.

MR. LEWIS: Thank you. Thank you. And this is my point. This is a long history of radioactives going into the wrong place at the wrong time and everything else. And it's being done now, and you are describing a perfect method to get the (audio interference) tons of earth over it to hide the highly radioactivity that will be tucked into that waste in order to hide it, in order to get rid of it, in order to make an extra buck.

MR. KLUKAN: Thank you very much for your comments, sir.

MR. LEWIS: You're very welcome.

MR. KLUKAN: Okay. Could we have our next speaker, please, Moderator? Thank you.

OPERATOR: Thank you. Our next comment comes from Mary Jane Williams. Your line is open.

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MS. WILLIAMS: Hi, yeah. No relation to someone else named Williams that spoke very well. I agree with everything everyone else has said. I couldn't believe you guys are resurrecting what used to be called below regulatory concern, was it, back in 1980s. And somehow that got its ugly head pushed back into the ground, but it's back.

I assume that this is probably in order to help nuclear power plants take themselves apart, decommission, and do it cheaply, not have to put it in places where they're actually are being overseen, hopefully by the NRC. But now the NRC wants to get rid of their oversight. Lordy. We -- the people who've been worrying about this issue for many years have at least given the NRC credit for trying to regulate. We didn't think they did a good enough job, but you were trying.

Now you seem to be trying to get rid of it, this so-called new interpretation of an existing something or other. But I'm not buying that at all. Obviously, this is just a terrible idea of putting stuff into the regular dumps. All the dumps -- these are going to be people who don't even have any way of measuring radiation. They don't monitor it. They know nothing about radiation, and we're trusting

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these people with our radioactive waste?

One of the elements you mentioned might go in is uranium. What you said, 703 million -- 703, I forget whether it's 100,000 years, a half-life. I mean, come on. And you're putting these things in unregulated dumps. I think it's just unconscionable. Thank you.

MR. KLUKAN: Thank you very much for your comment. Moderator, can we have the next speaker, please?

OPERATOR: Thank you. Eric Epstein, your line is open.

MR. EPSTEIN: Thank you. Good afternoon. How are you doing?

MR. KLUKAN: Good. Thank you.

MR. EPSTEIN: Can you hear me? Good.

MR. KLUKAN: Yes, we can hear you.

MR. EPSTEIN: Good, good, good. A couple observations and also a couple comments. I would just point out I've been on numerous teleconferences with the NRC in Region I over the year. And you guys seem to have a chronic problem with communication. And I've tried to raise this issue before. But if you can't get it right with the telephone technology, it doesn't really inspire confidence that you're

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going to be able to manage radioactive waste technology.

So I'm registering a rather severe rebuke to you guys that you really do need to have in-person hearings. This is at least the fourth or fifth time, and there's been several times when the communication has been absent. So let me just register that concern, and you can do with it what you want. I'm sure not much.

But I have six observations. The first is chain of custody. While you may try to deregulate responsibility, when you have waste disposed of at an incinerator or landfill at a local facility, we will claim that the chain of custody has not been deregulated. So I'm just pointing out to you a very fundamental environmental legal concept that should this radioactive waste arrive in our landfill or incinerator and should we have issues, you will be charged and you will be potentially sued in proportion to your ability to pay. So no matter what you may try to do in terms of deregulation, you're still going to have legal consequences.

The second is you've brought up the Commonwealth of Pennsylvania as the largest recipient of interstate waste, mostly from New York and New

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Jersey. We just have a problem being parochial of solving other people's radioactive waste isolation issues. I mean, I don't want to be provincial here, but we will wind up being the radioactive toilet for the northeast. I think that is manifestly unfair. And on top of that, I think you need to factor transportation issues. Largely what happens with that calling which is a perennial issue in landfill states like ours where the people that dispose the waste bring back things that shouldn't be in their containers.

Thirdly, and I don't have any confidence that you're going to back away from this awful legal standard. But you should condition this on having manifests, retrievable manifests. As someone who's litigated landfill and incinerator issues for four decades, that is an issue. So whatever you're sending, make sure that it is, in fact, something that we can if we have to go back and retrieve have some idea of what you left us with.

Also I know the Commonwealth of Pennsylvania has monitoring. I strongly encourage you to make that as a condition in other states. Again, Commonwealth of Pennsylvania is the second largest gas producer in the country. As such, we

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have a lot of radioactive waste products from fracking

--

(Simultaneous speaking.)

MR. KLUKAN: You have about 30 seconds left.

MR. EPSTEIN: Yeah, I want to congratulate you because you've now created another challenge for us. And finally, perhaps you're blind to it, but all federal agencies and state agencies at the local level will be experiencing extreme budget cuts. This is the exact wrong time to deregulate and bequeath your problems to state agencies which are about to be defunded.

And that's what I have from here. I do appreciate the time to comment. But I have no confidence in your agency and I feel that it's unlikely that you will give any consideration to the comments that have been made today.

MR. KLUKAN: Thank you very much for your comment. Moderator, could we have our next speaker, please? Thank you.

OPERATOR: Thank you. Martin O'Neill, your line is open.

MR. O'NEILL: Okay. Thank you. Can you hear me?

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(Simultaneous speaking.)

MR. O'NEILL: Yes, this is Martin O'Neill. It's O, apostrophe, N-E-I-L-L. I'm the Associate General Counsel of Nuclear Energy Institute [NEI], and I appreciate the opportunity to present the industry's views on the proposed interpretive rule. At the outset, I'd note our agreement with what appeared to be the rule's underlying objective to improve the efficiency of the very low-level waste disposal approval process to expand available disposal options.

With that said, however, we unfortunately have some significant concerns about how the NRC is going about trying to achieve those objectives via the proposed interpretive rule. Our concerns really fall broadly into three categories: legal, regulatory policy, and the administrative process. So to be clear, we're not questioning the NRC's ability to carry robust safety and environmental analysis. Our concerns are very legal and process oriented in nature.

As a threshold legal matter, we view the proposed interpretive rule as contrary to the plain language and structure of current NRC regulations. In essence, the proposed rule would appear to create

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a de facto licensing process for disposal of very low-level waste at non-NRC licensed facilities by reading Section 20.2001(a)(1) which relates to the disposal of licensed material in tandem with certain radioactive material transfer related provisions in Parts 30, 40, and 70. So in our view, this is really tantamount to a substantive change to the regulations themselves and the staff's longstanding and, in our view, correct reading of those regulations is documented in NUREG 1736.

In short, we read 20.2001, authorized land disposal of low-level waste, including very low-level waste, by two specific mechanisms: the disposal at an NRC specifically licensed Part 61 facility and by alternative disposal methods approved on a case-by-case basis under 20.2002. Of course, the NRC Agreement States, have implemented NRC compatible regulations that include analogous processes. But we'd note that to the extent that the NRC has issued exemptions in the past that allow for land disposal of very low-level waste has done so permissibly in connection with the 20.2002 process.

From a regulatory policy perspective, we believe the NRC should better explain the relationship between the proposed interpretive rule

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and the agency's prior very low-level waste related activities. At this point, the need for the rule and the regulatory underpinnings are not clear based on the current record. And this is somewhat troubling given the complexity of the low-level [radioactive] RAD waste disposal scheme established by Congress via statute and the NRC's regulation.

It's a scheme that would put considerable authority in the hands of state technicians and Agreement State regulators. So in our view, sound regulatory policy requires that the NRC work closely with the states on matters like this one. And finally, we have administrative due process concerns. We were frankly surprised by the proposed interpretive rule issued into March 2020 and the exact impetus for the rules remains opaque to us.

MR. KLUKAN: You have about 30 seconds left. Thank you.

MR. O'NEILL: Thank you. At the very least, it's procedurally anomalous. It's still not clear to us whether it will require a permission approval of any sort, how and in what form the NRC will address public comments and articulate the basis for its final decision, and where the final interpretive rule will be memorialized. I think our

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concerns are heightened by the NRC's recent change in position on the 20.2002 disposal request which is the subject of the pending legal action by NEI.

So I think suffice it to say that we view the current processes in 2001 and 2002 to be adequate when implemented as intended. Any substantive changes thereto require a more robust administrative process that assimilates stakeholder's input. So again, we thank the NRC for this chance to share our views on the proposed interpretive rule, and we will be submitting written comments, as well. So thank you again.

MR. KLUKAN: Thank you very much. Moderator, can we have our next speaker, please.

OPERATOR: Thank you. Taylor Altenbern, your line is open.

(No audible response.)

OPERATOR: Taylor, your line is open.

MS. ALTENBERN: Apologies. I was on mute. Hello. My name is Taylor Altenbern. Last name is spelled A-L-T-E-N-B-E-R-N. I'm Associate Director of the Committee to Bridge the Gap, a nonprofit focused on nuclear safety. Before I begin, my comments, I would like to reiterate to NRC that its failure to give adequate public notice for this

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meeting is completely inappropriate and violates the Administrative Procedure Act which requires that agencies give public notice prior to such public meetings designed to solicit public comment.

We signed up to receive emails about very low-level waste matters and received nothing about today's event. Whereas the first public comment call was noted in the *Federal Register*, this one was not. Holding this meeting without properly alerting the public will surely result in lower turnout, therefore stifling the voices of those concerned with this issue.

The proposed interpretive rule by NRC is one of the most daring and consequential schemes to deregulate radioactive waste to date. Should this rule move forward, NRC would permanently deregulate virtually all radioactive waste from civilian reactors other than spent nuclear fuel. NRC claims that its intent with this proposed rule is that it only affects very low-level radioactive waste, but this claim holds no water because there is no statutory or regulatory definition for very low-level waste.

NRC states that in the proposal that it covers all radioactive waste to be received at an

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unlicensed dump that would collectively be estimated by the dump operator to produce 25 millirem per year of radiation to a member of the public. Twenty-five millirem per year is an unacceptable amount of exposure to a nonconsenting member of the public. Twenty-five millirem of radiation per year is the equivalent of receiving without consent 900 unwanted and unnecessary chest x-rays over a lifetime.

That exposure would result in 1 in every 500 people exposed getting cancer from the radioactive waste, and that's according to the official risk coefficient from EPA and the National Academy of Sciences. The cancer risk from that radiation dose is 2,000 times the goal for a Superfund site under [Comprehensive Environmental Response, Compensation, and Liability Act] CERCLA and 20 times the upper limit of EPA's acceptable risk range. EPA has long found that such a dose limit would not be protective of public health.

So not only is this level of exposure a major risk to human health, it is actually higher than what licensed disposal sites are currently permitted. Under this proposed rule, unlicensed dump sites would be permitted to use a measure of radiation dose called EDE, or effective dose equivalent. EDE

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is a more lax measure than what is used in the current regulations for licensed disposal sites and would actually allow 2.5 times as much radiation to the public from an unlicensed dump as proposed here than from a licensed disposal site. So this egregious reversal of NRC's established guidance has been given no justifiable basis. It is a danger to human health and should be abandoned at once.

If instead this proposal moves forward, unlicensed, unfit municipal landfills and dump sites across the nation could be the final resting place for dangerous toxic waste, putting our communities unnecessarily in harms way. Please rethink this devastating action. Thank you.

MR. KLUKAN: Thank you very much for your comment. Moderator, could we have the next speaker, please?

OPERATOR: Kevin Kamps, your line is open.

MR. KAMPS: Hello. Thank you. My name is Kevin Kamps, and I serve as a radioactive waste specialist at Beyond Nuclear in Takoma Park, Maryland. My last name is spelled K-A-M-P-S. I would like to associate myself with the remarks made by everyone in opposition to this proposed

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deregulation of radioactive waste.

I remember a book that was written decades ago by Dr. Marvin Resnikoff of the Sierra Club Nuclear Waste Campaign. It was called "Living Without Landfills," and it was about so-called low-level radioactive waste licensed dumps. And it documented that every single one of them in the United States had leaked.

And believe you me, if radioactive waste starts pouring into ordinary garbage dumps, they also leak. So instead of a relatively small number of leaking radioactive waste dumps in this country, there would be countless leaking radioactive waste dumps. And I heard one of the NRC staffers point out that it's only 25 millirem per year. I think the last speaker rebutted that pretty effectively.

I would just point out that that figure that was shared by the NRC of over 600 millirem per year as an average background radiation dose to the public only was concocted in 2010 by the NRC. And the way they got there was by including exotic medical procedures that only a small number of Americans, relatively speaking, are exposed to. But they are very high radioactive doses.

So then you average it over the entire

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population to get such high figures. Previous to that, 300 millirem per year was given as the background dose. And a large chunk of that is radon which can be mitigated with things like ventilation and basements.

So really this is another assault on American public health. I think as previous speakers have also indicated this is a large-scale attack on environmental justice in this country, because who lives next to landfills? These are people of color communities. These are low-income communities who are already exposed to whatever is leaking from those landfills which could include certainly some level of toxic chemicals.

That's another comment I would like to make. We were warned by Rachel Carson in her book, "Silent Spring," in the early 1960s that the synergistic effects of toxic chemicals as from pesticides and radioactivity as from nuclear weapons, testing fallout in the atmosphere combined to deliver an even more harmful effect on human health and the health of other living species. So if you're going to be mixing radioactive waste in with the toxins that inevitably find their way even into ordinary garbage dumps, you are creating synergistic effects

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on human health downwind and downstream.

And it seems to be NRC's attitude just like the mandate to protect public health and the environment that you can just sue us if you want to. That seems to be your overriding approach to all things nuclear these days, including radioactive waste issues. So I guess we'll see what the public interest community will be able to muster in terms of a legal pushback against the NRC's rogue behavior. But certainly in the court of public opinion as this word spreads despite NRC's apparent attempt to keep it as quiet as possible as by not announcing this meeting with much effectiveness in advance. People are --

(Simultaneous speaking.)

MR. KLUKAN: You have about 30 seconds remaining. Thank you.

MR. KAMPS: People are understanding what the NRC represents at this point, and there will be tremendous pushback in the court of public opinion and, if need be, in the court of law, as well. Thank you very much.

MR. KLUKAN: Thank you very much for your comment. Moderator, could we have our next speaker, please?

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OPERATOR: Thank you. David Carlson, your line is open.

MR. CARLSON: Thanks so much. I had poor cell phone coverage when I spoke previously. Hopefully, this is much better. I won't go over what I said before other than two points. 20.2001(b)(4) requires a specific license under Part 61 for the land disposal facility, and the only alternative to the specific license is 20.2002.

I would like to go into what I would consider to be impacts of the proposal that aren't adequately covered. As has been previously mentioned, the proposal allows disposal and unlicensed landfills at levels up to 25 millirem per year. This is five times the current dose rate that's used under 20.2002. So it would certainly be an increase in concentrations and doses of radioactive material at those disposal facilities across the country.

Under this proposal, disposal of low-level radioactive waste in unlicensed landfills is not limited by radionuclide concentration. In fact, no limit is proposed. The proposal simply refers to the lowest portion of Class A waste. So if we just took some numbers and assumed that only the lowest 10

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percent of Class A waste was VLLW, that could still be over 90 percent of all low-level radioactive waste by volume. So we're talking about perhaps the lower end of Class A, really the majority or beyond the majority of low-level radioactive waste by volume.

Diversion of large quantities of low-level radioactive waste that are currently disposed in NRC Part 61 licensed disposal facilities from there to unlicensed facilities with specific exemptions would certainly threaten the economic viability of those licensed disposal facilities that have previously been determined to be the most robust and capable of safely disposing of the higher level classes of low-level radioactive waste. If you look at a facility like the WCS facility in Texas and you look at the calculated peak dose from that facility based on a performance assessment, that peak dose is about 0.5 millirem and that happens at 170,000 years from today. That should give an indication of the relevance of 25 millirem relative to existing 10 CFR 61 facilities.

The staff doesn't seem to have evaluated in regards to Administrative Procedure Act, to [National Environmental Policy Act]NEPA, or the Congressional Review Act. In addition, the proposal

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fails to consider the information was gathered in the 2018 VLLW scoping study. That study was never completed. The results were not provided to the Commission.

Comments were made by compacts, by Agreement States, by licensees, and by other stakeholders but were not publically addressed and appear not to have been considered in the development of this new proposal. So in conclusion, it's very difficult for me to imagine how a change of this magnitude to national policy for disposal of low-level radioactive waste as established by Congress and by the Nuclear Regulatory Commission could consider it a mere change in guidance. Therefore, we recommend NRC withdraw this proposal. Thank you very much.

MR. KLUKAN: Thank you very much. Moderator, I've been told that we have a Rich Janati, the Director for Nuclear Safety Division of the Commonwealth of Pennsylvania. Can we queue Mr. Janati up next?

OPERATOR: Yes. If you could please press *0 so I can get your line open if that was you. One moment. Rich, your line is open.

MR. JANATI: Good afternoon. Can you

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hear me?

MR. KLUKAN: We can. Thank you.

MR. JANATI: Okay, very good. Just a couple of comments I have. I know a few members of the public who called in, they're from Pennsylvania. They're Pennsylvania residents. I just want to point out that although Pennsylvania is an NRC Agreement State, but our Low-Level Waste Disposal Act of 1988 prohibits shallow land burial for shallow land disposal of low-level waste which means if the proposed waste is low-level waste or very low-level waste, particularly if it is from a licensed facility, it will not be -- a licensee would not be allowed to dispose of waste in a hazardous waste facility.

So that's the Pennsylvania specific comment. But as far as a general comment, I have a few of them. But I'll just make one of them. I think it's going to be a tough sell for NRC because you really haven't defined what very low-level waste is. And as far as I know, you haven't set any concentration limit for waste. Just having the 25 millirem per year exposure limit is not going to do it. It's going to be a tough sell. Thank you very much for the opportunity to provide comments.

MR. KLUKAN: Thank you. Moderator, can

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we have our next speaker, please?

OPERATOR: Thank you. Jan Boudart, your line is open.

MS. BOUDART: Thank you very much for giving me a chance to speak. I think everything that we have done so far indicates that we have to stop making nuclear waste, low-level, high-level, very high-level, or spent fuels. We need to stop making it.

So the plan that as far as I understand it is the dump will explain its criteria for acceptance of waste. And the dumper or the entity that is producing the waste and wants to dump it will decide whether their stuff fits those criteria. And in the meantime, all that the NRC has done is approve those criteria for the licensee.

I consider this to be the Boeing 737 MAX plan for public safety. We are leaving the watching this low-level waste up to the people who are profiting from it. And I can only cite like I did, Boeing 737 MAX. When it was left up to Boeing for the safety of their product, Rockwell, and Rocky Flats who was allowed to determine what safety was at the plant in Rocky Flats no matter how much they lied about it and what's going on at Hanford.

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The second thing I wanted to mention is that 25 millirems average per year doesn't mean that there might be a big dump of one thing and that the amount would go very much higher than that for the surrounding people. Twenty-five millirems per year doesn't mean it's going to be evenly distributed. And also -- well, I don't want to do that. Okay.

So my next point is that we're talking about 25 millirems per year, and somebody has said one person in 500 is going to get cancer and all that kind of stuff. But the truth is that when that dump is made, the reference men -- for every two reference men -- and a reference man is between 25 and 48, and he weighs 148 pounds. And he's at the prime of his life when he's the most resistant to radiation.

So if you take the reference man that most of these criteria are based on, for every two reference men that get a cancer, three reference women will get cancer. And if you want to take a ten-year-old child who's there, of the ten-year-old children who are present, 10 little boys for each reference man will get something and 20 little girls because little girls are much more susceptible. And this does not count the --

MR. KLUKAN: You have about 30 seconds

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remaining. Thank you.

MS. BOUDART: This does not count the fetuses that will be affected or the babies. This is a terrible plan, and that the NRC is reneging on its oversight for this is -- like everybody else who's spoken, you need to dump this and no pun intended. Thank you.

MR. KLUKAN: Thank you very much. Moderator, can we have our next speaker, please?

OPERATOR: Conrad Miller, your line is open.

MR. MILLER: Good afternoon, everybody. I'm a physician who's been anti-nuclear activist for many years after discovering Helen Caldicott's pamphlet in 1978 about the medical effects of nuclear power. I did a show on below regulatory concern in 1991 with Dr. Karl Morgan who is the grandfather of health physics and Amory Lovins and Diane D'Arrigo who spoke today and many other people from both sides of the story.

And this, to me, a resurrection of below regulatory concern, instead of saying LLW or low-level waste, now we're saying very low waste. And maybe in 2050 when it comes back again, we'll call it VLLLW. But right now, this is a resurrection of the

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same plan to me.

We're not talking about the radionuclides that will go into the dump. We're not measuring those, and these can go in -- again, things like cesium has a half-life of 30 years and plutonium can be in the low-level of waste. That has a half-life of 24,000 years, plutonium 239, a hazardous life of 10 to 20 times that which would be 240,000 years to 480,000 years. These are all crazy things. This is a plan that should not be allowed to go any further. And it's a good try, but it's really just the same old wine in a brand new bottle, as Kenny Loggins used to say and many other people.

As far as the millirems, again, everybody has mentioned that. But since this is going in as a comment, again, 25 millirems. You're really exposed to about 100 millirems at sea level per year of background radiation, maybe in the mountains 200 millirems. The radon which most people don't get exposed to and they want to add on to that. That's about 200 which most people don't get exposed to CAT scans and lab tests and other studies with contrast add into it too.

So overall, I think it's a bad plan. It should be withdrawn. The environmental racism is

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another issue here where these things want to -- you want to send these to all the dumps in America possibly. That is totally insane. And the people who generate the waste should still have to pay for it and not dump it in our dumps unregulated. It's really unregulated. And you're talking -- you even used the term XYZ dumps, yeah XYZ. One little point of information --

MS. DOELL: You have about 30 seconds remaining.

MR. MILLER: Okay. To the last lady who spoke, I think a reference man is 70 kilograms, 154 pounds. But that doesn't mean too much. Anyway, I think below regulatory concern or this new attempt at below regulatory concern should be dumped in the dump and try again in another 30 years but hopefully not. Thank you.

MS. DOELL: All right. Thank you for your comment. We lost Brett briefly from the bridge line. But until he rejoins us, I'll cover. Operator, could you give us the next speaker, please?

OPERATOR: Donna Gilmore, your line is open.

MS. GILMORE: Hi, this is Donna. Can you hear me?

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MS. DOELL: Yes, we can hear you.

MS. GILMORE: Okay, great. I've attended a lot of NRC meetings and normally we're able to ask questions, have some communication. And I think that's definitely needed. So to me, this is not an acceptable method. And then some of the comments, you couldn't hear them very well.

It's just really a lack as a whole. This is going to affect potentially every state. So this could have a major impact. And so in the middle of this pandemic when the priorities for state government and others are elsewhere and half the country is unemployed, it just seems like an inappropriate time to be dealing with this unnecessary change.

I live near San Onofre. And as far as I'm concerned, those domes can sit there for 40 years. So there's no urgency here. And I really would like you to take a pause on this and reevaluate it next year. Hopefully, not too many people will have died by then. And I think this process is hazardous to people's health.

It makes money for the nuclear utilities, but it does nothing, absolutely nothing to protect our safety to use -- even the qualified people are

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bad enough we're dealing with. I mean, the NRC won't even tell us the radiation levels coming out of our nuclear waste -- our 17-year-old nuclear waste canisters. You're hiding that information from us.

They're hiding information about the Calvert Cliffs old canisters. We don't know the radiation level coming out of the outlet air vents of those systems. So this is just -- it's just a horrible idea. And I support all the other comments that have been made opposing this ridiculous and what appears to be illegal action.

I think the legislature should take the NRC's ability away to make exemptions to any regulation. They're there for a reason. And I would like to have a list of all the exemptions that you've already given. Maybe either you can add that to some web page so people can see where the Superfund sites have been approved that we don't know about. Thank you.

MR. KLUKAN: Thank you very much for your comment. Moderator, given that we're closing in on 20 minutes until the scheduled end of the meeting, could you let us know how many speakers we have who are in the queue to speak?

OPERATOR: I have eight left.

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MR. KLUKAN: Okay. All right. We will move forward then. Can we have the next speaker, please?

OPERATOR: Michael Callahan, your line is open.

MR. CALLAHAN: Thank you very much. It's Mike Callahan, C-A-L-L-A-H-A-N, Governmental Strategies Inc. Can you hear me okay?

MR. KLUKAN: Yes, we can. Thank you, sir.

MR. CALLAHAN: I'm consulting for WCS, and I just wanted to go back and fill in for one of the particularly tough spots where Mr. Carlson tried to speak in his first go around. And that is NRC has never before supported regulation by exemption. And that's been true in adjudications where they had stated that exemptions should be extraordinary and sparing.

Regulations go through the full rulemaking process, including public notice and comment. And that way, the rules can stand the test of time. Guidance can be changed just about every few years. And in fact, we find ourselves in a VLLW process conundrum that was initiated by a change in guidance that originated in 1986, was changed in 2016,

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and here we are now looking to dispose of this material through guidance in 2000.

The rules were presumed to apply as written until an exemption requester has met the very high burden for an approval of an exception. So this is not, in WCS' mind -- it's not a good indicator of a regulatory practice that we should be following. Also, I just wanted to say for WCS, we don't like being in such definitive opposition to a staff proposal.

We have great regard for the professionalism and the dedication of the staff. In this specific instance, we believe that this proposal reflects an impermissible rewriting of agency regulations and a dramatic unjustified and ultimately unsupportable change of the process for disposal of low-level radioactive waste. Thanks.

MR. KLUKAN: Thank you very much for your comment. So Moderator, I think we're going to finish up with the seven remaining speakers you said we had in queue, and then we'll terminate the meeting after that. So could we have the next speaker, please?

OPERATOR: Thank you. Ellen Thomas, your line is open.

MS. THOMAS: Okay. I won't take up much

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time. I'm Director of Proposition 1 Campaign for a Nuclear Free Future and Co-Chair of Women's International League for Peace and Freedom, DISARM/End Wars Committee. And I just agree with every one of these excellent speakers against this idea. It's insane to put any radioactive waste into unregulated landfills, and I'm astonished that the NRC would consider it.

And I fully support the comments, not only of Nuclear Information Resource Service, but I'm very happily surprised to see that everybody else who has spoken today also opposes this idea. So I hope that you will recognize that we represent the people who live in the communities that would be affected by this. And radioactive wastes don't go away. So you really should not be doing this, and I hope and pray that you will do the right thing and discard this whole idea. Thank you very much.

MR. KLUKAN: Thank you very much for your comment. Moderator, next speaker, please. Thank you.

OPERATOR: Imora Duran, your line is open.

MS. DURAN: Hello. My name is Imora Duran. Can you hear me?

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MR. KLUKAN: We can. Thank you.

MS. DURAN: I'm a concerned member of the public, and I just want to say I support all of the previous comments. And I'm against this new rule that NRC is proposing because I think it's irresponsible. It would allow large amounts of nuclear waste to come into our community, dumping to landfills that were never set up to handle any amount of radioactive waste.

The NRC says it will only allow this for very low-level waste, but it has no definition of what that means. The NRC says it will require landfill operators to demonstrate that the facility wouldn't exceed a 25 millirem limit, but this would be based on an estimate rather than a real measurement. And even then, according to this proposed rule, NRC will not enforce this limit, that is, conduct inspections, fine violators, all the things that they should be doing. Even though if that dose limit were to be met, it would still lead to a deadly amount of radiation.

And finally, I just want to say that I love my black and brown brothers and sisters, and I wish for them the same right that I have to live in safe and healthy communities. And may I remind you

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that black and brown communities are already overly polluted and discriminated against by the same environmental laws and regulations that promise to protect them. Any environmental regulation that does not address environmental racism is inherently racist and discriminatory.

So this proposed ruling is therefore racist. And those of you who have taken part of drafting it are no different than the murderers of George Floyd. So please do not allow this proposed rule to go forward anymore. Thank you.

MR. KLUKAN: Thank you very much for your comments. Moderator, could we have the next speaker, please?

OPERATOR: Maria Caine, your line is open.

(No audible response.)

OPERATOR: Maria Caine, please unmute your line.

MS. CAINE: Hi. Sorry about that. My name is Maria Caine. That's C-A-I-N-E. This proposed deregulation of radioactive waste is not only ethically abhorrent, but NRC is actually breaching numerous legal and regulatory requirements to push it through.

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Firstly, today's meeting was not listed in the *Federal Register*, and the public was not actively informed about it. A quiet posting to your website is not sufficient notice. If NRC makes no real attempt to notify us about public meetings where it supposedly is soliciting stakeholder feedback, I have to question whether or not NRC is genuine in its desire to hear from us.

But unfortunately, this behavior is in line with what NRC is attempting to do through this interpretation. By claiming to merely reinterpret existing regulations rather than actually changing the regulations, NRC is effectively rescinding the entire 10 CFR 61 regulation specifying safety and licensing requirements for land disposal of radioactive waste without following the rulemaking requirements of law by misinterpreting this radical change in its regulations as a mere interpretive change, NRC is trying to bypass the Administrative Procedure Act just because it failed to notify concerned members of the public about the existence of this meeting supposedly designed to solicit their comments. NRC is hiding from the public the actual language that it's proposing to adopt. Meaningful comment is impossible when one cannot see what

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language is proposed.

NRC is also violating the National Environmental Policy Act by failing to conduct any environmental review of this proposal which is clearly a significant federal action that could have major environmental impact. In the past, environmental impact statements have been required for NRC approval of individual licensed low-level radioactive waste disposal sites. But under this new interpretation, unlicensed [low-level radioactive waste] LLRW disposal sites with doses at least 2.5 times higher than licensed sites did not require an environmental impact statement. This is not safe and clearly does not value public or environmental health and safety.

NRC is also violating the Atomic Energy Act which at its heart requires licensing of nuclear materials and activities as well as public notice and a right to a hearing over any application for a such a license. While therein limited exceptions are currently permitted, here NRC is proposing to exempt of the arena of radioactive waste disposal other than spent fuel from the [Atomic Energy Act] AEA licensing hearing requirement. Effectively, NRC has eliminated all of the rights to public notice, provided for no

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opportunity for exhibits or a hearing, and no opportunity to comment on an [environmental impact statement] EIS or environmental assessment.

The public would never know that a local landfill had requested the right to receive large amounts of nuclear waste exempt from licensing and regulation. Even the landfill's analysis claiming it had 25 millirems a year limit would be kept secret, shielded from public scrutiny. I ask NRC not to move forward with this proposed reinterpretation and to instead remember and return to your claimed vision of a trusted, independent, transparent, and effective nuclear regulator and to your claimed mission to protect public health and safety, promote the common defense and security, and protect the environment. Thank you.

MR. KLUKAN: Thank you very much for your comment. Moderator, next speaker, please.

OPERATOR: Jill McManus, your line is open.

MS. MCMANUS: Hello there. Thank you for hearing me. It's Jill McManus, M-C, capital M-A-N-U-S. I'm a citizen activist, and I have watched the NRC hold hearings about running a 42-inch gas pipeline 105 feet from Indian Point emergency backup

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generators without having any knowledge of how gas can explode, et cetera.

I see this reinterpretation as being the NRC's admitting that they are unable to handle the present levels of waste, and this is an opportunistic way to duck responsibility for that waste and spread it around. We know there are no safe levels of exposures, and we know that the government has already enabled the increase of permissible radioactivity in our water. So this is the final insult.

There will be transfer of this -- some level or another of waste that's indeterminate through small communities everywhere. We don't know what the transfer is going to involve or what dangers. In the end this also covers for the fracking industry because it then permits more burial of the Marcellus Shale that's radioactive. And it also is a way to make decommissioning cheaper on the back of the public and particularly minority areas.

So I'm absolutely against it. I think it's appalling. This whole reinterpretation is a cheap shot, and it's undertaken during the COVID crisis when no one has attention and it's badly advertised and the comment period was ridiculously set up. And I just feel a sense of outrage, and I

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do not consent. Thank you.

MR. KLUKAN: Thank you for your comment.
Moderator, could we have the next speaker, please?

OPERATOR: Larry Camper, your line is open.

MR. CAMPER: Can you hear me?

MR. KLUKAN: We can. Go ahead. Thank you.

MR. CAMPER: Very good. Larry Camper, C-A-M-P-E-R. I'm retired NRC executive. And I want to offer some comments with the assumption that the staff will continue with this approach, and my comments will hopefully address certain key issues and equally importantly enhance public communication.

First is that if you continue with this approach, in the criteria set forth in Slides 13 and 14 today along with information discussing the fact that any request for an exemption would be a bounding calculation and it would need to be changed if receipt conditions were to change, that must be carefully articulated in the guidance in NUREG 1736. The 25 millirem per year dose that's been discussed by the staff today and in the FRN, 25 millirem does have a pedigree. It is a known number.

It is the dose criteria for the license

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termination rule for decommissioning for unrestricted release of sites, and it's one of three criteria set forth in 10 CFR 61.41. That's 25 millirem for the whole body, 75 millirem to the thyroid, 25 millirem for any other organ. However, the staff has not done an adequate job of articulating why it is the basis or what is the basis for the number to be used in this case. Better descriptive information is needed.

Today, when someone requests a 20.2002 authorization, there are two components to that regulatory action. One is the authorization and the other is the granting of an exemption. It's unclear why the staff has chosen to use an interpretive rulemaking that would clarify language and guidance as opposed to specifically articulating a regulatory language change in 20.2001.

For example, there is language in Part 30.41 or 40.51 that says, quote, to any person exempt from the licensing and requirements of the Act and regulations in this part to the extent permitted under said exemption. I think the agency would be in a far better position to address this issue through a language adjustment in Part 20 and allow it to be subjected to all of the various requirements associated with a rulemaking change.

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I'll also point out that the 20.2002 authorization issue remains unresolved. There's a lawsuit that's taking place between the NEI and the NRC, and there's other issues out there around that particular point, yet it's discussed in the FRN. And it warrants further clarification to status of the 20.2002 authorization issue.

It's also important to point out that an environmental assessment [EA] will be done but not an environmental impact statement. That is the case with 20.2002 authorization today. That needs to be more clearly stated and the basis for why an EA is acceptable as opposed to a full-blown environmental impact statement. I think it's also important for the NRC staff to clarify that not all RCRA sites or landfills are, in fact, authorized to receive radioactive waste. RCRA --

(Simultaneous speaking.)

MR. KLUKAN: You have 30 seconds left.
Thank you.

MR. CAMPER: The EPA authority has to be more clear. Finally, providing some guidance on dose ranges and waste packages that would conceivably qualify would be of value. Thank you.

MR. KLUKAN: Thank you very much for your

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comment. Moderator, could we have the next speaker, please?

OPERATOR: Thank you. Our next speaker is Dan Shrum. Your line is open.

MR. SHRUM: Hi. My name is Dan Shrum, S-H-R-U-M. Can you hear me okay?

MR. KLUKAN: We can. Go ahead, sir. Thank you.

MR. SHRUM: I represent the Low-Level Radioactive Waste Forum, and we have a specific concern with Question 2 on the transboundary transfer associated with this action. As you're well aware, the compacts and the forum were developed out of the Low-Level Radioactive Waste Policy Act. And we would like the NRC to clearly state that this interpretive rule does not change that authority given to the compacts on where this low-level -- or very low-level radioactive waste can go to. Specifically, in my training from before with compliance issues, we always follow with the license. And we're not sure if a license will continue as this material is exempted or transferred to a facility that does not have a license. Will it come out of a licensed status at the facility, or will that happen when it arrives at the disposal facility? That would give us some

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clarification on the authority that the compacts would still have as to sending waste out of the compact or receiving waste into another compact.

On a personal issue, I would like some additional clarification, if possible, on how to transfer from one regulatory agency to another agency happens. Specifically, it appears that the NRC will be approving the base case for the exemption to be granted. But how will those base cases be confirmed at the receiving facility, for example, concentrations of radioactivity? Going to a RCRA facility, how is that confirmed? And what authority will the receiving regulatory states have to issue violations and such for radioactive materials that they don't normally permit? So that's the concerns that we have, and thank you for your time.

MR. KLUKAN: Thank you very much for your comment. Moderator, could we have I think the final speaker, please? Or maybe we have -- do we have one or two more?

OPERATOR: We now have two more.

MR. KLUKAN: All right. Our next speaker, please.

OPERATOR: Okay. Jan Boudart, your line is open.

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MS. BOUDART: Whoa. Okay. I wanted to talk a little bit further about the antitrust laws. Well, I have a grip with the NRC about COVID-19, and I live in Illinois. And COVID-19, the NRC did not protect us from COVID-19 because the NRC has a focus on protecting radiation or protecting people from excess radiation.

And as a result, the people who go around the country or who go around the state of Illinois doing refueling come from all over the place. And they spread COVID-19 around the state, and the NRC probably was not able to do anything about this because they don't regulate anything but radiation levels or the amount of radiation the public is getting. And I think this was really too bad.

And I have to say I need a correction. I was talking about the non-reference man victim of radiation. And I mentioned that for every two reference men who get cancer, three reference women do. And then I said for every reference man, ten little boys. But that's only five.

So for every reference man who gets cancer, a kid who's ten years old at the time is going to -- five kids who are ten years old at the time are going to get cancer. And it's true for ten girls.

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I mean, there's twice as many little girls who will get cancer as little boys. And then, of course, this data comes from the life cycle study of people from Hiroshima and Nagasaki.

And it doesn't cover stillbirths and other problems that develop in the fetus. And I found out that blue babies were born in Rocky Flats because of the radiation that people were subjected to there unknown to them. And there were several blue babies born because they were subjected to solutions at Rocky Flats without any recourse.

MR. KLUKAN: Thank you very much. You already had an opportunity to speak, and we're running low on time. We're going to move to our final speaker. So thank you for your comment.

OPERATOR: Thank you.

MR. KLUKAN: So last speaker, Moderator.

OPERATOR: Kay Cumbow, your line is open.

MS. CUMBOW: Hi. My name is Kay Cumbow. I'm from Michigan -- from St. Clair County, Michigan. And I'm proud to say that my township, Lynn Township of St. Clair County, passed a resolution strongly opposing this rule and they'll be entering it as a comment.

And this is just outrageous that you

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should propose this major change at a time when our communities are just struggling to survive. This meeting notice also was grossly inadequate and not in the *Federal Register* which many of us follow. And this is -- why it's important that the comment period be extended is because this could've -- this would impact every community nationwide, through transport or through facilities that took this stuff.

And during COVID-19, our elected officials, our community leaders, and the American public face daunting and unprecedented health and economic priorities that demand their full attention. There's so little time left for watchdogging regulators who are supposed to be protecting public safety and welfare and instead are taking full advantage to sneak through reckless changes.

So we are asking that the comment period for -- I, personally, am asking that the comment period for this critical decision be held off until six months after COVID-19 emergency has ended so that our townships, our counties, our state officials, our federal officials can all take part in this as well as the citizens in our communities. And to drop this senseless and dangerous move to deregulate large amount of radioactive waste that would go to exempted

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unlicensed facilities and landfills that are not designed to isolate nuclear waste. And if you should try to push this through anyways, then it requires a full programmatic environmental impact statement with public hearings and site-specific environmental impact statements for each site.

I wanted to say also that there are many computer programs that have combined audio where people don't have to juggle a phone and a computer. Several people mentioned that this had to do with reactor waste from -- waste from reactor decommissioning. The summary of the 2018 scoping study for very low-level waste stated that this new category was needed due to the very large amounts of radioactive waste connected with reactor decommissioning as well as waste that could come from reprocessing.

So does that mean new reprocessing, or does that mean the horrible waste that they're still cleaning up at West Valley and also radiological incidents? If uranium is to be included, then a reminder that Uranium-239 has a half-life of 4.5 billion years. That's the half-life --

MR. KLUKAN: You have 30 seconds remaining. Thank you.

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MS. CUMBOW: And it comes with a hefty decay chain that includes radioactive isotopes of radon, thorium, and polonium, et cetera, that all keep breaking down in 4.5 billion years. Thank you. Thank you for this poor attempt to get public comment, and I'm glad that some people weighed in. But you would have a whole lot more weighing in if you had adequate public comment time -- I mean, if you had adequate public notice for a meeting. Thank you.

MR. KLUKAN: Thank you very much. And thank you again to all who offered comments today. And thank you to the moderator very much for assisting me in conducting the public comment portion. So with that, thank you again, and I will turn it over to Trish.

DR. HOLAHAN: Okay. Thanks, Brett. And thank you all for your comments. They're very insightful, and we really appreciate all the comments we've received. Before we close the meeting, can I have the next slide? Oh, there it is.

I want to point out that if you wish to receive information on the NRC's low-level waste program, you can sign up for the low-level waste email distribution which we refer to as ListServ. And basically, you go to the NRC's public website and

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select Public Meetings and Involvement, Subscribe to E-mail Updates, and then select Lyris Subscription Services and check the box for low-level waste distribution.

Now I realize that we didn't put this meeting on the ListServ. We had put it on the public meeting notice website, and so we thought that was sufficient. But we've taken as a best practice we'll put it in for future VLLW meetings to include this on ListServ as well. So if I could have the next slide, please.

So as we reach the end of the meeting, I want to reiterate that our recent proposal provides an alternate way that we can approve a request to dispose of some VLLW in RCRA landfills instead of licensed facilities for radioactive waste. And as we said, it's a proposed interpretive rule. It's an alternative regulatory process to allow VLLW disposal in regulated facilities. It's commensurate with the waste hazard while protecting public health and safety and the environmental.

And to be clear, these proposed changes would not release the nation's radioactive waste from regulatory oversight. And second, it wouldn't affect other disposal methods or impact health and safety

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and the environment. I'd like to reiterate that it's not a revisit of the [below regulatory concern] BRC policy and we're not going to recycle materials. And it would reinforce that any landfill that wishes to be considered an authorized recipient must be approved by the NRC or the state regulators. It's not free disposal to any landfill at large.

So with that, again, I want to thank you all for participating. I know we've gone a little bit over time. We're going to take these comments along with the ones that are being submitted through regulations.gov and via the comment email. We created a comment email to make it easier for those that were having trouble with regulations.gov, and we'll consider them seriously as we develop next steps for this proposed interpretive rule. And with that, I'll turn it back to Marlayna. And thank you again very much. We're taking these all into consideration. Marlayna?

MS. DOELL: All right. Thank you, Trish. So at this time, I think we're going to go ahead and close out the meeting. Thank you again to everyone that was able to attend today. As we noted previously, we will be capturing all of the written and verbal comments into a transcript that we will

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append to the meeting summary once it is prepared.

So both the full audio transcript, as well as, the contents of both the chat and Q&A windows in Webex will be captured in the meeting summary. Again, thank you all so much for joining us. And I think with that, we will close the meeting, unless, Brett, you have any final comments.

MR. KLUKAN: No, just thank you again for everyone who participated.

MS. DOELL: All right. With that, I'll wish everyone a great afternoon and thank you again for joining us.

(Whereupon, the above-entitled matter went off the record at 2:40 p.m.)

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