Official Transcript of Proceedings NUCLEAR REGULATORY COMMISSION

Title: Proposed Rule Renewing Nuclear Power Plant

Operating Licenses -- Environmental Review

Afternoon Session

Docket Number: (n/a)

Location: Rockville, Maryland

Date: Thursday, March 16, 2023

Work Order No.: NRC-2291 Pages 1-30

NEAL R. GROSS AND CO., INC.

Court Reporters and Transcribers

1716 14th Street, N.W.

Washington, D.C. 20009

(202) 234-4433

U.S. NUCLEAR REGULATORY COMMISSION

+ + + + +

PUBLIC MEETING

+ + + + +

PROPOSED RULE RENEWING NUCLEAR POWER PLANT

OPERATING LICENSES -- ENVIRONMENTAL REVIEW

+ + + + +

THURSDAY

MARCH 16, 2023

+ + + + +

The public meeting convened at the

Bethesda North Marriott Hotel & Conference Center,

5701 Marinelli Road, Rockville, Maryland, and via

Video-Teleconference, at 2:00 p.m. EDT, Lance

Rakovan, Facilitator presiding.

PRESENT

LANCE RAKOVAN

JENNIFER DAVIS

KEVIN FOLK

PATRICIA HOLAHAN

BRETT KLUKAN

YANELY MALAVE-VELEZ

SHERRI MIOTLA

BILL ROGERS

MAX SMITH

AGENDA

NRC Presentation3
Jennifer Davis3
Kevin Folk4
Yanely Malave13
Public Comments24
Adiourn

P-R-O-C-E-E-D-I-N-G-S

2:18 p.m.

[Note: Due to a technical issue, the public meeting transcript for the afternoon session did not start recording until 18 minutes into the NRC Staff's presentation. However, no public comments or questions were affected. A full accounting of the NRC presentation information can be found in the public meeting transcript for the evening session.]

MS. DAVIS: Studies have not uncovered consistent evidence linking the harmful effects of field exposures. Because the state of the science is currently inadequate, no generic conclusion is possible.

If in future the Commission finds the general agreement has been reached by appropriate federal health agencies that there are adverse effects, then the Commission will treat this in a manner similar to a Category 2 issue and would require applicants to submit plant-specific information regarding this topic. Until such time, the applicants are not required to submit this information.

As indicated on this slide, no

environmental issues were eliminated, but certain issues were consolidated for clarity and one issue was subdivided into three separate issues.

Next, we'll summarize the key changes to the environmental issues evaluated in the draft revised License Renewal GEIS which are proposed to be included in Table B-1 under this proposed rule.

In general, all of the changes reflect new and updated information, technical or regulatory information as described in the GEIS, and the proposed changes are also intended to enhance the effectiveness of the NRC staff's license renewal environmental reviews.

And with that, I'll turn the presentation over to my colleague, Kevin Folk.

MR. FOLK: Thank you, Jenny, and good afternoon. Slide 12, please. My name is Kevin Folk and I will summarize the key technical changes in the proposed rule package.

For this first issue, the staff proposes to combine two closely related issues into a new consolidated Category 2 issue. This revised issue is named, "Groundwater quality degradation (plants with cooling ponds."

The scope of this combined issue

considers the possibility that groundwater quality and beneficial water uses can become degraded from the migration of contaminants discharged to cooling ponds from operating nuclear power plants.

The existing Category 2 issue only considers plants with cooling ponds at inland site locations. This revised consolidated issue recognizes that plant discharges to cooling ponds can degrade groundwater or surface water quality in coastal areas as well as at inland sites depending on such site-specific differences as cooling pond construction, operations, water quality, and site hydrogeologic conditions.

This proposed change is based on new information identified by the NRC staff during the 2019 environmental review for the Turkey Point Nuclear Plant in Florida. Slide 13, please.

This renamed consolidated Category 2 issue is titled, "Impingement mortality and entrainment of aquatic organisms, plants with oncethrough cooling systems or cooling ponds."

This issue pertains to cooling water intake effects on aquatic organisms, including finfish and shellfish, at operating nuclear plants with once-through or open cycle cooling systems.

The proposed rule combines an existing Category 2 issue with the impingement component of an existing and related Category 1 issue to more fully address potential environmental impacts. The staff proposed to review and rename the issue to consider impingement mortality rather than simply total impingement.

This change is consistent with the United States Environmental Protection Agency's 2014 Clean Water Act, Section 316(b) regulations, and its revised impacts methodology. Slide 14, please.

This next issue has the same underlying regulatory and technical basis as the previous issue and combines two existing Category 1 issues into one Category 1 issue named, "Impingement mortality and entrainment of aquatic organisms, plants with cooling towers."

The consolidated issue pertains to nuclear plants using cooling towards which are closed cycle cooling systems. For this combined issue, the NRC staff found that no significant impacts on populations of aquatic organisms have been reported at any existing nuclear power plants relying on cooling towers.

Therefore, this combined issue is generically resolved with an impact of small. This finding is also consistent with the U.S. EPA's revised Clean Water Act, Section 316(b) regulations that establish Best Technology Available standards, or BTA, for cooling water intake systems where cooling ponds are recognized as best technology for minimizing impacts on aquatic organisms. Slide 15, please.

This consolidated issue named, "Infrequently reported effects of thermal effluents," combines several closely related but seldom reported effects of nuclear plant thermal effluent discharges on aquatic organisms.

These various combined effects include, for example, cold shock, thermal barriers for migrating aquatic species, and effects on dissolved oxygen and other water quality changes.

Along with the thermal effluent component of an existing Category 1 issue, as stated in the proposed rule package, these infrequent effects would be minor and would not destabilize or alter any important attribute of aquatic populations in receiving water bodies.

The NRC staff also projects that these

effects or impacts would continue to be small for all nuclear power plants during any license renewal term. Therefore, the combined issue is generic in nature or Category 1. Slide 16, please.

Here, the staff proposes dividing an existing Category 2 issue into three separate Category 2 issues that address the potential impacts of operating nuclear plants on federally protected ecological resources.

The proposed change will promote clarity and consistency with the separate federal statutes and interagency consultation requirements that the NRC staff must consider.

The first issue concerns listed terrestrial and freshwater species and their critical habitats under the Endangered Species Act, or ESA for short, subject to U.S. Fish and Wildlife Service jurisdiction.

The second of the three issues concerns ESA-listed marine and migratory species and their critical habitats under National Marine Fisheries Service jurisdiction.

The last issue concerns essential habitat for regulated marine fisheries under National Marine Fisheries Service jurisdiction,

pursuant to the Magnuson-Stevens Fishery Conservation and Management Act. Slide 17, please.

As described in the proposed rule package, the NRC staff has also identified three new environmental issues for inclusion in Table B-1 of 10 CFR Part 51.

First, a new Category 2 issue titled, "National Marine Sanctuaries Act, Sanctuary Resources," would be added to evaluate potential effects of continued nuclear power plant operation on protected resources.

Currently, five nuclear power plants are located near designated or proposed national marine sanctuaries. This addition would enhance and clarify the NRC's interagency consultation requirements.

Specifically, Section 304(d) of the Act requires that federal agencies consult with the National Oceanic and Atmospheric Administration, Office of National Marine Sanctuaries for any actions that may injure sanctuary resources.

The staff would perform a plantspecific impact assessment as part of each license
renewal environmental review to determine the
potential effects on these resources, and would

consult as appropriate. Next slide, please. I'm sorry, same slide.

The remaining two new issues are closely linked and will facilitate the NRC staff's environmental review regarding greenhouse gas emissions, or GHGs for short, and climate change.

The NRC staff has been addressing GHGs and climate change in its licensing reviews in accordance with Commission direction since 2009, but such issues were not explicitly included in the 2013 License Renewal Generic Environmental Impact Statement and rule.

Now, a new Category 1 issue named, "Greenhouse gas impacts on climate change" would be added that evaluates the GHG impacts on climate change associated with nuclear power plant operation during the license renewal term.

Based on the NRC staff's evaluation, continued nuclear plant operations refurbishment activities emit small quantities of industrial greenhouse gases from such common diesel sources generators, pumps, boilers, as motorized equipment, and motor vehicles.

Analysis shows that the impacts of GHG emissions on climate change during the license

renewal term would be small for all nuclear power plants.

Additionally, a new Category 2 issue would be added titled, "Climate change impacts on environmental resources." This issue addresses the impacts of climate change on environmental resources that may also be directly impacted by continued nuclear power plant operations during the license renewal term.

Changes in resource conditions such as water temperature associated with climate change could result in environmental changes and interact with the incremental impacts of nuclear power plant operations.

The impacts of climate change on environmental resources are location specific, and therefore, they cannot be generically resolved. The NRC staff therefore proposes to perform a plant-specific impact assessment as part of each license renewal environmental review. Now slide 18, please.

The proposed rule package classifies the current Category 2, severe accidents issue, as a Category 1 issue. Under the 2013 rule, the issue of severe accidents was classified as a Category 2

issue, requiring that license renewal applicants perform a Severe Accident Mitigation Alternatives analysis, or SAMA, if not performed previously for the nuclear plant.

As proposed, this issue would be resolved generically for the vast majority, if not all, license renewal applicants. This is because expected future applicants will have previously completed a full SAMA analysis. All applicants will still have to identify any new and significant information subject to independent review by the NRC staff.

This proposed change from Category 2 to Category 1 is further supported by new information and analyses performed by the NRC staff which shows an overall reduction in population dose risk, and that continued severe accident regulatory improvements have reduced the likelihood of finding additional beneficial plant safety upgrades.

This new and updated information further supports the Commission's expectation that further SAMA analysis would not be necessary for plants that have already completed a SAMA analysis or similar analysis, such as a Severe Accident Mitigation Design Alternative analysis, or SAMDA.

Therefore, the NRC staff has concluded that the probability-weighted consequences of severe accidents during both an initial and a subsequent license renewal term would be small.

I will now turn it back to Yanely who will provide additional information on the rulemaking.

MS. MALAVE-VELEZ: Thank you, Kevin. Okay, Can everybody hear me? I'm Yanely Malave. the rulemaking project manager for project. Ι know we have provided а lot information, so I would like to summarize proposed amendments.

We will revise the existing requirements for environmental reviews of applications for license renewal of operating nuclear power plants.

The proposed amendments will codify the updated generic conclusions of the draft revised License Renewal GEIS for those issues for which a generic conclusion regarding the potential environmental impacts of issuing an initial or subsequent renewal license for a nuclear power plant can be reached.

These conclusions have been updated to

account for subsequent license renewal, as well as initial license renewal and other new information since the 2013 License Renewal GEIS update.

These issues are identified as Category 1 issues in the draft revised License Renewal GEIS. The Category 1 issues identified and described in the draft License Renewal GEIS may be applied to any initial renewal or subsequent license renewal application for an operating nuclear power plant and have been determined to have a small impact for all plants or a subset of plants.

Table B-1 in Appendix B to Subpart A of 10 CFR 51 summarizes and codifies the Commission's findings for all Category 1 issues. The revisions to Table B-1 account for subsequent license renewal.

It reflects lessons learned, knowledge gained, and experience from license renewal environmental reviews performed since the development of the 2013 License Renewal GEIS.

It considers changes to applicable laws and regulations, and factors in new scientific data and methodology with respect to the assessment of potential environmental impacts of nuclear power plant license renewal.

In addition, we make conforming changes to the provisions of 51.53(c)(3) and 51.95(c). We also clarify that it only applies to one term of subsequent license renewal, but we do have the question in the proposed rule package as to whether it shall be applied to more than one term of subsequent license renewal. Slide 20, please.

The NRC staff submitted the proposed rule package to the Commission on December 6, 2022, and the proposed rule was published on March 3rd. The FR citation is 88 FR 13329.

We're going to be conducting multiple public meetings during the 60-day public comment period which ends on May 2. After the conclusion of the public comment period, the NRC staff will respond to comments received on the proposed rule, the License Renewal GEIS and necessary guidance, and will be updating the package as appropriate.

The NRC staff plans to submit the final rule package to the Commission for its review and approval by the end of November. The estimated date of publication for the final rule is April 2024. Slide 21, please.

We have created a public website in which information related to this project and links

to the documents are available. In addition, the table shown in the slide shows all of the ADAMS numbers that correspond to each of the documents. Slide 22, please.

There are multiple ways that you can provide your comment. One of them is at today's meeting. The second one is online through the regulations.gov by searching the docket ID number NRC-2018-0296.

You can also email your comment to rulemaking.comments@nrc.gov. If you do not receive an automatic reply email confirming receipt, please contact us at 301-415-1677. Slide 23, please.

Also, and lastly, you can submit your comments by mail to the Secretary at the address displayed on the slide, and a friendly reminder, the comment period ends May 2. Slide 24, please.

I also would like to point out that in the proposed rule, as mentioned previously, we're seeking comment on whether the proposed rule should be extended beyond two license renewal terms. When you provide your rationale with your response, that will help us to provide a clear response to your comment. Slide 25, please.

This slide shows the different points

of contact that are able to help you if you have any questions, and now I will turn it over to Lance for further information on how you can provide your comments or questions.

MR. RAKOVAN: Okay, if we could go to slide 26, please? Right now, we would like to offer the chance to ask clarifying questions on the presentation if there was anything on the presentation that you didn't quite understand or wanted to ask a quick question on.

We don't want to spend too much time here because we want to make sure that we allow plenty of time for providing comments, which again is what we're here to focus on.

For those of you on Teams, if you have a question, you can use the raise my hand feature and you can find it on the top window with the hand icon. If you are on the phone, you can press *5 and that will raise your hand on Teams.

Teams will automatically put all of you all in a queue in the order of your hand raising, and once we call your name, Brett will activate your microphone. You will still have to unmute yourself in order to speak. If you are called into the bridge line, you can try unmuting or *6 to

unmute once Brett has a chance to do that.

If there's a Teams glitch like we've been having and you're not able to unmute yourself, there's a couple of things we can try. Again, we're looking right now for just clarifying questions and then we'll move fully to commenting.

So, if there's anyone who has a clarifying question in the room, please come up to the microphone if you would and give us your name and affiliation, and Brett, I will check in with you momentarily.

We've got a couple of folks approaching the microphone at this point though, so we're going to go with the hands in the room if you will. And let me make sure that the microphone is on. Oh, it is, excellent. Please, go ahead.

MS. WESTRA: Yes, good afternoon, Heather Westra with the Prairie Island Indian Community in Minnesota. I'm trying to better understand the change of the SAMA analysis from a Category 2 to a Category 1. It seems to me that analysis is really important, and so I'm trying to understand the rationale for changing it from 2 to 1.

MR. FOLK: Thank you for that question.

The change was primarily driven by the staff's updated analysis.

Appendix E of the License Renewal GEIS, about 100 pages long, it provides a detailed analysis that shows that the all hazards impacts for severe accidents is much lower than previously evaluated in the 1996 rule and GEIS, so that's the primary driver for this change.

Secondarily is the fact that all plants, most plants will have previously completed a detailed SAMA analysis such that there's already a full SAMA on record which will allow the staff to do a new and significant review for the subsequent license renewal term. So, this would only be for plants that have previously completed a full SAMA analysis.

MS. WESTRA: Yeah, well, the Prairie Island Plant has already gone through one renewal, so if I understand this correctly, the SAMA analysis would be a Category 1 and they would rely on the previous analysis?

MR. FOLK: Subject to the consideration of new and significant information which the staff has to independently review for all Category 1 issues.

MS. WESTRA: Okay, yeah, it's just, you know, the Prairie Island Nuclear Generating Plant right next to the Prairie Island Community, and it's a really unique situation, and I don't believe that cultural impacts were ever considered as part of any previous accident mitigation.

So, to me, I'm surprised to see that it's Category 1, but I'll have to review, you know, the rationale. I haven't really looked at the proposed rule yet, but I just wanted to flag that right now as an issue of concern.

MR. FOLK: We look forward to receiving your comments.

MS. WESTRA: Okay, thank you.

MR. RAKOVAN: Okay, I've got one more clarifying question in the room, and then, Brett, I'll do a quick check-in with you, so, sir, if you could introduce yourself and any group you're with, please?

MR. CAMERON: Chip Cameron, I'm a consultant to the Prairie Island Indian Community and I have two questions. I don't have a comment, but two questions on the text of the proposed rule. Is that appropriate to do that now or should I wait

for the comment period?

Okay, the first question is in reference to action areas, and that was the slide that you were discussing about Magnuson and endangered species, and the text supplementary information in the proposed rule seems to confine the analysis to what are called, quote, action areas, unquote, and I just wondered what is an action area?

MR. FOLK: That's certainly a question we could take during the formal comment period, but the --

MR. CAMERON: Okay.

MR. FOLK: -- as a Category 2 issue, the staff would perform a plant-specific analysis for that issue.

MR. CAMERON: Well, on the action areas, I'll be back to repeat the question at the comment period.

The second question is that the supplementary information to the rule talks about 36 federal registries. This was about consultation with Tribal governments, and that's derived from the executive order that wasn't deleted by the last President, okay?

It requires consultation with Tribes for any federal agency action that would affect them, and consultation is not just listening to their comments. It's talking to them.

And Xcel Energy is the licensee for the two plants across from Prairie Island Indian Community. They're going to come in with their renewal application in 2026 or maybe a little bit earlier, but I wonder when would you anticipate that the NRC would do consultation with the Prairie Island Indian Community?

MS. DAVIS: Hi, this is Jennifer Davis. Effectively, we don't initiate NHPA [National Historic Preservation Act] Section 106 consultation until accepted the application we have However, we can conduct consultation docketing. under the Tribal policy statement that the Commission issued back in 2017.

As with the initial license renewal, we did engage with the Prairie Island Indian Community in consultation space and developed a memorandum of agreement and kind of set up a protocol for how the review would be conducted.

I mean, obviously, if the Tribe does have similar concerns, we can definitely work to

setting up a dialogue earlier, sooner rather than later.

MR. CAMERON: Okay, that's great, and I would just, in reference to what you just said, is that it might be useful to do consultation before the NRC accepts the license application rather than after because there could be some discussion that might affect your acceptance, but thank you.

MS. DAVIS: No problem. Thank you.

MR. RAKOVAN: Brett, do we have any hands online in terms of clarifying questions at this time?

MR. KLUKAN: Lance, we do not at this time, but again just as a reminder, if you'd like to ask a clarifying question at this time and you are participating via Teams or on the phone, please use the raise hand function.

If you're participating via the app, that's up at the top, more towards the right corner of your screen if you're using the app itself, or if you're participating via phone, and there are a number of you participating via phone, press *5 at this time. Again, that is *5 to raise your hand and I'll give you a few seconds here to see if we have anyone who would like to queue.

Okay, Lance, I'm not seeing any individuals who would like to ask a clarifying question online at this time.

MR. RAKOVAN: Okay, let's go ahead and move to commenting then. Again, if you have a comment, please come on up to the microphone and we'll take folks one at a time.

If you are online -- again you can hit *6 if you are on the phone or you can use the raise your hand feature if you are directly on Teams and we'll take folks in whatever order we can.

Anyone in the room have a comment that they would like to provide in terms of the LR GEIS? Chip, are you coming up again? We'd like folks to, you know, take, say, three to five minutes if you will for your comments. I'm not sure how many folks we'll have online, but at least three to five minutes initially.

MR. CAMERON: Well, this was -- I was just told to repeat my question during the comment period, and again, it's on the Endangered Species Act, Magnuson, et cetera, et cetera, and it seems to limit, based on the supplementary information, the consideration under those acts during the NRC review to what are called, quote, action areas,

unquote, and there's no explanation of what an action area is.

So, my question is, and my comment, I guess, is that when you're going out with the final rule, please explain what the action item is, okay? Thank you.

MR. RAKOVAN: Thank you. Brett, do we have any hands virtually?

MR. KLUKAN: We do not at this time, Lance. Again, if you would like to raise your hand, or ask or pose a comment at this time, please raise your hand in the Teams app, or if you're participating via phone, please press *5. Again, that is *5 if you are participating via phone. And I will give you a few seconds here to see if we have anyone queue up.

MR. RAKOVAN: Yeah, we'll pause in the room to see if anybody approaches the microphone as well.

(Pause.)

MR. RAKOVAN: Brett, we do have a speaker in the room, so we're going to go ahead and go to them. Ms. Westra, please?

MS. WESTRA: Yeah, thanks, Lance. Excuse me. Just a question. Under the, or what is a

consolidated Category 1 issue, effects of thermal effluents, and does the term infrequently reported thermal impacts, what exactly does that mean, like it's an event that happens infrequent or it's reported infrequently?

Because there have been, at the Prairie Island site, fish kills over the years because of thermal impacts, so I'm just trying to understand what does that mean, infrequently reported?

MR. RAKOVAN: Do we have an answer for that or should we take that as a comment that that needs to be defined?

MR. FOLK: We can take that as a clarifying question. This is Kevin Folk for the NRC staff.

That term, infrequently reported, is, that adjective refers to issues that have been seen or observed only at a limited number of plants, and in some cases, only at one or two plants, and subsequently, that issue has not been observed again or the licensee has mitigated the impact such that it is no longer occurring.

So, all of those issues are housed under, or would be housed under a consolidated Category 1 issue and would be generically resolved.

Again, for all Category 1 issues, the staff, in its site-specific environmental review, would consider any new and significant information with respect to those issues.

MS. WESTRA: So, even though the fish kills, and there was one last summer, they're reported by the licensee, that's not enough to make it a site-specific issue?

MR. FOLK: So, Kevin Folk for the staff again. So, separately, thermal effluents are separately looked at as part of the staff's review. The question about infrequently reported effects, that is a distinct set of issues that have been observed at a limited number of plants and the feels confident staff that can generically we resolve those issues because they are no longer occurring or reoccurring issues at those plants, excuse me.

MS. WESTRA: Okay, I'm just -- it's occurring at the Prairie Island Plant, maybe not every year, maybe it's infrequently, but when it does occur, quite a lot of fish are killed because it's a thermal impact and people are concerned, and so I guess what you're saying is it will remain a Category 1.

MR. FOLK: For that particular issue, but as part of the plant-specific review, we will look at all new and significant information.

MS. WESTRA: Okay, thank you.

MR. FOLK: Sure.

MR. RAKOVAN: Brett, do you have anyone online?

MR. KLUKAN: Lance, I do not. Again, if you're participating via Teams, please press *5 if you're on the phone, excuse me, to raise your hand, or if you're on Teams, feel free to use the raise hand function to let me know that you would like to offer a comment at this time.

MR. RAKOVAN: And again, the microphone is open in the room if anyone has any comments they would like to provide. Sir, if you could introduce yourself and any group that you might be with?

Brian Littleton with MR. LITTLETON: EPA. Ι just had a clarifying question plant-specific regarding, Ι quess, the environmental impact statements. Do we expect all Category 2 issues to be addressed by a subsequent environmental assessment or an EIS? Just so I understand the process for addressing those issues.

MS. DAVIS: Yes, for each plant-

specific environmental review, the staff prepares a supplemental environmental impact statement to the License Renewal GEIS.

So, obviously, we would tier from the generic environmental impact statement, but with a plant-specific analysis of Category 2 issues, and we do review to see if there's any new and significant information with respect to Category 1 issues.

MR. LITTLETON: Okay.

MR. RAKOVAN: Brett, how are we looking online?

MR. KLUKAN: Again, we still don't have anyone. I did verify that people are able to raise their hands.

So, again, if you would like to ask or pose a question, excuse me, a comment at this time to be captured as part of the record, please raise your hand at this time if you're participating via the app or press *5 on your phone.

MR. RAKOVAN: All right, we'll pause again.

(Pause.)

MR. RAKOVAN: No one is approaching the mic here in the room. Any hands online?

 $$\operatorname{MR.}$$ KLUKAN: Lance, as far as I can tell, we have no hands raised online.

MR. RAKOVAN: Okay, Trish, do you want to go ahead and close us out today?

DR. HOLAHAN: All right, well, thank you all very much for coming. I know for those of you who have been at the RIC [Regulatory Information Conference], it's been a long week. Those of you who have come independently, I appreciate you coming to the meeting, as well as those online.

So, thank you very much and we'll close this meeting out then.

(Whereupon, the above-entitled matter went off the record at 2:55 p.m.)