

U.S. Nuclear Regulatory Commission Public Meeting Summary

Title: Public Scoping Meeting for the Environmental Review of the Subsequent License Renewal Application for Turkey Point Nuclear Plant 3 and 4

Meeting Identifier: 20180634

Date of Meetings: Thursday, May 31, 2018

Location: City of Homestead City Hall, 100 Civic Court, Homestead, Florida

Type of Meeting: Category 3

Purpose of the Meeting(s):

To provide an overview of the Nuclear Regulatory Commission's (NRC's) process to review the subsequent license renewal application for Turkey Point Nuclear Generating Units 3 and 4 and solicit public comments on the scope of the environmental review.

General Details:

The NRC held two public scoping meetings as part of the Turkey Point Nuclear Generating Units 3 and 4 (Turkey Point) Subsequent License Renewal (SLR) environmental review. The first meeting started at 1:00 p.m. and ended at approximately 3:15 p.m. The second meeting started at 5:00 p.m. and ended approximately 6:45 p.m. Twelve NRC staff members were present. The meeting was facilitated by William Burton, an NRC in-house facilitator. The meeting began with a review of meeting ground rules and an introduction of NRC staff, followed by a presentation on the license renewal safety review process by Lois James and the license renewal environmental review process by Michelle Moser. The presentations emphasized that comments were welcome to help focus the environmental review. There was an opportunity for attendees to ask questions about the NRC staff's presentation followed by an opportunity for members of the public to provide oral comments.

Approximately 100 people (this number includes the NRC staff) attended the meeting. Approximately 35 members of the local community provided comments during the oral comment periods of the two meetings.

Summary of Presentation:

The NRC staff reviewed the Principles of License Renewal Safety Reviews, which have not changed with the transition from initial license renewal (40 to 60 years) to subsequent license renewal (60 to 80 years).

- The regulatory process adequately ensures the plant's current licensing basis provides and maintains an acceptable level of safety.
- Each plant's current licensing basis is required to be maintained during the renewal term in the same manner and to the same extent as during the original license term.

Therefore, the focus of the safety review is to identify aging effects that could impair the ability of systems, structures, and components within the scope of license renewal to perform their intended functions, and to demonstrate that these aging effects will be adequately managed during the period of extended operation. The NRC staff stressed that this focus has not changed with the transition from initial license renewal to subsequent license renewal.

The staff discussed its efforts to be more effective and efficient with time and resources during the safety portion of the subsequent license renewal review, such as:

1. A separate operating experience audit was conducted to review the applicant's operating experience information and corrective action system for data applicable to aging management. This audit will inform the later on-site audit and review activities.
2. An in-office review will be conducted in order to review the documents and references in the application in more detail. This audit will inform the later on-site audit and review activities.
3. An on-site audit at the plant facility will be conducted in order to view site and system layouts and review additional documents, as needed.
4. A single, complete Safety Evaluation Report (SER) will be issued prior to the NRC staff meeting with the Advisory Committee on Reactor Safeguards' (ACRS's) Subcommittee on Plant License Renewal.

Regarding the environmental review, the NRC staff explained that it conducts the environmental review in accordance with the National Environmental Policy Act of 1969 (NEPA). NEPA requires federal agencies to follow a systematic approach in evaluating the potential impacts from the proposed action and alternatives to the proposed action. The environmental review begins with the scoping process. Scoping is the process by which the NRC staff identifies the specific impacts and significant issues to be considered within the draft Environmental Impact Statement (EIS) and public participation is an important aspect of scoping. The NRC staff considers all scoping comments provided during the public meeting, as well as written comments received during the scoping period in preparing the draft EIS. At the conclusion of the scoping process, NRC will prepare and issue an Environmental Scoping Summary Report that describes comments received during the scoping period and includes significant issues identified as a result of the scoping process.

The NRC staff also conducts an independent assessment, including an environmental site audit and documents its findings within the draft EIS. The draft EIS will be issued for public comment and the staff will consider these comments in preparing the final EIS. In conducting our environmental review, the NRC staff will be coordinating with other Federal, State, and local agencies, as well as tribal leaders to ensure that local technical resource specialists are involved in the review. Within the EIS, the NRC evaluates impacts from the proposed license renewal for a wide range of environmental resources, such as air quality, human health, wetlands, and threatened and endangered species. Ultimately, the purpose of the environmental review is to determine whether or not the environmental impacts of license renewal could be so great that preserving the option of license renewal for decision makers would become unreasonable.

The EIS will be considered in conjunction with the NRC staff's safety review in recommending to the Commission whether to renew the Turkey Point operating license.

The closing date for submitting scoping comments is June 21, 2018.

Public Participation Themes:

Thirty five members of the local community provided comments during the two public scoping meetings. The comments are grouped and quoted or paraphrased below.

- Concerns regarding the Turkey Point cooling canals
 - General
 - "...dangerous and destructive on so many levels"
 - "...pollution, while mitigated in some aspects, basically continues unabated"
 - "...the almost 6,000 acre canal system was built because the initial operation of the reactors killed 500 acres of seagrass"
 - "...the FP&L [Florida Power & Light Company] canal...been leaking a toxic hyper-saline pool into the Biscayne Aquifer which is our sole water source for all of Monroe County"
 - "...existing conditions of the cooling canals have already created algal blooms and extremely high temperatures, both of which are contaminates in their own right"
 - Plumes
 - "...advancement of the saltwater plume to the west, toward our well fields, and to the east into Biscayne Bay for the past several years"
 - "...unlined system of cooling canals released an unprecedented amount of contamination into the Biscayne Aquifer, threatening the drinking water supply for millions of people and hastening rates of saltwater intrusion"
 - "Presently, water from the cooling canal system is seeping into our groundwater, creating a hypersaline plume emanating out in all directions, towards drinking water wells and Biscayne Bay"
 - "...This plume moves at a rate of more than a foot a day and has migrated westward over five miles since the canals were instituted. The plume is fast approaching our drinking water wellheads, compromising our sole source of drinking water in Miami-Dade County, the Biscayne Aquifer"
 - "...The miles of canals are unlined, and due to the porous geology of South Florida, water from the canals has leached underground to form a plume of hypersaline and contaminated water, spreading westward into the Biscayne Aquifer, towards drinking water wells, and east towards Biscayne Bay and National Park"
 - "...The cooling canal system dumps up to three million pounds of salt a day into the Aquifer. That's equivalent to roughly 100 dump trucks of salt per day"
 - "...The ill-conceived dysfunctional cooling canal system in Turkey Point has wreaked havoc spilling over 600,000 gallons of hypersaline and toxic chemical laden water into Biscayne Aquifer every day"

- Cooling Canals Not Functioning as Designed
 - "...Intended to be a closed system, the leakages to the east and the west tell us that the cooling canal system is not functioning properly or as intended"
 - "...how will you ensure that the cooling canals stop polluting the Biscayne Aquifer and Biscayne Bay"
 - "...the cooling canal system is unlined and is actively contaminating the Aquifer and Bay, as indicated through the presence of the tracer, tritium"
 - "...The cooling canal system essentially works as an open industrial sewer"
 - "...The problem with the TP cooling canal system is it does not work in the manner in which it was intended to work, as a closed-loop system. The cooling canals are not only leaking into the Biscayne Aquifer and surface water outside the boundaries of the TP plant in all directions, but also through the hydraulic connection with the Bay"
 - "...The system as it exists is not as it was permitted, which was a closed-loop system"
 - "...In 2010-2011, the seagrass system completely collapsed. The seagrass was necessary to clean those canals. Then came the algae. "Today, flying over those canals and you will see brown, chocolate brown and green, they are covered with algae"
 - "...The cooling canal system out to the seagrass bed is a completely different system than the one you evaluated in 2002"
- Sea Level Rise
 - "...the license renewal application as written does not adequately consider the impacts of sea level rise on the operation of the plant and ancillary facility throughout the 20-year extension horizon. Over the last 100 years, sea level in the area of Turkey Point has risen approximately nine to 12 inches. By 2050, sea level rise could be between 1.5 and five feet in this area"
 - "Have you considered whether these cooling canals will survive the upcoming climate changes to make South Florida ground zero for sea level rise?"
 - "...If you keep the cooling canals in operation through 2053, they will be eliminated by sea level rise"
 - "...this issue of rising waters and the fact that there's such a discrepancy between the amount of sea rise that is being predicted by NOAA and the amount of sea rise that is being predicted by others. And NOAA is saying, by the end of this century, it'll be 5.6 feet, worst-case scenario. We certainly don't want those cooling canals to be underwater"
 - "...the cooling canal system is not sufficiently protected against sea level rise and hurricanes. And it can only worsen in coming decade"
 - "...the Southeast Florida Regional Climate Change Compact states "this unified sea level rise projection for Southeast Florida projects the anticipated range of sea level rise for the region, from 1992 to 2100." The projection highlights three planning horizons and these figures are all above 1992 mean sea level. Short-term by 2030, sea level rise is projected to rise six to ten inches. Medium-term by 2060, sea level rise is projected to rise 14 to 34 inches. Long-term, by 2100, sea level is projected to rise 31 to 81 inches"
 - "...it is crucial that the license renewal application adequately consider the potential impact of sea level rise on the operation of the plant. Sea level rise could increase in the Turkey Point area"

- Storm Surge
 - "...During storm events, it's possible that water levels may breach the height of the berms surrounding the cooling canal system, causing Bay water to mix with the cooling canal water before the water returns to the Bay. The end result could be an increased presence of contaminated cooling canal water in Biscayne Bay, which contributes to nutrient loading and potentially devastating algal blooms for the Bay and the ecosystems that it supports"
 - "...the cooling canal system is not sufficiently protected against sea level rise and hurricanes. And it can only worsen in coming decades"
 - "...please consider where we are and the fact that there can be a hurricane that would overflow those cooling canals to such an extent that you would be forced to decommission the plant"
 - "...If sea level rises another 81 inches, how high is storm surge going to be during hurricanes. And who is going to be living here at that time to maintain these plants"
 - "...the third and most egregious faulty projecting that FPL has relied upon, is their analysis relating to climate change...one other thing that FPL fails to mention in their environmental report, is the instance of ever more powerful storms. Now, one of the influences of climate change is to create possibly fewer storms, but far more powerful ones"
 - "...the specter of a Category 6 storm. As you know, under a regime of climate change, storms have become more and more intense in the Atlantic Ocean and could potentially wreak massive havoc, massive storm surge in this area"
 - "...So, there could be such a degree of water from a hurricane, including a tsunami or tidal wave, that it would overflow the cooling canals"
- Emergency Planning
 - "... timely emergency evacuation of homesteads in the Florida Keys was impossible"
 - "...Recent experience with hurricane Irma proved beyond any possible doubt that we were right. Timely emergency evacuation of the area is impossible"
- Radioactive Waste Storage
 - "To date, there is no sufficient plan for long-term storage of radioactive waste for Turkey Point"

Documents Submitted by Members of the Public During the Meeting:

- Laura Reynolds – ML18187A038¹
- Zac Cosner – ML18187A196
- Laura Sue Wilansky – ML18187A221
- Steven Schoedinger – ML18187A224

¹ Although some of the documents submitted contain information labeled as proprietary and/or copyright, the submitter confirmed that it had the permission of the owners of the information to make the information freely available for copying by the public through ADAMS

Action Items/Next Steps:

NRC staff will address any comments received during the scoping period as part of the license renewal review for Turkey Point. The NRC staff will develop and publish a draft Supplemental Environmental Impact Statement (SEIS) to NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants," which will be distributed for public comment. The NRC staff's responses to the comments received during the scoping period and received on the draft SEIS will be included in Appendix A of the SEIS. Concurrently, the NRC staff will also be preparing a safety evaluation report which documents the staff's independent safety evaluation.

Attachments:

- Meeting description and agenda – ML18145A201
- NRC staff presentation – ML18150A240 (English)
ML18150A255 (Spanish)
- Meeting transcript – ML18176A399 (Afternoon)
ML18176A401 (Evening)

Title: Public Scoping Meeting for the Environmental Review of the Subsequent License Renewal Application for Turkey Point Nuclear Plant Units 3 and 4 (EPID No. L-2018-LNE-0001)

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ADAMS Accession Nos.: ML18176A404 (Package); ML18176A403 (Summary); ML18176A399 (Afternoon Transcripts); ML18176A401 (Evening Transcripts)

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