

NRR-PMDAPEm Resource

From: Thorpe, April
Sent: Thursday, January 26, 2012 3:04 PM
To: NRR-PMDA-ECapture Resource
Cc: Paige, Jason
Subject: FW: Can you add the attached letter into ADAMS? Public, Turkey Point. thanks
Attachments: nrr-letter.pdf

Good Day:

Please process the attached publically available email.

Once completed, please forward the ADAMS Accession No. to reference.

Thanking you in advance,

April B. Thorpe, Contract Secretary
Office of Nuclear Reactor Regulation
Division of Operating Reactor Licensing
Plant Licensing Branch LPL2-2
Phone: 301-415-2024 Fax: 301-415-1222
April.Thorpe@nrc.gov

From: Paige, Jason
Sent: Thursday, January 26, 2012 3:02 PM
To: Thorpe, April
Subject: Can you add the attached letter into ADAMS? Public, Turkey Point. thanks

Title: Turkey Point, Units 3 and 4 - Comments Received on the Draft Environmental Assessment and Finding of No Significant Impact Regarding the Extended Power Uprate License Amendment Request

Jason Paige, Turkey Point Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation
US Nuclear Regulatory Commission
Phone: (301) 415-5888

Hearing Identifier: NRR_PMDA
Email Number: 247

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Subject: FW: Can you add the attached letter into ADAMS? Public, Turkey Point. thanks
Sent Date: 1/26/2012 3:03:48 PM
Received Date: 1/26/2012 3:04:36 PM
From: Thorpe, April

Created By: April.Thorpe@nrc.gov

Recipients:

"Paige, Jason" <Jason.Paige@nrc.gov>

Tracking Status: None

"NRR-PMDA-ECapture Resource" <NRR-PMDA-ECapture.Resource@nrc.gov>

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STEVE TORCISE, JR.

President

Chief Executive Officer

December 12, 2011

Mr. Jason C. Paige
Plant Licensing Branch 11-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Re: Proposed Turkey Point Power Plant Uprate Units 3 and 4 (ME4907 and ME4908)
Draft Environmental Assessment and Finding of No Significant Impact

Dear Mr. Paige:

Thank you for the opportunity to comment on the Draft Environmental Assessment and Finding of No Significant Impact for Florida Power and Light's (FPL) proposed Turkey Point Power Plant's uprating for Units 3 and 4. While we are generally supportive of FPL's proposed uprating, we have taken the opportunity to review the draft Finding of No Significant Impact (FONSI) and wanted to share our concern about the reported findings. Our concern is based upon the direct and express conflict between the FONSI on the one hand and 28 years of monitoring data on the other. Our concern arises from our experience and ownership of adjacent property. Figure 1 shows the relationship between the Turkey Point Power plant and our property. This figure also shows the existing farming areas and the locations of the major wellfields in the area.

The fundamental problem is that the Cooling Canal System (CCS) and interceptor ditch system do not perform as originally intended. This is a clear factual conclusion supported by 28 years of corroborating data. While the concept of the cooling system is theoretically sound, over time, because the majority of the makeup water is saline, drawn in from Biscayne Bay through the porous aquifer, evaporation creates hyper-saline water in the CCS. This hyper-saline water is not adequately contained by the hydraulic gradient created with the interceptor ditch along the west side of the CCS. As a result, the CCS is creating a significant adverse environmental impact on the groundwater. This impact extends well beyond the footprint of the CCS.

The hyper-saline water below the CCS comprises a dense plume that extends miles beyond the footprint in all directions. The fact that salinity values beyond the CCS footprint are higher than background values of Biscayne Bay is clear and compelling evidence that the hyper-saline water from the CCS is not being contained. FPL's NPDES permit does not authorize offsite discharges and the existing agreement between FPL and the SFWMD dating back to 1972 (and modified 5 times, with the most recent in 2009) commands that:

"... the purpose of the system is to restrict the movement of saline water from the cooling water system westward of the Levee 31E adjacent to the cooling water system to those amounts which would occur without the existence of the cooling canal system."

These supplemental agreements were **conditions precedent** to the issuance of regulatory permits that allowed FPL to construct Turkey Point and continue its operations. These historical and persistent impacts have been acknowledged by various regulatory agencies including Florida Department of Environmental Protection (FDEP), the South Florida Water Management District (SFWMD) and Miami-Dade County.

Preliminary studies by SFWMD and the United States Geological Survey (USGS) (Hughes et al, 2009) of the saltwater plume surrounding FPL CCS strongly suggest that it has caused a leading saline edge to migrate far enough west to pose health risks for drinking water wells for the Florida Keys and Homestead, Florida residents. This hyper-saline intrusion also threatens the Everglades restoration projects intended to revive historic freshwater flows to Biscayne Bay.

ACI engaged professionals to develop groundwater/saltwater intrusion models covering a large geographic area of south Miami Dade County, including the CCS area. The models conclude that the CCS has caused saltwater intrusion to extend well beyond the interceptor ditch boundary and much farther westward than the intrusion would have been without the hyper-saline CCS. Data collected by FPL itself, pursuant to several agreements between it and SFWMD, supports that conclusion. Data collected by FPL within the last year clearly documents the problem. On this point, Figures 2 & 3 show data for two parameters, chloride and tritium, collected by FPL within the last year. This data clearly shows that water from the CCS has migrated well beyond the footprint of the CCS.

The Generic Environmental Impact Statement for the License Renewal of Nuclear Plants – Supplement 5 – Regarding Turkey Point Units 3 and 4 – Final Report published ten years ago in the Federal Register dated January 2002, (GEIS-2002) was the last environmental assessment conducted of Turkey Point. The GEIS-2002 incorrectly asserted that the CCS was a closed system with an interceptor ditch along the CCS's west side that "... prevents flow of hyper-saline water from the cooling canals toward the Everglades." i.e. west (Page 2-7 of GEIS-2002). A decade later, this 2011 Draft Environmental Assessment (DEA) ignores hundreds of data

points from numerous monitoring wells that clearly demonstrate that the interceptor ditch does not prevent (and has not prevented) the hyper-saline water from migrating westward.

The DEA will allow, intentionally or unintentionally, significant adverse environmental impacts to Biscayne Bay, the Biscayne Aquifer and the Everglades that will continue ungoverned if the past monitoring results remain ignored. The proposed uprate will further increase the salinity in the CCS. Predictably, the cooling waters will become even more hyper-saline, thus threatening the adjacent freshwater bodies, as evidenced by the monitoring data collected during the last 28 years. This saltwater intrusion into the freshwater bodies threatens the purposes for which those freshwater systems serve and amounts to continuing and significant Clean Water Act violations.

The following DEA conclusions raise specific concerns:

Page 11

"The field data collected prior to implementation of the proposed EPU will be used to characterize existing environmental conditions from current PTN operations. The CoC allows the FDEP to require additional measures if the pre- and post-EPU monitoring data are insufficient to evaluate changes as a result of the EPU. If the data indicate an adverse impact, additional measures, including enhanced monitoring, modeling or mitigation, would likely be required to evaluate or to abate such impacts."

This statement suggests that the existing monitoring data does not show an adverse impact. EAS Engineering, however, using FPL's own historical monitoring data, has shown that contaminants from the CCS (chlorides, sulfates and tritium in particular) have travelled a mile or more to the west of the interceptor ditch, resulting in violations of G-II ground water standards in this area (See the attached figures), which is the boundary of the no discharge NPDES permit.

Furthermore, this statement suggests that additional measures would likely be required to abate such impacts. As of yet the FDEP has not acted on the data presented. The existing evidence is compelling that the CCS is not functioning properly and agencies, including the SFWMD, FDEP and the NRC, must act now to prevent further damage.

Page 12

"Approving the proposed EPU license amendment is not expected to cause significant impacts greater than current operations because the monitoring plan will provide data for FPL and state agencies to assess the effectiveness of current environmental controls and additional limits and controls could be imposed if the impacts are larger than expected. Therefore, there would be no significant impact to the groundwater following implementation of the proposed EPU."

There is no basis for this statement. Continued monitoring, when more than 28 years of data documenting a problem exists, is not a basis for a finding no significant impact. The existing data already shows that water quality violations attributable to the CCS are occurring. In fact, the

additional monitoring included in the 5th supplement to the original 1972 agreement between FPL and the SFWMD documents the problem even more clearly. See figures 2 & 3.

Substantial and meaningful intervention and mitigation are needed now to correct the existing problem of CCS water migrating westward through the groundwater. This Draft Environmental Assessment must mandate a solution to the impacts being caused by the CCS today and the increased impacts that will result from the uprate. The significance of the water quality violation is great enough that a "monitoring only" requirement is not an acceptable solution and FONSI is not acceptable.

Page 14

"Because the cooling canal system is unconnected to Biscayne Bay, Card Sound, or any natural water body, changes to the conditions within the cooling canal system would not affect any aquatic species' populations in the natural aquatic habitats. Therefore, the staff concludes that there would be no significant impacts to aquatic resources as a result of the proposed EPU."

On page 8, however, the following statement is made:

"Because the PTN canals are unlined, it is likely that there is an exchange of water between the PTN canal system and local groundwater and Biscayne Bay."

These two statements are contradictory. There is an exchange of water between the CCS and local groundwater and Biscayne Bay, so changed conditions in the CCS could certainly affect aquatic species populations in Biscayne Bay and in local canals.

Page 17

"Potential socioeconomic impacts from the proposed EPU include increased demand for short-term housing, public services, and increased traffic in the region due to the temporary increase in the number of workers at the PTN site required to implement the EPU. The proposed EPU could also increase tax payments due to increased power generation."

There is no discussion of adverse economic impacts to nearby property owners whose property values and development rights are adversely affected by the westward migration of the salt front that is caused by high salinity water generated in the CCS. We have been forced to install and monitor over 25 monitoring wells and to demonstrate that the salt front had not reached our quarries yet. We have also had depth restrictions placed on our quarry excavations because of the potential for saltwater intrusion. These restrictions and monitoring are expensive and time-consuming and would not have been imposed if the westward movement of the salt front had been halted by the interceptor ditch, as required.

Likewise, there is no discussion of the potential impact to citizens in south Miami-Dade County and Monroe County who rely on well water pumped from the Biscayne Aquifer. If salt intruded ground water reaches their wells, they will be forced to pay for expensive alternative

water sources. The Florida Keyes wellfield and the wellfield supplying Turkey Point, the Newton Wellfield are at risk.

The economy in the South Miami Dade County area is heavily dependent on farming. Not only is a significant portion of our land farmed, as shown on Figure 1 there are many other large farms in the area. All of these farmed areas rely upon groundwater for irrigation that is also potentially impacted by the continued salt front migration.

The NRC in this Draft Environmental Assessment must address and require prompt solutions to the problems being caused by the CCS.

Summary

To summarize, our concerns with this proposed EA are:

1. FPL claims that the cooling canal is a closed system, but obviously it is not. FPL's monitoring data shows that the unlined cooling canal system exchanges water with adjacent ground water. FDEP designated the groundwater within the cooling canal system as G-III waters (non-potable aquifer not subject to compliance with groundwater standards) and the NPDES Permit only authorized a discharge to those G-III waters. FPL's groundwater monitoring data shows that contaminants from the cooling canals have migrated west of L-31E and the interceptor ditch into G-II waters (See the attached figures).
2. In anticipation of directly causing saltwater intrusion, the interceptor ditch was intended *"...to restrict movement of saline water from the cooling water system westward of Levee 31E adjacent to the cooling water system to those amounts which would occur without the existence of the cooling canal system."* (SFWMD, 1983). The interceptor ditch has not been effective and has not contained the hypersaline water of the cooling canal system. FPL's monitoring data confirms this (See the attached figures 2 & 3). These figures show the chloride and tritium data collected by FPL in December 2010 and February 2011 respectively as an overlay on Figure 1. This indicates water quality violations and warrants remedial action by FPL to correct the problem before the uprate is initiated.
3. FPL has not acknowledged, controlled or adequately addressed the existing water quality violation. The proposed uprate will increase the salinity in the cooling canal system, which will exacerbate the existing water quality violation.
4. Because of this unaddressed water quality violation, other property owners have had to go to extraordinary efforts and costs to prove that saltwater intrusion has not reached their property. The NPDES permit did not authorize any injury to the public or private property or any invasion of personal rights, nor authorize infringements of federal, state or local laws or

regulations. The rights of nearby property owners clearly have been violated by the cooling system's influence on saltwater intrusion.

5. Until FPL addresses the existing water quality violations, the facility should not be allowed to increase its output and there should not be a Finding of No Significant Impact for the proposed uprate without mitigating the existing significant adverse impacts of the CCS. This Draft Environmental Assessment must mandate a solution to the impacts being caused by the CCS today and the increased impacts that will result from the uprate.

We remain willing to meet with Florida Power and Light and stakeholders to collaborate on reasonable and effective solutions which will enable FPL to proceed with its proposed project while protecting the interests of the community which surrounds Turkey Point's operations. If you have any questions or need additional information, please feel free to call us.

Sincerely,

Atlantic Civil Inc.

A handwritten signature in blue ink, appearing to read "Steve Torcise, Jr.", with a stylized flourish at the end.

Steve Torcise, Jr.

President

spl

encl

cc: Steve Torcise
Steve Walker
Edward A. Swakon

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REFERENCES

Hughes, J.D., C.D. Langevin & L. Brakefield-Goswami. 2009. Effect of hypersaline cooling canals on aquifer salinization. *Hydrogeology Journal*, 12 August 2009. DOI 10.1007/s10040-009-0502-7.

SFWMD. 1983. Fourth Supplemental Agreement with FPL, July 15, 1983.

SFWMD. 2009. Fifth Supplemental Agreement with FPL.

U.S. Nuclear Regulatory Commission. 2002. Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 5, Regarding Turkey Point Units 3 and 4, Final Report. NUREG-1437 Supplement 5.