Request for Additional Information 2
Issue Date: 03/27/2014
Application Title: Levy County, Units 1 and 2 - Dockets 52-029 and 52-030
Operating Company: Duke Energy Florida
Docket No. 52-029 and 52-030
Review Section: EIS 2.3.1 - Hydrology
Application Section:

QUESTIONS

EIS 2.3.1-1

By letter dated December 20, 2013 (ML14003A226) related to the retirement of Crystal River (CR) Unit 3 Duke Engery Florida (DEF) submitted a Voluntary Submittal of Environmental Impacts from Retirement of CR3 to NRC. The submittal is part of DEF's application for a combined license. The NRC issued NUREG -1941 Final Environmental Impact Statement (FEIS) for Combined Licenses (COLs) for Levy Nuclear Plant (LNP) Units 1 and 2 application in April 2012. The submittal is new information and the NRC staff needs to determine in accordance with 10 CFR 51.92 if this information is significant information or whether these are substantial changes that are relevant to environmental concerns.

10 CFR 51.92 states in part:

> a) If the proposed action has not been taken, the NRC staff will prepare a supplement to a final environmental impact statement for which a notice of availability has been published in the **Federal Register** as provided in § 51.118, if:
>
> (1) There are substantial changes in the proposed action that are relevant to environmental concerns; or
>
> (2) There are new and significant circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

In accordance with 10 CFR 51.41, the Commission may require an applicant to submit information that may be useful in aiding the Commission in complying with section 102(2) of the National Energy Policy Act (NEPA). **Accordingly, the** NRC staff requests the following information:

1. Provide the following reference: CH2M HILL. 2011. Technical Memorandum 338884-TMEM-128, Rev 0. Supplemental Computations of Levy Nuclear Plant Potential Effects on Temperature and Salinity in the Plume of the Crystal River Energy Complex Discharge for the U.S. Nuclear Regulatory Commission. June 6.
2. Explain the significance of "theoretical" winter discharge temperatures previously provided to the NRC (ML11171A294). Why are those discharge temperatures considered theoretical?
3. Explain how CR Unit 5 discharge temperatures were estimated.
4. Given the substantial difference in the combined discharges from CR Units 4 and 5 (~70,000 gpm) and CR Units 1 and 2 (~638,000 gpm), explain why the winter discharge temperatures are so high compared to the EIS data.
5. Explain why winter discharge temperatures for DEF simulations were assumed to be the same as those in summer.
6. Explain the relevance of comparing the DEF winter simulation results with EIS winter simulation results given that the winter discharge temperatures for DEF simulations were assumed to be the same as those in summer.
7. Explain why the discharge data provided to the NRC (ML11171A294) are not relevant. How can the results of the DEF analysis be used to draw conclusions regarding the impacts of combined CR-LNP discharge on the Gulf of Mexico?
8. In CH2M HILL 338884-TMEM-136, REV 1 The value for HCT intake is reported to be 866,000 gpm for all units with LNP. In NPD-NRC-2009-167 the HCT intake is shown to be 686,000 gpm. Explain the differences.
9. In both reports the discharges are reported to be essentially the same. Explain how the apparent evaporation associated with the 866,000 gpm intake is plausible.
10. In the two reports mentioned above, profound differences in the values for CR-4&5 makeup and blowdown rates exist, 7000 gpm versus 61,111 gpm and 20,062 gpm versus 75,778 gpm, respectively. Explain the differences.
11. While the evaporation rates between the two cases are similar, explain how the cycles of concentration are plausible in the low flow case for seawater.
12. Why is using the maximum flow-rate for LNP conservative (called worst-case 338884-TMEM-136) in regard to temperature if the LNP discharge temperature is lower than the upstream temperatures in the discharge canal?