

PMTurkeyCOLPEm Resource

From: Williamson, Alicia
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To: Orthen, Richard
Cc: TurkeyCOL Resource
Subject: Draft RAIs 6353 Alternatives
Attachments: RAI 6353 Alt Sites (DRAFT).doc

Rick

Attached is the draft RAI regarding alternative sites.

We plan to discuss them at the tentatively scheduled April 10 public meeting.

Any questions, let me know.

Thanx

Alicia

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Request for Additional Information No. 6353 Revision 1

Turkey Point Units 6 and 7
Florida P and L
Docket No. 52-040 and 52-041
SRP Section: EIS 9.3.1 - Alternative Site Selection Process
Application Section: Section 9.3

QUESTIONS for Environmental Projects Branch 1 (RAP1)

EIS 9.3.1-1

Please clarify whether or not the Augmented Site Selection Report supersedes the screening analyses in the ER. If only portions of the analyses in the ER are superseded, explain which portions are superseded and which are not.

Background. (FPL Response to NRC RAI No. 9.3.1-14; RAI 5588, L-2011-378 Dated 13SEP11: Response to NRC Environmental RAI Letter 1104071, Attachment 2). Response says "The regional screening process mentioned in the ER is superseded by a regional screening/candidate area identification process documented in the Augmentation Report (Reference 1)." Augmented Site Selection Study Report August 2011 page 3 "The AA does not supersede or replace analyses in the original Siting Report."

EIS 9.3.1-2

Please provide the population density for the census block groups containing and surrounding the St Lucie site. Additionally, please clarify the population density of St Lucie County.

Background. (FPL Response to NRC RAI No. 9.3.1-14; RAI 5588, L-2011-378 Dated 13SEP11: Response to NRC Environmental RAI Letter 1104071, Attachment 2). The Augmented Site Selection Study Report August 2011, Table 3-1 Regional Screening Criteria. Population – Excluded Census block groups where population density > 300 persons/mi²; Page 11, Identifies St Lucie plant site as CA-15, Coastal Existing Plant (St. Lucie); Fig A-3 appears to show this area as >300 psm. Page D-41 shows St Lucie County as 336.3 ppsm. US Census website has St Lucie County at 485.7 psm per 2000 census. FPL Response recalculates population density around St Lucie using the unpopulated ocean area in the calculation. "The population density calculation at a given point is based on total area within a 20-mile radius of the site, not land area alone. The total area within 20 miles of the St. Lucie site is 1,256.6 square miles, and using the total population of 326,647 cited above, a population density of 259.9 ppsm results." The Census Bureau and the ER population density for the Turkey Point site do not use this approach for calculating density. Please resolve the discrepancy for the County population density between the response and the ER and provide the census block group population densities for the area in and around St. Lucie.

EIS 9.3.1-3

Based on the RAI response wherein the ER Screening is superseded by the Augmentation Report, please further expand on the rationale for eliminating Martin A and Glades A in favor of Okeechobee (ranked 6th) and Glades (ranked 7th) on Figure 6-1. ESRP 9.3 requires that the candidate sites represent among the best sites that could be reasonably found.

Background. (FPL Response to NRC RAI No. 9.3.1-14; RAI 5588, L-2011-378 Dated 13SEP11: Response to NRC Environmental RAI Letter 1104071, Attachment 2). In the Augmented Site Selection Study Report August 2011. Figure 6-1, the top five ranked sites in order are Turkey Point, St. Lucie, Martin, Martin A, and Glades A. On page 31, the Martin A and Glades A sites are dropped with the explanation that they would not provide advantages over the other sites previously identified in the county and because of questions on water availability. If the Augmented Site Selection Study truly supersedes the previous siting study as noted in FPL's RAI response, then the rank scoring of the Augmentation report should supersede the previous site listings in the ER. Additionally, the availability of sufficient additional land, 2800 acres, for Martin has not been confirmed thus challenging the viability of that site. And finally, the question of water availability at all alternatives sites has not been resolved, per FPL RAI response "Basis for reasonable expectation. Physical availability of water at these sites was confirmed during regional screening and/or analysis of flow records for the source water bodies. Contact with regulators/owners of waters assumed as sources for the alternative sites is considered beyond the level of reconnaissance information appropriate for alternative site evaluations, as discussed in more detail in the response to EIS 9.3-11 " Based on these RAI responses please further expand on the rationale for eliminating Martin A and Glades A in favor of Okeechobee (ranked 6th) and Glades (ranked 7th) on Figure 6-1. ESRP 9.3 requires that the candidate sites represent among the best sites that could be reasonably found.

EIS 9.3.1-4

Please identify the specific environmental and population constraints that would prevent construction of a waste water pipeline in the vicinity of the identified waste water sources or beyond 10 miles from the sources.

Background. (FPL Response to NRC RAI No. 9.3.1-16; RAI 5588, L-2011-336 Dated September 1, 2011: Response to NRC Environmental RAI Letter 1104071, Attachment 8). The Augmentation Report on Page A-8 identifies 11 viable sources of waste water for cooling, however, the RAI response indicates that "...due to population and environmental constraints present in these candidate areas, FPL did not identify any potential sites other than Turkey Point that were located near viable sources of reclaimed water." When widening up to 20 to 40 miles of roadway in highly populated and environmentally sensitive areas is acceptable for some sites, please identify the specific population and environmental constraints that support a conclusion that environmental and population factors preclude construction of a water pipeline from all 11 sources.

EIS 9.3.1-5

Please provide the basis for excluding from further consideration areas beyond 10 miles from a waste water source.

Background. (FPL Response to NRC RAI No. 9.3.1-16; RAI 5588, L-2011-336 Dated September 1, 2011: Response to NRC Environmental RAI Letter 1104071, Attachment 8). In the Augmented Site Selection Study Report August 2011, Table 3-1 Regional Screening Criteria. Cooling Water Availability (Reclaimed Water) - Excluded areas greater than 10 miles from qualifying wastewater treatment plants. Palo Verde operates with a waste water supply line that is about 35 miles long. The staff also notes that FPL found acceptable widening up to 40 miles of roadway for some sites, an activity that would have environmental, population and cost impacts similar to laying a pipeline. Please provide the basis for excluding areas beyond 10 miles.

EIS 9.3.1-6

If FPL's basis for inclusion of the St Lucie site because it is an existing, operating nuclear power plant site were removed from FPL's logic, would the site have been retained as an alternative site?

Background. (FPL Response to NRC RAI No. 9.3.1-16; RAI 5588, L-2011-336 Dated September 1, 2011: Response to NRC Environmental RAI Letter 1104071, Attachment 8). In the Augmented Site Selection Study Report August 2011, page 26 - In addition, the St. Lucie and Turkey Point sites were included as primary sites based on the fact that they are existing, operating nuclear power plant sites within the ROI. Please expand on FPL's decision to include the St Lucie site since a) it may not have met the population exclusionary screening criteria, and b) St Lucie ranks 17 on FPL's scoring Table 5-2 and Figure 5-1.

EIS 9.3.1-7

On figure 3-4 of the Augmentation Report there are two areas similar in size to areas marked as Candidate Areas but that are not included as Candidate areas. Please clarify the exclusion of these two areas.

Background. (FPL Response to NRC RAI No. 9.3.1-2; RAI 5588, L-2011-336 Dated September 1, 2011: Response to NRC Environmental RAI Letter 1104071, Attachment 1). The RAI response states that the Augmented Site Selection Study Report August 2011 adds "...Explicit steps for regional screening and candidate area identification..." On Figure 3-4 ROI Regional Screening Results – Northern Service Territory, there are two areas on this figure comparable in size to other areas that were identified as Candidate Areas (CAs) that were not identified as CAs at this stage in screening. Specifically, please clarify why the area between CA-8 and CA-7 and the area to the south of CA-5 were excluded as CAs?

EIS 9.3.1-8

Several sites were eliminated for insufficient land area. Please clarify the land area available at the Andytown, Lauderdale, Port Everglades, Riviera, Cutler, Sanford and Canaveral sites that justified their elimination from further consideration.

Background. (FPL Response to NRC RAI No. 9.3-5; RAI 5589, L-2011-195 Attachment , Letter #1104121, dated 5/27/11). The response states "... Thus, the 3,000 acre guideline was not used as an exclusionary criterion or mandatory requirement in determining site feasibility. Accordingly, even though some sites would have required land acquisition for nuclear plant development, no potential sites were screened out solely on the basis of the 3,000 acre guideline." Augmented Site Selection Study Report August 2011, page 15, Footnote (1) 3,000 acres was used as a general guideline in determining land sufficiency for sites other than existing nuclear power plant sites. Text page 15 – "The Andytown, Lauderdale, Port Everglades, and Riviera sites were eliminated from further consideration because these sites do not include enough land for a new nuclear power plant..." In addition, the Cutler, Sanford and Canaveral sites do not have adequate land area,..." Since no other information is provided on the available land at these sites, or other reasons provided for their elimination, it would appear that they were excluded from further evaluation based on not having at least 3,000 acres.

EIS 9.3.1-9

FPL has now determined that only 568 acres are available at the Martin site. For the Martin site to pass the 3,000 acre screening criterion, along with Glades and Okeechobee, FPL has assumed that such acreage is available. Please address why this presumption was not applied to other sites that were eliminated for insufficient land area on page 15 of the Augmented Site Report.

Background. Augmented Site Selection Study Report August 2011, page 26, the Martin site is included in the down select to 10 primary sites even though the required 3,000 acres is not owned by FPL nor is its availability confirmed. See: FPL Response to NRC RAI No. 9.3.1-12 (RAI 5588), L-2011-378 Dated 13SEP11: Response to NRC Environmental RAI Letter 1104071, Attachment 1 The Martin site affected area would be 4,674 acres, Glades 9,287, Okeechobee 6,568. FPL Response to NRC RAI No. 9.3-8 (RAI 5589) L-2011-395 Attachment 4 (Letter #1104121, dated 9/30/11) "...development of two nuclear units at the [Martin] site would require approximately 3,364 acres (excluding offsite linear infrastructure components), including a new 3,000 acre reservoir since the existing 6,500 acre reservoir would not be available. Taking into account the 568 acres currently available for development, it is assumed that FPL would continue to operate the solar facility and would need to acquire approximately 2,800 acres of land in order to develop two nuclear units at this site." Please clarify these apparent inconsistencies in the application of the 3,000 acre criterion, wherein some sites are eliminated for not having 3,000 acres and others were carried further in screening even though they require lands well in excess of 3,000 acres and the availability of such land has not been confirmed.

EIS 9.3.1-10

The response to NRC RAI No. 9.3-6 indicates that the St Lucie site would require an affected area of 2,828 acres. The response to NRC RAI No. 9.3-7 indicates that only 953 acres is available on the current site. Please clarify if the additional 1875 acres required are available and whether use of such acreage would require removal of existing wetlands or developed land.

Background: This question is referring to response to NRC RAI No. 9.3-6; RAI 5589, L-2011-395 Attachment 3, Letter #1104121, dated 9/30/11 and FPL Response to NRC RAI No. 9.3-7; RAI 5589, L-2011-195 Attachment 2, Letter #1104121, dated 5/27/11.

EIS 9.3.1-11

Please provide the impact analyses of the consequences of transporting fill to the St Lucie site.

Background (FPL Response to NRC RAI No. 9.3-9; RAI 5589, L-2011-395 Attachment 5, Letter #1104121, dated 9/30/11.) The response indicates that to adequately fill the St Lucie site 393,000 truckloads of fill would be required. As the impacts of this transportation must be assessed in the EIS please identify a specific source(s) of such fill and the analysis of the impacts of this amount of truck traffic between the source location and the site.

EIS 9.3.1-12

Please identify possible areas that could be used for floodplain mitigation at the Glades and Okeechobee sites and the impacts associated with such mitigation actions.

Background. (FPL Response to NRC RAI No. 9.3-9; RAI 5589, L-2011-395 Attachment 5, Letter #1104121, dated 9/30/11.) The response indicates that floodplain mitigation areas for the Glades and Okeechobee sites would be required but have not yet been identified. As the impact to these mitigation areas must be addressed in the EIS, please identify hypothetical location(s) of the mitigation areas and the acres that will be impacted.

EIS 9.3.1-13

As required by ESRP 9.3, the viability of the alternative sites depends upon the availability of cooling water. Please provide further evidence of the availability of cooling water for the alternative sites.

Background. (FPL Response to NRC RAI No. 9.3-10; RAI 5589, L-2011-395 Attachment 6, Letter #1104121, dated 9/30/11, Responses 1 & 2.) FPL's response "...Contact with regulators/owners of waters assumed as sources for the alternative sites is considered beyond the level of reconnaissance information appropriate for alternative site evaluations,..." This response does not provide adequate support to a determination of water availability and thus the viability of the alternatives sites. The staff notes that FPL's statement conflicts with the guidance of Regulatory Guide 4.7, which states on page 3, "In the site selection process, coordination between applicants for nuclear power stations and various Federal, State, local, and Native American tribal agencies will be useful in

identifying potential problem areas.” And on page 6, regarding water availability in particular it states, “Regulatory agencies should be consulted to avoid potential conflicts.”

EIS 9.3.1-14

Please estimate the number of occupied structures that would have to be removed along the 9.3 miles of State Road 70 expansion. Provide an explanation of how the estimate was made.

Background: The question is referring to FPL Response to NRC RAI No. 9.3-13; RAI 5589, L-2011-395 Attachment 9, Letter #1104121, dated 9/30/11.

EIS 9.3.1-15

Please estimate the number of occupied structures that would have to be removed along the 39.1 miles of State Road 710 expansion. Provide an explanation of how the estimate was made.

Background: The question is referring to FPL Response to NRC RAI No. 9.3-14; RAI 5589, L-2011-395 Attachment 10, Letter #1104121, dated 9/30/11.

EIS 9.3.1-16

Please estimate the number of occupied structures that would have to be removed along the 22 miles of State Road A1A, Seaway Drive and Ocean Blvd. expansion. Provide an explanation of how the estimate was made.

Background: The question is referring to FPL Response to NRC RAI No. 9.3-16; RAI 5589, L-2011-395 Attachment 12, Letter #1104121, dated 9/30/11.