

CCNPP3COLA NPEmails

From: Quinn, Laura
Sent: Friday, August 07, 2009 11:30 AM
To: Lutchenkov, Dimitri; Perdomo, Federico R
Cc: CCNPP3COL Resource; Williamson, Alicia; Anderson, Kathy NAB02; Parkhurst, Mary Ann; Chapman, Elaine G
Subject: Calvert Aug Alternative Site Audit Information Needs
Attachments: Calvert Aug alt audit Information Needs.doc

Dimitri,

Here are the information needs for the audit on the new alternative sites that is being held on August 18-19, 2009. I am out the rest of the afternoon so we can discuss these beginning next week.

Thanks

Laura

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Calvert Cliffs Nuclear Power Plant Unit 3 Alternative Site Audit
Information Needs

August 18 and 19, 2009

NRC Information Need Requests		
Alternative Site Evaluation		
Number	Page	Question/Issue
1	6	Provide an expert who can describe the screening criteria used to identify the 1036 possible sites and particularly why the 1036 possible sites were identified before UniStar identified candidate areas. Also, be prepared to describe the relationship between the 1036 possible sites mentioned on page 6 and the 206 possible sites mentioned on page 8, including why both lists are referred to as "possible sites." In addition be prepared to discuss the process used to select the 1036 sites from the two sources used to identify the sites on page 6.
2	8, A-1	Provide an expert who can resolve the apparent inconsistency between the first paragraph, which says there are 206 possible sites within the candidate areas as listed in Appendix A and Appendix A, "Environmental Scoring Criteria Basis", which does not contain a list of the 206 possible sites. Be prepared to provide further explanation about the 206 possible sites including the screening criteria used to generate this list. Also, be prepared to explain the information in Appendix A and how it was used in the evaluation of selecting alternative sites.
3	8	Table 4-1 shows the 4 screening criteria used by UniStar to establish candidate areas. Substantially similar criteria are shown in the 4 bullets at the bottom of page 4 of the Environmental Report (ER) revision where UniStar states that the criteria "were used to narrow the list of sites to be retained for further consideration." Provide an expert who can explain why the basis for the similarity in the criteria for these two different screenings appears similar between the two documents.
4	16	Provide an expert who can explain whether the 5 sites at the bottom of page 16 are potential sites or candidate sites. They are labeled candidate sites but the 1 st paragraphs on pages 16 and 18 seem to indicate they are potential sites. Additionally, be prepared to discuss whether UniStar followed the Environmental Standard Review Plan (ESRP) 9.3 (2007) convention regarding the proposed site plus the alternative sites or is using a different convention.
5	20, 25	Provide an expert who can explain why the Morgantown site is included in Tables 6.1 and 7.1 given that it is not in the list of sites at the bottom of page 16 and the when the text states that it was eliminated before determining the merits of the remaining sites.
6		Provide a copy of the missing figure from Section 4 that shows the areas excluded for population.
7	20-21	Provide an expert who can explain how scores in the sub-areas in Table 6-1 are not whole numbers since the criteria in Appendix A would lead to whole number scores. Be prepared to discuss the justification of "fractionalizing" between the values in Appendix A.
8		Provide an expert who can explain why the Beiler site (which in Table 6-1 ranks only slightly lower than the Bainbridge site) was not looked at as an alternative while Bainbridge was analyzed.
9		Provide an expert who can discuss the inconsistencies with the criteria in Table

		6-1/ Appendix C and Appendix A. Some examples of the inconsistencies are listed below (this is not all inclusive): Bainbridge 1d – Rated 1, but should be 3 Bainbridge 1e – Rated 5 but should be 1 Bainbridge 14a and 14b – rated 4.7 and 4.6 respectively, should both be 5 East ALCO 1c – Rated 4.8 but should be 5 East ALCO 1e – Rated 2.3 but should be 5 East ALCO 14a – Rated 1.4 but appears to be a 1 Thiokol 1e – Rated 4.4, but should be a 5 Calvert 1b – Rated 4.8, should be 5 Calvert 1d – Rated 1.3, should be 1 Calvert 1e – Rated 4.8, should be 3
10		Provide an expert who can discuss the criteria used to rank the sites, in particular, the criteria for cultural and historic resources, 3a floodplains, and 4a threatened and endangered species habitat.
11		Provide an expert who can discuss how in table 9.3-4 the Bainbridge and East ALCO sites rate higher than the proposed Calvert site for hydrology, but in Table 9.3-8 they rate worse than the Calvert site. Similarly, the EAST ALCO site rates far superior to the Calvert site for terrestrial and aquatic ecology in Table 9.3-4, but worse than Calvert in Table 9.3-8. Please be prepared to discuss this difference in ranking and how it was calculated.
Environmental Report Sections 9.3.1 and 9.3.2		
Alternative Site Selection Process		
Number	Page	Information Need
12	1	Provide an expert who can explain the apparent discrepancy between Section 9.3, which says that UniStar relied on the special case in ESRP 9.3 for selecting its proposed site, and Section 9.3.1, which says that the proposed site was selected from the list of candidate sites.
13	2,5	Provide an expert who can explain the alternative site evaluation process (Section 9.3.1.2) as it relates to the evaluation of potential sites, something not specifically addressed in the ER.
14	3	In Section 9.3.1.2 there is mention of “more than 1000 brownfield, remediation, and other power facilities in Maryland that were initially selected for consideration. Provide a copy of the screening criteria used to identify the 1036 sites.
15	4	The text implies that sites within the Region of Interest (ROI) were considered before the candidate areas were determined. ESRP 9.3 calls for identification of an ROI followed by identification of candidate areas and then identification of potential sites. Provide an expert to explain the actual process followed.
16	4	Under the topic of Candidate Areas and Candidate Sites (Section 9.3.1.2) in the last line of page 4 is the following text: “A de-select criteria, as allowed by NUREG-1555 and the EPRI siting guide (EPRI, 2002), was applied to the list of sites within the candidate areas to narrow the list.” It is not clear whether this covered the 1000+ sites mentioned on page 3 or the list of >200 sites identified in Figure 9.3-1. Provide an expert who can explain which list of sites is referenced and the deselect criteria was therefore applied.
17	5	Please an expert who can describe the screening criteria used to identify candidate areas.
18	5	The bottom of page 5 refers to weighting values, but it is not clear that the

		weighting values (or a brief description of how they were applied) are included in the ER. Provide an expert to describe the weighting values and discuss whether they are the same as those shown in Appendix D of the underlying assessment in the alternative site evaluation (UniStar 2009).
19	45	Figure 9.3-1 refers to a list of >200 sites. Provide an expert to explain whether this list is discussed and/or identified in the ER and whether the criteria in the four bullets at the bottom of page 4 were used to generate the list.
20		Provide documentation with the names of the owner/organization of each of the 3 alternative sites.
21		Provide an expert who can explain if the ER takes precedence in those situations where there are differences between the ER and the underlying assessment in the Alternative Site Evaluation (UniStar 2009). For example, Figure 2-2 in the underlying assessment contains potential sites as part of the process whereas Figure 9.3-1 in the ER does not.
22		Provide an expert who can discuss the inconsistencies in 9.3.2.2.1 for the Bainbridge site topography. This section states there is 80 feet of relief across the site, leading to moderate cut and fill requirements. Appendix C of the siting study says, "There is approximately 262 feet of relief across the site. The topography is steep with greater than 100 feet of relief in the area to be developed." Also be prepared to discuss the similar discrepancy between 9.3.2.3.1 for the ALCO site and Appendix C on topography, and the Thiokol site in 9.3.2.4.1 which lacks any discussion of topography.
23		Provide an expert to discuss the analysis used for the greenfield section in the ER. In particular be able to discuss the analysis used to determine a LARGE impact for land use in 9.3.2.5.1, a MODERATE TO LARGE for terrestrial ecology in 9.3.2.5.4, a SMALL TO LARGE for aquatic ecology in 9.3.2.5.5, a MODERATE TO LARGE for socioeconomics in 9.3.2.5.6, and a MODERATE TO LARGE for transmission corridors in 9.3.2.5.10.
Hydrology		
Number	Page	Information Need
24	14-15, 21, & 27-28	Provide an expert who can discuss the Bainbridge site, section 9.3.2.2.3, and the ALCO site, Section 9.3.2.3.3, which indicates a consumptive water use of 50 million gallons per day (MGD). The expert should also be able to discuss section 9.3.2.4.3 for the Thiokol site and why it uses the same 50 MGD number, but doesn't provide a water source number for comparison. The expert should also be able to justify the approach with the consumptive water use considered for Calvert Cliffs of about 27 MGD and explain why this is not inconsistent with the other two sites.
25		Provide any reports and studies on the water quantity and quality of the water resources for the alternative sites that was used as information to develop the analysis in the ER sections.
26		Provide an expert who can clarify the hydrology scoring basis logic in a clear and consistent manner. For example, the current language for a rank of 5 states: "Source water body exceeds 7Q10 by 6-to 10% or equal to 10 times the needed volume for the annual requirement [182,500 MGD]." Be prepared to clarify whether the definition of 7Q10 is the seven-day, consecutive low flow <i>with a ten year return frequency</i> rather than "in a 10-year period."
27		Water quality seems to have been ranked on the ease of use by the plant (i.e. brackish water allows fewer cycles of concentration) rather than on whether the impacts of the plant are likely to be adverse to the water quality of the

		environment. Provide an expert who can discuss water use and quality as a function of the plant's effects on the environment.
28		The ALCO source water is considered to be fresh water. The scoring matrix indicates that fresh water earns a rank of 5. Provide an expert who can explain why the ALCO score for Water Quality (topic 2a) is 3 (indicating oligohaline water) rather than 5.
Land Use		
Number	Page	Information Need
29	12-13	Provide an expert who can discuss the analysis that was used to determine the impact level of MODERATE for land use at the Bainbridge site.
30	40, 72	Provide an expert who can explain the discrepancies between the bullet at the top of page 40, which says the land use impacts at Calvert Cliffs are greater than the land use impacts at the alternative sites, with the information provided in Table 9.3-8 and the text in the ER. The expert should also be prepared to discuss how this bullet relates to the other alternative sites and the greenfield site.
31		Provide figures and/or textual descriptions indicating where the plant's major components would be located on the property for each alternative site. Also, for each alternative site tour provide an expert who is knowledgeable of these layouts.
32	19, 20	Provide an expert who can clarify what type of dedicated land use is within 2.8 miles of the site as indicated in Section 9.3.2.3.1 for the ALCO site.
Terrestrial Ecology		
Number	Page	Information Need
33		Provide an expert who can discuss the distribution and extent of wetlands present on the alternative sites and the related impacts to wetlands from construction and operation of a nuclear plant at all the alternative sites.
34	15-16, 22, & 28-29	Provide an expert who can discuss the likelihood that federally-listed and state-listed species would occur within the site at the Bainbridge, Thiokol and ALCO sites, given that most of these sites are agricultural fields, mown grasslands or otherwise previously disturbed. Provide any documentation such as surveys for species that have been completed. The expert should be able to discuss how the likelihood of the species presence corresponds to the impact determination in the ER sections for all alternative sites.
Aquatic Ecology		
Number	Page	Information Need
35	16	Provide the author of the ER sections of Aquatic Ecology. The author should be prepared to discuss the analysis used to determine that the impact to aquatic resources would be LARGE at the Bainbridge site and provide information not currently in the section on threatened and endangered species, as well as an explanation of how they would be impacted. Please provide copies of any references related to these analyses.
36	22-23	Provide the author of the ER sections of Aquatic Ecology. The author should be prepared to discuss the analysis used to determine that the impact to aquatic resources would be MODERATE at the ALCO site. The applicant should be prepared to explain why the ER states that there are no federally-listed species and one state-listed species and how the impact level was determined from this statement. Please provide copies of any references related to that analysis.
37		Provide figures and/or textual descriptions indicating where the intakes and discharges would be located on the property for each alternative site.

38		Provide an expert who can discuss the ecologically, commercially, and recreationally important species that may occur at or near the alternative sites or along the route of cooling water pipelines that need to be constructed.
39		Provide an expert who can discuss the numbers and characteristics of the streams and small ponds on the alternative sites and along the route of cooling water pipelines that need to be constructed.
Socioeconomics/EJ		
Number	Page	Information Need
40		Provide documentation and/or an expert to discuss more up-to date population estimates from the 2000 census (rather than the 1990 census information currently being used) and any additional current population estimates, such as from the county, or other sources for each alternative site.
41		Provide documentation to support and/or an expert that can discuss estimates of how many construction workers and operations workers are expected to in-migrate into the area, and what counties are they expected to settle in near the alternative sites. Please be ready to identify whether the number of workers and in-migration assumptions are the same for the alternative sites as for the proposed Calvert Cliffs site.
42		Provide any documentation that supports and/or an expert that can discuss potable water supplies and wastewater treatment facilities for the potential host counties for each alternative site, including facility name, capacity and current utilization.
43		Please provide any documentation that supports and/or an expert to discuss any recreational facilities/activities in the near vicinity of each alternative site.
44	73-75	Provide any documentation that shows a year for the data in Table 9.3-9 – 9.3-11 and/or an expert that can provide this information.
45	16-17, 23-24	Provide an expert who can discuss the approach used for the evaluation of housing impacts for the Calvert Cliffs sites in Section 4.4.2.4 and the Bainbridge and ACLO sites. This approach appears to assume a limited area from which to draw the workforce as well as that all of the workforce would in-migrate for purposes of housing considerations.
46	18-19	Provide an expert who can discuss the approach in the evaluation of environmental justice for the Bainbridge site in 9.3.2.2.9 which appears to use census tracts, while the evaluation for Calvert Cliffs in 4.4.3 appears to use census blocks. The expert should also be prepared to discuss why no evaluation of disproportionate adverse impacts was conducted.
Historic and Cultural Resources		
Number	Page	Information Need
47	10-11	Provide an expert who can explain the conclusion of historic and cultural impacts at the Calvert Cliffs site and the Memorandum of Agreement (MOA) or mitigation measures.
48	18	Regarding section 9.3.2.2.8 for the Bainbridge site, provide an expert who can explain the finding of a LARGE impact to cultural resources from construction and operation. Provide any documentation that support or was used in that analysis such, as cultural surveys and/or records, consultation records with the Maryland Historical Trust, etc. that were used in the analysis.
49	25	Regarding Section 9.3.2.3.8 for the ALCO site, provide an expert who can explain the finding of a MODERATE impact to cultural resources from construction and operation. In particular the section indicates there are historic properties within five miles of the ALCO site, but the conclusion is that there is a

		MODERATE impact because of a property within one mile. The expert should be prepared to provide specific information about this property and the impacts that support the conclusion. Provide any documentation that supports that analysis, such as cultural surveys and/or records, consultation records with the Maryland Historical Trust, etc. that were used in the analysis. Also provide the name of and describe the site that is within one mile of the ALCO site.
50		Provide an expert who can discuss the finding of a SMALL impact for historic resources for the Thiokol site. The analysis of this site indicates that there are quite a few “National Historic Registered Places” properties in the county, but gives no indication of distances between these properties and the alternative site. Provide any documentation that supports that analysis, such as cultural surveys and/or records, consultation records with the Maryland Historical Trust, etc.
51	38	Regarding Section 9.3.2.5, provide an expert who can describe the basis of the cultural resources impacts determination at the greenfield site.

US Army Corps of Engineers Information Needs Requests		
Number	Page	Information Need
1		Provide a description of the potential wetland and waterway impacts based on mapping and aerial photography. Provide the information in an easy-to-read table with all mapping tools referenced/cited.
2		Provide the total wetland and stream acreage located on each alternative site.
3		Provide aerial maps/photographs of each alternative site.
4		Provide figures and/or textual descriptions indicating where the plant’s major components would be located on the property for each alternative site.