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March 17, 2011

UN#11-100

Kelly Neff  
Non-Tidal Section – Wetlands and Waterways Division  
Maryland Department of the Environment (MDE)  
1800 Washington Boulevard  
Baltimore, Maryland 21230

**Subject:** Response to Comments on Draft Final Phase II Nontidal Wetland and Stream Mitigation Plan For Calvert Cliffs Nuclear Power Plant, Unit 3 in Calvert County, Maryland, MDE Project Number, 08-NT-0191 (NT), USACE Tracking No. NAB-2007-08123-M05

**Reference:** Kelly P. Neff (MDE) to Dimitri Lutchenkov (UniStar Nuclear Energy), Draft Final Phase II Mitigation Plan Nontidal Wetlands Permit #: 08-NT-0191, Permit Tracking # 200862335, Project: Calvert Cliffs Nuclear Power Plant County: Calvert, dated November 18, 2010.

The purpose of this letter is to transmit our enclosed response to MDE comments on the Draft Final Phase II Nontidal Wetland and Stream Mitigation Plan For Calvert Cliffs Nuclear Power Plant, Unit 3 (Reference).

If you have any questions concerning the attached document, please call Mr. Jim Burkman at (410) 787-5130.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Lutchenkov", with a long horizontal line extending to the right.

Dimitri Lutchenkov

Enclosure – Response to MDE Comments Dated 18 November 2010 – Draft Final Phase II  
Mitigation Plan Calvert Cliffs Nuclear Power Plant, Unit 3 Prepared 10 January  
2011

cc: Susan Gray – Power Plant Research Program  
Cheryl Kerr - MDE  
Laura Quinn – NRC  
Bob Zepp – USFWS  
Kathy Anderson - USACE  
Harriet Nash - NRC  
Mary Ann Parkhurst - PNL  
Roy Kropp – PNL  
Woody Francis – USACE

bcc: Jim Burkman – Constellation (w/enclosures)  
Lisa Decker – Constellation (w/o enclosures)  
Lee Rabideau – Bechtel (w/enclosures)  
Dimitri Lutchenkov - UNE (w/o enclosures)  
Ed Miller – Constellation (w/o enclosures)  
Rich Pfingsten, EA (w/o enclosures)

**Enclosure**

**Response to MDE Comments Dated 18 November 2010 –  
Draft Final Phase II Mitigation Plan  
Calvert Cliffs Nuclear Power Plant, Unit 3  
Prepared 10 January 2011**



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**Response to MDE Comments Dated 18 November 2010 – Draft Final Phase II Mitigation Plan**

**Calvert Cliffs Nuclear Power Plant, Unit 3**

**Prepared 10 January 2011**

EA Engineering, Science, and Technology, Inc (EA) has reviewed the comments from the Mitigation and Technical Assistance Section of the Maryland Department of the Environment (MDE) in the letter dated 18 November 2010 from Kelly Neff, regarding the review of the Draft Final Phase II Mitigation Plan. EA is providing the following point-by-point responses (*in italics*) to address MDE's comments and will make the necessary revisions for the submission of the Final Phase II Mitigation Plan or as otherwise described in our responses below.

1. I am only reviewing the wetland mitigation portion of the submittal. Mohammad Ebrahimi will be reviewing the stream portions, and will send his comments separately.
  - *Separate comments will be anticipated for this review. This letter is in response to comments received to date and any additional comments received will be addressed in a separate response letter.*
  
2. Please clearly draw the proposed wetland creation/enhancement boundaries on the plans. It seems that the grading of WC-3 will be into the existing wetland. Since this grading is just to tie the wetland creation to the existing wetland, this overlap area will be counted as wetland enhancement only, assuming you will be treating the Phragmites and planting trees.
  - *Enhancement and creation boundaries will be clearly identified on figures or plans for MDE. When determining the credits for mitigation, EA did in fact calculate any area of existing wetlands which would require some earthwork to tie into proposed areas as enhancement and not as additional creation. However, on the Final Design Plans, the boundaries of enhancement and creation will be clearly identified. Please note that the mitigation plan as it stands now proposes to plant and enhance additional riparian areas and create some floodplain wetlands which are not being requested for credit. Only the areas requested for credit will be clearly identified in response to this comment.*
  
3. For the RSC areas that are getting wetland mitigation credit for being wetland creation, please be sure they are designed to be vegetated wetland.
  - *The mitigation design limits the amount of backwatering behind riffle grade controls explicitly for this purpose, as excessive backwater could create largely un-vegetated open water areas. Backwatering has been utilized in some locations but these locations are designed to allow emergent and/or forested wetland species to establish. RSC areas which have pronounced stormwater influence and subsequent pool areas are intended to hold water periodically and establish hydrophytic vegetation tolerant to those conditions. If these areas do not establish vegetation as expected, through a combination of surplus credits and adaptive management, Unistar will ensure that the mitigation obligations are met.*

4. It is proposed that some of the mitigation areas will have a flow control. Please discuss this further. If you are planning to use a control structure that can be manipulated, once the desired water elevations are met, the structure should be locked. We do not want this control structure to be actively controlled in the long-term – except for the possible management of Phragmites. You mentioned in your May 27, 2010 letter that this issue would be discussed in Draft Final Phase II Mitigation Plan Phragmites Control Plan. I did not see it included there. This may also need to be discussed in the Section 7.0 Site Protection Instrument.
  - *The outlet structure at Lake Davies(WC-2) is proposed to have a **temporary** variable height flow control. The details and specifications of this may be left to the contractor, with the elevation changes dictated by the Engineer for the purposes of controlling Phragmites.*
  - *The WC-2 wetland creation (Lake Davies basin) intends to **use a variable height outfall structure only during the period of Phragmites management**. The final configuration of the WC-2 outfall utilizes a cross vane to control the water surface at a fixed, permanent elevation. As Phragmites management will be adaptive and successful only with adjustment and coordination between agencies, engineer and contractor, only the final condition is presented in the design plans.*
  
5. In Section 7.0, please include language in the protection mechanism to allow the possible spraying of invasive species. Also, please revise the 1st paragraph to state that activities in the protected areas will have to be approved by USACE and MDE. In the 3rd paragraph, MDE will also need to approve the draft protection mechanism prior to finalization.
  - *The plan will be revised as requested, and included in the Final Phase II Mitigation Plan. EA understands that prior to the approval of the final mitigation plan, a draft protection document will need to be proposed and approved by the regulatory agencies and recorded with the County. The draft protection instrument will be drafted and submitted to the regulatory agencies with the Final Phase II Design Plans.*
  
6. Please revise the planting plans to include a higher ratio of trees to shrubs, rather than the other way around. We want species that will outgrow the +10' tall Phragmites, and trees may have a better chance than shrubs.
  - *The plan will be revised as requested, and included in the Final Phase II Mitigation Plan. Although the species diversity of shrubs used will remain the same, they will be included in lesser comparative density to the trees proposed. EA believes that shrubs provide a vital habitat and food function in this biome, therefore management of Phragmites will be required to ensure their success.*
  
7. Some of the species to be planted in the wetland zones are FACU (e.g. Broomsedge and Little bluestem). All species planted in the wetland creation or enhancement areas must be native and should have wetland indicator status of OBL, FACW, or FAC.
  - *The plan will be revised as requested, and included in the Final Phase II Mitigation Plan. Upland species will be excluded from the wetland portions of the site.*

8. The wetland creation sites should be graded to below 6 inches of final grade, then 6 inches topsoil (or clean salvaged wetland soil) spread over the site. This is especially important in areas with higher amounts of cut (e.g. WC-3). Please specify this in the plans.
  - *The plan will be revised as requested, and included in the Final Phase II Mitigation Plan. A detail will be added making this modification explicit to the contractor for all wetland creation areas and floodplain areas which have extensive disturbance, grading which exposes mineral soils, and are anticipated to be wetland after construction - regardless of their mitigation credit status.*
9. The surface of the soil must not be compacted to the extent that it limits plant establishment and microbial activity. Upon completion of initial grading, the soil must be disked or chisel plowed to a depth of at least 8 inches. Please specify this in the plans.
  - *The plan will be revised as requested with notes specifying this will be included in the Final Phase II Mitigation Plan. Low earth pressure equipment will also be specified, as well as techniques which limit direct bearing on excavated areas, and utilize the reach of excavators in the grading areas without direct pressure.*
10. The LOD seems too large in some areas, potentially clearing more forest than necessary (e.g. E&S Plans 18, 20). Please discuss if this can be pulled in. Forested upland areas that will be disturbed should be reforested and restored after construction is complete. This should be shown in the plans.
  - *The LOD shown has been expanded to accommodate potential design changes for this level of design. The plan will be revised as requested, and included in the Final Phase II Mitigation Plan. The LOD has also been shown larger to accommodate thalweg grading between structures. The revised plan will include "Heavy Equipment Exclusion Areas" which will limit widespread grading by only allowing rubber tracked or miniature equipment (mini-excavators, dingos, and small skidloaders for example) to limit compaction and unnecessary clearing. Additionally, no trees greater than 4" will be removed without engineer approval.*
11. In a few of the Planting and Enhancement plans (e.g. Sheet 13), some of the areas show wetland planting in upland areas. If these areas are not wetland, they would be counted as upland enhancement instead and should be noted as such. Also, there are upland planting in the wetland. Please explain this.
  - *The plan will be revised as requested with greater detail, including "upland restoration planting," "riparian planting," and "forested wetland enhancement" planting schemes, and included in the Final Phase II Mitigation Plan.*
12. Please discuss the source of hydrology for all wetland creation areas.
  - *A detailed discussion of hydrology for wetland areas will be included in the Final Phase II Mitigation Plan.*

13. The Best Management Practices for working in nontidal wetlands, wetland buffers, waterways, and 100-year floodplains should be included on the plans.

- *The plan will be revised as requested, and included in the Final Phase II Mitigation Plan.*

14. MDE will require a bond or other financial assurance for the entire amount of mitigation. This will be at the rate of \$20,000 per acre. If the Corps also requires a bond or other financial assurance of at least this amount, that bond can satisfy this requirement.

- *The plan will be revised as requested, and the proposed final amount of the bond will be included in the Final Phase II Mitigation Plan.*