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May 27, 2010

UN#10-134

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

Subject: Response to Comments Concerning Phase II Non-Tidal Wetlands and Stream Concept Plan and Tidal Wetlands Impacts for Calvert Cliffs Nuclear Power Plant, Unit 3, in Calvert County, Maryland, MDE Project Number 08-WL-1462 (T), 09-NT-0191 (NT), USACE Tracking No. NAB-2007-08123-M05

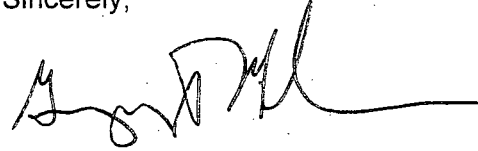
Reference: Maryland Department of the Environment Letter from Kelly P. Neff (MDE) to Dimitri Lutchenkov (UNE), Comments on Mitigation – Conceptual Phase II Plan Non-Tidal Wetlands; Permit # 08-NT-0191; Permit Tracking # 200862335; Calvert Cliffs Nuclear Power Plant, dated December 21, 2009

Enclosed for consideration, please find the response to comments received in the referenced letter on the Conceptual Phase II Non-Tidal Wetland and Stream Mitigation Plan, dated December 2009, for the proposed Calvert Cliffs Nuclear Power Plant, Unit 3, in Calvert County, Maryland.

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If you have any questions concerning the attached document, please call Mr. Dimitri Lutchenkov at (410) 470-5524 or Mr. Jim Burkman at (410) 787-5130.

Sincerely,

A handwritten signature in black ink, appearing to read 'Greg Gibson', with a long horizontal line extending to the right.

Greg Gibson

Enclosure – Response to MDE Comments Nontidal Wetlands Permit # 08-NT-0191 Calvert Cliffs Nuclear Power Plant, Unit 3, 11 May 2010

cc: Mohammad Ebrahimi - Maryland Department of the Environment (w/enclosure)
Woody Francis – U.S. Army Corps of Engineers (w/enclosure)
Susan Gray – Power Plant Research Program (w/enclosure)
Cheryl Kerr – Maryland Department of the Environment (w/enclosure)
Laura Quinn – NRC Project Manager, Environmental Projects Branch 2 (w/enclosure)
Amanda Sigillito – Maryland Department of the Environment (w/enclosure)

Enclosure

**Response to MDE Comments
Nontidal Wetlands Permit # 08-NT-0191
Calvert Cliffs Nuclear Power Plant, Unit 3
11 May 2010**



**Response to MDE Comments
Nontidal Wetlands Permit # 08-NT-0191
Calvert Cliffs Nuclear Power Plant, Unit 3
11 May 2010**

EA Engineering, Science, and Technology, Inc (EA) on behalf of UniStar Nuclear Energy (UniStar) has reviewed the comments from the Mitigation and Technical Assistance Section of the Maryland Department of the Environment (MDE) in the letter dated 21 December 2009, regarding their review of the Conceptual Phase II Mitigation Plan, as well as the comments from the Nontidal Wetland and Waterways Division in the letter dated 11 January 2010, regarding the review of the Joint Permit Application (JPA) and development plans.

This formal written response is being provided to inform you that we are currently working to address the comments in the 11 January 2010 MDE letter and will provide you with the required information upon completion. Therefore, we request that you accept this letter as notice that UniStar is continuing to pursue the authorization for impacts proposed in the Joint Permit Application associated with above referenced Permit #.

Furthermore, EA is providing the following point-by-point responses (*in italics*) to address MDE's 21 December 2009 comments and will make the necessary revisions during the design of the Draft Final Phase II Mitigation Plan or as otherwise described in our responses below. We are currently awaiting comments on the Conceptual Phase II Mitigation Plan from additional agencies, including the United States Army Corps of Engineers (USACE) prior to moving forward with the design of the Draft Final Phase II Mitigation Plan.

1. Since this is only a Conceptual Plan, detailed plans are not included. These detailed plans will need to be reviewed and approved by the Mitigation Department as part of the Phase II Mitigation Plan approval.
 - *We understand that detailed plans will be required for final approval of the Mitigation Plan. Detailed plans will be included in the Draft Final Phase II Mitigation Plan submittal, for review by MDE and the U.S. Army Corps of Engineers (USACE), and comments on these plans will be addressed and revised for the Final Phase II Mitigation Plan submittal.*
2. As discussed through email with Jim Burkman (Constellation Generation Group) on December 9, 2009, MDE will require a 1:4 ratio for enhancement to replace forested wetland losses.
 - *Based on comments received by MDE on 2 December 2009, it has been determined that forested wetland enhancement will yield mitigation credits at a 1:4 ratio. Please note that this determination of the 1:4 credit ratio was established after our submittal of the Conceptual Phase II Mitigation Plan that described a 1:3 credit ratio for forested wetland enhancement. As discussed through recent emails, UniStar*

understands that the enhancement mitigation ratio will now be at a 1:4 credit ratio rather than a 1:3 credit ratio, and this will be reflected in the Draft Final Phase II Mitigation Plan. This revision to the mitigation credit ratio will not alter the proposed mitigation design, as the change in ratio will not require additional area to meet the projects mitigation needs. The revision to the mitigation credit ratio has been addressed in the Phase II Mitigation Summary that was submitted to the USACE for the Draft Environmental Impact Statement, and this results in a change to the total wetland mitigation credits from 14.32 to 12.29 acres.

3. Stream preservation rarely receives mitigation credit. We would only consider that if the stream has exceptional value. If it is considered at all, the credit ratio would be much lower than 1:1.
 - *The Conceptual Phase II Mitigation Plan proposed stream mitigation credits for stream preservation areas at a 1:1 credit ratio, as recommended by USACE staff during a field review meeting held on 16 November 2009. Receiving mitigation credit for the preservation of streams is not needed to meet the mitigation credits required, as the Mitigation Plan proposes 9,688 linear feet of stream restoration for impacts to 8,350 linear feet of stream channel. However, approximately 930 linear feet of stream preservation is proposed along SR-3 that was identified as having a large American eel population, which is unique to the streams located on-site. Therefore, UniStar believes this stream should be preserved rather than undergoing restoration activities as proposed in the Phase I Mitigation Plan. We understand that a 1:1 mitigation credit ratio is not likely to be granted for this case and will preserve the stream channel at a mitigation credit ratio determined by the regulatory agencies.*
4. The regulatory agencies may require a monitoring period longer than 5 years, especially since much of the wetland mitigation is for eradication *Phragmites* areas, which often require monitoring for longer time periods.
 - *EA and UniStar are aware that a monitoring period greater than 5 years may be required by the regulatory agencies on a case-by-case basis. The Conceptual Phase II Mitigation Plan proposes the monitoring program in accordance with the Maryland Compensatory Mitigation Guidance in addition to the USACE guidance letter dated 10 October 2008. As stated in the Conceptual Phase II Mitigation Plan, "If success criteria have been satisfied at the completion of the 5-year monitoring program, a request for release from monitoring will be made to USACE and/or MDE." If the regulatory agencies are not satisfied with the results from the monitoring efforts at the completion of the 5-year monitoring period, we understand the monitoring requirements related to the *Phragmites* eradication efforts may be extended.*
5. We will consider advanced mitigation credit once items 2 and 3 have been addressed.
 - *As stated above in response to Comments 2 and 3, revisions to the wetland enhancement mitigation ratio and stream preservation credit availability will still yield an excess of mitigation credits. Although the credit reserve will be less than initially described in the Conceptual Phase II Mitigation Plan, UniStar would still like to*

pursue the ability to create a reserve of mitigation credits for potential future use for impacts that may arise from future projects and maintenance activities on-site.

6. In areas where regenerative stormwater conveyance (RSC) practices will be installed, are these existing forested areas? If so, how much area will be cleared to install these? Are all of these areas necessary to reduce erosion? For example, the descriptions for WE-4, WC-5 and WC-6 sound like they are currently relatively stable. The concern is obviously that if it is a healthy forested system already, we do not get much functional gain by cutting down the mature trees to make a forested wetland system. If the concern is that additional stormwater will be going to these areas to make them unstable, maybe that should be addressed through the stormwater management instead of through mitigation. As mentioned, we would be very interested in seeing an example of the RSC systems.

- The Area of SR-2/WC-1 is partially a forested upland containing a very large, excessive, head-cut and eroded valley, while the remainder of the drainage area to this system extends to an open field. The area of WE-3/WC-4, although forested, is not very dense and contains areas of open water with some emergent banks. Lastly, the areas of WC-5 and WE-4/WC-6 are located in existing drainage swales along Johns Creek that are dominated by Phragmites and shrub layer species. RSC systems in these areas are expected to provide functional gain over the current site conditions at these locations.*
- Some forest clearing will be required, especially to restore the portion of SR-2 within the large head-cut area. However, the majority of the trees, including large specimens, will be avoided to the greatest extent practicable to implement the design. Detailed design plans will be included in the Draft Final Phase II Mitigation Plan that will depict the limit of disturbance and clearing/grading required for implementing these practices.*
- A site meeting was conducted on 15 January 2010 in order to visit two existing RSC practices in the field. During this site meeting, techniques of this practice and how they intend on being utilized at the Calvert Cliffs site were discussed in further detail with representatives from MDE.*

7. For mitigation area WC-2, will the flow control be set? 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*.

- The flow control device proposed for WC-2 will likely have the ability to be manipulated and will be described in greater detail in the Draft Final Phase II Mitigation Plan. The control structure will be locked once the desired water elevations are met, however the device may be manipulated periodically for Phragmites control. UniStar understand the concern of MDE regarding the control device and will include the appropriate language in the Phragmites Control Plan and*

protective instrument documents to ensure proper control of the device. A Phragmites Control Plan will be included in the Draft Final Phase II Mitigation Plan.

8. Any areas proposed as emergent wetlands will have a strong threat of *Phragmites* invasion. You may want these areas to be planted in trees to reduce that threat.
 - *As originally described in the Phase I Mitigation Plan and re-stated in the Conceptual Phase II Mitigation Plan, the development of the site will result in impacts to both forested and emergent wetlands. Therefore, in order to stay consistent with the goals and objectives of the Mitigation Plan, UniStar is proposing the re-creation of emergent wetlands to mitigate for those that will be lost from development of the site. There are few areas situated on the property where emergent wetland creation would likely be successful other than those originally proposed. We understand that the threat of Phragmites invasion exists on-site and the practices used to control its spread will be addressed in the detailed Phragmites Control Plan. We also recognize that even if trees were planted throughout this area, the threat of Phragmites spreading to the area will still be an issue during the early growth years of the forested wetland, and as seen along John's Creek, does not completely eliminate its spread. Additionally, UniStar has focused the mitigation plan on achieving in-kind and on-site mitigation, wherever feasible. Thus, the emergent wetland area proposed in WC-2 was necessary to meet the in-kind replacement for the emergent wetland impacts.*
9. The protection document should also include language allowing remediation of the mitigation site after approval by MDE.
 - *Draft protection documents for the mitigation areas proposed in this project will be prepared for agency review prior to approval of the Final Phase II Mitigation Plan. The protection documents will include appropriate language to allow monitoring activities, as well as any remediation activities that may be required by the regulatory agencies.*
10. For monitoring, please also include information required through the MDE monitoring protocol for sites larger than a half acre.
 - *As stated in the Conceptual Phase II Mitigation Plan, the monitoring program will be implemented in accordance with the Maryland Compensatory Mitigation Guidance, and the guidance provided by the USACE in RGL No. 08-03. The section in the Conceptual Phase II Mitigation Plan for post-construction monitoring and performance standards will be updated in the Draft Final Phase II Mitigation Plan to include all the appropriate language from the monitoring protocol for mitigation sites greater than one-half acre, as described in the document that was provided by MDE on 21 December 2009.*