

Greg Gibson  
Vice President, Regulatory Affairs

100 Constellation Way, Suite 1400P  
Baltimore, Maryland 21202-3106



10 CFR 50.4  
10 CFR 52.79

December 4, 2008

UN#08-076

ATTN: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Subject: UniStar Nuclear Energy, NRC Docket No. 52-016  
Calvert Cliffs Nuclear Power Plant, Unit 3  
Submittal of Supplemental Response to Request for Additional Information  
Environmental Impact Statement (EIS) Issue #5

- References:
- 1) UN#08-060, UniStar Nuclear Energy, NRC Docket No. 52-016 Calvert Cliffs Nuclear Power Plant, Unit 3 Submittal of Response to Requests for Additional Information Environmental Impact Statement (EIS) Issues, dated October 31, 2008
  - 2) Requests for Additional Information concerning SER Issues and EIS Issues for the Calvert Cliffs Nuclear Power Plant Unit 3, dated October 14, 2008

The purpose of this letter is to provide the NRC staff with supplemental information regarding the response to EIS Issue #5 provided by letter UN#08-060 (Reference 1). EIS Issue #5 was provided to UniStar by Joe Colaccino (NRC) on October 14, 2008 (Reference 2). Enclosed is the revised UniStar response to EIS Issue #5. The UniStar supplemental information regarding the EIS Issue #5 response is a summary of Calvert Cliffs Nuclear Power Plant (CCNPP) Unit 3 construction and preconstruction related environmental impacts and is provided in Attachment 1 and the page mark-up of Section 4.6 of the CCNPP Unit 3 Environmental Report (ER) is provided in Attachment 2.

If there are any questions regarding this transmittal, please contact me at (410) 470-4205.

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NRC

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*I declare under penalty of perjury that the foregoing is true and correct.*

Executed on December 4, 2008

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

Greg Gibson

Enclosure: Supplemental Response to NRC Request for Additional Information,  
Environmental Impact Statement Issue #5

Attachments: 1) CCNPP Unit 3 ER Table 4.6-2, Summary of Construction and  
Preconstruction Related Impacts  
2) CCNPP Unit 3 ER Section 4.6 Page Mark-up

cc: U.S. NRC Region I  
U.S. NRC Resident Inspector, Calvert Cliffs Nuclear Power Plant, Units 1 and 2  
NRC Environmental Project Manager, U.S. EPR Combined License Application  
NRC Project Manager, U.S. EPR Combined License Application  
NRC Project Manager, U.S. EPR Design Certification Application (w/o enclosure)

**Enclosure**

**Supplemental Response to NRC Request for Additional Information,  
Environmental Impact Statement Issue #5**

**EIS Issue No. 5 from Colaccino Drop-in Visit**

Provide a table summarizing the construction and preconstruction related impacts of activities defined in 10 CFR 50.10(a)(1) and (a)(2)(i) through (vii). The columns of the table should list the activity; the potential impacts; the significance of the potential impacts; the estimated percentage of the impacts caused by construction and preconstruction, and the basis for the estimated percentages. If activities are aggregated, explain how the aggregation was made.

**UniStar Response:**

Table 4.6-2 summarizing the construction and preconstruction related impacts of activities is attached (Attachment 1). Also attached is a mark-up of the additional text to be included in ER Section 4.6, Measures and Controls to Limit Adverse Impacts During Construction (Attachment 2).

**COLA Impact:**

Table 4.6-2 and additional text will be included in Revision 4 to the Environmental Report.

**Attachment 1**

**CCNPP Unit 3 ER Table 4.6-2, Summary of Construction and  
Preconstruction Related Impacts**

Table 4.6-2: Summary of Construction and Preconstruction Related Impacts

Section Reference	Potential Impact and Significance <sup>(a)</sup>	Estimated Impacts (%)		Basis of Estimate
		Construction <sup>(b)</sup>	Preconstruction	
<b>4.1 Land Use Impacts</b>				
<b>4.1.1 The Site and Vicinity</b>				
4.1.1.1 The Site	S - Land Use	0	100	The percentage of the construction area impacted during preconstruction is estimated to be 100%, as described previously.
4.1.1.2 The Vicinity	S - Land Use	95	5	Estimates are based on the activities for the construction of CCNPP Unit 3 and supporting facilities that will take place during the construction of the new construction access road and above the tree line and will thus be visible from nearby roads.
4.1.2 Transmission Corridors and Off-Site Areas	S - Land Use	0	100	Transmission corridors are not included in the definition of construction of SSC's. There are no off-site areas associated with the project that are included in the definition of construction of SSC's.

Section Reference	Potential Impact and Significance <sup>(a)</sup>	Estimated Impacts (%)		Basis of Estimate
		Construction <sup>(b)</sup>	Preconstruction	
4.1.3 Historic Properties	S - Land Use	0	100	The impact of historic properties will apply primarily to preconstruction activities since they will be identified and mitigation plans established prior to land clearing, grading, installation of drainage, erosion and other environmental mitigation measures, construction of temporary roads and laydown areas, etc. There is some small potential for discovery of historic properties during the construction-related excavations.
<b>Section 4.2 Water Related Impacts</b>				
Section 4.2.1 Hydrologic Alterations				
Section 4.2.1.1 Description of Surface Water Bodies and Groundwater Aquifers	S - Erosion and Sediment M - Surface Water S - Groundwater	0	100	The percentage of the construction area impacted during preconstruction is estimated to be 100%, as described previously.

Section Reference	Potential Impact and Significance <sup>(a)</sup>	Estimated Impacts (%)		Basis of Estimate
		Construction <sup>(b)</sup>	Preconstruction	
Section 4.2.1.3 Water Sources and Amounts Needed for Construction	M - Surface Water	90	10	Estimates are based on a planned 86 months of construction, of which 23% is preconstruction. Estimates are based on the quantity of water to be used during the initial 23% time (assumed for preconstruction) and the remaining years for construction as shown in Table 4.2-1.
Section 4.2.1.4 Surface Water Bodies Receiving Construction Effluents that Could Affect Water Quality	S - Erosion and Sediment M - Surface Water	0	100	The percentage of the construction area impacted during preconstruction is estimated to be 100%, as described previously.
Section 4.2.1.5 Construction Impacts	S - Erosion and Sediment M - Surface Water S - Groundwater	0	100	These estimates are based on the land area that will be impacted by the construction of CCNPP Unit 3 and related facilities and on water usage over the time period of construction. A significant contributor to construction impacts will be de-watering of the deep excavations, with water routed in accordance with a required NPDES permit.



Section Reference	Potential Impact and Significance <sup>(a)</sup>	Estimated Impacts (%)		Basis of Estimate
		Construction <sup>(b)</sup>	Preconstruction	
Section 4.2.1.6 Identification of Surface Water and Groundwater Users	N/A	N/A	N/A	N/A
Section 4.2.1.7 Proposed Practices to Limit or Minimize Hydrologic Alterations	N/A	N/A	N/A	N/A
Section 4.2.1.8 Compliance with Applicable Hydrological Standards and Regulations	N/A	N/A	N/A	N/A
Section 4.2.1.9 Best Management Practices	N/A	N/A	N/A	N/A
<b>Section 4.2.2 Water Use Impacts</b>				
Section 4.2.2.1 Description of the Site and Vicinity Water Bodies	N/A	N/A	N/A	N/A

Section Reference	Potential Impact and Significance <sup>(a)</sup>	Estimated Impacts (%)		Basis of Estimate
		Construction <sup>(b)</sup>	Preconstruction	
Section 4.2.2.2 Hydrologic Alterations and Related Construction Activities	S - Erosion and Sediment M - Surface Water S - Groundwater	0	100	These estimates are based on the land area that will be impacted by the construction of CCNPP Unit 3 and related facilities and on water usage over the time period of construction. A significant contributor to construction impacts will be de-watering of the deep excavations, with water routed in accordance with a required NPDES permit.
Section 4.2.2.3 Physical Effects of Hydrologic Alterations	S - Erosion and Sediment M - Surface Water S - Groundwater	0	100	These estimates are based on the land area that will be impacted by the construction of CCNPP Unit 3 and related facilities and on water usage over the time period of construction. A significant contributor to construction impacts will be de-watering of the deep excavations, with water routed in accordance with a required NPDES permit.

Section Reference	Potential Impact and Significance <sup>(a)</sup>	Estimated Impacts (%)		Basis of Estimate
		Construction <sup>(b)</sup>	Preconstruction	
Section 4.2.2.4 Water Quantities Available to Other Users	M - Surface Water S - Water Use S - Groundwater	90	10	Estimates are based on a planned 86 months of construction, of which 23% is preconstruction. Estimates are based on the quantity of water to be used during the initial 23% time (assumed for preconstruction) and the remaining years for construction as shown in Table 4.2-1.
Section 4.2.2.5 Water Bodies Receiving Construction Effluents	M - Surface Water S - Groundwater	90	10	Estimates are based on a planned 86 months of construction, of which 23% is preconstruction. Estimates are based on the quantity of water to be used during the initial 23% time (assumed for preconstruction) and the remaining years for construction as shown in Table 4.2-1.
Section 4.2.2.6 Baseline Water Quality Data	N/A	N/A	N/A	N/A

Section Reference	Potential Impact and Significance <sup>(a)</sup>	Estimated Impacts (%)		Basis of Estimate
		Construction <sup>(b)</sup>	Preconstruction	
Section 4.2.2.7 Potential Changes to Surface Water and Groundwater Quality	M - Surface Water S - Groundwater	90	10	These estimates are based on the water usage over the time period of construction. The assumption is made that the disturbed land will be stabilized so as to prevent erosion and that potential changes to water quality will be associated with water usage and consequent runoff potential during active preconstruction and construction. A significant contributor to construction impacts will be de-watering of the deep excavations, with water routed in accordance with a required NPDES permit.
Section 4.2.2.8 Surface water and Groundwater Users	N/A	N/A	N/A	N/A

Section Reference	Potential Impact and Significance <sup>(a)</sup>	Estimated Impacts (%)		Basis of Estimate
		Construction <sup>(b)</sup>	Preconstruction	
Section 4.2.2.9 Predicted Impacts on Water Users	S - Water Use M - Surface Water S - Groundwater	90	10	Estimates are based on a planned 86 months of construction, of which 23% is preconstruction. Estimates are based on the quantity of water to be used during the initial 23% time (assumed for preconstruction) and the remaining years for construction as shown in Table 4.2-1.
Section 4.2.2.10 Measures to Control Construction Related Impacts	S - Erosion and Sediment M - Surface Water S - Groundwater	0	100	The percentage of the construction area impacted during preconstruction is estimated to be 100%, as described previously.
Section 4.2.2.11 Consultation with federal, state, and local environmental organizations	N/A	N/A	N/A	N/A
Section 4.2.2.12 Compliance with Water Quality and Water Use Standards and Regulations	N/A	N/A	N/A	N/A
Section 4.2.2.13 Water Quality Requirements for Aquatic Ecosystems and Domestic users	N/A	N/A	N/A	N/A

Section Reference	Potential Impact and Significance <sup>(a)</sup>	Estimated Impacts (%)		Basis of Estimate
		Construction <sup>(b)</sup>	Preconstruction	
<b>Section 4.3 Ecological Impact</b>				
<b>Section 4.3.1 Terrestrial Ecosystems</b>				
Section 4.3.1.1 Vegetation	S - Terrestrial Ecosystems	0	100	The percentage of the construction area impacted during preconstruction is estimated to be 100%, as described previously.
Section 4.3.1.2 Fauna	S - Terrestrial Ecosystems	0	100	The percentage of the construction area impacted during preconstruction is estimated to be 100%, as described previously.
Section 4.3.1.3 Wetlands	S - Aquatic Ecosystem	5	95	Estimates are based on the land area of wetlands that will be permanently filled (11.7 acres (4.7 ha) of non-tidal wetland habitat of a total of 57.5 acres (23.3 ha) of wetlands, or 20%) due to the construction of the CCNPP Unit 3 site. Most wetlands work is preconstruction; minor wetlands work may be required during construction.
Section 4.3.1.4 Other Projects Within the Area with Potential Impacts	N/A	N/A	N/A	N/A

Section Reference	Potential Impact and Significance <sup>(a)</sup>	Estimated Impacts (%)		Basis of Estimate
		Construction <sup>(b)</sup>	Preconstruction	
Section 4.3.1.5 Consultation	N/A	N/A	N/A	N/A
Section 4.3.1.6 Mitigation Measures	N/A	N/A	N/A	N/A
<b>Section 4.3.2 Aquatic Ecosystems</b>				
Section 4.3.2.1 Impacts to Impoundments and Streams	S - Surface Water S - Aquatic Ecosystem	0	100	The percentage of the construction area impacted during preconstruction is estimated to be 100%, as described previously.

Section Reference	Potential Impact and Significance <sup>(a)</sup>	Estimated Impacts (%)		Basis of Estimate
		Construction <sup>(b)</sup>	Preconstruction	
Section 4.3.2.2 Impacts to Chesapeake Bay	S - Aquatic Ecosystem	0	100	<p>These estimates are based on the land area that will be impacted by the construction of CCNPP Unit 3 and related facilities and on water usage over the time period of construction. A significant contributor to construction impacts will be de-watering of the deep excavations, with water routed in accordance with a required NPDES permit. The majority of these construction impacts (sediments disturbed during the enlargement of the barge slip and the intake structure) are temporary. The portion of the Chesapeake Bay nearest the CCNPP site is of lower relative importance, none of the important species in the vicinity of the CCNPP site are endemic to Chesapeake Bay, and the area near the CCNPP site does not provide critical habitat for any species; therefore the affects of the construction of CCNPP will be small and temporary.</p>



Section Reference	Potential Impact and Significance <sup>(a)</sup>	Estimated Impacts (%)		Basis of Estimate
		Construction <sup>(b)</sup>	Preconstruction	
Section 4.3.2.3 Impacts on the Transmission Corridor and Off-Site Areas	S - Aquatic Ecosystem	0	100	Transmission corridors are not included in the definition of construction of SSCs. There are no off-site areas associated with the project that are included in the and definition of construction of SSCs.
Section 4.3.2.4 Summary	N/A	N/A	N/A	N/A
<b>Section 4.4 Socioeconomic Impacts</b>				
Section 4.4.1 Physical Impacts				
Section 4.4.1.1 The Public and Workers	N/A	N/A	N/A	N/A
Section 4.4.1.2 Noise	S - Noise	77	23	Estimates are based on a planned 86 months of construction, of which 23% is preconstruction.
Section 4.4.1.3 Dust and Other Air Emissions	S - Air Quality	77	23	Estimates are based on a planned 86 months of construction, of which 23% is preconstruction.
Section 4.4.1.4 Buildings	S - Other (Site Specific)	77	23	Estimates are based on a planned 86 months of construction, of which 23% is preconstruction.
Section 4.4.1.5 Transportation Routes	M - Transportation and Roads	77	23	Estimates are based on a planned 86 months of construction, of which 23% is preconstruction.

Section Reference	Potential Impact and Significance <sup>(a)</sup>	Estimated Impacts (%)		Basis of Estimate
		Construction <sup>(b)</sup>	Preconstruction	
Section 4.4.1.6 Aesthetics	S - Other (Site Specific)	77	23	Estimates are based on the visual aesthetic impact from construction of CCNPP Unit 3. The reactor building, turbine hall, and two natural draft cooling towers are expected to affect the aesthetics around the site. CCNPP Unit 3 is set back from, and only limited portions of the construction will be visible from, publicly accessible areas. Most construction activities will be shielded from public view and construction activities are by nature temporary.
<b>Section 4.4.2 Social and Economic Impacts</b>				
Section 4.4.2.1 Study Methods	N/A	N/A	N/A	N/A
Section 4.4.2.2 Construction Labor Force Needs, Composition and Estimates	N/A	N/A	N/A	N/A
Section 4.4.2.3 Demography	N/A	N/A	N/A	N/A

Section Reference	Potential Impact and Significance <sup>(a)</sup>	Estimated Impacts (%)		Basis of Estimate
		Construction <sup>(b)</sup>	Preconstruction	
Section 4.4.2.4 Housing	S - Socioeconomic	77	23	Estimates are based on the workforce estimated to be necessary for each phase of construction as shown in Table 4.4-3. Estimates are based on a planned 86 months of construction, of which 23% is preconstruction.
Section 4.4.2.5 Employment and Income	S - Socioeconomic	77	23	Estimates are based on the workforce estimated to be necessary for each phase of construction as shown in Table 4.4-3. Estimates are based on a planned 86 months of construction, of which 23% is preconstruction.
Section 4.4.2.6 Tax Revenue Generation	S - Socioeconomic	77	23	Estimates are based on the workforce estimated to be necessary for each phase of construction as shown in Table 4.4-3.
Section 4.4.2.7 Land Values	S - Socioeconomic	100	0	Estimates are based on the presumption that preconstruction activities have no impact on land values; only permanent structures as will be developed during construction may be perceived to impact land values.

Section Reference	Potential Impact and Significance <sup>(a)</sup>	Estimated Impacts (%)		Basis of Estimate
		Construction <sup>(b)</sup>	Preconstruction	
Section 4.4.2.8 Public Services	S - Socioeconomic	77	23	Public services availability is based on the ability of the emergency services to respond simultaneously to an emergency as well as off-site evacuation. For the educational system, estimates are based on the workforce estimated to be necessary for each phase of construction. Estimates are based on the workforce estimated to be necessary for each phase of construction as shown in Table 4.4-3.
Section 4.4.2.9 Public Facilities	S - Socioeconomic	77	23	Estimates are based on the workforce estimated to be necessary for each phase of construction as shown in Table 4.4-3.
<b>Section 4.4.3 Environmental Justice Impacts</b>				
Section 4.4.3.1 Minority and Low Income Populations and Activities	S - Socioeconomic	77	23	Estimates are based on the workforce estimated to be necessary for each phase of construction as shown in Table 4.4-3. Estimates are based on a planned 86 months of construction, of which 23% is preconstruction.

Section Reference	Potential Impact and Significance <sup>(a)</sup>	Estimated Impacts (%)		Basis of Estimate
		Construction <sup>(b)</sup>	Preconstruction	
Section 4.4.3.2 Subsistence Activities	S - Socioeconomic	0	100	The percentage of the construction area impacted during preconstruction is estimated to be 100% as described previously.
<b>Section 4.5 Radiation Exposure to Construction Workers</b>				
Section 4.5.1 Site Layout	N/A	N/A	N/A	N/A
Section 4.5.2 Radiation Sources at CCNPP Units	S - Radiation Exposure to Construction Workers	77	23	Estimates are based on the workforce estimated to be necessary for each phase of construction as shown in Table 4.4-3. Estimates are based on a planned 86 months of construction, of which 23% is preconstruction.
Section 4.5.3 Historical Dose Rates	N/A	N/A	N/A	N/A
Section 4.5.4 Projected Dose Rates at CCNPP Unit 3	N/A	N/A	N/A	N/A
Section 4.5.5 Compliance with Dose Rate Regulations	N/A	N/A	N/A	N/A

Section Reference	Potential Impact and Significance <sup>(a)</sup>	Estimated Impacts (%)		Basis of Estimate
		Construction <sup>(b)</sup>	Preconstruction	
Section 4.5.6 Collective Doses to CCNPP Unit 3 Workers	S - Effluent and Wastes S - Radiation Exposure to Construction Workers	77	23	Estimates are based on the workforce estimated to be necessary for each phase of construction as shown in Table 4.4-3. Estimates are based on a planned 86 months of construction, of which 23% is preconstruction.
Section 4.5.7 Radiation Protection and ALARA Program	N/A	N/A	N/A	N/A
<p>Notes:</p> <p>a) The qualitative significance levels of [S]MALL, [M]ODERATE, or [L]ARGE have been assigned based on deployment and effective implementation of mitigation measures and controls required by local, state and federal regulations.</p> <p>b) "Construction," as defined in 10 CFR 50.2 "Definitions" refers to the construction of "safety-related structures, systems, or components (SSCs) of a facility".</p>				

**Attachment 2**

**CCNPP Unit 3 ER Section 4.6 Page Mark-up**

except: (1) surface waters, which is expected to be MODERATE and require mitigation due to the impact of wetlands and wetland buffers; (2) traffic, which is expected to be MODERATE but manageable with the implementation of a Traffic Management Plan.}

Table 4.6-2 provides estimates of the percentage of impacts attributable to "construction" and to "preconstruction" as well as a summary of the basis for the estimates. The estimated construction related impacts presented in the table were based primarily on two factors, namely the area associated with the construction of safety-related structures, systems, or components (SSCs) and the labor hours associated with the construction of SSCs. Information related to these two factors is provided as follows:

- **Construction Area** - The area that will be developed for CCNPP Unit 3 is estimated to be approximately 460 ac (186 ha). Of this developed area, approximately 130 ac (53 ha) will be occupied by SSCs. This includes 5 ac (2 ha) for the UHS Intake Structure, 25 ac (10 ha) for the 500 kV AIS Switchyard, 30 ac (12 ha) for the Transmission Corridor, 50 ac (20 ha) for the Power Block, 15 ac (6 ha) for the Cooling Tower and 5 ac (2 ha) for the Desalination Plant. It is assumed that preconstruction activities of clearing, grubbing and site preparation will impact land area to be occupied by both SSCs and non SSCs structures/activities. All site development will be done concurrently.

- **Labor Hours** - Based on construction estimates for all phases of development of the CCNPP Unit 3, the estimated labor hours associated with the construction of SSCs is approximately 90% of the total labor hours associated with the development of the entire CCNPP Unit 3 plant site.

"Other factors that were considered where applicable include the following:

- **Construction Duration** - Estimates of impacts generally associated with construction activities were estimated to be related to construction of SSCs 77% of the time and to preconstruction activities 23% of the time.

- **Water Usage** - The quantity of water to be used for preconstruction is estimated to be 10% of the total water requirements in Table 4.2-1. Preconstruction activities were assumed to begin at the start of Year 1 and extend eight months into Year 2 to align with the assumption that preconstruction activities comprise 23% of time of construction. The water usage predicted for the first 20 months of the 86 month CCNPP Unit 3 construction period is allocated to preconstruction activities. That usage totals 10% of the total volume in Table 4.2-1.)