Application NAB-2007-08123-M05
Response to U.S. Army Corps of Engineers Information Request Dated 01/16/09
Calvert Cliffs 3 Project, LLC and UniStar Nuclear Operating Services, LLC
February 12, 2009

Question 2

Provide write up on proposed fish screens and fish return.

RESPONSE

CCNPP Unit 3 will employ impingement/entrainment mitigation techniques (low velocity approach, screens, etc.) to protect aquatic species consistent with the intent of Clean Water Act Section 316(b) regulations. To achieve this, the Unit 3 inlet piping is oriented perpendicular to the Units 1 & 2 intake flow which itself is perpendicular to the tidal flow of the bay. The intake velocity is further reduced through the use of a common forebay and subsequently separate CWS and UHS Intake Structures. All these appurtenances result in further reducing the inlet flow at the Units 1 & 2 inlet bay from 0.5 ft/s to flow velocities at the circulating water makeup structure and the UHS makeup structure of less than 0.3 fps(0.09 mps) and less than 0.1 fps (0.03 mps), respectively.

To further protect aquatic species, a fish return system and outfall from the CCNPP Unit 3 intake will reduce the mortality of aquatic species even further. Design features of the system incorporate fish-friendly buckets on the screen panels to minimize the impact on aquatic resources. The new Unit 3 fish collection/holding system will be similar to that of Units 1 and 2. It will be located on the east side (bay side) of the Unit 3 Intake Forebay. Screen wash water and fish collected from the traveling screens of the Unit 3 Circulating Water Makeup Intake Structure and UHS Intake Structure will be diverted to the new Fish Return System and will be released to the Chesapeake Bay via a buried pipe to a new shoreline outfall. The outfall will be submerged below low tide level to minimize any drop at the exit to facilitate the fish return to the Chesapeake Bay water. No modification to the existing fish return and holding system for Units 1 and 2 is necessary.