

Burkman, Jim

From: Burkman, Jim
Sent: Monday, September 22, 2008 5:44 PM
To: Miller, Edward A
Subject: FW: Work description rev 3
Importance: High
Attachments: Draft Work Description rev 8-16 rgh (7).doc

Tracking: **Recipient** **Read**
 Miller, Edward A Read: 9/22/2008 5:45 PM

Ed,

This is the revised work description text we submitted to clarify the 5.7 vs. 5.5 acres of tidal impact. There were no revisions to figures associated with this change.

Note: The request to preserve both methods of dredging is noted here.

Jim

From: Burkman, Jim
Sent: Sunday, August 17, 2008 2:05 PM
To: 'Anderson, Kathy NAB02'; 'Robert Tabisz'
Cc: Decker, Lisa; Lutchenkov, Dimitri
Subject: FW: Work description rev 3
Importance: High

Kathy/Bob,

We discovered two errors in the work description narrative that was issued on 7/14/08.

1. The total tidal wetland impact number of 5.5 acres should have been 5.7 acres or an increase of 0.2 acres. (There was a calculation error in the 7/14/08 version)
2. The impact associated with the discharge pipe should be 38,500 square feet. (This is a revision to the impact originally stated)

These corrections as well as any other revision to the narrative are highlighted in yellow on the attached document.

Per an earlier request, we are also want to preserve the option of both mechanical and hydraulic dredging.

Please call if you have any questions.

Thanks,

Jim Burkman
(410) 787-5130

10/7/2008

DRAFT WORK DESCRIPTION

The applicants propose, in accordance with the attached plans, to impact approximately 11.72 acres of nontidal wetlands and 5.7 acres of tidal open waters for the purpose of performing site preparation activities and construction of supporting facilities, for which a license from the Nuclear Regulatory Commission is not required, at the site of a proposed nominal 1,710 MW nuclear power generation station (Unit 3) in Calvert County, Maryland. The proposed nuclear power generation station would generate electricity for sale at wholesale. There is a demonstrated future need for additional base-load electric capacity in the region that includes the State of Maryland.

Work in Nontidal Areas:

Power Block:

To clear and grade for construction of a power block, including reactor, turbine and safety-related structures, permanently impacting 2,470 square feet (0.06 acres) along 617 linear feet of stream bed.

Laydown Areas:

To clear and grade for construction of five construction laydown areas in various locations, permanently impacting 95,832 square feet (2.20 acres) of nontidal forested wetlands; 52,708 square feet (1.21 acres) of emergent wetlands; 114,563 square feet (2.63 acres) of open water; and 1,535 square feet (0.04 acres) along 384 linear feet of stream bed.

Cooling Tower:

To clear and grade for construction of a cooling tower, permanently impacting 32,670 square feet (0.75 acres) of nontidal forested wetlands and 5,780 square feet (0.13 acres) along 1,445 linear feet of stream bed.

Switchyard:

To clear and grade for construction of a switchyard, permanently impacting 179,903 square feet (4.13 acres) of nontidal forested wetlands and 16,710 square feet (0.38 acres) along 4,178 linear feet of stream bed.

Construction Access Road:

To clear and grade for construction of the Unit 3 construction access road will require three separate road crossings. The first road crossing is 200 linear feet of 30-inch diameter reinforced concrete pipe (RCP); the second road crossing is 100 linear feet of 36-inch diameter RCP; and the third road crossing is 520 linear feet of two 54-inch diameter RCP. The invert of each pipe will be depressed to match the slope and invert of the stream or wetland being crossed. The work will include the emplacement of a 15-foot by 15-foot riprap scour pad at two of the road crossings and a 40-foot by 40-foot riprap scour pad at the third road crossing. All of the aforementioned work will permanently impact 31,363 square feet (0.72-acre) area of nontidal forested wetlands and 4,336 square feet (0.10 acres) along 1,084 linear feet of stream bed.

Heavy Haul Road:

To clear and grade for construction of a heavy haul road leading from the barge slip to the construction site, permanently impacting 2,570 square feet (0.06 acres) along 642 linear feet of stream bed.

Work in Tidal Areas:

New Sheet Pile, Armor Removal, Armor Installation for Intake at Existing Forebay:

To construct the new Unit 3 intake, install a sheet pile wall extending approximately 180 linear feet from the existing shoreline to existing baffle wall and extending approximately 90 feet channelward of the approximate mean high water shoreline creating an approximately 9,000 square foot wedged shaped pool. To install the new sheet pile wall, approximately 50 feet of existing shoreline armor protection will be removed. Once the new sheet pile wall is in place, approximately 60-feet of armor within the wedged shape pool will be removed and temporary upland sheet piling will be installed along the make up water pipe routing. This upland sheet piling will extend out into the wedge shaped pool approximately 30 feet to facilitate dewatering, installation of the pipe and the associated trash rack. The area within the wedged shaped pool surrounded by the pipe line sheet piling will be dewatered and dredged

by mechanical method to create an approximately 30-feet wide by 30-feet long by 25-feet deep area, resulting in approximately 900 cubic yards of sand and gravel, which will be deposited at an existing upland (non-wetland), environmentally controlled area at the Lake Davies laydown area onsite. After dredging, two 60-inch intake pipes with trash racks at the pipe openings, extending approximately 20 feet channelward to a bottom elevation of -25 feet mean low water, will be installed. After installation of the pipes and associated trash racks, shoreline armor protection along the shore approximately 80 linear feet and extending 10 feet channelward will be restored within the wedged shaped area extending. In addition, armor protection will extend out beyond the new sheet pile wall approximately 75 linear feet and extend approximately 205 feet channelward. As a final step, the temporary sheet pile wall, around the 60-inch intake pipes will be removed allowing the area to flood and submerge the pipes.

Discharge Pipe:

A 30-inch high density polyethylene (HDPE) discharge pipe with a three single port diffuser outfall structure approximately 550 linear feet channelward and depressed 4 feet below the bay bottom will be installed using mechanical dredging methods. The discharge point will be elevated 3 feet above the bay bottom. This installation will temporarily impact approximately 38,500 square feet, approximately 0.9 acres, along 550 linear feet of the bay bottom. Additionally, a 20-foot by 40-foot riprap scour pad will be installed at the diffuser outfall permanently impacting 800 square feet, 0.02 acres. Approximately 7,000 cubic yards of existing material dredged for the pipe installation will be reused as trench fill (approximately 5,800 cubic yards) with the remainder (approximately 1,200 cubic yards) being deposited at an existing upland (non-wetland), environmentally controlled area at the Lake Davies laydown area onsite. (Note: the pipe will be installed with a minimum of 4 feet of cover to protect it from storms and snagging by small boat anchors. Turbidity curtains are anticipated during the work to contain suspended sediments.)

Restoration of Barge Unloading Facility including Maintenance and New Dredging:

To facilitate receipt of equipment and materials for the construction of the plant, two existing pile cap crane supports and one mooring bollard will be removed. The existing barge slip will be restored and extended to re-establish use of an approximately 1,500-foot by 130-foot (average width), 195,000 square foot area to a bottom elevation of -16 feet mean low water, requiring approximately 50,000 cubic yards of mechanical dredging. Approximately 1,065-feet of the dredging is considered maintenance, and the remaining 435-feet is an extension beyond the original dredging limits and is required to reach the bottom elevation of -16 feet mean low water. Of the approximately 50,000 cubic yards of dredging required, 45,000 cubic yards are considered maintenance dredging, and 5,000 cubic yards are considered new dredging. Ten-year maintenance dredging is requested.

The dredge material will be characterized prior to use. The dredge material removed from the barge slip will either be used during the plant construction as sand bedding for underground pipe installation or deposited at an existing upland (non-wetland) environmentally controlled disposal area onsite. Suspended sediments resulting from this work are anticipated to be contained by a floating turbidity curtain.

As a part of the restoration, a new sheet pile wall will be installed along the shore line in front of the existing bulk head which was built as a part of the original design. The bulk head will consist of a new sheet pile wall driven immediately in front of the existing remaining bulk head. This bulk head will be approximately 90 feet in length starting from the barge slip extending south to an existing outfall culvert. On the land side of the new sheet pile bulk head, a concrete apron will be placed along with a gravel apron to allow equipment to be off-loaded from barges with wheeled mounted transporters.

Near shore maintenance dredging will require removal of sediment which has mounded up over the past 30 years and will include restoration of an existing culvert outfall. Due to silt build up over the years, the discharge from this outfall meanders in a north-south direction prior to discharging into the barge slip area. The restoration activities in this area will include the installation of a 40-foot x 40-foot x 2-foot deep riprap apron extending approximately 40 feet channelward will be placed directly in front the existing outfall allowing the discharge to flow directly in the bay as originally designed. The existing waterway depths range from approximately 0 feet to -16 feet elevation within the work area.

Unit 3 Fish Return:

A fish return system will be provided as a part of the intake design. This design will be similar to the existing Unit1/Unit 2 fish return and will be finalized as a part of the detailed design effort and in conjunction with the purchase of intake pumps and screens.

To construct the proposed fish return outfall, an 18-inch diameter HDPE pipe will be installed in a mechanically excavated trench. The pipe will be installed 4 feet below the bay bottom and will emerge from the bay bottom 40 feet channelward. The outfall location will be protected with a 10-foot by 10-foot riprap apron extending approximately 48 feet channelward. To install the pipe, approximately 40 linear feet of the existing shoreline revetment will be removed, and approximately 500 cubic yards of material will be dredged within the work area. The dredged material will be returned to the trench after the pipe is placed, and the existing shoreline revetment will be restored to its original design after pipe installation. Turbidity curtains are anticipated during the work to contain suspended sediments.

Total Proposed Project Impact:

The total proposed project would permanently impact 343,253 square feet, 7.88 acres, of forested nontidal wetlands; 52,707 square feet, 1.21 acres, of emergent nontidal wetlands; 114,563 square feet, 2.63 acres, of non-tidal open water; 33,400 square feet, 0.77 acres, along 8,350 linear feet stream bed portions; and 248,000 square feet, 5.7 acres, of tidal open waters (approximately 138,500 square feet, 3.2 acres, of the tidal open water impacts are maintenance dredging; approximately 109,000 square feet, 2.5 acres, is new dredging; approximately 52,500 square feet, 1.2 acres, of the new dredging will be backfilled).

This work includes a total of 3,485 square feet, 0.08-acre area, of isolated forested wetland impact.