

**Response to DNR Data Request No. 1**  
**Maryland Public Service Commission Case No. 9127**  
**UniStar Nuclear Energy, LLC and UniStar Nuclear Operating Services, LLC**

**Question 1-11**

Please provide maps and other graphics depicting the surveyed locations of two listed flora of special concern that would be affected by construction activities at the proposed site; these are *Solidago speciosa* (showy goldenrod; Maryland Threatened) and *Quercus shumardii* (Shumard oak; Maryland Threatened). Please provide additional details and estimates of the population sizes of both species to supplement the general description provided in the Technical Report on page 5-47. Please provide details of what would actually be done to mitigate impacts to these two state-listed species, to supplement the general statements made in the Technical Report on page 5-48.

**RESPONSE**

Maps of the surveyed locations of showy goldenrod (*Solidago speciosa*) and Shumard oak (*Quercus shumardii*) are attached with this documentation as Figure 1.

Estimates of population sizes for showy goldenrod and Shumard oak were not conducted during the rare plant survey in 2006 and 2007. These areas will be re-surveyed during the appropriate portion of their growing season to ascertain the number of individuals in each population, areal extent of each population, and the general condition of each population. The re-surveys and reporting are expected to be completed by October 2008 and will be provided to the PPRP.

Mitigation for the showy goldenrod will consist of translocation of rhizomes (underground roots) to a mitigation planting site outside of the project construction limits. The translocation will be conducted during an appropriate time of year, preferably fall, prior to initiation of construction activities. The rhizomes can be carefully dug by hand and be taken directly to the mitigation planting site for replanting. Where possible, all individuals in each showy goldenrod subpopulation will be translocated to the mitigation planting site. If a particular subpopulation is too large to translocate in its entirety, then a minimum of twelve (12) individual plants from that subspecies will be translocated to the mitigation planting site. Once reestablished at the new location, the transplanted rhizomes should successfully spread over the mitigation planting site until their numbers and aerial extent meet or exceed their condition at their original location. Using the translocated rhizomes also maintains the localized genetic diversity of the onsite showy goldenrod populations.

Mitigation for Shumard oak will include measures to minimize construction impact and to propagate seedlings for use within wetland mitigation areas. The Shumard oaks on the property are all too large to be translocated successfully (greater than 15-inch diameters). To minimize construction impacts, construction barriers with prominent field marking at

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the drip-line for each tree will be established prior to construction activity. The drip-line constitutes an approximately circular area surrounding a tree trunk and extending outward horizontally as far as foliage on the outermost limb. Appropriate temporary fencing and signage will be used to protect these trees. If disturbance can be avoided within the drip-line, no further mitigation should be necessary to protect the Shumard oak population on the site. However, for the case where disturbance cannot be avoided, acorns from onsite Shumard oak trees will be collected and propagated in a greenhouse to generate oak seedlings. These seedlings will be planted within the proposed wetland mitigation areas per the planting guidelines described in the wetland mitigation plan (as discussed in response to Question 1-9). Planting these seedlings will provide a native plant source for the proposed wetland mitigation activities and will maintain the localized genetic diversity of the onsite Shumard oaks.