

Mitigative Measures Identified by SERI in its ER and Used by NRC Staff in Assessing FEIS Significance Levels

Mitigation Measure	Construction / Operation	ER Section(s)
Minimizing land cover impact by careful construction techniques and reclaiming land disturbed by construction to the maximum extent possible	Construction	4.1.1, 4.3.1, 4.4.1
Using standard noise protection and abatement procedures during construction. Providing hearing protection to onsite personnel if needed. Moving excessively loud activities to daytime hours if necessary	Construction	4.1.4, 4.4.1
Surveying areas prior to disturbance for archaeological resources, followed by data recovery, if necessary	Construction	4.1.3
Stabilizing embayment banks with riprap or other appropriate means during and following construction, and following requirements of ACE	Construction	4.2.1, 4.2.2, 4.3.2
Implementing site-specific storm water pollution prevention plans; maintaining vegetative cover on land not in active construction; routing runoff to existing sedimentation basins; and monitoring discharges in accordance with NPDES and State water-quality standards and requirements	Construction	4.2.1, 4.2.2, 4.3.2
Using tieback walls or similar control technology to limit effects of dewatering in accordance with applicable MDEQ regulations	Construction	4.2.1, 4.2.2
Preventing contaminants from entering the aquatic system through use of a Spill Prevention Control and Countermeasure Plan	Construction	4.3.2
Segregating excavated topsoil for replacement in pipeline trench to allow wetland characteristics to be restored; confining construction to low-water periods to minimize disturbance of wetland soils; using low-weight construction equipment or operating from protective surfaces; and reseeded following construction	Construction	4.3.1

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Mitigation Measure	Construction / Operation	ER Section(s)
Modifying construction activities as necessary to avoid nesting or similar critical life history periods	Construction	4.3.1
Avoiding removal of isolated mixed hardwood-loblolly pine stand north of the switchyard	Construction	4.3.1
Avoiding areas where square-stemmed monkeyflower (<i>Mimulus ringens</i>) occurs, if documented prior to construction	Construction	4.3.1
Conducting surveys for species of special concern prior to construction activities	Construction	4.3.1
Controlling air emissions, if necessary, to meet requirements of applicable air regulations and onsite permits. Open burning would be done in burn pits in compliance with MDEQ regulations	Construction	4.4.1
Controlling dust by water spray, reseeding, and mulching, as necessary; equipping concrete batch plant with dust suppression equipment	Construction	4.4.1
Implementing flexible construction shifts and Unit 1 operation shifts to minimize impact on local traffic	Construction	4.4.2
Incorporating drift eliminators into design of cooling towers to minimize potential for salt deposition	Operation	5.1.1, 5.3.3
Maintaining natural drainage patterns as much as practicable	Operation	5.2.1
Maintaining sedimentation basins to minimize sedimentation to Hamilton Lake	Operation	5.2.1, 5.2.2
Disposing dredge spoils as required by ACE and MDEQ	Operation	5.2.2
Designing intake pipes/screens to minimize potential for impingement and entrainment	Operation	5.3.1

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Mitigation Measure	Construction / Operation	ER Section(s)
Maintaining/restoring bank stabilization following any construction on the river shore	Operation	5.3.2
Using proven industrial hygiene principles to reduce worker exposure to microorganisms	Operation	5.3.4
Treating effluents containing biocides or other chemicals prior to discharge, in compliance with NPDES permit requirements. Onsite sanitary waste treatment would include tertiary treatment. SERI would also develop and implement a Storm Water Pollution Prevention Plan to manage runoff	Operation	5.5.1
Collecting and storing chemical wastes and waste petroleum products; disposing or recycling offsite at licensed facilities	Operation	5.5.1
Developing and implementing ALARA requirements to mitigate occupational exposures to radioactive and mixed wastes	Operation	5.5.2
Instituting flexible work hours and additional road improvements, such as traffic lights or turn lanes, as needed to mitigate effects on local traffic	Operation	5.8.2
Increasing revenue to Claiborne County and the town of Port Gibson to support emergency services	Operation	5.8.2

**Anticipated or Assumed State/Local Government Activities
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Anticipated or Assumed Activity	FEIS Section
New highway construction to extend the present path of Highway 18 is scheduled for early 2006 (see Figure 2-11). This proposed extension will connect Highway 18 to Grand Gulf Road, providing additional access to the Grand Gulf ESP site (SERI 2004a; Williford, Gearhart, and Knight 2005).	2.8.2.2
<p>At least \$7.8 million [of the assessed taxes from GGNS] goes to Claiborne County (SERI 2004c). Of this amount, \$3 million is allocated contingent upon Claiborne County upholding its commitment to the GGNS offsite emergency plan. The \$7.8 million represents roughly 83 percent of all Claiborne County revenues (Mississippi State 2002).</p> <p>The Mississippi State Tax Commission transfers \$160,000 annually to the town of Port Gibson provided that the city maintains its commitment to the GGNS offsite emergency plan.</p>	2.8.2.3
Emergency planning responsibilities are assigned to a number of departments and agencies. Federal, State, and local officials will implement appropriate protective actions in case of an emergency (MDOT 2004a; Scott 2004).	2.8.2.6
County officials do have verbal agreements and are in contact with other licensed facilities within 96 km (60 mi) and believe that emergency responders would come to help from other counties, but they would like to have much more capability under local control (Scott 2004).	2.8.2.6
The transportation network at the Grand Gulf site in Claiborne County and in the surrounding counties of Copiah, Hinds, Jefferson, and Warren Counties in Mississippi and Tensas Parish across the Mississippi River in Louisiana is a well-developed system and would not be significantly affected as a result of construction activities. Several upgrades are planned or already underway that will lessen impacts (Section 2.8.2.2).	4.5.1.3

**Anticipated or Assumed State/Local Government Activities
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Anticipated or Assumed Activity	FEIS Section
The conclusion of LARGE beneficial impacts by the NRC was predicated on certain assumptions made by the staff; these include: . . . that there are no significant changes in Mississippi tax law, especially the terms and conditions for taxability of real property.	4.5.3.3
A highway construction project to extend State Highway 18 is in the advanced planning stages (Section 2.8.2.2). This proposed extension would connect State Highway 18 from Port Gibson to Grand Gulf Road near the site, providing additional access to the Grand Gulf ESP site (SERI 2004a). The section of U.S. Highway 61 from Natchez Trace Parkway south through Claiborne and Jefferson Counties to the Jefferson/Adams County line is currently being widened from two to four lanes (SERI 2004a).	4.5.4.1
Specific agreements have been established with local medical care suppliers to support emergency planning (SERI 2005). It is expected that these arrangements would be updated to support the new facility. A new medical center has recently been constructed in Vicksburg (56 km/35 mi from the site on Highway 61 North) with a full range of major medical capability.	4.5.4.4
Although some water and sewer systems [in surrounding communities] are reaching capacity, it is likely that they would have to be expanded anyway to meet normal growth.	4.5.4.4
While there are limited police, fire, and medical facilities in the vicinity of the plant, the cooperative operational linkages between many of the local governments provides a considerable backup capability.	4.5.4.4
In that case [the event of a large influx of school-age children], the impacts of building and staffing additional school facilities likely would be moderate, assuming some level of State impact assistance.	4.5.4.5
However, if, as expected, most of the construction workforce lives outside of Claiborne County, the other school districts in the region likely to receive students are larger than Port Gibson or have sufficient capacity planned to absorb the potential increases in enrollment related to construction.	4.5.4.6

**Anticipated or Assumed State/Local Government Activities
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Anticipated or Assumed Activity	FEIS Section
The estimated workforce of 3150 would have a SMALL effect on the transportation network in the vicinity and region because several permanent transportation mitigation measures are being implemented that will remove most remaining bottlenecks.	4.5.4.6
The conclusion of MODERATE impacts by the NRC was predicated on certain assumptions made by the staff; these include: that . . . the state would provide some financial help if the school system were seriously affected by in-migration.	4.5.4.6
If additional tax payments and planned infrastructure improvements are not made to Claiborne County to compensate for the additional burden of construction traffic and possible new residents, the staff concludes that the socioeconomic burden on local taxpayers (largely minority, and a majority of whom are low income) may be adverse, disproportionate, and MODERATE.	4.7.2
The conclusion of LARGE beneficial to MODERATE adverse impacts by the NRC staff is predicated on certain assumptions made by the staff. These include that . . . there are no significant changes in the terms and conditions for taxability of real property under Mississippi tax law	4.7.3
Section 4.5.4.1 shows a number of permanent changes to the regional and local transportation network that would reduce any potential adverse impacts generated by the influx of 3150 construction workers during construction of one or more new units.	5.5.4.1
Therefore, while in general no unforeseen demands on medical facilities would result from the operation of the new unit or units, there may be increased demands for beds in Port Gibson's hospital as well as increased hours of operation. Financing the potential hospital upgrades would require additional revenue (Scott 2004).	5.5.4.4

**Anticipated or Assumed State/Local Government Activities
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Anticipated or Assumed Activity	FEIS Section
Workers with school-aged children would be interested in communities with good school districts. The largest school district near the Grand Gulf ESP site is in Vicksburg, Mississippi. The current student population at Vicksburg is 9180 (NCES 2002). Given sufficient lead times, school officials in Warren County are not concerned about absorbing the potential increase in students (Scott 2004).	5.5.4.5
Port Gibson has only 2011 students (Section 2.8.2.7). If 14.6 percent of new workers moving to the area located in Port Gibson and their family size is assumed to be four (two of whom are students), the impact in Port Gibson would be 169 students, an 8.4 percent increase. This would be a moderate impact (assuming some impact assistance from the State) on Port Gibson schools were it to happen.	5.5.4.5
The estimated workforce of 1160 would have a SMALL effect on the transportation network in the vicinity and region because permanent transportation mitigation measures proposed for the construction of the new unit or units would also result in much reduced transportation-related impacts during operation of the new unit or units.	5.5.5
The conclusion of LARGE to SMALL beneficial impacts and SMALL to MODERATE adverse impacts by the NRC staff is predicated on certain assumptions made by the staff. These include . . . there are no significant changes in Mississippi tax law, especially the terms and conditions for taxability of real property.	5.5.5
SERI would provide some additional revenues to support emergency services in Claiborne County and Port Gibson (see Section 5.1.1). However, depending on where new in-migrating employees decide to live, Claiborne County might have to upgrade several components of its social services and public utilities infrastructure.	5.7.3
The conclusion of LARGE beneficial impacts is predicated on certain assumptions made by the NRC staff. These include...there are no significant changes in the terms and conditions for taxability of real property under Mississippi tax law[... .]	5.7.4

**Anticipated or Assumed State/Local Government Activities
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Anticipated or Assumed Activity	FEIS Section
<p>Given the current plans and construction activities for road improvements in the region of the Grand Gulf ESP, the potential cumulative increase in the number of vehicles during a combined outage, construction, and permanent workforce egress and ingress into the site are unlikely to have an adverse impact on the local road system.</p>	7.6
<p>The conclusion of LARGE net beneficial impacts by the NRC staff was based on certain assumptions. These include: ... there are no significant changes in the terms and conditions for taxability of real property under Mississippi tax law[...] The specific level within the wide range of possibilities depends largely on to what extent the local communities have access to the tax base represented by the new units.</p>	7.6