

Applicant: <u>Alabama Carbon, LLC</u>
Mine Name: <u>Glade Preparation Plant</u>
Permit Number: <u>P-3829, Revision R-8</u>

Attachment III-B-2(d)

#### FINE COAL PROCESSING WASTE BANK REQUIREMENTS

Coal fines from the Glade Preparation Plant will be ran through a press prior to mixing with coarse refuse and transported by an overland conveyor to Coarse Refuse Disposal Area No. 3 for disposal. The detailed design plans for Coarse Refuse Disposal Area No. 3 will be designed using current prudent engineering practices and Regulatory Authority design criteria and certified by a qualified registered professional engineer.

All surface drainage will be routed around the outslope of the waste bank by using diversion ditches. The diversion ditches will be designed to pass a peak flow from a 100 yr. - 6 hr. precipitation event.

For areas where fill is to be placed into a natural or man made drainage course, springs, or wet weather seeps underdrains will be installed to prevent erosion, ensure stability, and to prevent infiltration. The type of underdrain system will be specified within the detailed design plans.

All vegetation and any organic material will be removed prior to the construction of the coarse refuse disposal area. Any topsoil removed will be segregated and stored on-site for future reclamation needs. An underdrain system will be placed beneath the coarse refuse disposal area as shown in the detailed design plans.

Slopes of the waste bank will be maintained at a minimum slope to be specified within the detailed design plans. The slopes of the waste bank will be designed to exceed a 1.5 minimum long term static safety factor and 1.2 dynamic safety factor.

Sufficient site and laboratory investigations will be performed on the foundation area and the coarse refuse disposal area fill material to be utilized in the design of the waste bank. If a potential hazard is revealed, the Regulatory Authority will be informed and necessary safety measures will be implemented.

The waste bank will be inspected by a registered professional engineer or other qualified professional specialist under the direct supervision of the qualified professional engineer. Inspections will be made at least quarterly and during times of removal of organic material and topsoil, installation of diversion ditches, installation of underdrains, placement of the coarse refuse/fines mixture, placement of cover material, construction of diversion ditches and revegetation of the disturbed area. Photographs of the underdrain will be taken during and after their construction but prior to their cover. Certification inspection reports will be filed with the Regulatory Authority stating that proper construction and maintenance are occurring in accordance

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with approved design plans. Inspection reports will be retained at the facility office.

Upon completion of operations, the waste bank area will be graded using mobile equipment, as outlined in the Detailed Design Plans, to the configuration approved in the design plans. The waste bank will be covered with 4 feet of non-toxic, non-acid forming, and non-combustible material. All disturbed areas will be vegetated with an appropriate combination of grasses and legumes as stated in the reclamation plan, fertilized, and mulched to ensure a permanent diverse vegetative cover. Soil amendments, including lime and fertilizer, will be added and disced into the cover material in rates as recommended by laboratory analysis performed upon the cover material. These soil amendments will ensure a diverse effective vegetative growth upon the material.

See Attachment III-B-2(d), Coarse Refuse Disposal Area No. 3.

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#### COARSE COAL PROCESSING WASTE EMBANKMENT REQUIREMENTS

Coal fines from the Glade Preparation Plant will be ran through a press prior to mixing with coarse refuse and transported by an overland conveyor to Coarse Refuse Disposal Area No. 3 for disposal. The detailed design plans for Coarse Refuse Disposal Area No. 3 will be designed using current prudent engineering practices and Regulatory Authority design criteria and certified by a qualified registered professional engineer.

All coarse refuse produced by the screening operation at the Glade Preparation Plant will be mixed with coal fines that have been ran through a press prior to mixing with coarse refuse and transported by an overland conveyor to Coarse Refuse Disposal Area No. 3 for disposal. The disposal plans will be designed using current prudent engineering practices and Regulatory Authority design criteria and certified by a qualified registered professional engineer.

All surface drainage will be routed around the outslope of the waste bank by using diversion ditches. The diversion ditches will be designed to pass a peak flow from a 100 yr. - 6 hr. precipitation event.

For areas where fill is to be placed into a natural drainage course, underdrains will be installed to prevent erosion, ensure stability, and to prevent infiltration. The type of underdrain system will be specified within the detailed design plans.

All vegetation and any organic material will be removed prior the construction of the embankment. Any topsoil removed will be segregated and stored onsite for future reclamation needs.

All refuse material will be transported and placed in a controlled manner in the waste bank. The material will be spread in two feet lifts and compacted to 90% of the standard proctor as outlined in ASTM, as to ensure stability of the area, to prevent combustion of the material, minimize effects of surface and ground water quality and quantity, and not create a public hazard.

Slopes of the waste bank will be maintained at a minimum slope to be specified within the detailed design plans. The slopes of the waste bank will be designed to exceed a 1.5 minimum long term static safety factor.

Sufficient site and laboratory investigations will be performed on the foundation area and the fill material to be utilized in the design of the fill. If a potential hazard is revealed, the Regulatory Authority will be informed and necessary safety measures will be implemented.

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The waste bank will be inspected by a registered professional engineer or other qualified professional specialist under the direct supervision of the qualified professional engineer. Inspections will be made at least quarterly and during times of removal of organic material and topsoil, installation of diversion ditches, installation of underdrains, placement and compaction of refuse material, and revegetation of the fill. Photographs of the underdrain will be taken during and after their construction but prior to their cover. Certification inspection reports will be filed with the Regulatory Authority stating that proper construction and maintenance are occurring in accordance with approved design plans. Inspection reports will be retained at the facility office.

Upon completion of operations, the waste bank area will be graded using mobile equipment to the configuration approved in the design plans. The waste bank will be covered with 4 feet of non-toxic, non-acid forming, and non-combustible material. All disturbed areas will be vegetated with an appropriate combination of grasses and legumes as stated in the reclamation plan, fertilized, and mulched to ensure a permanent diverse vegetative cover. Soil amendments, including lime and fertilizer, will be added and disced into the cover material in rates as recommended by laboratory analysis performed upon the cover material. These soil amendments will ensure a diverse effective vegetative growth upon the material.

See Attachment III-B-2(d), Coarse Refuse Disposal Area No. 3.