

JUSTIFICATION AND NEED FOR GENOA OFF-SITE FACILITY

- Proposed Air Quality Emission Control Upgrades at the Genoa Station will reduce beneficial reuse options for the coal combustion byproduct (CCBs) and substantially increase the amount of CCBs requiring landfill disposal.
- Based on the coal blend typically burned at the Genoa Station an estimated 165,000 cubic yards per year of moisture-conditioned CCBs will require transport and disposal at a landfill. The disposal volume can vary based upon the coal type burned and CCBs beneficial reuse rate.
- Landfill disposal options analyzed included the Alma Off-Site Landfill, third-party landfills located within the region, and a “greenfield” landfill located within a 25-mile radius of the Genoa Station. Based on estimated transport and disposal costs the Alma Off-Site Landfill and the third-party landfills were estimated to be two (2) to six (6) times more expensive per ton versus a “greenfield” landfill located within 25-miles of Genoa.
- Use of third party landfills for disposal of Genoa Station CCBs would also substantially reduce the remaining site life of the facilities. In most cases it reduced the facility site life to less than the time typically required to develop a replacement landfill (i.e., 4 to 7 years).
- The estimated remaining plant life of the Genoa Station is 30 years, thus, the “greenfield” landfill facility must be sized to provide thirty years of CCBs disposal capacity using conservative assumptions (approximately 11.4 million cubic yards).
- Based on regulatory and project specific criteria 70 landfill sites were identified within 20-miles of Genoa and ranked. The top two ranked sites are located approximately 9-miles due east of Genoa and north of STH 56.
- Based on continuing research being conducted through-out the world, near term solutions for the beneficial reuse of substantial amounts of CCBs produced by the Genoa Station due not appear available. Thus, containment in a dedicated monofill “greenfield” landfill appears to be the most environmentally sound and economically effective solution for managing the CCBs.
- Disposal of CCBs in a monofill also maintains the potential to someday mine the disposed material if a practicable beneficial use for the waste ash is discovered.