UPLAND AND WETLAND VEGETATION ESTABLISHMENT ON COAL SLURRY IN NORTHERN MISSOURI

by

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Abstract. Since the Cooperative Wildlife Research Laboratory's (CWRL) Mined Land Reclamation Program's first establishment of a wetland on slurry in 1976, industry, state, and federal agency interest in reclamation alternatives for inactive slurry has increased. CWRL has been involved in pre-reclamation site characterization and monitoring for inactive slurry impoundments throughout Illinois, Indiana, Kansas, Kentucky, Missouri, and Washington. Geochemical site characterization of three slurry impoundments at the AECI Bee Veer Mine located near Macon, Missouri began in April 1990. A substrate sampling grid was established for all slurry impoundments with a centerline orientated parallel to the discharge to decant f low pattern. Surface (0-6") and subsurface (30-36") slurry samples were collected annually and analyzed for acid-base balance, immediate acidity macro- and micro-nutrients, potential phytotoxic metallic ions and salts, and texture. Water table elevations and water quality were monitored quarterly from shallow (≤ 12') peizometers. General reclamation plans included annual (3 years) incremental limestone amendments (35-50 tons/acre) and direct vegetation establishment. Cool and warm season grasses dominate vegetation cover in upland habitats (slurry cell RDA1) while wetland habitats (palustrine emergent seasonally-permanently inundated) have been established in slurry cells (RDA2 and RDA3). Isolated *hot spots* continue to be amended with limestone and supplemental vegetation establishment is scheduled.

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