COAL HANDLING SYSTEM FOR NEW IGCC FACILITY

PROJECT: Design-Supply of Coal Handling System For A New 618 MW IGCC facility

CLIENT: Confidential

LOCATION: Knox County, Indiana

SERVICES: Engineering Design, Supply and Field Services

DESCRIPTION

River Consulting provided structural, mechanical, piping and electrical engineering design along with equipment procurement and field services for the coal handling system for the new IGCC facility. The plant will utilize Indiana and Midwestern coal with an estimated use of 1.7 to 1.9 million tons of coal per year.

Design for the coal handling system included conveyor design, piping for service air and water, conveyor washdown systems, heat traced water lines, rail and truck unloading hoppers and conveyor tunnels, stockpiling, reclaim to day bunkers, dust collection systems, concrete stacking tube and head house, coal unloading building, and all associated electrical and instrumentation design. The new system utilizes seven conveyors, eight reclaim vibrating feeders, and two unloading belt feeders.

River Consulting also provided equipment supply for the coal handling system components. Items supplied included conveyors, hoppers, buildings, samplers, belt scales, automated rail unloading, stacking tube, magnetic separators, utility water and air systems, and electrical motors, control panels and cabinets, and field devices and instrumentation. Additionally, the dust collection system supplied features state of the art technology to meet and exceed the most stringent EPA codes.

PRINCIPAL FEATURES

- Two 60 inch truck/rail unloading conveyors, 150-600 tph capacity each
- 48 inch belt conveyor to live storage, 1,200 tph capacity
- Two 42 inch reclaim to coal bunker belt conveyors, 900 tph capacity each
- Two 42 inch reversible coal bunker belt conveyors, 900 tph capacity each
- Reclaim via underground hoppers with vibratory feeders with variable rates of 200-900 tph each
- 12 foot diameter (inside) by 78 foot 9 inches tall concrete stacking tube capable of stockpiling a 20,000 ton coal pile with design to facilitate future expansion of another stacking tube of similar dimensions
- As-received and as-fired sampling systems
- Dust collection systems with better than 0.005 gr/dscf emission rate
- Approximately 2,500 feet of conveyors
- 140 foot long x 30 foot wide x 50 foot high coal unloading building