

Project Summaries and Assignments

Civil/ Structural/Mechanical Lead Experience

Major Infrastructure Projects

Houston, TX - State of Texas and Houston Metro - \$300MM Southwest Freeway Expansion: Reconstructed Houston's largest freeway. Served as Senior Project Manager for the construction of a two directional bus way along the center of the Southwest Freeway, as well as, adding two additional lanes in both directions and expanding frontage roads. Responsible for contract negotiations, budgets, schedules, roadway and deck designs, construction, and project execution and work completion. Facilitated resolutions to conflicts arising from interagency involvement and multiple designers and contractors. Prepared environmental impact study for the project.

Houston, TX, Washington DC, and Los Angeles, CA – Federal Government - \$3MM Underground Liner Projects: Under subcontract to major contractors, provided the design and construction methods for the installation of HDPE liners for five to 15 foot diameter storm sewers and rapid transit tunnel projects for the control of methane gas and water leakage.

Houston, TX – Metro Houston - \$2.3billion Rapid Rail System: Served as the Project Unit Manager for the development of a eighteen mile heavy rail facility which was designed to connect the southwest and north sections of Houston to downtown and other major employment areas. The project included three major bridges, tunnels (subways), power and communications systems, and railroad design and construction. Project responsibilities included the design, construction, and supervision from concept through start-up of a the first three mile section

Major Industrial Facilities

Saudi Arabia - Aramco Project \$230MM Sulfur Pipeline and Export Facilities: Designed and specified a 2000 TPH sulfur prill bulk material handling systems for storage, reclamation, and ship loading facilities. The project also included the design of utility systems, specifications of heat jacketed pumps, and pipe designs and layouts.

Ridgeville, SC - \$120MM Carbon Electrode Manufacturing Facility: Specified process and support equipment such as pumps, compressors, mill machines, petroleum pitch blending, and material handling equipment for a carbon electrode manufacturing

facility. The process was designed with a mechanized roller conveyor system, electronically controlled to removed electrodes and separate containers and sand packs for further finishing. Specified designs of the Sager Can Operation with robotics for the electrode process.

Tennessee Valley Authority, TN – TVA \$80MM Coal Preparation Plant: Completed a turnkey coal preparation plant for the mining industry. Designed conveyors, trusses and related machinery equipment. Also [designed the floor structure plans](#) for the screen section of the plant.

Birmingham, AL – Reynolds Metals - \$4MM Aluminum Recovery Process: Engineered plant layout design for a heavy media aluminum recovery process. The project included specific design and specifications for water clarification systems, plant process design, and plant equipment.

McLeansboro, IL – Inland Steel - \$60MM Coal Preparation Plant and Material Handling Facilities: Fixed fee contract for engineering and construction of grass roots coal preparation plant and facilities for a major steel company. [Directed all civil and structural design of the coal preparation plant.](#)

Gallop, NM - \$25MM Rail Terminal for Strip Mining Operations: Turnkey Storage and Rail terminal for strip-mining project. [Engineered and designed all structural designs of the conveyor systems, tunnels and existing stacker overhaul.](#)

Mobile, AL – General Electric - \$60M RCRA Corrective Action: A Structural Integrity Test and Assessment was conducted to determine if 14 sumps, basins, and tanks have had releases to the environment which would trigger RCRA Corrective Action. The results were used to negotiate with the state agency that no releases have occurred above risk base action levels, and that RCRA Corrective would not be required for the SWMU's.

Burley, ID – Simplot - \$600M Cover/Liner Installation: Designed and constructed an anaerobic cover/liner system for the biodegradation of food wastes. The system recovered methane gas to power the plant facility. The project required the development of a sophisticated pulley system to install the 100-mil liner over the basin. Other aspects of the project included a gas collection system and the weight system, which required aerodynamic analysis and special warranty negotiations.

Beaumont, TX – DuPont - \$1.6MM RCRA Corrective Measures: A test fill construction project was implemented to address closure of 21 SWMUs in an unstable wetlands environment for a major chemical manufacturing facility. The project was designed to evaluate settlement issues of stabilized waste in the SWMUs. The project consisted of stabilizing 108,000 yd³ of soil and sludge with lime kiln dust and cement as the primary reagents. The results showed that waste can be stabilized in SWMUs without causing settlement.

Other Projects of Note

Northeast United States - \$2MM Solid Waste Landfill Liner Systems: Designed and installed landfill liner and leachate collection systems for several major solid waste landfills.

Houston, TX - \$1 M Montgomery Ward: Prepared design and studies for the installation of Sheet Piling along Buffalo Bayou in downtown Houston, TX. This activity required the application and securing of a Wetlands Permit from the US Army Corps of Engineers in Galveston, TX prior to undertaking the implementation of the Project.

Houston, TX - \$100M Rail and Bus Development Studies: Prepared alternative studies of selected rail and bus corridors for submittal and approval of the Metro board of directors. Study analysis included preparation of engineering conceptual plans for major environmental impacts, local political issues, and other basic data necessary for final project review.

Burkeville, AL - \$50M HDPE Liner Test System: Under a warranty agreement, a newly designed smoke-testing unit was developed for the testing and repairs of leaks. This system successfully tested HDPE liners used in plant neutralization tanks.

Beckley, WV - \$120MM Three Coal Prep Plants: Grassroots design and construction of three complete coal preparation plants and related facilities. Project responsibilities included structural design of conveyors and preparation plants.

Sundial, WV - \$50MM Coal Preparation Plant: Completed Turnkey Coal Preparation Plant for a major steel company. Engineered and designed plant process systems and layouts, including piping and system designs. This project also included plant foundation engineering and design.

Wayne County, WV - \$60MM Coal Preparation Plant: Fixed fee contract for a grass roots engineering and construction of coal preparation plant and related facilities. Engineered and designed the entire structural floor designs of the preparation plant. Engineering design included vibration analysis for rotating equipment, and supervision of design engineers.

Pittsburgh, PA - \$20MM Coal Conveyor System: Engineered layout and structural design for a major steel company. The design was for a five-mile overland belt conveyor system. Project included structural design for the foundation of the entire system and structural steel designs of conveyor drive stations.

Monroeville, PA - \$12MM Multi - Purpose Coal Test Plant: Engineered and designed plant layout. Specified environmental equipment and systems for dust collection, water clarification, plant piping, process and material handling, and computer control instrumentation.

Martinsville, VA – DuPont - \$400MM Solid Waste Landfill Closure: Prepared the Final Closure Plan for an Industrial Ash Landfill at a major chemical manufacturing plant. The project included the amendment of previous closure plans, the development of the final bid documents, health and safety plans, a Construction Quality Assurance Plan, and construction of a final cap. Closure certification was prepared and executed.

New Braunfelds, TX – US Gypsum Co. -\$40MM Gypsum Plant Upgrade: Project Engineering for an expansion of existing mining and lime processing facilities. The project included the installation of a new kiln and other rotating equipment. Project responsibilities included vendor procurement, equipment selection, project engineering and final design of plant facilities, and environmental safety specifications.

Louviers, Colorado - DuPont - \$5MM PTN (picric acid) plant remediation: Provided engineering and construction services to DuPont in the decommissioning of a manufacturing chemical plant for blasting caps. The project included the destruction of over 60,000 explosive charges and bioremediation of explosive residues that lined the bottom of several settlement ponds and basins.

Tacoma, Washington – DuPont - \$25MM Ordinance Plant Superfund Project: Provided project management and engineering support to the DuPont/Weyhauser Superfund Site. The Project included cleanup of a 70-year-old decommissioned plant, which produced explosives for military operations. The project consisted of drum removal, soil washing of lead contaminated soils, and the use of several disposal technologies.

