

PLANT SYSTEMS ENGINEERING

Bulk Material Unload / Load Out Project Case Studies

Project: 100 TPH Rail Load Out System
Year: 2010
Client: Andritz Feed and Biofuel
Project Location: Georgia Biomass, Waycross, GA
Material: Wood Pellets
Services: Design-Build
Constructed Value: \$3M



\$3M design build project at the largest wood pellet facility constructed in North America. Convey, store, weigh and load rail cars with wood pellets. Drag conveyors, custom 100T storage bins with explosion protection, dust collection, load out spouts, coordination with rail service provider CSX, rail car indexer, fall protection, controls and control panel design, compressed air, structural steel, building ventilation, construction and project management, start up and commissioning.

Totally greenfield project area with limited interface into new equipment supplied by others. OSHA Plant.

Project: Sand and Iron Ore Receiving Station
Year: 2007
Client: ESSROC Cement
Project Location: Martinsburg, WV
Material: Sand and Iron Ore
Services: Engineering
Constructed Value: \$1M



Complete engineering package for receiving raw sand and iron ore on tri-axle dump trucks. Receiving hoppers, pan feeders, belt conveyors, dust collection, structural steel, concrete walls.

Totally greenfield project area with limited interface into new equipment by others. MSHA Plant.

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Project: Cement Rail Load Out
Year: 2008
Client: Claudius Peters Americas
Project Location: ESSROC Cement - Martinsburg, WV
Material: Cement
Services: Engineering
Constructed Value: \$3M



Complete engineering package for retrofitting insertion of “bayonet” style air slides into concrete silos used for cement storage. Scope also included design of material handling, dust collection and load out spouts for loading bulk rail cars.

Extensive 3D modeling required to design steel framing and aeration pads inside of concrete silos. Coordination with vendor (Claudius Peters) equipment, rail clearances and owner provided rail-scale.

Complete retrofit project area with extensive interface into new and existing equipment. MSHA Plant.

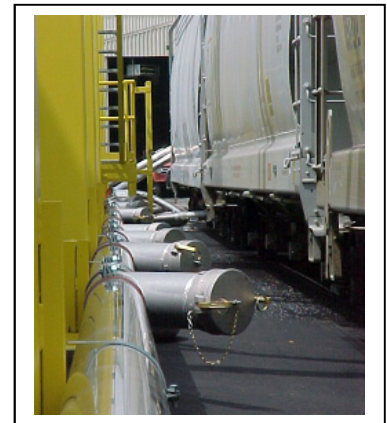


Project: Rail Unload System – Plastic Pellets
Year: 2001
Client: Bemis Corporation
Project Location: Hazleton, PA
Material: Plastic (PE) Pellets
Services: Design-Build
Constructed Value: \$750K

Design-Build project to unload (8) rail cars on a dual rail siding operated by Norfolk Southern. System included vacuum pneumatic conveying systems to unload railcars and pressure system to load silos.

Layout required extensive use of pipe bridges and custom supports for distribution piping. Coordination with equipment vendor. Integrated fall protection systems to enable safe access to top of rail cars.

Retrofit project area with extensive interface into new and existing equipment. OSHA Plant.



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Project: Undersize Material Processing Plant and Truck Load Out
Year: 2012-13
Client: Proprietary
Project Location: Proprietary
Material: Industrial Minerals
Services: Engineering
Constructed Value: \$5M



Complete engineering package for under size material processing plant and truck load out system. Mill fines and collected dust conveyed, classified and a proprietary “value add” step. Belt conveyors, bucket elevators, bulk storage silos, classifying equipment, weighing equipment, process piping, power distribution and motor controls.

Special concrete construction with retaining walls. Predominantly greenfield project area with limited interface into existing equipment. MSHA Plant.

Project: Bulk Storage and Truck Load Out
Year: 2012
Client: Proprietary
Project Location: Proprietary
Material: Industrial Minerals
Services: Engineering
Constructed Value: \$5M



Complete engineering package for storage and truck load out of bulk industrial mineral. Seismic considerations required deep foundations (drilled piers) for storage silos. Belt conveyors, bucket elevators, bulk storage silos, load cells, process piping, power distribution and motor controls and remote I/O panels. Predominantly retrofit project area with extensive interface into existing equipment. Coordination with rail service provider Union Pacific (equipment spanned over existing siding). MSHA Plant.

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