



STATEMENT OF QUALIFICATIONS

WATER/WASTEWATER EXPERIENCE



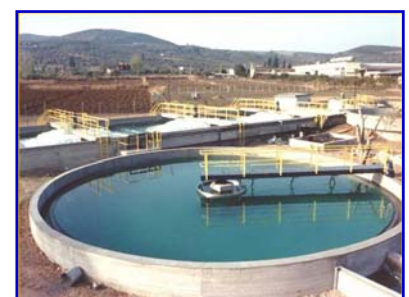
HARD HAT SERVICES™
Engineering, Construction and Management Solutions

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INTRODUCTION

Hard Hat Services (HHS) is a full-service environmental engineering, project management and construction company, with extensive experience in water and wastewater projects. We offer reliable engineering and construction, and have the common sense to implement cost-effective, sustainable solutions for your water or wastewater projects.

Our approach to serving our clientele is simple. We do quality work for a reasonable price. We establish a site-specific team approach, and hold ourselves accountable for our work. HHS focuses on providing quality services that offer innovative, cost-effective alternative approaches wherever possible. Furthermore, our project management solutions provide a continuous stream of project information that is tailored to specific project needs, whether they are schedule, cost, technical, or regulatory-driven.



3 CAL Water Quench System, AreclorMittal Steel – East Chicago, Indiana

HHS performed a system evaluation of the 3 CAL Quench Water Treatment System including review of all available and current information, collection and analysis of water data and flow data and testing for additional data points. HHS also employed interim measures to minimize the impacts on product quality simultaneous with seeking and designing a permanent solution. An evaluation was performed of alternative make-up water sources and water treatment technologies to be used for the new, proposed “Closed Loop” System, including the Belgian System and the Burns Harbor Quench Water System. For the selected solution, HHS compiled the preliminary design criteria, equipment lists, budgeting, and schedule. HHS is currently providing the detailed design and construction management for installation of the upgrades. Detailed design includes piping, instrumentation, control valves, cooling tower, chemical feed systems, structural modifications, and PLC upgrades.

DIW System, AreclorMittal Steel – East Chicago, Indiana

HHS performed a Pre-Design Study, the DIW Preliminary Engineering Design Report, and budgetary bidding and pricing for each component of the DIW System installation. Following that work, HHS provided final engineering and design work in order to produce a biddable set of drawings and specifications. HHS currently provides bid-phase assistance, value engineering, construction management assistance, and engineering during construction for the installation of the DIW system.

The main design engineering tasks included:

- Civil Site – site preparation, demolition, control room / electrical room construction, existing utility relocation, utility tie-ins, leveling the system area, general arrangement of system, and ancillary equipment.
- Structural – Concrete building foundation and slab, equipment pads and foundations, approach apron, structural steel mezzanine structure, structural steel for building.
- Mechanical – Equipment, piping, pumps, HVAC, chemical feed systems, building utilities.
- Electrical – Power feed & distribution, conduit and cables, panel layouts, PLC functional logic, instrumentation & control.

Water Balance Study, Gallatin Steel- Ghent, Kentucky

HHS evaluated the existing cooling water systems with regard to capacity, productivity, optimization, and efficiency. A water balance study, concentrating on the water use through the various cooling systems, and heat loss/gain through the hot and cold sides of the cooling systems, was conducted. HHS also evaluated filtration needs and capabilities, as they related to the increased production rates. Pumps, piping, tankage, and hydraulic capacity of equipment, as well as modifications to increase capacity, were considered.

HHS is conducting a feasibility study that will result in a selected set of options for each portion of the necessary cooling water upgrades. These options will then be carried through to detailed engineering. The level of complexity involved with each option may vary from a simple pump replacement, to a complete reconfiguration of cooling loops,



filtration technologies, and towers. Systems evaluated include the direct and indirect cooling systems, the caster mold water and laminar system cooling water, recycle, wastewater treatment, scale pits, sand filtration, cooling towers, pumps, and piping.

Alliant Energy - Cedar Rapids, Iowa

Performed engineering study to determine pH and DO profiles across the horizontal and vertical cross-sections of four process wastewater treatment/settling lagoons. Also investigated the contribution of biological activity in the lagoons to the effluent pH. Performed design on various pH adjustment options to bring effluent into compliance for discharge under NPDES permit.

DuPont Washington Works, Water Filtration Plant - Washington, West Virginia

Provided engineering, design, procurement, installation and construction services to upgrade existing domestic water filtration plant. Installed effluent 100,000 gallon potable water storage tank, including subbase foundation, tank overflow pipe and splash pad, safety ladder with cage, chlorine meter, and site gauge. Installed dual set of 25 hp effluent pumps, backwash pump and influent pressure relief valve. Oversaw construction, including building expansion, piping and electrical and control. Responsible for start-up and test-out, as well as providing O&M manual for system.

Confidential Food Processing Company - Michigan

Conducted preliminary design and financial feasibility study for anaerobic treatment systems for waste food solids and wastewater from this large industrial food processing facility. This plant primarily processes different varieties of vegetables. Anaerobic digesters were designed for approximately 11,000 tons/yr of vegetable solids and 1 million gallons per day of high BOD wastewater. Energy recovery via micro-turbine generators was also part of the facility design.

Pepsi Cola General Bottlers - Twinsburg, Ohio

Engineered and managed design of wastewater treatment plant upgrade including closure of existing lagoons system, and installation of new pH adjustment, solids removal and handling equipment, and permitted sewer discharge. Retrofit was designed to be implemented while existing plant was operational, with virtually no lost time for start-up. New system will save operational costs associated with the existing lagoon system, and allowed the lagoon area to be used for additional plant expansion. Performed construction services for the decommissioning of the existing lagoon system following construction of the new wastewater treatment system.

Alliant Energy (Interstate Power & Light) - Ottumwa, Iowa

Hard Hat Services provided design-build services for an oil/water separator system at the Alliant Energy power plant. Responsibilities included site preparation, including surveying, geotechnical analysis, and influent water sampling. HHS installed a 10,000 gallon underground oil/water separator tank, effluent sump pit, and pumping system. Other responsibilities included preparing permit applications, specifying all materials and equipment, and bid evaluation.



Reserve Marine Terminal - Chicago, Illinois

Conducted all engineering and construction of industrial wastewater treatment system to handle solids and oil removal from engine block crushing operations in Chicago, Illinois. Work included design, procurement, construction, and installation of equipment; start-up, initial operation, and training of client's operators. Treatment train included grit removal, oil/water separator (coalescing plates), filtration, and recycling. Also designed and installed high-pressure, high flow spray nozzles and pump system to jet grime and oil off crushed engine block pieces. Used oil boiler was designed and installed to provide heat for high-pressure spray water and heating loops in concrete floor.

Pepsi Cola General Bottlers - Cincinnati, Ohio

Investigated pH profile of various process discharges and designed new tank-based pH adjustment system for facility. Batch system is capable of handling up to 100,000 gpd, equalizing high-strength wastewaters to reduce peak loading on the sanitary discharge. Design included pipe routing, lift station design, tank system and chemical feed systems, controls and monitoring station, and discharge piping. New system was designed into existing floor space, maximizing use of elevated tanks and mezzanines, to minimize footprint of treatment system.

Pepsi Cola General Bottlers - Munster, Indiana

Conducted design study of storm water control system at Munster, Indiana bottling plant. Work included site inspection, work plan development, design and reporting. Also inspected facility and prepared updated SPCC for petroleum used within operating areas of three separate facilities in Indiana and Ohio.

Crown Cork & Seal - Toledo, Ohio

Conducted all engineering and construction of industrial wastewater treatment system upgrade to handle solids and chromium removal from coil coating operations in Toledo, Ohio. Work included permitting, design, procurement, construction, and installation of equipment; programming of instrumentation and control; start-up; initial operation and training of CC&S operators. Treatment train included gravity separation, pH and ORP adjustment, flocculation, inclined-plate separation, pH adjustment and metered discharge to a permitted outfall. Also upgraded chemical feed systems and solids handling systems.

Family Tradition Foods - Tecumseh, Ontario, Canada

Designed and built an upgraded wastewater treatment system, using as much existing equipment as possible. Upgrade consisting of an equalization tank, a DAF unit, instrumentation, and piping reconfiguration. Prepared site, including leveling DAF area and layout arrangement. Provided on-site construction manager to ensure project proceeded smoothly. Provided and installed equipment, including DAF and DAT, 10,000-gallon polyethylene equalization tank, new pH probe and controller, caustic feed system, coagulant feed system, new flow meter and control valve. Oversaw modification of electrical and mechanical system. Tested components of all systems and made one-day crossover. Prepared operation maintenance manuals for all equipment.



Chemplex Groundwater Treatment Plant - Clinton, Iowa

Served as project engineer for a 100 gpm groundwater pump and treat system. System treatment train included greensand filtration, air stripping, and granular activated carbon. Designed all 51 extraction wells in three separate aquifers, 6 lift stations and metering vaults, piping network, and treatment plant. Plant included two separate treatment streams in order to segregate high-strength wastewater, requiring additional chemical addition and recycle to achieve treatment objectives and discharge criteria. Design included all civil site work, concrete, pre-engineered building erection, piping, valving, pumping, tanks, and control system and logic to operate system continuously, even while back-washing was conducted. Primary treatment system pumps operated on variable frequency drives, and were paced on tank level to maintain continuous flow through plant.

Pepsi Cola General Bottlers - Munster, Indiana

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Richardson Electric - LaFox, Illinois

Performed a discharge pipe system evaluation, including video camera jetting for pipe inspection. Inspections were performed on the lagoons, including inlet and outlet structures, for leaks or breaks. Recommendations were given to improve the system, and the site was evaluated for compliance with the applicable NPDES Permit.

Pepsi Distribution Facilities Stormwater Design; Massillon, Ohio – Kankakee, Illinois – Twinsburg, Ohio

At three separate facilities, Hard Hat was responsible for the design and construction of a new asphalt parking lot. Critical to the projects was the design of stormwater systems that would provide storage for onsite runoff, calculated to hold the 100 year, 24 hour storm. This included detention ponds, catch basins, stormwater piping, and inlet and outlet structures.

Pepsi Americas - 51st Street Bottling and Distribution Facility – Chicago, Illinois

Hard Hat completed a concrete and asphalt repair and storm sewer investigation work at the 51st Street facility. The work included sawcutting, removing, and replacing: four damaged areas of concrete warehouse floor, one exterior, concrete, approach ramp and apron, and three areas of damaged asphalt surrounding catch basins. The work also included investigation of storm sewer pipes entering and exiting the three catch basins. The investigation consisted of jetting the pipes and using a video camera to inspect the condition of the storm pipes (pipe collapse was suspected).

Pepsi Americas Stormwater Maintenance; Cleveland, Ohio – Elyria, Ohio

At both of these facilities, a catch basin was demolished, removed, disposed of, and replaced with a new catch basin at the appropriate elevation to maintain positive drainage



to the surrounding concrete and asphalt pavement without creating a significant depression in the final grade. Hard Hat site personnel determined final elevation of the inlet. Before backfilling the area surrounding the catch basin, the subgrade for the asphalt was verified to be sufficient for the aggregate stone base for the asphalt. Soft areas were over excavated and fine graded compacted stone was used as backfill to bring the area to grade for asphalt placement.

