



CASE STUDY

Pump & Treat System Installation

DESCRIPTION

A major Aerospace manufacturer client in Riverside CA required the implementation of groundwater remedial enhancements at one of its large facilities under the oversight of the Regional Water Quality Control Board. The enhancements included construction of a Groundwater Pump and Treat System to recover groundwater containing various chemicals of concern, among which were chlorinated VOC's and degradation products, Hexavalent Chromium and 1,4-Dioxane. The resulting installed system treats and subsequently discharges the groundwater to the City's publicly owned treatment works under a Class 1 permit.

MAIN TASKS

- E&E performed trench excavation to install piping and conduit to monitoring wells, piezometer wells, sewer manholes, and future NPDES discharge locations. Piping included HDPE, 3 x 1 Schedule 40 PVC conveyance and secondary containment system, and Schedule 80 PVC.
- Excavated and installed a concrete treatment pad to include double mat rebar, center line trench drain and sump, entry/exit ramps for forklift traffic, and separate pad for a liquid oxygen tank.
- Placed and anchored all components of the water treatment system. Components included poly tanks with stands, Chromium treatment skids, solids removal skids, Carbon treatment systems, Oxidation process skids and related tanks and controls, sump and transfer pumps, chemical injection tanks with related pumping systems, and electrical power and control panels.
- Installed all support structures and piping to connect the various treatment

systems. Piping included Schedule 80 PVC, Galvanized steel, HDPE, and silver brazed copper.

- On completion of the installation, E&E technicians assisted the client with system shake down and start-up.

CHALLENGES

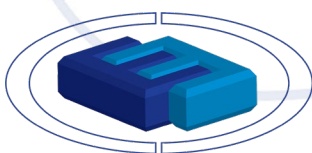
Multiple tasks needed to be performed concurrently to keep the schedule of completion on track.

The end client is an aerospace facility with restricted access, stringent security, and site-specific safety requirements requiring custom training and certification. As such, all E&E staff were custom certified and credentialed, including backup staff to provide a layer of redundancy, and movement on and off the site required tight coordination with site security. This was also of paramount importance when dealing with equipment deliveries, therefore E&E provided the client's site security head office with updated schedules daily, established and utilized radio communication, and provided escorts from the ingress points to the site through a very busy active facility to the work zone and laydown areas. E&E successfully adhered to and met all protocols required by the facility with zero incidents.

Numerous existing underground utilities were located during the excavation of new trench paths, many uncharted on existing plan-sets. During excavation and backfill, all utilities remained undamaged and in-tact.

INTERESTING POINTS

E&E and the client worked closely together as a team and collaborated to come up with time and cost savings for multiple adjustments and changes to the original scope of work, as well as effective installation of additional system piping and processes added during the project.



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