Project Name: Cerro Metals Products Site

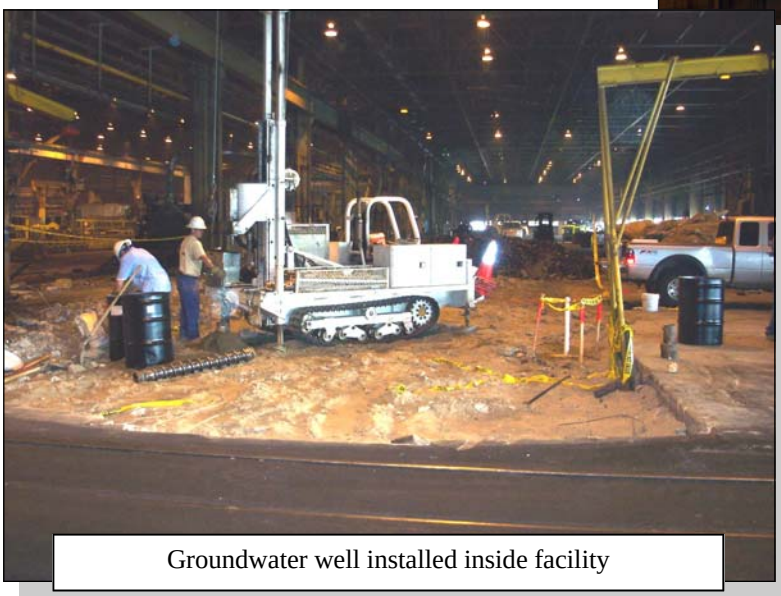
Project Scope: Environmental investigation and remediation of a copper pipe manufacturing facility for the purpose of commercial redevelopment.

General Project Description and Services Provided

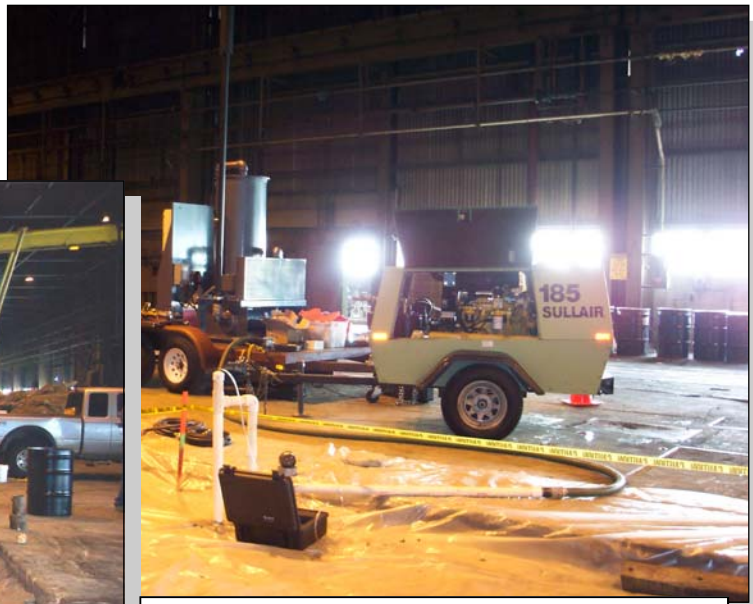
The evaluation of a large metal pipe manufacturing facility in operation since 1955 for the purpose of identifying potential environmental impact source areas; development of sampling plans; site wide investigation of soil, soil gas and groundwater; soil and groundwater remediation; and coordination with the redevelopment team for treatment system modifications to accomodate property redevelopment. All work was conducted under the regulatory oversight of the Los Angeles Regional Water Quality Control Board.

Key Project Highlights

- Soil remediation of volatile organic chemical impact using vapor extraction.
- Soil remediation and closure of former diesel above ground storage tank area.
- Excavation and off-site disposal of 8,718 tons of 1,4-dioxane impacted soil .
- Implementation of soil vapor extraction (SVE) and air sparge system for treatment of solvent impacted soil and contaminant mass reduction in groundwater hotspot area.
- Design, installation and operation of a groundwater extraction and treatment system for VOCs and 1,4 -dioxane. 1,4-Dioxane impacted groundwater treated with advanced oxidation treatment unit (HiPox).
- Negotiated first ever cleanup standard for 1,4-dioxane in soil with RWQCB and conducted soil remediation of 1,4-dioxane impacted soil to clean-up level requirements.



Groundwater well installed inside facility



Soil vapor extraction/air sparge pilot test in former solvent degreaser inside facility.

1,4-Dioxane soil excavation, structural support posts from former facility removed during excavation.

Oversight of facility demolition, segregation and management of impacted soil from former subgrade metals processing pit.

Groundwater treatment system including advanced oxidation system (HiPox) for treatment of 1,4-Dioxane impacted groundwater

Development of 550,000 square foot state-of-the-art automated grocery distribution center while still achieving groundwater remediation goals and remediation completion time frame.

Results and Final Product

- Impacted soil was effectively remediated and the impacted copper and chromium could be left in place and managed by having the property capped with the new building and concrete aprons.
- A request for soil closure package was submitted and the LARWCQB approved request and issued soil closure for the site. Received an acknowledgment from the LARWQCB that his project has been one of the Brownfield redevelopment success stories for the LARWQCB.

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Total Cost to Date: $2,800,000
Site Characterization/Soil Remediation: $750,000
Groundwater Remediation Budget: $2,461,000
(10 year groundwater remediation program)