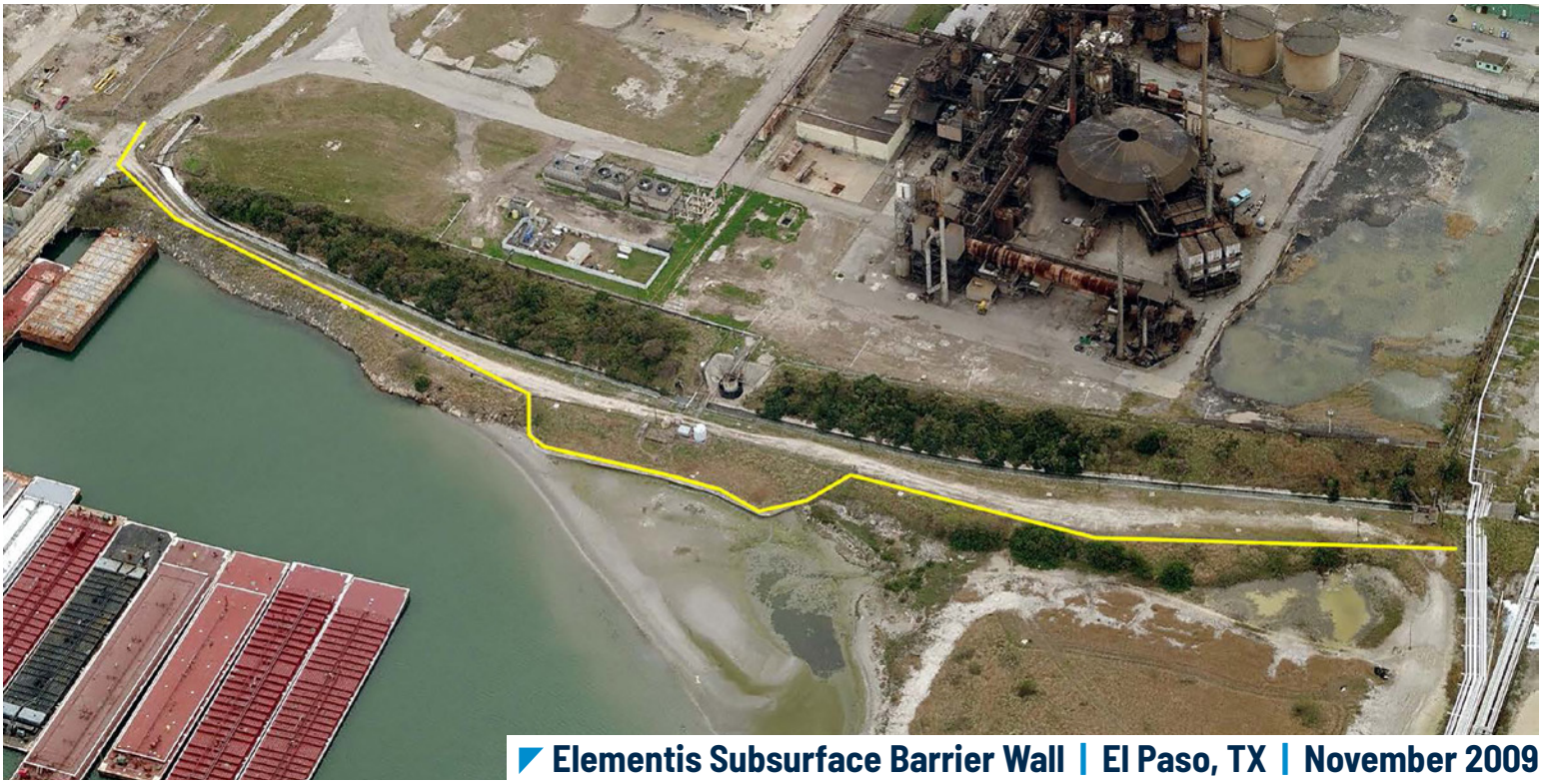
Case Study

Cut-Off & Containment



Elementis Subsurface Barrier Wall | El Paso, TX | November 2009

Project Partners:

Contractor: Entact

Engineer: URS Corporation

Owner: El Paso Merchant Energy-Petroleum Company

Max Depth:
32 ft 10 m

Length:
1,000 ft 305 m

Products:
ShoreGuard® SG-625
PileClaw™

Background

A manufacturing plant owned by Elementis Chromium L.P. became contaminated due to operations at a property owned by El Paso Merchant Energy-Petroleum. Groundwater and subsurface soils are contaminated with high concentrations of benzene. The EPA evaluated a remedy selection and construction for chromium contaminated areas.

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Why CMI

After investigating several options, including slurry, they chose to utilize ShoreGuard® vinyl sheet piling to create a subsurface barrier wall. The solution limited the amount of excavation and ground disturbance at the jobsite in effort to limit dangerous air emissions from the contaminated soils. A vinyl barrier wall provided a much higher level of chemical resistance than other options.

Performance

A chemically resistant sealant by Deneef was used in the sheet piling interlocks so the subsurface wall would provide a virtually impermeable barrier. Numerous extraction wells were put in place to confirm success. All groundwater in the contaminated areas were sampled quarterly to confirm the stability and containment of the Hexavalent Chromium, NAPL, and dissolved Benzene.

Installation

Poor soil conditions made the design and installation a challenge. To ensure successful installation of 32 ft long SG-625 sheets, ENTACT chose to utilize CMI's PileClaw™ mandrel. The PileClaw™ and the patented I-Beam Lock™ interlock system of the vinyl sheet piling kept the integrity of the locks during installation. The PileClaw™ worked especially well with the contractor's ABI machine.