PROJECT SNAPSHOT

ISS/ISCO Remediation

ISS/ISCO

Location: Yuma, Arizona

Client: Confidential Consultant

Contamination: TPH & BTEX

Reagent: Portland Cement & ORC

Service: Soil Mixing & Injections

Project Duration: 2 Months

Project Approach

Cascade performed in-situ chemical oxidation (ISCO) mixing project followed by in-situ stabilization (ISS) of 3,000 CY of TPH/BTEX - impacted soils with Portland cement. Track excavator mounted mixing equipment was utilized across a treatment area of 11,000 sf to an ultimate depth of 22' below ground surface (bgs). Initial work included the removal of an 8" thick concrete surface prior to excavation of clean overburden soils down to 12' bgs using a 1:5 to 1 sloping design based on existing soils and OSHA requirements. Clean overburden soils were staged on site for later re-use as backfill above the mixing and stabilized zone. In-situ chemical oxidation (ISCO) mixing using a 3-part mixture of oxidizing chemicals was completed from 12' to 22'bgs. Following mixing activities, in-situ stabilization (ISS) of the upper 3' of the mixing zone was performed through the addition of Portland cement and mixed with a rotating mixer head attached to an excavator.

WHAT MAKES THIS PROJECT UNIQUE?

Based on the small site and layback required during excavation of overburden soils, the sequencing of the mixing cells was critical to insure tracked excavation equipment, concrete trucks, mixing hoses and other support equipment would be able to complete the work safely and without getting trapped inside the treatment area prior to stabilization with Portland cement.

Project Results

The ISS/ISCO work was completed over a 10-day continual work period. In addition, hot spot soil excavation, transportation and disposal was completed during the work without delay or impact to the ISCO/ISS work. Backfilling and site restorations were completed in a second 10-day work period.

CONTACT

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