



“Soil capping was selected as the preferred alternative and the most cost effective strategy to both mitigate contaminated soil exposure to workers and limit interference to the on-going daily activities within an active chemical plant.”

PROJECT DETAILS

Location:

Western United States

Project Type:

Dinoseb (DNO) Impacted Soil Management Strategy

PROJECT SUMMARY

In December 2011, TEA conducted a soil investigation within an active chemical plant (warehouse and rail loading area) after the site personnel observed possible Dinoseb (DNO) contaminated material. Soil investigations were conducted to confirm the presence of and identify the horizontal and vertical delineation of DNO contamination within shallow soils. Soil sampling activities found DNO at levels that exceeded EPA Regional Screening Levels while delineating “hot spots” and distribution of DNO.

REMEDIATION PLAN

A Corrective Action Plan was developed that evaluated two treatment technologies (soil excavation and soil mixing) and a containment technology (capping). These technologies focused on DNO levels and distribution in soil; physical and chemical characteristics and exposure pathways; technical feasibility, effectiveness, sustainability, and cost of each remedial alternative as it pertains to the existing conditions at the chemical facility.

Capping was selected as the preferred alternative due to the physical challenges of remediation at this location (i.e. risk of compromising the integrity of facility structures such as the warehouse and rails if excavation or soil mixing were performed), in addition to being the most cost effective means

to minimize worker exposure during remediation. A cap will function with minimal maintenance and promote surface drainage while eliminating erosion and rainwater infiltration. Capping will also not interfere with the continued use of this area of the chemical facility.

THE RESULTS

Site structures including a drain and a concrete pad were permanently removed from the site. Any visibly stained material that was potentially DNO contaminated was also excavated and containerized for disposal. The remediation area was then graded to establish a slope to allow for proper sheet-flow run-off of rainwater away from the remediation area. Following the establishment of the proper grade, an asphalt cap was constructed over the DNO-impacted area. All areas of the cap were completed to ensure a smooth and even finish.

SITE PLAN



ASPHALT CAP



SS_004