



PROJECT:

BridgePort I Logistics Center

LOCATION:

Perth Amboy, NJ

DEVELOPER:

Bridge Development

SERVICES:

Geotechnical

Environmental

PROJECT SUMMARY:

The BridgePort I Logistics Center project involved the multi-media remediation and the subsequent redevelopment of the 105-acre former industrial Site. The Site was developed in the late 1800's by American Smelting and Refining Company (ASARCO) and National Lead, who operated a secondary lead smelting operation and paint manufacturing facility on the property known as Dutch Boy Paints. Most of the original property consisted of tidal wetlands which were filled in with as much as 25 feet of industrial slag produced from the various on-site operations; mostly from ASARCO's primary facility to the north of the Site.

SESI conducted a geotechnical investigation on the extremely geologically complex site, and designed a ground improvement program to enable the buildings to be constructed on shallow foundations. Dynamic Compaction was conducted, rigid inclusions were utilized, and the pre-loading/surcharge program involved installation of over 6,000 wick drains to assist in consolidation over 30 feet of soft organic clay.

A remedial investigation was completed and a remedial action workplan was developed by SESI Consulting Engineers. SESI Consulting Engineers assisted a developer in reaching a settlement between the NJDEP and the responsible parties for the remediation costs. SESI also coordinated with the client, project team, and regulators from the NJDEP and NJEIT for approval of project documents and over \$38 million in state-funded project financing. Bridge Development is currently constructing three industrial warehouse buildings at the Site totaling approximately 1.29 million square feet.

The Property was affected by the widespread distribution of smelting slag and other waste materials, which exhibit contamination by priority pollutant list (PPL) metals, primarily arsenic, antimony, and lead. The intent of the remedial action was to reduce the exposure of Site contaminants, including slag, to human and ecological receptors, groundwater, a tidally-influenced waterway running through the center of the Site known as Cranes Creek, and the Arthur Kill.

The remediation consisted of a coordinated multi-faceted approach to reduce mass loading of contaminants to surface water by removing and/or containing contaminated source materials, restricting the movement of groundwater flowing through the residual slag fill, construction of engineering controls to minimize exposure to underlying residual slag and to minimize the infiltration of precipitation to groundwater, and reducing the contaminant concentration in groundwater at the surface water interface.

The following is a summary of remedial actions which were implemented at the Site:

1. Excavation from below the water table and on-Site placement of highly impacted soil/slag containing lead, arsenic, and/or antimony;
2. Site-wide engineered capping system to prevent direct human and ecological exposure to underlying residual soil/slag;
3. Reduction of storm-water infiltration through residual soil/slag by routing storm water runoff from impervious cover to wet basins discharging directly to Cranes Creek and/or the Arthur Kill;
4. Installation of a groundwater cutoff slurry wall around the Site.;
5. Removal of underground storage tanks (USTs) and remediation of impacted soil;
6. Excavation and removal of material indicative of industrial or process waste, for off-Site disposal;
7. Excavation and removal of battery casings for off-Site disposal;
8. Delineation and remediation of PCB-contaminated soil in accordance with USEPA Region II Toxic Substance Control Act (TSCA) Regulations and NJDEP Technical Requirements;
9. Excavation of Light Non-Aqueous Phase Liquid (LNAPL) stained and Total Petroleum Hydrocarbon (TPH) impacted soil,
10. Removal of recoverable creosote product from the subsurface in the Former Creosote Plant Area.

