

## Terminal 5 Remediation

### *Site History*

Most of T-5 overlies former tide flats that have been filled and used for various industrial purposes, including but not limited to railroad yards, wood treatment facilities, steel scrap storage, and a municipal and wood waste landfill. For the purposes of upland cleanup, the SWHP was divided into five Remediation Areas (RAs). RA-1, 2, 3, and 5 were remediated under oversight by the Washington State Department of Ecology (Ecology), while RA-4 was addressed under agreement with the United States Environmental Protection Agency (USEPA). The operational history of each RA is summarized below.

#### **RA-1: Burlington Northern Buckley Yard (Ecology).**

RA-1 consists of approximately 14 acres and was previously used by Burlington Northern (now BNSF Railway Company) for railcar staging operations.

#### **RA-2: Salmon Bay Steel North Property (Ecology).**

Historically, much of RA-2 was used to support operations of an adjacent steel mill. Support operations included scrap metal storage, slag disposal and storage, and miscellaneous waste storage and disposal. Fill, consisting primarily of slag, is present at the site at depths of up to 15 feet.

#### **RA-3: Former SSI Property (Ecology).**

Much of RA-3 is underlain by a historical municipal landfill known as the former West Seattle Landfill. The northern 10 acres of the property were once leased by the Purdy Company, a scrap metal recycler. Prior to redevelopment, the former West Seattle Landfill was covered with a layer of soil and slag, and piles of debris and slag were present over much of the area. During redevelopment, much of the soil and subsurface municipal refuse was excavated from the eastern portion of the landfill area, consolidated, and placed in the western portion, creating an elevated landfill area bounded by Harbor Avenue on the west and the retaining wall and BNSF access road on the east. A shallow black geomembrane liner (underlain by a protective sand layer) was then placed on the landfill surface (both the excavated and consolidated areas) and covered with several feet of clean fill.

#### **RA-4: PSR Superfund Site (U.S. EPA).**

The RA-4 footprint is the location of the former the Wyckoff West Seattle wood-treating facility. The main processing area of the wood-treating plant was in the northern portion of the site (closest to Elliott Bay); the southern portion was occupied by a laboratory area, kiln building,

and sawmill. Storage areas for treated and untreated stock were also present at the site. The site was redeveloped under an agreed order with USEPA, and today it includes a portion of the Jack Block Park Public Access Area, the northern portion of the Intermodal Yard track switching areas, and the BNSF storage track yard.

#### **RA-5: Former Lockheed Shipyard West (Ecology).**

RA-5 was an active commercial shipyard from 1946 to 1986 encompassing approximately 24 acres; it was purchased by the Port in 1992 and remediated under an agreement with Ecology. Past industrial practices at the shipyard resulted in contamination of the underlying soil, much of which was remediated prior to the site's inclusion as part of the SWHP.

#### ***Contamination Issue***

Soil and groundwater contamination within the SWHP area originated from former industrial operations located in and upgradient of the Site prior to the redevelopment of T-5. During the 1990s, the RAs were remediated, which consisted of a combination of removing soil with elevated contaminant concentrations, consolidation of subsurface contamination, and installing engineered environmental controls to manage contaminated soil and groundwater remaining in place. These environmental controls include asphalt covers/caps, ballast covers, and containment systems specific to each RA. Soil contaminants of concern (COCs) and engineered controls of the individual RAs are listed below.

#### **RA-1: Burlington Northern Buckley Yard (Ecology).**

Soil COCs:

- Resource Conservation and Recovery Act (RCRA) 8 Metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver); diesel range organics (DRO); gasoline range organics (GRO)

Environmental Controls:

- Asphalt cover; ballast cover

#### **RA-2: Salmon Bay Steel North Property (Ecology).**

Soil COCs:

- RCRA 8 Metals; DRO; polychlorinated biphenyls (PCBs) as Aroclors

Environmental Controls:

- Asphalt cover; ballast cover

#### **RA-3: Former SSI Property (Ecology).**

Soil COCs:

- DRO; GRO; PCBs as Aroclors, carcinogenic polycyclic aromatic hydrocarbons (cPAHs)

Environmental Controls:

- Asphalt cover; ballast cover; geomembrane liner (underlain by a protective sand layer) of consolidated landfill; gas collection subsurface pipe system

**RA-4: PSR Superfund Site (U.S. EPA).**

Soil COCs:

- RCRA 8 Metals; Additional Metals: copper and zinc; DRO; GRO; VOCs; cPAHs

Environmental Controls:

- Asphalt cap; containment wall; light non-aqueous liquid (LNAPL) recovery trench (inactive)

**RA-5: Former Lockheed Shipyard West (Ecology).**

Soil COCs:

- Additional Metals: antimony, copper, and nickel; cPAHs

Environmental Controls:

- Asphalt cover