

**PROPERTY REVIEW****TERMINAL 117/****FORMER MALARKEY ASPHALT COMPANY****1.0 Background Information**

**Facility Name:** Port of Seattle Terminal 117  
Former Malarkey Asphalt Company

**Facility Address:** 8700 Dallas Avenue South  
Seattle, WA

**Property Owner:** Port of Seattle

**Current Use:**

The upland T-117 property covers approximately 5.5 acres, including a section of land adjacent to the shoreline that is 50-60 feet wide. This area is owned by the Port as successor in interest to the Duwamish Commercial Waterway District No. 1 (DCWD1). The roofing asphalt manufacturing business that operated as Malarkey Asphalt Company no longer occupies the site. Malarkey ceased asphalt operations in 1993. Plant decommissioning and removal of the tanks and equipment was completed in 1996/1997. After several cleanup actions, the site was completely paved and is currently referred to as the Port of Seattle Terminal 117 (T-117). In 1999, the Port acquired the additional inland parcels that made up the former Malarkey property between the shoreline DCWD1 parcel and Dallas Avenue South. These properties were consolidated to form the present-day T-117. Portions of the property are currently leased to two tenants. International Inspection, which occupies the office building on the site, while part of the warehouse and yard are leased to Second Use Building Materials. The Port uses the warehouse for its own storage needs. Basin Oil Company leased part of the warehouse on the southern edge of the property until early 2004. See Figures 1 and 2 attached.

**Past Use:**

The U.S. government used the property during the early to mid-1940s (Hart Crowser 1992). Their activities and operations are not known; however it is reported that the U.S. Army Corps of Engineers may have used the site to deposit dredged material generated from maintenance of the Lower Duwamish Waterway navigation channel (URS 1994) in the 1950's.

The Duwamish Manufacturing Company reportedly began asphalt manufacturing operations at the site around 1937 and continued until 1978 (URS 1994). The asphalt manufacturing process used a mopping grade oil (flux oil), primarily from Chevron's Richmond Beach, WA refinery as feedstock. Air was blown through the flux oil, an exothermic process which heated the oil to approximately 400 to 500 °F. This heating process evaporated light hydrocarbons, which were recovered in the process, and the resulting asphalt was stored in heated tanks for further packaging. An estimated 500 to 600 gallons of the light oils were generated per month.

The records reviewed in preparing this report contain a discrepancy as to how these light oils were handled. The 1994 Site Inspection (SI) done by URS for EPA (URS 1994) cites a 1989 EPA TSCA inspection. Copies of the EPA inspection report were not available for this property review. The SI quotes the EPA inspection report as follows: “Reportedly, 500 to 600 gallons of waste oils were generated per month at the site. These waste oils were hauled off site for recycling (EPA 1989).”

The 1996 Draft Removal Action Work Plan prepared by EMCON for Malarkey Asphalt (EMCON 1996) refers to these light oils as follows: “The product was blown to approximately 500°F to drive off the light-end hydrocarbons. An estimated 500 to 600 gallons of these light oils were generated (vaporized) off the blowing stills per month. A fume incinerator/afterburner was operated to burn the vaporized oil, which was routed to the unit via overhead piping.”

In order to keep the asphalt from hardening in piping and storage tanks, on-site furnaces were operated 24-hours per day.

The asphalt stills had water spray rings that circled the tanks approximately halfway up to cool the tanks and water was sprayed down the outside of the tanks. Early in the facility operating history, the cooling water was used once and collected in an on-site holding pond, which was a low spot in the eastern portion of the property. According to a 1984 METRO inspection, the water collected in a concrete sump under the cooling tanks and it discharged by gravity to the pond. Under full operation, the pond filled up three to four times per day (METRO 1984). The pond would flow overland via and discharge to the LDW. Malarkey did not have an NPDES permit for the river discharge of non-contact cooling water.

According to the 1996 Removal Action Work Plan (EMCON 1996), Mr. Malarkey stated that non-contact cooling water was not generated during asphalt processing operations; i.e., the non-contact cooling water evaporated off of the stills as steam. Excess water was captured in the containment structure and a sump pump transferred the water to a holding tank. The water was recycled for cooling water use.

During the oil embargo in the early 1970s, the facility reportedly received approximately 1,000 gallons (gal) per month of waste oil, including polychlorinated biphenyl (PCB)-contaminated waste oil from Seattle City Light (URS 1994). The waste oil was used as fuel for the on-site furnaces (Hart Crowser 1992; URS 1994). This practice apparently continued until the Arab oil embargo was lifted and oil prices stabilized. Oil placed in a former railroad tank car on-site, was reportedly from Seattle City Light (URS 1994).

In 1978, the property was purchased by MCW, Inc. (formed by Michael Malarkey, Peter Chance, and Harry Wyborne) and roofing asphalt manufacturing continued (URS 1994). MCW, Inc. later changed its name to Malarkey Asphalt Company. Malarkey Asphalt Company continued asphalt manufacturing operations until 1993.

The southern portion of the Malarkey property contained a warehouse and a 10,000 gallon storage tank. As early as 1990 (E&E 1990a), the storage tank was leased to Vintage Oil Company for waste oil storage. This tank became the used oil processing tank for Basin Oil’s business that operated across Dallas Avenue. The warehouse also housed Basin Oil’s used oil

filter processing area. According to a 2000 Ecology Dangerous Waste inspection, “There were approximately 700 palletized drums stored and stacked 3 high in 6 rows. The contents were variously labeled as “non-hazardous sludge,” petroleum product,” “used oil filters,” “rags,” and “pads.”

The following paragraphs describe the various inspections, investigations, and activities that have taken place on the Malarkey property.

#### ***Metro Inspection - 1984***

The Municipality of Metropolitan Seattle (Metro) conducted an inspection of the Lower Duwamish Waterway (LDW) which included portions of the site in 1984 (URS 1994). Metro collected sediment and surface water samples from the waterway upstream and downstream of the site. Sediment and surface water samples were also collected from an “on-site holding pond,” from the storm drain outfall, and from observed groundwater seeps discharging into the waterway. PCBs were detected in “sediment and water” (presumably a turbid grab sample) collected from the on-site ponding area at 23 parts per million (ppm). The water sample collected from the storm outfall contained PCBs at 6.8 mg/L. Zinc was detected in on-site surface water up to 206 ppm. Polycyclic aromatic hydrocarbons (PAHs) were detected up to 11.6 ppm in LDW sediment and surface water. It was concluded that the discharges from the site exceeded Washington State water quality standards for PCBs and zinc. Additional investigation was recommended to determine the source of PCBs and zinc at the site.

The on-site ponding area was reportedly used to hold non-contact cooling water from the facility’s stills (Hart Crowser 1992). Metro and Malarkey Asphalt Company negotiated to arrange for the disposal of this wastewater to the sanitary sewer system. Malarkey opted to recycle the water instead, and the area reportedly was filled with soil (EMCON 1996). One investigator mentioned that sludge in the bottom of the pond was not removed prior to filling (Parametrix 1991). No process sludges were observed in the pond area when it was excavated (Onsite 2000b).

#### ***Ecology Inspections – 1985 and 1986***

Ecology conducted inspections at the site in 1985 and 1986 (URS 1994). During the inspections, Ecology identified “partially buried” underground storage tanks (USTs) and aboveground storage tanks (ASTs) and associated piping at the site. Areas of visibly stained surface soil were also noted. Ecology collected sediment samples from an on-site drainage ditch. The laboratory results of the sediment samples indicated that metals including lead (1,666 mg/kg), arsenic (2,027 mg/kg), zinc (5,416 mg/kg), and cadmium (11 mg/kg) were detected. The results of the investigation prompted Ecology to mandate additional investigation at the site through an enforcement action; however, Malarkey Asphalt Company appealed based on economic hardship, and the investigation was not conducted (EMCON 1996; Parametrix 1991).

#### ***EPA TSCA Inspection - 1989***

EPA conducted a Toxic Substances Control Act (TSCA) inspection in 1989. Samples were collected from a waste oil tank and another tank containing usable light oils. No PCBs were detected, although total halogens were detected in samples at levels up to 1,160 ppm total

chlorine in one tank (Hart Crowser 1992). The contents of the partially buried railroad tank car were not sampled during the TSCA inspection. No PCB-related activities were identified in the TSCA report (EMCON 1996; URS 1994).

### ***EPA SPCC Inspection - 1989***

On October 27, 1989, a spill prevention, control, and countermeasure (SPCC) inspection was performed by the EPA Region 10 Technical Assistance Team (E&E 1990a). It was observed that secondary containment was not present around the tanks at the site (URS 1994). Samples were not collected during the inspection (EMCON 1996).

### ***EPA Preliminary Assessment - 1990***

Ecology and Environment, Inc. (E&E) conducted a preliminary assessment of the site on behalf of EPA in 1990 (E&E 1990). Three gasoline and diesel USTs were identified. The USTs were reportedly leased to Evergreen West Wholesale Lumber, Inc., the site tenant. One 10,000-gal waste oil AST was also identified on-site as being leased to Vintage Oil Company. Front Water Inc., a waste oil recycler, reportedly leased a portion of the site in 1990. Three waste oil USTs, a railroad tank car, and two “partially buried” tanks were identified at the site in 1990. These three tanks all contained waste oil (Parametrix 1991). E&E recommended additional EPA investigation of the site. No samples were collected during the E&E preliminary assessment (EMCON 1996).

### ***Ecology Site Hazard Assessment - 1991***

A Site Hazard Assessment was performed in May 1991 under MTCA by Parametrix and SAIC (Parametrix 1991). The project site was given a ranking of 1 on a scale of 1 (for highest risk) to 5 (for lowest risk). The site assessment included a review of Ecology’s files, Malarkey Asphalt’s files, and fieldwork. The scope of the fieldwork included drilling and installation of three monitoring wells (MW-1, MW-2, and MW-3), soil sampling and analysis during the drilling activities, and groundwater sampling and analysis. The fieldwork also included sampling the product in the USTs and above-ground storage tanks (ASTs). According to the report, the groundwater flow direction beneath the site was to the northeast during high tide and to the east during low tide. Floating product with a measured thickness of approximately 1/8-in. was reported in well MW-3. Parametrix and SAIC collected soil, product (from tanks), surface water, and groundwater samples during the assessment. The laboratory results of the samples indicated that metals, VOCs, semivolatile organic compounds (SVOCs) including PAHs, and PCBs were present beneath the site at depths ranging from 1 to 6 ft bgs. VOCs, heavy metals, PCBs, pesticides, and SVOCs reportedly were detected in all matrices analyzed. Dioxin was reported in one soil sample composited over a depth range of 0 to 5 feet in the monitoring well MW-02 borehole (the original MW-02 was removed as part of the 1999 emergency PCB soil removal action). No concentration was reported for TCDD and the sample holding times were deemed unacceptable. No matrix spike/matrix spike duplicate data were provided for the dioxin analysis. The toxicity characteristic leaching procedure results indicated that all sample results were below the Washington State Dangerous Waste Criteria.

Groundwater samples were collected from each monitoring well and analyzed for several parameters. The laboratory results indicated that PCBs were detected in the samples from each well at concentrations ranging from 1.7 to 77 µg/L. PAHs (naphthalene) were detected only in the samples collected from MW-3 (at 110 µg/L and an estimated 60 µg/L). In addition to PCBs and PAHs, various metals, pesticides, VOCs, and SVOCs were also detected in groundwater samples.

### ***UST Decommissioning - 1992***

Hart Crowser decommissioned three USTs at the site in 1992 (Hart Crowser 1992; URS 1994). The decommissioned tanks included two 4,000-gal waste oil USTs, and one 10,000-gal diesel UST. One 12,000-gal partially buried railroad tank car was also decommissioned by removal. Prior to decommissioning, tank contents were pumped out and recycled. The three USTs, which were located under a building, were closed in place by filling with concrete slurry. The contents of the railroad tank car (waste oil) were also pumped out and the contents placed into 55-gal drums. The railroad tank car was excavated and left on site (URS 1994). Hart Crowser collected three soil samples from beneath each UST before closing the tanks in place and collected soil samples from the former diesel pump and product line area (located off the northwest corner of the building that is north of the tank farm area). The laboratory results indicated that diesel- and bunker C-range petroleum hydrocarbons were detected in one sample collected from beneath one of the 4,000-gal USTs and in one sample collected from the pump/product line area. The UST samples and the pump/product line area sample also contained total petroleum hydrocarbons (TPH) by EPA Method 418.1 at concentrations of 240 and 790 mg/kg, respectively. Hart Crowser also collected a soil sample from beneath the railroad tank car excavation. This sample contained TPH at 580 mg/kg. Although PCBs were detected in the sludge removed from the railroad tank car (66 mg/kg), the soil sample was not analyzed for PCBs (EMCON 1996). The Hart Crowser report did not include an explanation as to why the tanks were decommissioned. A letter to Department of Ecology mentioned that Malarkey Asphalt Company and Hart Crowser were pursuing additional investigations at the mentioned property. The tank decommissioning also coincides with the reduction of the asphalt product manufacturing activities at the site. Malarkey Asphalt Company ceased manufacturing of asphalt roofing materials at the site in 1993 (SECOR 1998b).

### ***Ecology Dangerous Waste Site Visit – Basin Oil and Malarkey Asphalt - 1994***

Ecology conducted site visits to the Basin Oil and Malarkey Asphalt Plant on January 12 and 29, 1994. The inspection summary on file with Ecology noted concerns regarding use of the 10,000-gal storage tank at the Malarkey site and that the department had never been notified of Basin's use of the Malarkey site for processing used oil. Ecology expressed concern regarding the integrity of the tank and the lack of secondary containment for the tank. The report also noted that 500–600 gal of used fuel oil associated with Basin Oil activities were spilled on the Malarkey Asphalt site in October 1993 and that Basin Oil trucks routinely drove their trucks through the pond area near the Malarkey shoreline. There was concern on the part of Ecology inspectors that contaminants on the site, such as PCBs, would be transferred off-site by this vehicle activity. No samples were collected during the inspection.

***EPA Site Inspection - 1994***

URS Consultants (URS) conducted an inspection of the site in 1994 which included on-site and off-site soil, sediment, groundwater, and surface sampling. This work was conducted for EPA as a result of concerns regarding potential surface and groundwater contamination and on-site exposure identified in the preliminary assessment (E&E 1990a). URS collected three surface soil samples at depths ranging from 0 to 0.5 ft bgs at locations where wastes were suspected (mainly near the former railroad tank car location and around the ponding area). Three additional samples were collected at the same locations at depths ranging from 1.5 to 2 ft bgs. PCBs were detected in all three surface soil samples at concentrations ranging from 18 to 120 mg/kg. Subsurface soil samples also contained PCBs up to 180 mg/kg. PAHs were also detected in all three surface soil samples at concentrations up to 0.884 mg/kg chrysene. PAHs were only detected at depth in two of the three sampling locations (EMCON 1996).

URS also collected groundwater samples from the three monitoring wells and one surface water sample near the LDW in 1994. PCBs were detected in all three monitoring well samples at concentrations ranging from 0.99 to 179 µg/L. PCBs were not detected in the seep sample. PAHs were detected only in the groundwater sample collected from MW-3. Other constituents detected in the groundwater samples include VOCs, SVOCs, pesticides, and metals. None of the monitoring wells was reported as containing free floating product at the time of the URS investigation (EMCON 1996). One sediment sample was also taken in the tidal flat immediately offshore of the site.

***EPA Sampling - 1995***

E&E collected soil and water samples on behalf of EPA in 1995. E&E collected seven surface soil samples from locations near the ponding area, the former railroad tank car, and storm drain ditches. Sampling depths are not known but assumed to be less than 0.5 ft. E&E also collected one water sample from inside a sump. The laboratory results for these samples indicated that PCBs were detected at concentrations between 11 and 40 mg/kg in soil and at 5,800 µg/L in the water sample collected from the sump. SVOC analyses were run on the water sample only. The results indicated that phenanthrene was the only PAH detected (estimated concentration of 410 µg/L EMCON 1996).

***Asbestos Abatement Work - 1995***

Asbestos abatement work was performed at the Malarkey Plant site in August 1995 by Restec Contractors, Inc., of Redmond, Washington as part of the Malarkey Company's compliance with the Administrative Order on Consent for Removal Action issued by EPA effective April 26, 1996. Construction monitoring was performed by David Evans and Associates, Inc., of Portland, Oregon and air monitoring and final containment inspection were performed by Pacific Rim Environmental of Tukwila, Washington (SECOR 1998a). Documentation of this action is included as Appendix D of the Draft Removal Action Work Plan (EMCON 1996).

***Malarkey Asphalt Plant Decommissioning – 1996/1997***

In 1996, EMCON prepared a removal action work plan for additional work in response to the Administrative Order on Consent (AOC) for Removal Action between EPA Region 10 and

Malarkey Asphalt Company (April 26, 1996). Activities addressed in the work plan included additional asbestos survey and abatement for the asphalt plant, interim stormwater controls, plant tank and equipment decommissioning, and hot spot soil removal. The plan also described proposed additional investigations of the former pond (“roadway”) area and the plant tank farm. The asbestos abatement and plant decommissioning activities were performed in accordance with the approved work plan between May 1996 and December 1997. The work included asbestos abatement for several tanks, a boiler, and associated piping, valves, and gaskets. Interim stormwater controls, including an asphalt diversion berm and a gravel filter, were installed at the site as specified in the work plan. Twenty-three aboveground tanks were cleaned and removed from the site. Tanks and contents were inventoried, contents were sampled, and procedures for cleaning were developed. Two tanks that served as blowing stills (Tanks T-12 and T-14) were cleaned and retained for future use. All other tanks were demolished and shipped off-site for recycling. Extensive disassembly and cleaning of plant piping and equipment was also conducted (EMCON 1996; SECOR 1998a).

### ***Focused Site Characterization - 1997***

In response to the 1996 AOC, SECOR conducted a focused site characterization at the Malarkey site for the Malarkey Asphalt Company’s legal counsel. The work was based on the Draft Removal Action Work Plan (EMCON 1996) and subsequent refinements agreed to with EPA. The scope of work included subsurface (core) soil sampling from grid locations in the former ponding “roadway” area (Port property), soil sampling from the ditch area, subsurface soil sampling from five locations at a former waste oil storage tank (UST), collecting subsurface soil samples from one monitoring well borehole and completing the well as MW-4, and conducting groundwater monitoring in all four groundwater monitoring wells. Soil and water samples were analyzed for PCBs, PAH, petroleum hydrocarbons (TPH), chromium, lead, and zinc. Results indicated that PCBs were present in shallow soil throughout the ponding “roadway” area on the Port property. PCB concentrations ranged up to 531 mg/kg. PAHs were not detected above the then-established Method C industrial cleanup levels and were not considered to be chemicals of concern. Results for soil sampling near the waste oil UST found PCBs at less than 20 mg/kg, and investigators concluded that soil removal was not necessary. PCBs were detected in some locations up to 40 mg/kg at less than 1 ft depth, indicating the need for localized shallow soil removal. Aroclor 1260 was detected in groundwater from monitoring wells MW-2, MW-3, and MW-4 at concentrations ranging from 0.561 to 54.3 µg/L. No PCBs were detected in MW-1. SECOR noted that “reported PCB concentrations may be exaggerated by PCB-contaminated soil particulate entrained in the groundwater samples and thus not accurately reflect PCB concentrations in groundwater.”

### ***Focused Feasibility Study - 1998***

SECOR prepared a Focused Feasibility Study (SECOR 1998c) based on earlier investigations and the results of the site characterization efforts. This study was required under the 1996 AOC and was prepared for the Malarkey Asphalt Company’s legal counsel. According to SECOR, the feasibility study was performed to evaluate potential cleanup actions for the site. Due to limited groundwater impact, the feasibility study focused primarily on shallow soil and control of stormwater and associated erosion/particulate transport. SECOR concluded that the groundwater migration pathway at the site was “not substantial, due to the low solubility and mobility

characteristics of PCBs and as evidenced by the groundwater data collected to date.” The study evaluated the following four remedial alternatives:

- Alternative 1—No action
- Alternative 2—Miscellaneous surface remediation tasks, grading, asphalt cap, stormwater control, monitoring, and institutional controls
- Alternative 3—Miscellaneous surface remediation tasks, soil excavation and offsite landfill disposal, grading, asphalt cap, stormwater control, monitoring, and institutional controls
- Alternative 4—Miscellaneous surface remediation tasks, soil excavation and offsite incineration, grading, gravel cap, stormwater control, monitoring, and institutional controls.

The evaluation resulted in the selection of Alternative 3, which was determined to be an effective means of protecting human health and the environment. SECOR also developed a PCB soil cleanup level of 131 mg/kg for the site, based on State of Washington risk calculation procedures and toxicity factors in use at the time. SECOR used the state’s “Method C” procedure which considers exposure assumptions for industrial property and does not include potential exposure to surface water.

#### ***Utility Corridor Sampling - 1999***

Seven soil samples were obtained from three boreholes located along a former Malarkey plant utility/pipeline corridor extending from the plant area toward the south building (Onsite 1999). Samples were obtained to determine whether PCB concentrations in excess of the soil removal project remedial action objective of 25 mg/kg were present in soil along the corridor alignment. PCB concentrations ranged from 0.77 to 15 mg/kg as Aroclor 1260 (no other Aroclors were detected). It was noted that one sample consisting almost entirely of asphalt contained the least amount of PCB (0.77 mg/kg). This work was done as part of the scoping for the subsequent PCB soil removal/containment action.

#### ***Port of Seattle PCB Soil Removal/Containment Action - 1999***

The Port of Seattle, under EPA oversight, implemented the removal and containment of PCB-contaminated soil in the upland portion of the T-117 and Malarkey Asphalt Site in the fall of 1999 (Onsite 2000b). The work included the removal and treatment of impounded stormwater in the “roadway pond” area, excavation and disposal of over 2,000 tons of PCB-contaminated soil, backfilling, installation of storm drain improvements, and site paving. The soil removal criterion for the project was 25 mg/kg. The excavation plan relied on previous borehole testing performed by SECOR to define the required depths and areas of removal. Verification testing was performed in soil removal grids where PCB concentrations in the deepest SECOR borings still exceeded the removal criterion. Soil was tested until the removal criterion was met. For example, sample SG-A2SW-3.0 indicated a PCB concentration of 130 mg/kg at a 3.0-ft depth. Subsequent sampling at the final depth of 5.0 ft (sample SGA2SW- 5.0) indicated a confirmatory residual concentration of 0.28 mg/kg. Three shallow monitoring wells (MW-2, MW-3 and MW-4) were abandoned to allow for excavation and were replaced once the project work was completed. A water supply well located at the site (referred to in some reports as a “sump”) was also abandoned after it was inspected and determined not to contain product. Work was performed under a scope of work approved by EPA Region 10. Health and safety procedures

and extensive air monitoring were implemented during the excavation work to assure protection of site workers and the public. The completion of this work resulted in the present-day configuration of the site as an operating Port of Seattle terminal. Soil removal in the “roadway pond” area was successfully completed.

### ***Groundwater Sampling - 2003***

The three on-site groundwater monitoring wells (MW-2, MW-3, and MW-4) and one upgradient well (MW-1) were sampled in May 2003 and groundwater samples were analyzed for PCBs, PAHs, total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene, and total xylenes (BTEX) (Onsite 2003). No product accumulations were observed in any of the wells. Chemicals of concern were only detected in monitoring well MW-03 and these were limited to diesel-range TPH (0.79 mg/L), lube oil-range TPH (1.4 mg/L), and six PAHs at concentrations ranging from 0.013 to 1.6 µg/L. PCB Aroclors, gasoline-range TPH, and BTEX were not detected in any of the wells.

### ***Seattle Public Utilities Outfall Inventory/Survey - 2003***

The City of Seattle is currently assembling an inventory of outfalls along the LDW as part of the work conducted for LDWG (Schmoyer 2003). This work includes locating and surveying all outfalls to the waterway, including those located along the study area. The results of this work should be available from the City in the near future.

The Terminal 117 property is adjacent to the Lower Duwamish Waterway on its eastern boundary. Surrounding land uses are as follows:

- Basin Oil Company is to the west across Dallas Avenue. As of May 20, 2004, the facility has ceased operation, although no decommissioning activities have taken place. The property is zoned commercial with a present use of industrial (general purpose) and office building.
- To the south is the Boeing South Park property (1420 South Trenton Street), which is primarily a parking lot on the north end of the parcel. The property is zoned commercial with a current use of light industrial.
- To the north is the currently-operating South Park Marina, an active marina, boat storage, and boat repair facility. This property is zoned commercial with a current land use of marina.
- Weatherly Holdings doing business as Seattle Chocolate Company in a masonry warehouse (8620 16<sup>th</sup> Avenue South). This is zoned commercial with a warehouse listed as the current use.

## **2.0 Site Map**

Figure 1 attached is a site location figure. Figure 2 provides more detail on Terminal 117 and the surrounding land uses.

## **3.0 Chemical/Waste Handling at the Site**

### ***Chemicals Used/Stored at the Site***

Diesel fuel and gasoline are the only chemicals referred to in the reviewed documents as being used or stored at the site.

### ***Waste Products Generated or Stored at the Site***

Wastes have been produced at the site as a result of the asphalt manufacturing operations, which have been completely decommissioned and removed from the site. The following list includes wastes that were produced while manufacturing operations were ongoing:

- Sanitary wastes were routed to the METRO combined sewer. Stormwater and non-contact cooling water were discharged to an unlined pond and then to the LDW (METRO 1984). According to an Ecology inspection in 1986, the non-contact cooling water made contact with spilled oils in the tank farm and carried an oil sheen to the pond and to the river. Many photographs in the inspection report showed that this was likely an ongoing source of contaminants to the river sediments and surface water.
- Unused light oil was transported off site by Vintage Oil for reclamation. Unused waste oils were stored in two underground storage tanks (USTs) and a partially buried railroad tank car (E&E 1990).
- Still bottoms were transported to the King County Cedar Hills landfill for disposal (Parametrix 1991).
- Waste oils from Seattle City Light, which contained PCBs, were used as furnace fuel. Some of this oil was stored in an on-site UST.

### ***Volumes of Chemicals Used and Wastes Generated Per Year, Maximum On-Site***

If the recovered light oils were actually transported off-site, these amounted to approximately 500 to 600 gallons per month. None of the records provided by Ecology for the purposes of preparing this property review contained any additional information about the volumes of chemicals used or wastes generated while the facility was in operation.

### ***Chemical or Waste Treatment Systems***

No waste treatment facilities currently operate on the site.

### ***Chemical/Waste Storage or Disposal Areas***

No wastes were disposed on-site.

### ***Type, Quantity and Destination of Wastes Removed from the Site***

The destination of wastes generated on-site is discussed above.

### ***Spills or Releases***

The many releases and assumed releases are discussed in the Past Use section above.

### ***Hazardous Substances Used, Stored, or Released by Prior Owners/Operators***

Information about actual or assumed releases by owners prior to the Port of Seattle is discussed in the Past Use section above.

#### **4.0 Permit Information**

In METRO 1984, Hart Crowser 1992, and URS 1994, the holding pond was described as receiving non-contact cooling water and discharging to the LDW. Storm and cooling water discharge to the LDW were never permitted discharges. In EMCON 1996, Mr. Malarkey (property owner) is quoted as saying that cooling water was never discharged; it was recycled and reused in the process. In a personal communication with Dan Cargill, Washington Department of Ecology, Malarkey Asphalt never applied for a Waste Discharge Permit (Cargill 2004).

The 1990 EPA Preliminary Assessment (E&E 1990) refers to an air discharge permit issued by the Puget Sound Air Pollution Control Agency. There is no additional information in the project files relevant to this permit.

#### **5.0 Sampling/Cleanup Information**

History about the numerous site investigations is discussed in the Past Use section above.

#### **6.0 References**

Cargill 2004. Personal Communication (telephone conversation with Doug Pearman, SAIC regarding permitting history of the Malarkey Asphalt site). Site Manager, Washington Department of Ecology, Bellevue, WA. May 27, 2004.

E&E 1990a. Preliminary Assessment report, Malarkey Asphalt Company, Seattle, Washington. October 1, 1990. Prepared for U.S. Environmental Protection Agency, Region 10. Ecology and Environment, Inc., Seattle, WA.

E&E 1990b. Preliminary Revised HRS for Malarkey Asphalt Company; Seattle, Washington. November 5, 1990

Ecology 1994. Dangerous waste compliance inspection on January 12 & 29, 1994, WAD988510673/ WAD988477501 (Basin Oil Inc.). Draft letter from Jeannie Summerhays to Terry Drexler, Basin Oil Company. Department of Ecology, Bellevue, WA. (Never sent) Filed December 30, 1996.

Ecology 1996. File – Malarkey Asphalt Company, Seattle, WA, 8700 Dallas Ave. So. Washington Department of Ecology File # 0000022776.

Ecology 2000. File – Malarkey Asphalt Company, Seattle, WA, 8700 Dallas Ave. So. Washington Department of Ecology (3975) File # 0000022222.

EMCON 1996. Draft Removal Action Work Plan, Malarkey Asphalt site, Seattle, Washington. Prepared for Malarkey Asphalt Company. EMCON, Bothell, WA. May 24, 1996.

- Hart Crowser 1992. Site Assessment UST Decommissioning, Malarkey Asphalt Company. Prepared for Duwamish Properties, Inc., Hart Crowser, Seattle, WA.
- KCSWMD 1993. Site Inspection by King County Surface Water Management Division; Letter from Jerry Creek to MCW, Inc./DBA: Duwamish MFG. RE: N97609 EVERGREEN/WEST LUMBER. October 20, 1993
- METRO 1984. Memorandum to File from Tom Hubbard; RE: Malarkey Asphalt site inspection. September 24, 1984
- METRO 1985. Memorandum to File from Tom Hubbard; RE: Malarkey Asphalt Site Inspection. May 15, 1985
- Onsite 1999. Malarkey Asphalt Site – Remedial Action Work Plan. Prepared for the Port of Seattle. Onsite enterprises, Inc., Redmond WA.
- Onsite 2000a. Underground Storage Tank Removal Site Check/Assessment Report, South Park Site (Formerly Malarkey Asphalt Company), Seattle, Washington. Prepared for the Port of Seattle. Onsite Enterprises, Inc., Redmond, WA. January 2000.
- Onsite 2000b. PCB Removal/Containment Action, South Park site (formerly Malarkey asphalt Company), Seattle, WA. Prepared for the Port of Seattle. Onsite Enterprises, Inc., Redmond, WA.
- Parametrix 1991. Site Hazard Assessment Summary Report for Malarkey Asphalt Company, Seattle, Washington. Prepared for Washington State Department of Ecology. Parametrix, Inc., Bellevue, WA.
- PCHB 1986. In the Matter of Malarkey Asphalt Company, Appellant v. State of Washington Department of Ecology, Respondent; Appeal of a Regulatory Order. Pollution Control Hearings Board. March 28, 1986
- Schmoyer 2003. Personal Communication (letter to Warren Hansen, Onsite Enterprises, Inc. regarding City of Seattle’s ongoing survey work to locate stormwater outfalls along the Duwamish river shoreline. B. Schmoyer, Seattle Public Utilities, Seattle, WA. June 27, 2003.
- SECOR 1997. Focused Site Characterization Report, Malarkey Asphalt site, 8700 Dallas Avenue South, Seattle, Washington. Prepared for Copeland, Landye, Bennett and Wolf, LP, Port of Seattle and City of Seattle. SECOR International Incorporated, Bellevue, WA. November 26, 1997
- SECOR 1998a. Volume 1, Final Report, Malarkey Asphalt Site, 8700 Dallas Avenue South, Seattle, Washington. Prepared for Copeland, Landye, Bennett and Wolf, LP, Port of Seattle and City of Seattle. SECOR International Incorporated, Bellevue, WA. May 15, 1998.

SECOR 1998b. Volume 2, Appendices A – G, Final report, Malarkey Asphalt Site, 8700 Dallas Avenue South, Seattle, Washington. Prepared for Copeland, Landye, Bennett and Wolf, LP, Port of Seattle and City of Seattle. SECOR International Incorporated, Bellevue, WA. May 15, 1998.

SECOR 1998c. Focused Feasibility Study, Malarkey Asphalt Site, 8700 Dallas Avenue South, Seattle, Washington. Prepared for Copeland, Landye, Bennett and Wolf, LP, Port of Seattle and City of Seattle. SECOR International Incorporated, Bellevue, WA. June 29, 1998.

URS 1994. Site Inspection Report for the Malarkey Asphalt Company, Seattle, Washington. Prepared for the U.S. Environmental Protection Agency, Region 10. URS Consultants, Seattle, WA.

Windward 2003. Lower Duwamish Waterway Superfund site, Terminal 117 Early Action Area. Task 1: Summary of Existing Information and Data Needs Analysis. Prepared for the Port of Seattle. Windward Environmental LLC; Dalton, Olmstead & Fuglevand, Inc; and Onsite Enterprises, Inc. Seattle, WA. September 26, 2003.