

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 16th 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

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- 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.

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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.



Aerial Photography - 2002

LEGEND

 Parcel Boundary

0 200 400 800 1,200 Feet

0 50 100 200 300 Meters




FIGURE 1


Site Location






Aerial Photography- 2002

LEGEND

 Parcel Boundary

0 75 150 300 450
 Feet

0 25 50 100 150
 Meters




FIGURE 2

Terminal 117




PROPERTY REVIEW
BASIN OIL COMPANY, INC.

1.0 Background Information

Facility Name: Basin Oil Company, Inc.

Facility Address: 8661 Dallas Avenue South
Seattle, WA
8701 Dallas Avenue South
Seattle, WA
8617 17th Avenue South
Seattle, WA

Property Owner: 8700/8701: Basin Oil Company
8617: Drexler Terry J. and Linda K. et al

Current Use:

The oil processing and recycling business that operated as Basin Oil Company has recently been shut down. All of the equipment is still in place and operable, but the gate is locked and it appears that the business is out of operation.

Property Information:

Processing Plant: The combined 8661/8701 Dallas Avenue property, where the processing equipment is located is 0.5 acres. King County Assessor records show that the ownership at 8701 Dallas Avenue transferred from Michael O’Neil Malarkey to Duwamish Properties on December 9, 1999 and then from Duwamish Properties to Basin Oil Company on August 10, 2000. The 8661 Dallas Avenue property was sold by Duwamish Properties to Basin Oil on August 10, 2000.

The 8661/8701 Dallas Avenue property is a triangular parcel bounded entirely by Dallas Avenue to the east/north, 17th Avenue to the west, and Donovan Street to the south. The property is zoned commercial with a present use of industrial (general purpose) and office building.

Adjacent Residential Property: The 8617 17th Avenue property is listed on King County Assessor records as 0.18 acres. Terry Drexler purchased property and a residential home at 8617 17th Avenue South from Marjorie Weishaar on November 5, 1998. This property is directly across 17th Avenue from the processing facility and has been used to store drums, vehicles, and equipment. This property is zoned commercial with a current use of single family (C/I Zone).

Past Use:

The earliest dated file provided for review is the September 11, 1990 Notification of Dangerous Waste Activities filed by Basin Oil Company to attain status as a hazardous waste transporter, off-specification used oil marketer, and used oil collection and transportation. At the time, Basin Oil listed the property address as 8661 Dallas Avenue South and Malarkey Asphalt Company was listed as the property owner. Most agency files from 1990 to the present list the Basin Oil address as 8700 Dallas Avenue, however that is also the address for Malarkey Asphalt. King County Assessor records show the current Basin Oil facility as occupying 8700 and 8701 Dallas Avenue. The real estate excise tax documents and Basin Oil's corporation registration with the Washington Secretary of State's office list the address as 8661 Dallas Avenue S, so, for consistency, this document will use 8661 and 8701 Dallas Avenue South as the address for the facility.

The EPA Preliminary Assessment dated November 15, 1990 for the adjacent Malarkey Asphalt Company cites the following "...There is also a waste oil storage facility operating on the Malarkey Property that consists of one 10,000-gallon aboveground storage tank. The tank is leased to Vintage Oil Company. In addition to the leased waste oil storage tank, Malarkey leases property across Dallas Avenue to a waste oil reclaimer (Frontwater, Inc.)." Frontwater was owned and operated by Peter Hoffman, but there is no evidence of a business sale. Frontwater and Basin Oil were in the exact same business. In the early years of operation of Basin Oil, most of the reclaimed oil was sold and transported to Vintage Oil Company. The Vintage Oil tank on Malarkey property may have been used as an interim holding tank for oil transfer from Basin to Vintage.

Basin Oil has operated a used oil reprocessing facility on the triangular property bounded by Dallas Avenue, Donovan Street, and 17th Avenue South from approximately 1990 until 2004.

Two other businesses owned by Terry Drexler- also operated at this location. Northwest Antifreeze Service, Inc. collected new and used antifreeze, stored it at the site, and then shipped it off to TSD facilities for treatment. Because used antifreeze designates as a dangerous waste, the company needed a hazardous waste generator ID number. Based on the effective dates of the ID number, Northwest Antifreeze operated from February 6, 1998 to January 20, 2004. Basin Tank and Environmental Services, Inc. removed USTs and ASTs and residential heating oil tanks. The tanks were brought back to the Basin Oil location to be refurbished and reused or cut up for scrap metal. The company's registration was effective between March 14, 1997 and March 31, 2002.

Basin Oil also leased property at the Malarkey Asphalt facility. A large warehouse on the south end of the site housed Basin Oil's oil filter crushing and adsorbent pad recycling operation. This activity will be discussed in the Terminal 117/Malarkey Asphalt Property Review.

The Basin Oil facility is surrounded by chain link fencing with lockable gates. Based on a 2003 Ecology Compliance Inspection Report, a security guard patrolled the area at night.

Surrounding land uses are as follows:

- The former Malarkey Asphalt Company operated on property across Dallas Avenue to the east. The Malarkey property is itself bounded to the east by the Duwamish Waterway. This property is currently owned by the Port of Seattle and is zoned commercial with a current use listed as a warehouse.
- To the south, across Donovan Street, 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.

Across 17th Avenue to the west, from south to north are:

- King County records show that Weatherly Holdings LLC owns the masonry warehouse at 8620 16th Avenue South. This property is zoned commercial and is currently leased to Seattle Chocolate Company for its manufacturing facility.
- The Drexler property at 8617 17th Avenue South.
- The properties at 8609 17th Avenue and 8601 17th Avenue are both zoned commercial but are used as single family residences.

2.0 Site Map

A Site Map is attached to this Property Review.

3.0 Chemical/Waste Handling at the Site

Chemicals Used/Stored at the Site

The following chemicals have reportedly been used or stored at the site:

- | | |
|--------------------------------------|-----------------------|
| ➤ waste oil (of unknown composition) | ➤ wire pulling grease |
| ➤ machine shop oil | ➤ demulsifier |
| ➤ fuel/water mixtures (bilge water) | ➤ oily sludges |
| ➤ oily water | ➤ diesel fuel |
| ➤ antifreeze | ➤ sulfuric acid |
| ➤ alkaline cleaner | ➤ Aluma Brite |

Waste Products Generated or Stored at the Site

Wastes have been produced at the site as a result of the used oil processing, antifreeze recycling, and AST/UST decommissioning services. The following list of wastes comes primarily from the Dangerous Waste Compliance Inspection Report (March 3, 2003) that resulted from Ecology's December 18, 2002 inspection.

➤ sludge	➤ used 55-gallon drums
➤ sorbent pads	➤ antifreeze
➤ oil filters	➤ process wastewater
➤ storm water	➤ bilge water
➤ used USTs	➤ Scrap metal and oil filter casings

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

One Basin Oil file contained information on volumes of oil handled and waste water generated (Basin Oil 1993).

- One file contained records of the volume of waste oil that was transferred to Vintage Oil in the time period of January through June of 1992. Approximately 392,000 gallons of waste oil and 75,000 gallons of water were transferred to Vintage Oil. During this time frame, Vintage Oil accepted most of Basin's used oil. These quantities may represent the volume of oil processed by Basin in early 1992.
- During calendar year 1992, Basin Oil shipped approximately 166,000 gallons of mixed oil/water to Marine Vacuum Service.

Chemical or Waste Treatment Systems

Two treatment processes operate at the Basin Oil facility. The first process involves treating the used oil to remove water. The used oil initially brought into the plant is first off-loaded into two tanks to allow ash and sludges to settle. The oil phase is then transferred to three separate tanks with heating coils. Hot water is passed through the coils, heating the oil to drive off moisture. Early process descriptions for the facility mentioned the addition of a de-emulsifier to aid in the water separation. Recovered water is stored for off-site disposal. The treated oil is moved to two cool-down tanks and blended with other oils to adjust the contaminant and Btu content prior to sale and shipping.

The only other treatment process at the facility is the two oil-water separators that treat stormwater prior to discharge. The paved area of the property is sloped so stormwater runs toward the oil/water separator. The oil/water separator is a gravity based overflow/underflow system that holds any floating oil in one chamber and allows water to underflow a divider and discharge. The stormwater from the northern portion of the plant discharges to Dallas Avenue and flows toward the Port of Seattle (former Malarkey Asphalt) property to the east, ultimately discharging to the Duwamish Waterway. The stormwater from the southern portion of the plant discharges to 17th Avenue South and flows toward catch basins on the west side of the street. The catch basin behind Seattle Chocolate connects to a pump station which sends the water to the combined sewer on near Donovan. There are no as-builts for the north catch basin near 8617 -17th Avenue South. Where it discharges to is unknown at this time.

Chemical/Waste Storage or Disposal Areas

Used drums, trucks and unused equipment were typically stored at the 8617 property and in the leased warehouse on Malarkey property.

After oil had been wrung from the sorbent pads, the pads were stored in drums until there was a sufficient quantity to transport for disposal. These drums were also stored in the leased warehouse.

Chemicals used in the oil recovery process (de-emulsifier, sulfuric acid) were seen stored in drums inside the tank farm's secondary containment walls. Several of the Ecology compliance inspections noted that the drums needed to be moved outside of the tank farm containment area and into covered storage.

None of the documents reviewed indicated that there were chemical or wastes disposed of on-site, i.e., by burying or dumping.

Type, Quantity and Destination of Wastes Removed from the Site

As stated above, no information was found that indicated quantities of wastes generated while the facility operated. There is information about the destination of wastes.

- Sludge: non-RCRA sludge was sent to the Spokane Waste to Energy facility for incineration. Sludge was also sent to Evergreen Recycling and Philip Services.
- Sorbent pads: Once the adsorbed oil was wrung out of the pads, they were drummed and hauled to the Spokane Waste to Energy facility for incineration.
- Oil filters: The filters were drained and crushed at Basin Oil. The crushed filters were drummed and sent to Nucor (formerly Birmingham Steel) for recycling. Since the filters had residual value (the steel company pays Basin for the filters), this waste stream may be better classified as a product.
- Antifreeze: Used antifreeze was sold to a Las Vegas company. Again, this may be better classified as a product.
- Wastewater: Waste water from the oil treatment process was sent to Lafarge.
- Bilge water: Bilge water was sent to Puget Sound Recycling.
- Drums: Empty and damaged drums were sent to Seattle Barrel.
- Old underground storage tanks: Unusable tanks were cut up for scrap metal – various records listed Salmon Bay Steel and Birmingham Steel as purchasers.
- Storm water: Storm water was discharged from two different oil/water separators directly to the Dallas Avenue where it would sheet flow eastward across Port of Seattle (Malarkey Asphalt) property toward the Duwamish waterway.

Spills or Releases

The files examined for this property review describe three documented spills:

- On October 21, 1993, approximately 500-600 gallons of used oil was spilled from a storage tank onto the concrete containment area. All of the product was contained and recovered.
- On June 13, 1996, a tank overflowed and approximately 20 gallons of diesel fuel spilled onto the ground. Impacts soils were excavated and replaced with clean soil.
- On October 1, 1996, the oil filter from one of Basin Oil's vehicles leaked approximately 1 cup of motor oil onto the ground. The oil was wiped up and adsorbed with kitty litter.

While these are the only documented releases, the many compliance inspections noted generally poor housekeeping around the facility and secondary containment that was not intact. It is likely that small and unreported spills have occurred on the site during its operational period. If the oil/water separators were not regularly cleaned, this spilled oil would have ended up on Dallas Avenue and the Port of Seattle property to the east.

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

No information on hazardous substances used, stored, or released by prior owners/operators was available.

4.0 Permit Information

File documents list the following permits for Basin Oil Company:

- Industrial Stormwater General Permit Number SO3-002273. The permit was initially issued on November 18, 1995
- Dangerous Waste Activity. Site ID# WA D988477501. Basin Oil is listed as a generator, on-site recycler, marketer and transporter of used oil.

5.0 Sampling/Cleanup Information

File documents indicate that very little environmental sampling has been conducted at this site. A groundwater monitoring well (MW-01) was installed in 1991 as part of a Site Hazard Assessment on the Malarkey Asphalt site. Located in the southeast corner of the property, this well has been sampled three times as part of ongoing investigations at the Malarkey site. The first sampling event was by Parametrix in 1991. Parametrix installed three groundwater monitoring wells as part of a Site Hazard Assessment for Ecology. Samples from MW-01 contained detectable concentrations of PCB Arochlor1260, although not above regulatory limits. In a 1994 Site Inspection (SI) for EPA, URS Consultants sampled MW-01 and found 1,1,1-trichloroethane at 7 µg/L. This was more than three times background and considered "significant" in the SI report. Onsite Enterprises sampled MW-01 in May 2003, and found no evidence of contamination.

No formal site investigations have occurred on the Basin Oil properties.

6.0 References

Basin Oil 1993. Terry Drexler, Basin Oil Company response to letter from Jeannie Summerhays, Department of Ecology, Bellevue, WA. August 3, 1993. Basin Oil Company, Inc., Seattle, WA. September 2, 1993. File # 0000012248.

Ecology 1992. Basin Oil Notification of Dangerous Waste Activities , general correspondence 1992 -. Department of Ecology, Bellevue, WA. File # 0000012251

Ecology 1993. Dangerous waste compliance inspections, ID #WAD988477501 [Basin Oil Company]. Letter from Jeannie Summerhays to Terry Drexler, Basin Oil Company. Department of Ecology, Bellevue, WA. August 3, 1993.

Ecology 1996. Dangerous waste compliance inspection on September 28, 1995 WAD988510673 (Basin Oil Inc.). Letter from Jeannie Summerhays to Terry Drexler, Basin Oil Company. Department of Ecology, Bellevue, WA. February 2, 1996.

Ecology 2000a. Dangerous Waste Compliance Inspection at Basin Oil Co., Inc. RCRA ID# WAD988477501 on 9/26/00. Letter from Robert Stone to Shelly Hood, Basin Oil Co. Department of Ecology, Bellevue, WA. November 14, 2000.

Ecology 2000b. Dangerous waste compliance inspection at Basin Oil Co. Inc. Letter and compliance report to Shelly Hood, Basin Oil Co. Inc. from Robert A. Stone, Hazardous Waste Specialist, Hazardous Waste and Toxics Reduction Program, Department of Ecology, Bellevue WA. November 14, 2000.

Ecology 2003a. Dangerous Waste Compliance Inspection at Basin Oil Company, Inc. RCRA ID# WAD 988477501 on December 18, 2002. Letter from Tiffany Yelton to Terry Drexler, Basin Oil Inc. Department of Ecology, Bellevue, WA. March 13, 2003.

Ecology 2003b. Dangerous Waste Compliance Inspection at Basin Oil Company, Inc. RCRA ID# WAD 988477501 on June 25, 2003. Department of Ecology, Bellevue, WA. June 25, 2003.

Ecology 2004. General Industrial Stormwater Permit NPDES permit SO3-002273. Department of Ecology, Bellevue, WA.

EPA 1995. In the matter of Basin Oil Company, Inc. Respondent. Complaint issued by US Environmental Protection Agency, Docket No. 10-95-0131-OPA. US Environmental Protection Agency, Region 10, Seattle, WA.

EPA 2003. TSCA Inspection of Basin Oil Company, June 25, 2003 by Eileen Hileman, EPA and Tiffany Yelton, Ecology

King County 1993a. King County Surface Water Management Division Drainage Investigation Report. Basin Oil Company. April 14, 1993. File No. 93-0277.

King County 1993b. King County Surface Water Management Division Drainage Investigation Report. Basin Oil Company. December 20, 1993. File No. 93-1018.


King County 1994. King County Surface Water Management Division. Basin Oil Site Visit with Jeannie Summerhays of Dept. of Ecology. January 12, 1994

King County 1995. King County Surface Water Management Division Drainage Investigation Report. Basin Oil/Malarkey. June 12, 1995.



Aerial Photography - 2002

LEGEND

 Parcel Boundary

0 200 400 800 1,200 Feet

0 50 100 200 300 Meters




FIGURE 1

Site Location






LEGEND


 Parcel Boundary



FIGURE 2

Basin Oil



PROPERTY REVIEW**BOEING SOUTH PARK****1.0 Background Information**

Facility Name: Boeing South Park
Facility Address of Record: 1420 South Trenton Street
Seattle, WA
Property Owner: The Boeing Company Commercial Airplane Group
Current Use:

This is a 27 acre light industrial facility owned and operated by The Boeing Company. The site is entirely impervious, either covered with buildings or pavement. The facility has housed various training, information technology, and research functions since it was constructed in the early 1950's.

Property Information:

King County records list the 1420 South Trenton address as 27.52 acres zoned for commercial use and presently used as light industrial. Eight individual buildings are listed on the county records.

Past Use:

A review of historical aerial photographs (Windward 2003) shows that grading for the Boeing South Park facility was evident in the 1956 photograph. By the 1960 photograph, a paved parking lot and the edge of a large building were present.

The files available this property review include Boeing's Pollution Prevention Plan and several annual reports to Ecology, a report of a small release in 1998, and an NPDES permit file beginning with the initial permit grant in 1987.

In the 1987 NPDES permit renewal Statement of Basis (included in file with Ecology 1993), the facility was described as follows:

"This location is currently used by Boeing for training of Commercial Aircraft customer flight crews and maintenance personnel. Training is conducted in classrooms, in flight simulators and in aircraft component mockups. Various research projects are conducted in the Radiation Effects Laboratory and in the Free Electron Laser Facility.

"Contaminated waters discharge to METRO Sanitary Sewer. The likelihood of any contaminated water entering the storm sewer system is very remote.

“The discharges to state waters include parking lot runoff and non-contact cooling water [from air conditioners]. The volume and temperature of the cooling water are relatively minor, and therefore the theoretical and actual effect in the river is unmeasurable.”

The Pollution Prevention Plan Five Year Update submitted by Boeing to Ecology in 1998 provides some additional information on activities conducted at the South Park facility. The facility description says “The Boeing Company – South Park facility supports airplane production by providing employee and customer training. The facility also houses a small research laboratory and a metrology laboratory.”

Two different processes were described:

- Facilities, Automotive and Equipment Maintenance: The process of maintaining equipment and facilities. This process includes wastes generated from the use of equipment filters, oils antifreeze, crankcase oils, lubrication oils and oil pads. It also includes wastes generated during building maintenance such as cleansing materials, paints, and building debris.
- Laboratory Operation. The process of laboratory operations for research and manufacturing support. This process includes materials research and qualification, quality testing and materials characterization. Example operations include coating and lubricant development, material acceptability testing, manufacturing process development, mechanical testing, chemical analysis, product quality testing, waste analysis, product evaluation, quality control/testing, and equipment evaluation.

Surrounding land uses are as follows:

- The Duwamish River fronts the eastern edge of the property.
- The Sea King Industrial Park is on the southern boundary of Boeing South Park.
- Apartments and industrial warehouses occupy the western property boundary.
- To the north, the property is bounded by Basin Oil Company, Port of Seattle Terminal 117 and additional industrial properties.

2.0 Site Map

A Site Map is attached to this Property Review.

3.0 Chemical/Waste Handling at the Site

Chemicals Used/Stored at the Site

The 1998 Pollution Prevention Plan Five Year Update contains a list of hazardous chemicals and quantities used in 1997.

Substance	Quantity (lbs)
Acetone	91.14
Alpine Easy Kleen	21.86
PC Board Etching Solution	11.92
Isopropyl Alcohol	10.69
Formula 409 All Purpose Cleaner	10.15
Bounty Hunter	6.24
Methyl Alcohol	3.28
Ceramabond 569	2.5
Viscosity Standard N.4	1.82
Viscosity Standard N.8	1.82
Scotch-Seal EC-1252 Pink Tamper Proof Sealant	1.56
ZEP 45	1.51
91-025 Tartan Glass White Lacquer	1.5
Viscosity Standard N 1.0	1.42
91-108 Tartan Dark Blue	1.36
Hi-Tack 76 Spray Adhesive	1.08
Unocal UNAX AW 32	0.91
Krylon 1311 Matte Finish, 1313 Satin Finish	0.72
416 Superbonder 416 GAP Filling Instant Adhesive	.014
Ross Ultra Super Glue	0.01

Waste Products Generated or Stored at the Site

According to the 1998 Pollution Prevention Plan Five Year Update, the following wastes were generated at the site in 1997.

Description	Quantity (lbs)
Latex Paint, Water: Ethylene Glycol	1,975
Lab Pack – Paint Related Material	1,950
Rags contaminated with solvents; acetone, MEK, tetrachloroethylene, trichloroethylene; inks, paints, sealants; barium, cadmium, chromium, lead, selenium, silver	340
Lab Pack – Combustible liquid, N.O.S.	300
Spent parts washer solvent: petroleum naphtha	281.9
Solvents: acetone, MEK, toluene, xylene; paints and inks; barium, benzene, cadmium, chromium, lead, selenium, 1,1,1-trichloroethane	160
Absorbent items and debris contaminated with oils, coolants, fuels and hydraulic fluids; petroleum distillates, methanol	96
Lab Pack – Aerosols	75
Lab Pack – Battery, wet, filled with acid	50
Lab Pack – Hazardous waste, solid NOS	12

Lab Pack – Mercury	11.3
Lab Pack – Flammable liquid, NOS	8.3
Lab Pack – Potassium hydroxide, solution	8.3
Lab Pack/Overpack – Gallium metal	0.8
Lab Pack – Aerosols	0.4

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

See the previous table.

Chemical or Waste Treatment Systems

The documents reviewed do not list any on-site treatment processes.

Chemical/Waste Storage or Disposal Areas

The documents reviewed do not describe the on-site procedures for handling or disposing of hazardous or dangerous wastes.

Type, Quantity and Destination of Wastes Removed from the Site

The documents reviewed do not describe the on-site procedures for handling or disposing of hazardous or dangerous wastes.

Spills or Releases

The files examined for this property review describe one small release. In a February 10, 1998 letter from Boeing to Ecology, a release as defined in MTCA was reported. The elevator in Building 15-01 malfunctioned and hydraulic oil leaked into the elevator shaft and casing. Further investigation revealed that the casing bottom was not sealed. Free oil was recovered, a new elevator jack was installed with a PVC casing, and an oil recovery system was placed in the bottom of the boring. Of the 50 gallons estimated to have leaked, approximately 30 were recovered. Analytical testing showed that the oil did not contain PCBs.

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

No information on hazardous substances used, stored, or released by prior owners/operators was available.

4.0 Permit Information

File documents list only a NPDES permit for stormwater discharge to the Duwamish River, Permit Number WA-002987-4. The files include a renewal request letter from Boeing to Ecology indicating that the existing permit was to expire on May 12, 1987. The most recent correspondence was a letter from Ecology to Boeing acknowledging that Boeing no longer discharged non-contact cooling water to the Duwamish. This action effectively cancelled the NPDES permit. Stormwater discharges were covered under the General Permit S03001009.

5.0 Sampling/Cleanup Information

The files reviewed do not contain any information on site investigations which may have occurred on the Boeing South Park property.

The primary purpose of this property review was to determine the possibility of contaminants to be released from the Boeing South Park property and recontaminate areas on the Lower Duwamish Waterway that will be dredged as part of the Early Action program, in particular the Port of Seattle's Terminal 117 property. PCBs are of primary concern.

Since no sampling has been performed on the Boeing South Park property, there is no concrete evidence of PCBs being present on the property. Based on the limited background information reviewed, there is also nothing to suggest that PCBs have ever been present on the site.

6.0 References

Boeing 1993. Termination of NPDES Permit No. WA-002987-4(I) for South Park. Letter from L.M. Babich, III to Pam Elardo, Department of Ecology. Boeing Commercial Airplane Group, Seattle, WA. November 8, 1993.

Boeing 1998. MTCA release report. Building 15-01 Elevator, Boeing Commercial Airplane Group, 1420 South Trenton Street, Seattle, WA, WAD 980982672. Letter from L.M. Babich, III to Michael Gallagher, Department of Ecology. Boeing Commercial Airplane Group, Seattle, WA. February 10, 1998.

Boeing 2003. Boeing South Park, 1420 South Trenton Street, Seattle, WA, Pollution Prevention Management Commitment, Statement and Submittals of the Plan and APR. Letter from Kristi Savacool, Boeing Shared Services Group, September 2, 2003. Boeing Shared Services Group, Seattle, WA.


Ecology 1993. National Pollutant Discharge Elimination System (NPDES) Waste Discharge Permit No. WA-002987-4; Boeing-South Park. Letter from John Glynn to L.M. Babich, III, Boeing Commercial Airplane Group. Department of Ecology, Bellevue, WA. December 21, 1993.

Windward 2003. Lower Duwamish 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.



Aerial Photography - 2002

LEGEND

 Parcel Boundary

0 200 400 800 1,200
Feet

0 50 100 200 300
Meters



FIGURE 1


Site Location





Aerial Photography - 2002

LEGEND

 Parcel Boundary

0 100 200 400 600 Feet

0 25 50 100 150 Meters



FIGURE 2

Boeing South Park



PROPERTY REVIEW
SOUTH PARK MARINA

1.0 Background Information

Facility Name: South Park Marina
Facility Address of Record: 8604 Dallas Avenue South
Seattle, WA
Other Parcel Addresses: 1415 South Thistle Street
Seattle, WA
8510 Dallas Avenue South
Seattle, WA
8544 Dallas Avenue South
Seattle, WA
8603 Dallas Avenue South
Seattle, WA
Property Owner: South Park Marina Limited Partnership, Guy Crow, Agent
Current Use:

South Park Marina is an active small boat marina and do-it-yourself boat maintenance and repair facility. South Park Marina Limited Partnership was first incorporated on April 1, 1982, with Guy M. Crow as the registered agent. Mr. Crow purchased the property in approximately 1967 and operated the marina as South Park Boat Haven until the name was changed in 1970 (Crow 2004). Two parcels are leased to private businesses. See Figures 1 and 2 for the site location and parcel use.

A recent conversation with Mr. Crow confirms that the marina still operates as it was described in the 1992 permit application (Crow 2004).

The earliest description of the operation is contained in the 1992 application for a NPDES discharge permit filed by South Park Marina LP with the Department of Ecology (Ecology 1993). The north end of the current property was still shown as a mobile home park, the marina buildings were on the south end of the property adjacent to the Malarkey Asphalt facility.

The permit application asks when the facility was constructed. The response given is “unknown – before 1940’s.” South Park Marina offers new boat construction, vessel repair and bottom cleaning for pleasure boats, both power and sail. They estimate that 95 boats per year are worked on at the facility. The marina offers 150 permanent moorages. The repair yard is a 100% self-service yard, i.e., boat owners do their own work or hired someone to do the work; South Park does not offer those services.

Boats are hoisted out of the water by either a 35-ton crane capable of hoisting a 6-ton boat or a trailer capable of handling a 10 ton boat. Boats are cleaned with a high pressure or low pressure

water wash. No abrasive blasting is allowed. Wash water is pumped from a catch basin to a water treatment system to remove suspended particles. The water passes through a series of weirs and then two filters and is reused by the pressure washers. The sludge generated by the pressure washing process is “dried and bagged and put in the garbage.”

Stormwater flows to two catch basins, passes through an oil-water separator, and then discharges to the Duwamish River. The stormwater is sampled monthly and analyzed for metals, oil and grease, and total suspended solids.

When boat owners work on their boats, the boats are covered with a plastic tent to limit fugitive dust. Commonly used paints include rust inhibiting oil based paints and zinc based paints. Thinners, solvents, and acetone are also commonly used as part of the boat refinishing work. A hazardous waste barrel is used to accumulate used paint and other materials. The property owner stated that the barrel is emptied yearly, or whenever it is full. The original permit application cited Safety Kleen in Auburn as their waste disposal firm.

Used oil is also accumulated in a barrel. South Park encourages their customers to recycle their oil at the South Seattle transfer station. When the 55-gallon used oil barrel is full (estimated at one per year), the oil is recycled. The original permit application listed Basin Oil or Frontwater Services as the used oil recyclers.

A battery storage area is used to accumulate old batteries. These are recycled on a monthly basis. The original permit application listed Standard Battery in Seattle as the battery recycler.

As stated above, two of the South Park Marina LP-owned properties are leased to operating businesses. Rick’s Master Marine operates a marine engine repair business on the 1415 Thistle property. Potential contaminants are fuels, oils and solvents associated with engine repairs.

A portion of the 8510 Dallas property is leased to Tire Factory which sells and mounts new tires. No additional automotive repair services are offered by Tire Factory. There is a very low likelihood of soil contamination on this property.

Property Information:

King County records do not list a physical parcel address for 8604 Dallas Avenue South. The marina occupies three King County tax parcels, all owned by South Park Marina Limited Partnership (LP).

1415 South Thistle Street: This is a 0.38 acre parcel that was sold by Willard and Rose Marie Crow on February 9, 1993 to South Park Marina LP. The property is zoned commercial and the current use is listed as heavy industrial. King County records cite a property name of Rick’s Master Marine. Rick’s Master Marine leases this parcel from South Park Marina LP and has operated a marine engine repair business since approximately 1987 (Crow 2004)

8510 Dallas Avenue South: This is a 1.39 acre parcel that was sold by Willard and Rose Marie Crow on February 9, 1993 to South Park Marina LP. The property is zoned commercial and the current use is listed as a retail store. King County records cite a property name as Tire Factory.

Tire Factory, a retail tire business, has leased the property from South Park Marina LP since approximately 1980.

8544 Dallas Avenue South: This is a 1.96 acre parcel that was sold by Willard and Rose Marie Crow on February 9, 1993 to South Park Marina LP. King County list the property as zoned for commercial and the current use is listed as a marina.

8603 Dallas Avenue South: This is a 0.21 acre parcel that was sold by Willard and Rose Marie Crow on February 9, 1993 to South Park Marina LP. King County lists the property as zoned for commercial and the current use is listed as associated parking.

Past Use:

A review of historical aerial photographs (Windward 2003) shows that a boat dock is evident in a 1946 photograph. The dock and shore-side facilities continued to grow in the photographs reviewed for 1956, 1960, 1969, 1974 and 1980. This area has been used as a small boat moorage and repair location since approximately 1946.

Since no records were provided for operation of the marina from approximately 1940 until the 1992 NPDES application, it must be assumed that similar activities occurred. One key element, the recycling and treatment of the pressure wash water, did not exist until 1992. One can also assume that the site was not paved until later in the operation. Soil was likely contaminated with metal based paints, thinners, solvents, gasoline, diesel, lubricating oil, and fiberglass resin components. No soil sampling data is available.

Surrounding land uses are as follows:

- The Duwamish River fronts the eastern edge of the property.
- Properties across Dallas Avenue to the west are primarily single family residential (1440 South Cloverdale; 8529, 8525, 8523 and 8519 Dallas Avenue South), with one exception. 8500 14th Avenue South is a dry cleaning business
- The former Malarkey Asphalt Company operated on property directly to the south. This property is currently owned by the Port of Seattle and is zoned commercial with a current use listed as a warehouse.
- Across 16th Avenue to the north is a single family residential parcel (1401 South Thistle Street) and a warehouse building (1400 South Thistle Street)

2.0 Site Map

A Site Map is attached to this Property Review.

3.0 Chemical/Waste Handling at the Site

Chemicals Used/Stored at the Site

The 1992 NPDES permit application listed the following chemicals as being used or stored at the site:

- waste oil
- rust inhibiting oil based paint
- zinc based paint
- vinyl anti-fouling paint
- thinners
- acetone
- waste paint
- fiberglass resin
- used batteries
- solvents

Since the property has been used as a marina and boat repair facility since the 1940's there is a high likelihood that many of the chemicals listed above could be detected in a soil or shallow groundwater sampling program. Other petroleum contaminants which are likely to have been used at the site would include fuels (gasoline and diesel) and other lubricants (gear oil, grease, etc.).

Waste Products Generated or Stored at the Site

According to Ecology 1993, the following wastes were generated or stored at the site:

➤ waste paint	➤ used oil
➤ thinners	➤ used batteries
➤ solvents	➤ fiberglass resin
➤ acetone	➤ pressure wash sludge

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

Ecology 1993 contained information on volumes of waste generated.

- The 55-gallon hazardous waste storage drum was “emptied once per year or when full.” These wastes were most likely waste paint and paint thinners.
- The 55-gallon waste oil drum was also recycled once per year.
- Used batteries were recycled on a monthly basis, although the records don't indicate how many batteries were involved. In a recent telephone conversation, Mr. Crow said that approximately 5-7 batteries are currently recycled per month.

Chemical or Waste Treatment Systems

Two treatment processes operate at the Basin Oil facility. The first process involves the high- and low-pressure water wash used to clean boat hulls. The closed loop system includes a sump to collect runoff water. The collected water is pumped through two tanks with weirs to capture any suspended solids. The water is then routed through two filters, one with a 10 micron filter and the other with a 2 micron filter to remove any fines remaining. Treated water is then re-used for pressure washing.

The only other treatment process at the facility is the oil-water separator that treats stormwater prior to discharge. The paved area of the property is sloped so stormwater runs toward two catch basins. Water is pumped from the catch basins to the oil/water separator. The oil/water separator is a gravity based overflow/underflow system that holds any floating oil in one chamber and allows water to underflow a divider and discharge. The stormwater from the site discharges directly to the Duwamish River.

Chemical/Waste Storage or Disposal Areas

Used oil and hazardous wastes are accumulated in specially marked drums. Used batteries are accumulated at a designated battery storage area.

Type, Quantity and Destination of Wastes Removed from the Site

The original NPDES permit application (Ecology 1993) listed the following destinations for wastes generated at the Marina.

- Hazardous waste was transported and disposed by Safety Kleen. These wastes consisted of a 55-gallon drum of waste paints and thinners disposed of annually.
- Used oil was described as being picked up and treated by Basin Oil Company. The quantity was listed as 55-gallons annually.
- Used batteries were recycled to Standard Battery in Seattle. Recent information indicates that 5-7 batteries are recycled monthly.

Spills or Releases

The files examined for this property review do not describe any spills or releases.

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

No information on hazardous substances used, stored, or released by prior owners/operators was available.

4.0 Permit Information

File documents list only a NPDES permit for stormwater discharge to the Duwamish River. Permit Number WAG-030004-5 was issued on February 5, 1993. The permit was to expire on November 4, 1997. Files examined also include a December 4, 2002 letter from the Department of Ecology to South Park Marina which declared that a permit extension application was received for the permit which was to expire on December 8, 2002. The letter stated that the application review would not be completed until June 2003 and the permittee was allowed to continue operation under the terms of the expired permit.

5.0 Sampling/Cleanup Information

No formal site investigations have occurred on the South Park Marina properties.

The primary purpose of this property review was to determine the possibility of contaminants to be released from the South Park Marina property and recontaminate areas on the Lower Duwamish Waterway that will be dredged, in particular the Port of Seattle's Terminal 117 property. While PCBs are of primary concern, other contaminants that may partition into sediments such as PAHs are also of interest. The used oils generated at the facility likely contain cPAHs as oil constituents or as breakdown products as the oil is consumed. It is highly likely that these used oils have contaminated site soils.

Since no sampling has been performed on the South Park Marina property, there is no concrete evidence of PCBs being present on the property. Based on the limited background information reviewed, there is also nothing to suggest that PCBs have ever been present on the site. Furthermore, the South Park Marina is downstream of the Port of Seattle Terminal 117 property and there is very little likelihood that contaminants could migrate from South Park to T-117.

It is highly recommended that a limited soil and groundwater investigation be conducted on all of the South Park Marina properties. As stated earlier, a marina and boat repair activities have been conducted on this property since the 1940's. There is a high likelihood that the site soils and shallow groundwater have been impacted by these operations.

As stated earlier, two of the South Park Marina LP-owned properties are leased to operating businesses. Rick's Master Marine operates a marine engine repair business on the 1415 Thistle property. Potential contaminants are fuels, oils and solvents associated with engine repairs. As with the marina proper, used oils containing cPAHs have likely contaminated site soils.

A portion of the 8510 Dallas property is leased to Tire Factory which sells and mounts new tires. No additional automotive repair services are offered by Tire Factory. There is a very low likelihood of soil contamination caused by this business on this portion of the South Park Marina-owned properties.

6.0 References

Crow 2004. Personal Communication (telephone conversation) between Guy M. Crow, South Park Marina property owner and Douglas Pearman, SAIC. June 24, 2004.

Ecology 1993. General Industrial Stormwater Permit NPDES Permit No. WAG-03004-5. February 5, 1993. Letter and permit from J. Glynn to Guy Crow, South Park Marina. Department of Ecology, Bellevue, WA.

Ecology 2001. Water Compliance Inspection Report, General Industrial Stormwater Permit NPDES permit no. WAG-03004-5, South Park Marina. October 3, 2001 Department of Ecology, Bellevue, WA.

South Park 1998. Discharge Monitoring Reports, 1998. General Industrial Stormwater Permit NPDES, Permit No. WAG-03004-5, South Park Marina.

South Park 2001. Discharge Monitoring Reports, 1999 - 2001. General Industrial Stormwater Permit, NPDES Permit No. WAG-03004-5, South Park Marina.


South Park 2003. Discharge Monitoring Reports, 2002 - 2003. General Industrial Stormwater Permit, NPDES Permit no. WAG-03004-5, South Park Marina.

Windward 2003. Lower Duwamish 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.



Aerial Photography - 2002

LEGEND

 Parcel Boundary

0 200 400 800 1,200 Feet

0 50 100 200 300 Meters





FIGURE 1

Site Location






LEGEND

 Parcel Boundary

0 100 200 400 600 Feet

0 25 50 100 150 Meters



FIGURE 2
South Park Marina

