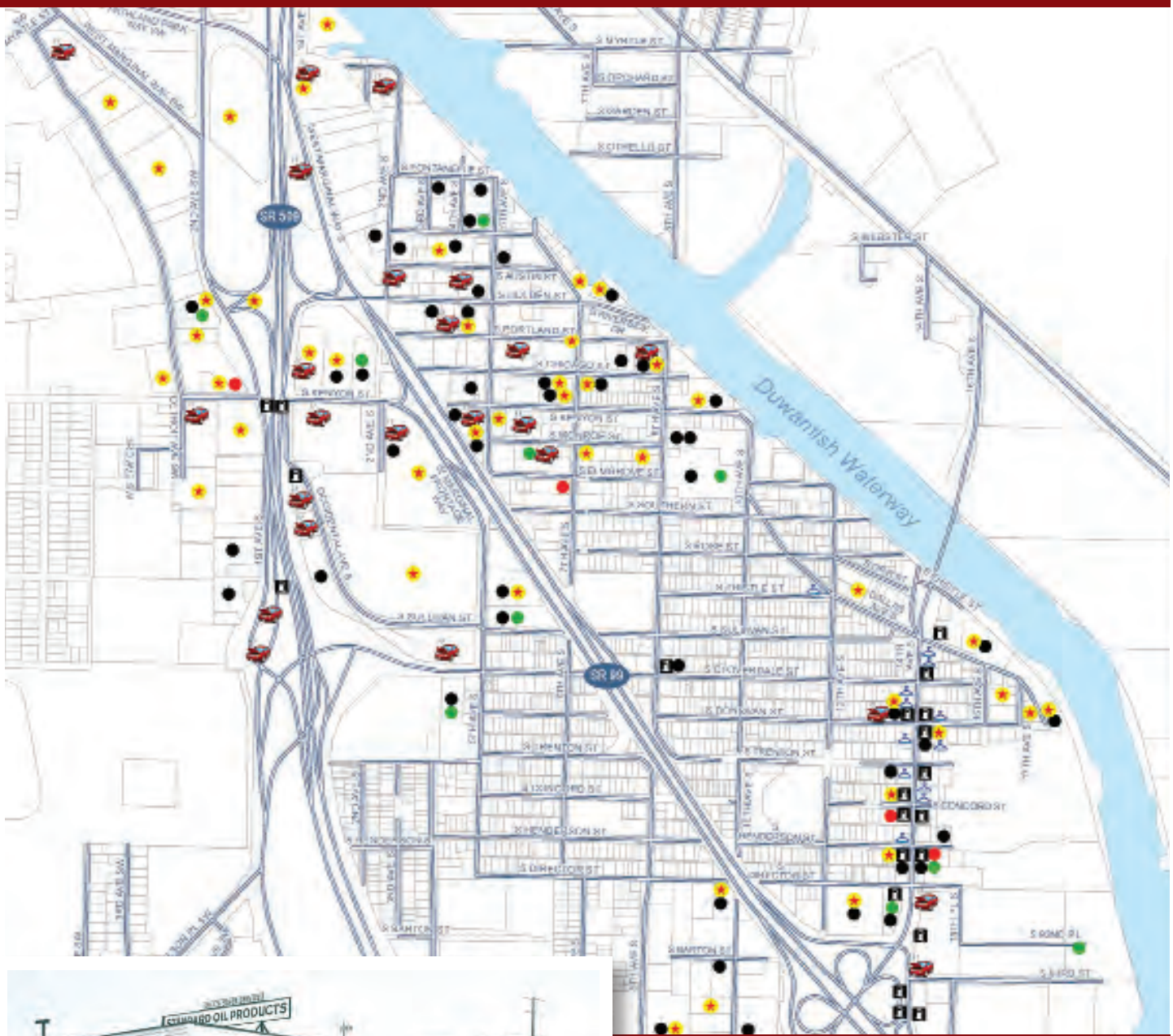
Historical South Park Neighborhood Inventory

Sites with Potential Recognized Environmental Conditions





King County
Department of
Natural Resources and Parks
Solid Waste Division

Executive Summary

Using publicly available documents and reference materials,117 tax parcels and eight highway right of way (ROW) locations in the greater South Park area were identified that might be considered as having 'Recognized Environmental Conditions' (RECs) according to American Society for Testing and Materials (ASTM) Standard Practice E-1527-13. These parcels and ROW locations contain 189 RECs, none of which pose an imminent threat to human health or the environment. However, anyone contemplating the purchase or redevelopment of these sites would be advised to seek the services of a qualified environmental consultant to conduct a Phase I Environmental Site Assessment (ESA) of the site.

This inventory is not a Phase I Environmental Site Assessment as would be performed for a specific site by a professional consultant. It is intended to point out sites that, because of past or present land use, are impacted or have the potential to be impacted by contamination due to the release of petroleum or hazardous substances. Property owners who may find their real estate listed in this inventory and want to know more about what lies beneath the surface of their land should contact a qualified environmental consultant to assess their site.

The purpose of the inventory is to provide developers, property owners, community groups, and residents with historical information that will help promote cleanup and reuse of properties in the South Park area that may become available for future development.

Seven categories of data were reviewed to develop this inventory:

1. Historical Gas Station sites
2. Historical Dry Cleaner sites
3. Historical Auto Wrecking Yard sites
4. Sites listed on the Washington State Department of Ecology's Confirmed and Suspected Contaminated Sites List (CSCSL) and Leaking Underground Storage Tanks (LUST) List
5. Sites listed on Ecology's No Further Action (NFA) List
6. Sites listed on Ecology's Regulated Underground Storage Tanks (UST) – Active Sites List
7. Sites listed on Ecology's Regulated Underground Storage Tanks (UST) – Inactive Sites List

Information on categories one through three was obtained principally from R. L. Polk City Directories for Seattle and Cole Cross Reference Directories available at the King County Regional Library in Bellevue, and from archival tax records at the Puget Sound Regional Archives at Bellevue College. Information on categories four through seven was obtained from Ecology's Integrated Site Information System (ISIS)[1] website and via public records requests to Ecology's Central Records Division at their Northwest Regional Office in Bellevue.

Of the 117 tax parcels and eight ROW locations, 75 had one REC, 39 had two RECs, eight had three RECs, and three had four RECs distributed as follows:

1. 25 sites listed as Historical Gas Stations
2. 12 sites listed as Historical Dry Cleaners
3. 25 sites listed as Historical Auto Wrecking Yards
4. 49 sites listed on the CSCSL or LUST lists
5. 17 sites listed on the NFA list
6. 6 sites listed as active Regulated UST sites
7. 55 sites listed as inactive Regulated UST sites

For the first three categories of data, a narrative history, along with contemporary and archival photographs (if available) of the sites are provided. For the fourth category, summaries of site history, contamination, and cleanup efforts, along with contemporary (and in some cases archival) photographs of each site are provided. Sites in the last three categories are listed in tables. All sites are represented geographically on site maps throughout the report.

[1] https://fortress.wa.gov/ecy/tcpwebreporting/Report.aspx.

Disclaimer

The scope of the report was developed with the involvement of King County by ECOSS in its capacity as a Technical Services contractor to the King County Solid Waste Division to achieve specific project objectives, with the intent of establishing an appropriate balance between level of effort and uncertainty. Neither King County nor ECOSS can be held responsible for interpretation or extrapolation of the data contained herein, since that would be contrary to the intent of the study as stated in the introduction.

ECOSS

Sustainable Solutions for All

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Please direct questions to Lucy Auster with the King County Solid Waste Division at 206-477-5268 or Lucy.Auster@kingcounty.gov.

Introduction



It has long been recognized that communities on both sides of the lower Duwamish River have a disproportionately high percentage of King County's contaminated sites. The King County Duwamish Manufacturing/Industrial Center makes up only .04% of the county's acreage, yet has 10% of sites in the county listed by the Washington State Department of Ecology (Ecology) as contaminated and almost half of these are in the Georgetown and South Park neighborhoods. There are numerous, but now forgotten, historical gas stations, dry cleaners, and auto wrecking yards in the area that may have released contaminants to the soil and groundwater.

With the completion of the new South Park Bridge over the Duwamish River, there is a renewed interest in the economic redevelopment of the South Park and Georgetown commercial districts. Local residents and community groups, such as the South Park Area Redevelopment Committee (SPARC), the Georgetown Merchants Association, and the Georgetown Community Council have a vested interest in reuse of commercial properties that may have been impacted by contamination due to past land uses.

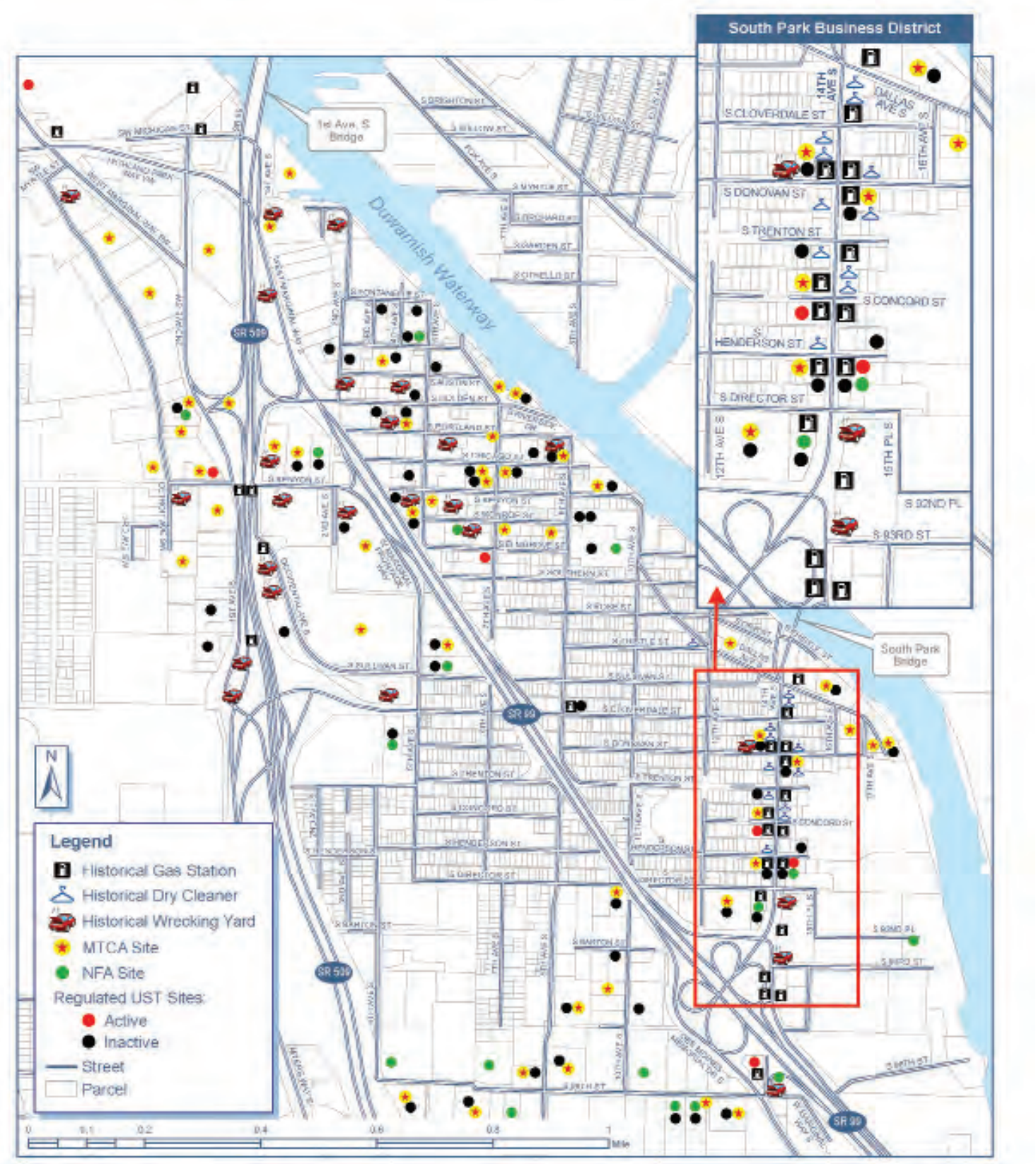
In 2012, the nonprofit ECOSS began an inventory of sites in the commercial districts of Georgetown and South Park that are, or have the potential to be, contaminated with petroleum or other hazardous materials due to past land uses and practices. This inventory is designed to advise potential property purchasers, developers, and the community at-large of the potential for soil or groundwater impacts from petroleum and/or hazardous substances that may have been released in the past. The inventory includes historical gas stations with underground storage tanks (USTs), dry cleaners, and sites listed on Ecology's Toxics Cleanup databases. Gas stations and dry cleaners were common in commercial districts across the country after World War II, and have been the source of much of the contamination discovered in non-industrial neighborhoods over the past 20 years.

The inventory was started using an ECOSS volunteer; however, six months after starting the inventory the volunteer moved out of the area and the work was taken up by ECOSS staff using brownfields assessment grant funds awarded in 2010 to King County's Solid Waste Division by the United States Environmental Protection Agency (EPA) to operate the King County Brownfields Program. In March 2013, the county's Brownfields Technical Services contract with ECOSS expired and was not immediately renewed, so the project went dormant.

Later that year, the county learned that it had been awarded a new EPA brownfields assessment grant for three years beginning with federal fiscal year 2014. A new technical services contract between King County and ECOSS was signed in March 2014 which allowed ECOSS to revive the inventory project. With the new funding, ECOSS decided to divide the project into two separate reports, one for Georgetown and one for South Park, and to expand the areas covered beyond the immediate commercial districts. This is the second of these two reports.

King County will share the reports with community stakeholders through meetings and internet postings. The King County Brownfields Program will then work with stakeholders to provide assistance as appropriate on sites the community wishes to see cleaned up and redeveloped.

FIGURE 1 **South Park Recognized Environmental Condition sites**



Acknowledgements

ECOSS wishes to acknowledge the following organizations and individuals who provided valuable research assistance and access to documents and data relevant to this project.

Office of the Secretary of State, Division of Archives and Records Management Puget Sound Regional Branch, Bellevue, WA

- Phil Stairs, Research Assistant
- Midori Okazaki, Archivist

Washington State Department of Ecology, Northwest Regional Office, Bellevue, WA

- Dan Cargill, Source Control Project Manager, Urban Waters Initiative, Lower Duwamish River
- Chérie Gritsch Public Disclosure officer, Central Records,
- Sally Alexander, Central Records
- Sally Perkins, Central Records

Recognized Environmental Condition (REC)

This inventory identifies sites that potentially have RECs as defined by ASTM. A definition of a REC is contained in ASTM Standard Practice E-1527-13: Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process as follows:

"Recognized Environmental Condition (REC): the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: 1) due to any release to the environment, 2) under conditions indicative of a release to the environment; or 3) under conditions that pose a material threat of a future release to the environment…"

An Historical Recognized Environmental Condition (HREC) is generally defined under ASTM E-1527-13 as a site with known contamination that has been cleaned up to the satisfaction of the applicable regulatory authority or meets unrestricted residential use criteria established by a regulatory authority without subjecting the property to controls.

Methodology



Following the format established by ECOSS in similar studies in Bothell, Bellevue, White Center, and Kent, the initial step in assembling information for this project was to study Ecology's ISIS to identify sites in the South Park neighborhood (which includes parts of zip codes 98108 and 98106) that have been listed in one or more of the following databases: CSCSL, LUST, NFA, and Regulated USTs – both active and inactive sites.

The next step was to research R.L. Polk's City Directories for Seattle at the King County Regional library in Bellevue. Polk Directories were issued annually for the City of Seattle from the late 19th century until the late 20th century. They provide residential and commercial names and addresses in a street by street index or for commercial sites, in a classified section. Thus, it is possible to check the name and type of businesses that were extant in any particular year at a specific address. The Bellevue library has a copy of the 1928 Polk Directory (which doesn't have street indices) and most (but not all) of the Directories for 1940 through 1996. For later years, the library has copies of the Cole Directories from 2000 to present. It is principally through the Polk Directories at the Bellevue Library that historical gas stations, dry cleaners, and auto wrecking yards were identified.

Once a particular site was identified, its parcel number was determined by using King County's web-based interactive mapping application iMAP and its Parcel Viewer 2.0 web site.[2] The third step was to review the tax record for that parcel at the Puget Sound Regional Archives in Bellevue. The tax record often has a photograph of the historical business in question taken whenever new or modified taxable structures were added. This photograph is very useful to show the site as it was in the past and compare it to current conditions, thus providing the reader with a compelling visual comparison of "what was then" with "what is now."

[2] http://gismaps.kingcounty.gov/parcelviewer2/

Report Organization

Information in this report is organized in the following way:

1. Historical Gas Station sites.
2. Historical Dry Cleaner sites.
3. Historical Auto Wrecking Yard sites.
4. Model Toxics Control Act (MTCA) sites consisting of a) sites on the confirmed and suspected contaminated sites list (CSCSL) and b) sites listed on the leaking underground storage tank (LUST) list. The former is a database of sites that are undergoing cleanup and sites that are awaiting further investigation and/or cleanup. It also includes sites that have been ranked and appear on Ecology's Hazardous Sites List. The leaking underground storage tank list is a database of sites that have (or had), underground storage tank (UST) facilities that require cleanup.
5. The NFA list. This list contains information about sites previously on the CSCL and LUST lists that have received an NFA decision from Ecology. Ecology will provide this opinion if no further remedial action is necessary at the property to clean up contamination associated with the site in compliance with MTCA.
6. The Regulated UST lists. These lists include facilities with USTs, such as gas stations, transportation companies, manufacturing industries, commercial properties, and governmental entities. There are two lists — one for active (operational) facilities, and one for inactive facilities.

Glossary

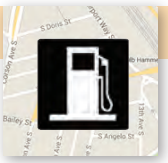
Agreed Order	A legal document issued by Ecology which formalizes an agreement between the department and potentially liable persons (PLPs) for the actions needed at a site.
AS/SVE	Air Sparging/Soil Vapor Extraction. A remedial system that reduces concentrations of volatile contaminants in soil and groundwater by injection of contaminant-free air into the subsurface to vaporize contaminants (air sparging) and removal of them through a series of extraction wells under negative air pressure (soil vapor extraction).
AST	Aboveground Storage Tank. A storage tank which has visible exterior surfaces even if it rests on a concrete pad or other platform that obscures the bottom.
ASTM	American Society for Testing and Materials. This is a standards development organization that serves as an open forum for the development of international standards.
BETX	BTEX is an acronym that stands for benzene, toluene, ethylbenzene, and xylenes. These compounds are some of the volatile organic compounds (VOCs) found in petroleum hydrocarbons such as gasoline.
bgs	Below ground surface. Used as an abbreviation describing depth to groundwater, USTs, contamination, etc.
CAP and DCAP	Cleanup Action Plan and Draft (i.e. preliminary) Cleanup Action Plan.
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act. U.S. Environmental Protection Agency Superfund law.
Chlorobenzene	A colorless, flammable liquid commonly used as a solvent and widely used in the manufacture of other chemicals and commodities such as herbicides, dyestuffs, and rubber.
CKD	Cement Kiln Dust. A caustic granular waste product of the cement manufacturing industry that may contain metals deleterious to the environment. Frequently used historically as fill material on uneven or swampy ground in South Park.
Class C landfill	Subtitle C landfills are those landfills which are authorized under the federal Resource Conservation and Recovery Act (RCRA) to accept hazardous waste for disposal.
Class D landfill	Landfill licensed to accept construction debris and household garbage but not hazardous wastes.
COC, COPC	Contaminants of Concern, Contaminants of Potential Concern. A list of hazardous substances known or suspected to be present on a site undergoing environmental or remedial assessment.
Creosote	A dark brown oil distilled from coal tar and used as a wood preservative. It contains a number of phenols, cresols, and other organic compounds.
CSCSL	Confirmed and Suspected Contaminated Sites list. A standard report/data set produced by Ecology's Toxics Cleanup Program.
DCE	1,2-dichloroethene. A chlorinated hydrocarbon commonly known by its old name of ethylene dichloride (EDC). It is a common by-product produced by the biodegradation of PCE and TCE.
De minimus concentration	Less than one inch of a regulated substance [in a UST system] or less the reportable quantity as defined by CERCLA (WAC 173-360 UST Statute & Regulations).
Dioxin/furans	Dioxins and furans are a class of similar chlorinated aromatic organic compounds. They are produced primarily during the incineration or burning of waste; the bleaching processes used in pulp and paper mills; and the chemical syntheses of various other organic compounds. They are extremely toxic and persistent in the environment.
Early notice letter	A formal letter from Ecology to owners, operators, and other persons known to be potentially liable for the cleanup of a site notifying them that their site is suspected of needing cleanup and that it is Ecology's policy to work cooperatively with them to accomplish prompt and effective cleanup.

Ecology	Washington State Department of Ecology.
EDC	1,2-dichlorethane. A chlorinated hydrocarbon that is a common by-product produced by the biodegradation of PCE and TCE.
EPA or USEPA	United States Environmental Protection Agency.
ESA	Environmental Site Assessment (see Phase I and Phase II below). May also refer to the Endangered Species Act.
FS	Feasiblity Study. See RI/FS below.
GRO	Gasoline Range Organics.
HREC	Historical Recognized Environmental Condition. A site with known contamination that has been cleaned up to the satisfaction of the applicable regulatory authority or meets unrestricted residential use criteria established by a regulatory authority without subjecting the property to controls.
HVOC	Halogenated volatile organic compound, most commonly a solvent containing chlorine, but may include other chemicals with bromine or iodine.
iMAP	King County's Interactive Mapping Tool. iMAP is an application that allows users to view King County spatial information (GIS data and images) in a map display.
ISIS	Integrated Site Information System. State-wide tracking system used and managed by Ecology's Toxics Cleanup Program.
KCIW	King County Industrial Waste program.
Land Farming	A common practice in the 1990s to aerate PCS to encourage biodegradation and to liberate volatile products, thereby "cleaning up" the soil. This practice is no longer allowed by air quality agencies.
LDW	Lower Duwamish Waterway.
LUST	Leaking Underground Storage Tank.
Methylene Chloride	A volatile organic liquid with a moderately sweet aroma widely used as a solvent.
mg/kg and µg/l	Milligrams per kilogram and milligrams per liter. Mg/kg is used to express the quantity of a contaminant in soil and µg/l is used to express the quantity of a contaminant in groundwater. Mg/kg is generally equivalent to parts per million and µg/l is equivalent to parts per billion.
MNA	Monitored Natural Attenuation. A remedial method that allows the breakdown of contaminants by natural means over time.
MTCA	Model Toxics Control Act. Legislation passed by the State of Washington in 1988. Its purpose is to identify, investigate, and clean up facilities where hazardous substances have been released. It defines the role of Ecology and encourages public involvement in the decision making process. The act is codified in Washington Administrative Code (WAC) 173-340-370.
MTCA Method A and B cleanup levels	Method A establishes cleanup levels for 25 to 30 common chemicals found in soil and groundwater, Method B establishes cleanup levels using state and federal laws and risk assessment equations and other requirements specified for each medium.
MW	Monitor Well. A well designed and installed to obtain representative groundwater quality samples and hydrogeological information.
Natural Attenuation	A variety of physical, chemical, and/or biological processes that, under favorable conditions, act without human intervention to reduce the mass, toxicity, mobility, volume, or concentration of hazardous substances in the environment.

Glossary *continued*

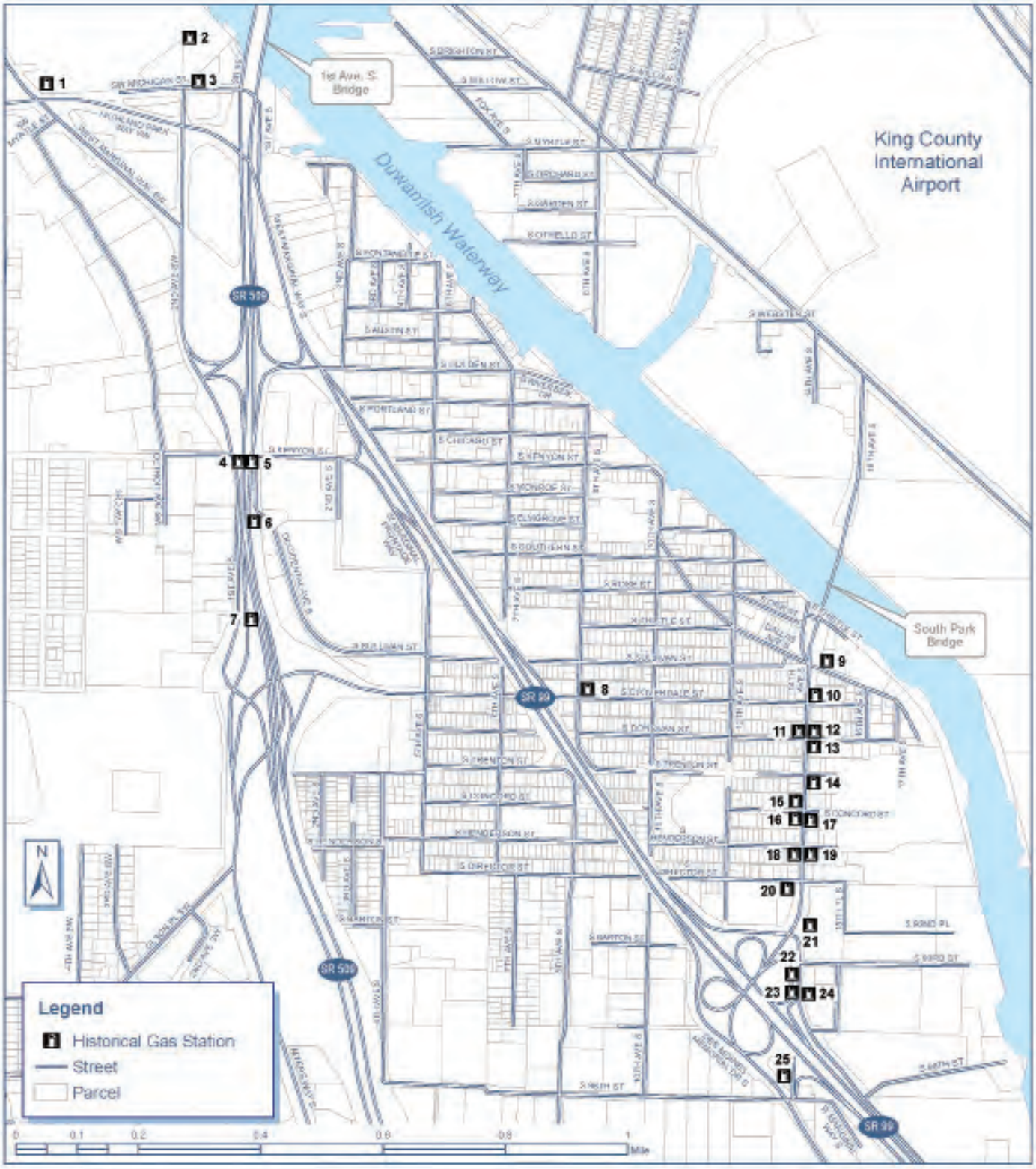
NFA	No Further Action. An opinion letter issued by Ecology that remedial actions on a site have achieved the substantive cleanup requirements of MTCA and no further work is needed.
Non-detect	Below the lowest concentration of a chemical that can be observed with any degree of confidence under laboratory analysis.
PAH and cPAH	Polycyclic aromatic hydrocarbons and carcinogenic polycyclic aromatic hydrocarbons. These are organic compounds composed of multiple aromatic rings of carbon and hydrogen that may pose a risk of cancer in humans. Examples of PAH include naphthalene, anthracene, and phenanthrene. Examples of cPAH include benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd) pyrene.
ppb	Parts per billion.
PCB	Polychlorinated biphenols. A broad family of man-made organic chemicals that were domestically manufactured from 1929 until their manufacture was banned in 1979. They were used in hundreds of industrial and commercial applications including electrical, heat transfer, and hydraulic equipment. PCBs have been demonstrated to cause cancer, as well as a variety of other adverse health effects.
PCE	Tetrachloroethylene also known as Perchloroethylene or Perc. A chlorinated solvent commonly used in the dry cleaning industry.
PCP or Penta	Pentachlorophenol. A common wood treating chemical found in creosote.
PCS	Petroleum Contaminated Soils.
Pesticide	A substance used for destroying insects or other organisms harmful to cultivated plants or to animals.
Phenols	A mildly acidic toxic white crystalline solid obtained from coal tar and used in chemical manufacture, and in dilute form as a disinfectant. Also, any compound with a hydroxyl group linked directly to a benzene ring.
Phthalates	A group of man-made chemicals that are structurally related to the organic acid, phthalic acid. The most important use of phthalates is in plastics, especially PVC, where they act as plasticizers.
Phase I ESA	Phase 1 Environmental Site Assessment. A detailed study of historical land uses, practices, and previous environmental testing at a specific site to determine if RECs are present. No sampling is conducted in a Phase I ESA.
Phase II ESA	Phase II Environmental Site Assessment. Generally a follow-up to a Phase I ESA that collects environmental samples to determine the presence or absence of contamination and other environmental hazards.
PPA	Prospective Purchaser Agreement.
PVC	Polyvinyl chloride. A common plastic polymer used to make pipe, bottles, and non-food packaging.
REC	Recognized Environmental Condition. The presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: 1) due to any release to the environment, 2) under conditions indicative of a release to the environment; or 3) under conditions that pose a material threat of a future release to the environment (ASTM Standard Practice E-1527-13).
RCRA	Resource Conservation and Recovery Act. This law was enacted in 1976 and is the principal federal law in the United States governing the disposal of solid waste and hazardous waste.
RCRA Metals	Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, and Silver. RCRA specifically lists each of these eight metals because they are extremely toxic at even small concentrations.
RI/FS	Remedial Investigation/Feasibility Study. A two-step investigation that collects data to determine the extent and magnitude of contamination (the RI) and a study to evaluate and establish criteria for the cleanup (the FS).

SHA	Site Hazard Assessment. An assessment conducted by or for Ecology to gather information about a site to confirm whether a release of hazardous substances has occurred and to enable Ecology to evaluate the relative potential hazard posed by the release.
SPU	Seattle Public Utilities.
SVE	Soil Vapor Extraction. See AS/SVE above.
SWPPP	Stormwater Pollution Prevention Plan.
TAL Metals	Target Analyte Metals include: Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, and Zinc.
TCA	1,1,1-Trichloroethane also known as methyl chloroform, is a chloroalkane. This colorless, sweet-smelling liquid was once produced industrially in large quantities for use as a solvent.
TCE	Trichloroethylene. A chlorinated compound commonly used as an industrial solvent.
TCLP	Toxicity characteristic leaching procedure. A soil sample extraction method for chemical analysis employed as an analytical method to simulate leaching through a landfill. The testing methodology is used to determine if a waste is characteristically hazardous and must be disposed of at a Class C landfill.
TEE	Terrestrial Ecological Evaluation. A study to determine if land-based plants and animals will be harmed from exposure to contaminated soil.
TPH, TPH-G, TPH-D, TPH-O	Total Petroleum Hydrocarbons, Total Petroleum Hydrocarbons as Gasoline, Total Petroleum Hydrocarbons as Diesel, and Total Petroleum Hydrocarbons as heavy oil.
UST	Underground Storage Tank. Any one or a combination of tanks (including underground pipes connected thereto) that is used to contain an accumulation of regulated substances, and the volume of which (including that of underground piping connected thereto) is ten percent or more beneath the surface of the ground. (WAC 173-360-120)
VCP	Ecology's Voluntary Cleanup Program. Voluntary cleanups are initiated by persons responsible for cleaning up contamination at a site. They may be conducted with or without oversight from Ecology but usually there is some Ecology assistance or review to assure that the requirements of MTCA are being met.
Vinyl chloride	An important chemical used to make PVC. It can be formed in the environment when soil organisms break down chlorinated solvents like PCE and TCE.
VOC, SVOC	Volatile Organic Compounds, Semi-volatile Organic Compounds.
WARM	Washington Ranking Method. The method used by Ecology to rank sites placed on the Hazardous Sites List according to their risk to human health and the environment. The WARM rank is a number between 1 and 5, with a 1 indicating the greatest assessed risk to human health and the environment and a 5 indicating the lowest assessed risk.
WTPH, NWTPH	Washington Total Petroleum Hydrocarbon. Northwest Total Petroleum Hydrocarbon. Analytical methods for testing soil and groundwater for semi-volatile petroleum products in the states of Washington and Oregon.



SECTION 1 **Historical gas station sites**

FIGURE 2



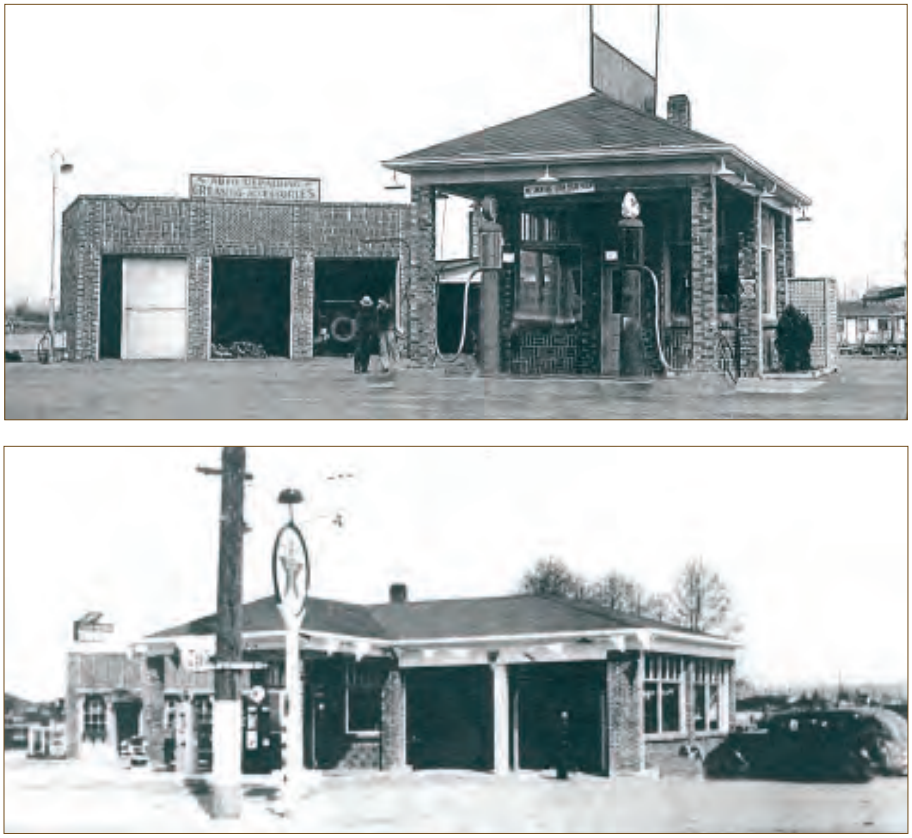
Historical gas station sites

South Park contains two principal traffic corridors connecting the southern suburbs to Seattle via bridge crossings over the lower Duwamish River. The First Avenue South Bridge carries traffic from downtown Seattle to State Highways 99 and 509 which lead to Tukwila and Burien, respectively. The South Park Bridge connects 14th Avenue South to West Marginal Way South and State Highway 99. Both these corridors, especially 14th Avenue South, were attractive to gasoline retailers during the second half of the 20th century. In addition, a small grouping of gas stations west of the First Avenue South Bridge on SW Michigan Street was probably due to the presence of Boeing Plant 1 in the 1920s and '30s. In addition to leaking USTs and piping, gas stations can generate RECs through routine auto repairs and maintenance work that might result in releases of lubricants, oils, and solvents.

Site 1

460 Southwest Michigan Street
Parcel Number **5367203180** now **5367202505**

Tax files indicate that this gas station was built in 1930, most likely as a Shell station. Polk Directories from 1940 through 1944 list it as Jas Ritelas gas station. In 1948-49 it was remodeled into a Texaco and remained so until 1954. In 1956, the station was Severson's Sav-Mor Gas, then Boeing Automotive Gas (1957), Walt's Automotive Gas (1958), Sandy's Pay-Less Gas (1960), and George's Pay-Less Gas (1961 to 1965). The last listing in Polk Directories is 1966 as Michigan Street Gulf Service.



Two historical views of the Site; as it appeared in the 1930s in the top photo, and after remodeling as a Texaco in the late 1940s in the photo directly above.



Today, the Site is used for trailer parking at the Seafreeze Plant at the corner of West Marginal Way SW and Highland Park Way SW.

Site 2

171 Tronsen Place Southwest
Parcel Number **5367202505**

According to archival tax records, a service station was built at this location in 1925 with the address of 171 Tronsen Place SW, a street that no longer exists. The original owner was C.B. Dodge Corporation and the 1937 photo shows it to be Bill's Super Service, a Standard Oil station. The tax file says it was torn down in 1965.



Bill's Super Service on Tronsen Place SW in late 1930s.



This employee parking lot is approximately in the same location on what was Tronsen Place SW.

Site 3

120 Southwest Michigan Street
Parcel Number **5367202503**

According to the Polk Directory, Nelson's Richfield was built in 1939 a block south of Bill's Super Service. Tax files indicate it had two 500 gallon USTs, one 1,000 gallon UST, and a hydraulic lift in the lube shop.



Nelson's Richfield in 1939.



Today, this station would be located behind the Seafreeze sign where 1st Avenue SW (on the right) meets SW Michigan Street.

Site 4

7901 1st Avenue South
Parcel Number **3224049001**

According to the Polk Directory, Kenyon Street Texaco was listed at this address in 1964. In 1966, it was Lyle Thomasson's Texaco, and Polk Directories for 1968 show it as residential and vacant in 1969. No archival photographs could be located for this gas station.



No archival photo is available. The Kenyon Street Texaco would have been located on the southwest corner of 1st Avenue S and SW Kenyon St. which is now Intermountain Supply Co.

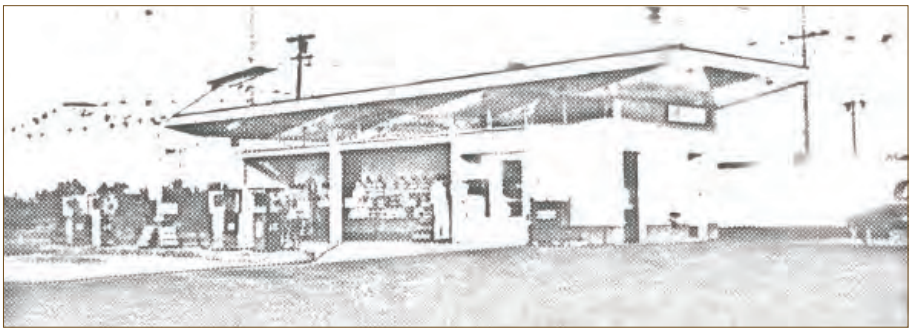
Site 5

7900 1st Avenue South
Parcel Number **3224049007** now **SR 509 ROW**

The archival photo taken in 1955 shows a Shell gas station by the name of Bale's Quality Gas at this location, however there is no listing in Polk Directories. The likely reason for this is that the parcel in question was outside Seattle's city limits in the 1950s and therefore excluded from Polk's Seattle listings. When the parcel was incorporated into the city, the site was listed. It was Lee's Payless Gas from 1960 to 1965 and then Mark's First Avenue Gulf in 1966. The site was vacated in 1968 for the construction of SR 509.



Original gas station as it appeared in 1955.



The station as it looked nine years later.



Both this gas station and the Chevron at Site 6 below were demolished to make way for construction of State Route 509 in 1968. Site 5 would be in the background of this photo where South Kenyon Street would cross SR 509.

Site 6

8100 1st Avenue South
Parcel Number **3224049008** now **SR 509 ROW**

According to the Polk Directory, Chevron Stations, Inc. established this station in 1955-56. From 1959 to 1962, it was called Ernie & Hanks Chevron. The property was vacant in 1963 then renamed as Ken's Chevron in 1964. It was vacant again from 1966-67 and not listed in 1968 when tax records indicate it was torn down to make way for construction of SR 509.



This Chevron Station built was in 1956 and torn down in 1968 to make way for SR 509 construction.



The Chevron Site is underneath this section of SR 509 a block south of South Kenyon Street.

Site 7

8450 1st Avenue South
Parcel Number Now **SR 509 ROW**

The Polk Directory for 1956 lists this site as Shepp's Eagle Gas. In 1960, it is Ollie's Eagle Gas. In 1964 the site is listed as Boulevard Excavating and in 1966, Jim Foran Trucking. No archival photo could be located for this site.



No archival photo is available. Today, Shepp's Gas would have been located somewhere in the left background of this photo of 1st Avenue South just north of the South Cloverdale interchange.

Site 8

800 South Cloverdale Street
Parcel Number **7883604285**

This Richfield station was constructed in 1958 and listed in Polk Directories as Four Corners Service. In 1961, it became Bayung's Richfield. The site was vacant in 1963 then returned as Big Bird Richfield in 1965. It was vacant again from 1966 to 1973 and torn down in 1974 to make way for Seattle Fire Station Number 26.



This Richfield service station at 8th and South Cloverdale lasted from 1958 to 1965.



Today, the Site is Seattle Fire Station 26.

Site 9

8510 Dallas Avenue South
Parcel Number **2185600025**

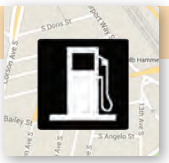
Polk Directories list this as the site of Luard A. Spurlock's gas station in 1942. It doesn't show up in the Directories again until 1954 when it is Crow South Park Service. From 1954 to 1956, it is March's South Park Service and from 1958 to 1962 it is Pumphrey's Flying A Service. In 1963, it is Pumphrey's Auto Repair. It became a Big-O Tire Store in 1966 and currently is the South Park Tire Factory.



This 1944 photo shows a gas station on the far left next to the South Park Café and trailer camp.



The South Park Tire Factory building was constructed in 1974.



Historical gas station sites

Site 10

8524 14th Avenue South
Parcel Number **7883608714**

Between 1940 and 1944, this gas station was listed in the Polk Directories under three different names: John Kluper, C.A. Blanchard, and Jack Baker. It was not listed in 1948-49. From 1951 to 1960 it was the South Park Texaco, then South Park Flying A (1961-1963), South Park Rocket (1964-1965) and from 1966 to 1972, Red's Hancock Gas. After 1972, it was Red's Auto Parts.



Atwood's Texaco as it appeared a year or so after construction in 1936. It went through many owners over the next 36 years when it ceased selling petroleum.



Today, it is a pet store and laundromat.

Site 11

8621 14th Avenue South
Parcel Number **7883607842**

This gas station is listed from 1940 to 1942 in the Polk Directory as Frank Regis gas station and as Louis Spurlock in 1943-44. It is not listed in the Directory for 1948-49 but does appear for the last time as Gene's Associated Service in 1951. It is also listed as MTCA Site 36 under the name of Crosby Auto Repair.



This station was originally constructed in 1930 and the photo at right was probably taken in 1937.



The photo at right was taken about twenty years later when the station ceased selling gas and was converted to use as an automotive repair shop.



The Site today at the northwest corner of 14th Avenue South and South Donovan Street.

Site 12

8620 14th Avenue South
Parcel Number **7883608683**

This site was listed as a Standard Station in the Polk Directory for 1942. Richard Hogan was the operator in 1943-44 followed by N.A. Giacomini in 1948-49. It is listed from 1951 to 1955 as Nat's Chevron and Sam & Russ Chevron from 1956 to 1957. The site is listed as vacant in 1958. It later became a dry cleaner (Historical Dry Cleaner Site 6).

Two views of South Park Chevron. At right is how the station looked shortly after it was built in 1941.



At right, how it appeared after a remodel ten years later.





The gas station closed in the 1950s and, from 1963 to 1990, was a dry cleaner. Above is how the station looks today as a tire store.

Site 13

8700 / 8702 14th Avenue South
Parcel Number **7883608629**

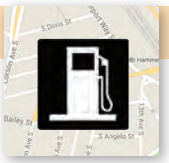


The Site in 1958.

According to the Polk Directory, Sam & Russ Chevron moved from Site 12 to this location in 1958 and remained in business until 1971-72. The name was changed to Russ Winter Chevron from 1973 to 1983 and Dean Moon Chevron in 1985 to 1986 and was no longer listed after 1986. The site is listed as MTCA site 37 under the name Chevron 98484.



Today, the Site is R.L. Cook Sales & Supply Co. warehouse.



Site 14

8802 14th Avenue South
Parcel Number **7883608614**

This station is listed as John Kluper's gas station in Polk Directories for 1942, 1943-44, and 1951-1958. In the 1959 and 1960 Directories it is listed as Bill's Mobile Gas, then as South Park Service in 1961-62 and 1963. The final listing is as Yate's Service in 1964.



John Kluper's gas station in 1942. The station was in business under various owners until 1965.



Today, the Site is the SeaMar Pharmacy.

Site 15

8819 14th Avenue South
Parcel Number **7883608370**

According to King County tax records, this gas station was built in 1963. It is first listed in the Polk Directories as South Park Douglas Service from 1966 to 1971-72. In 1973, it became the South Park Texaco until 1977. In the 1978 Polk Directory the site is listed as vacant. It is listed as Volks Folks Auto Repair in 1979, G&J Auto repair in 1983, and L&L Fork Lift services in 1985. In 1986, it is listed as South Park Arco and remained so through 1994. It currently operates as South Park Mini Mart convenience store and gas station. This site is also listed as MTCA Site 38 under the name South Park 76.



This 1963 photo shows the brand new Douglas gas station.



The photo above shows the station in January 1972 when it was remodeled into the South Park Texaco.



Today, the Site is the South Park Mini-Mart and gas station selling Chevron branded petroleum.

Site 16

8901 14th Avenue South
Parcel Number **7883608511**

This station appears in the 1928 Polk Directory listed as J.F. Wilson's gas station. There were only two stations listed in the 1928 Directory, this one and Site 18, below.



No archival photograph of the gas station is available. The tax file has this photo of a Tradewell Grocery Store built on the site in 1950.



Today, the Site is the South Park Food Center. (King County Assessor photo)

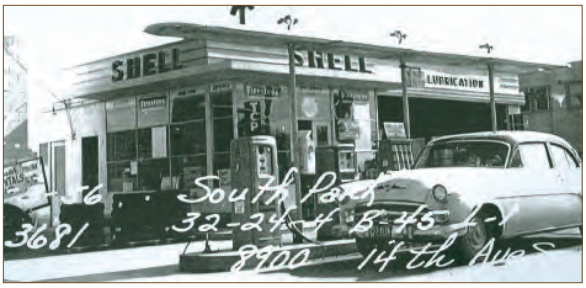
Site 17

8902 14th Avenue South
Parcel Number **7883608597**

This station is first listed in the 1948-49 Polk Directory as L.E. Spurlock's gas station. From 1951 to 1954 it is listed as Lou's Richfield, then Lou's Shell Service from 1955 to 1966. In 1967 it is listed as Phillips 66 Service, but one year later it is South Park Transmission and no longer is listed as a gas station.



L.E. Spurlock opened this Richfield gas station in 1947.



It was remodeled and rebranded as a Lou's Shell in 1955.



It became South Park Transmission in 1968 and today, the Site is Southend Quality Auto Care.

Site 18

9001 14th Avenue South
Parcel Number **7883608556**

This station is listed in the 1928 Polk Directory as Limit Service Station. In the 1940 Directory it is listed as Jean Powell gas station and in the 1941 and 1943-44 Directories as Max Sawyer gas station. From 1948 until 1978, it was identified as Jerry's Garage Auto Service. The archival photo taken in 1956 clearly shows gas pumps and a Richfield sign, but it is not listed in Polk Directories of this period as a gas station. In 1990, the site became Warner's Foreign Auto Repair and is listed as MTCA Site 39 under Warner's Auto Repair.



The photo above was taken in about 1937 when the station was selling Mobil Oil products.



This photo shows the remodeled site in 1956 as a Richfield Station.



Today the Site is Warner's Auto Repair.

Site 19

9000 / 9004 14th Avenue South
Parcel Number **7883608578**

This station was built in 1957 and first listed in the Polk Directories as Shepp's Corner gas service in 1958. In 1960, it was listed as Franzen's Richfield; in 1963, South Park Richfield; from 1964-65, Tumbleson's Richfield; and from 1966 to 1967 Rocket gas station. It is vacant in 1968, but in 1969 and 1970 it is Jerry's Richfield, then Jerry's Arco from 1971-72 to 1978. In 1979 is becomes Bus & Air Parcel Service and no longer listed as a gas station. It is listed as NFA Site 8.



The photo above was taken in 1958 when this station was listed as Shepp's Corner Gas station. It remained a gas station for 20 years, then was used for other commercial purposes.



Today, it is a used tire store.

Site 20

9111 14th Avenue South
Parcel Number **0001600016**

First listed in the 1951 Polk Directory as Baker Miller self-service gas, it was listed in 1953 as Sunset Oil Company Eagle Station #71-7 then Shepp's Eagle in 1954. It is listed as Shepp's Union gas station from 1955 to 1957. It is vacant in 1958, then listed as South End Service 1959 and South End Eagle service in 1960. There are no further listings as a gas station after 1960. The site is now part of the 14th Avenue South ROW at the southeast corner of 14th Avenue South and South Director Street.



Baker-Miller Self Service gas station in 1950. The gas station disappeared about 10 years later.



The location today is partially highway right of way and partially used as parking for a limousine and shuttle service.

Site 21

9242 14th Avenue South
Parcel Number **0001600058**

The only listing in Polk Directories is as M.A. Nelson gas station in 1948-49. This address is now part of the Aeronautical Machinist Union Hall property in Sea King Industrial Park.



This was M.A. Nelson's gas station in 1947.



Southwest corner of the Aeronautical Machinist Union property today.

Site 22

9407 14th Avenue South
Parcel Number **SR 99 ROW**

This site first is listed as Tidewater Associated gas station in Polk Directory for 1943-44. In the 1948-49 Directory, it is listed as Robert Hoyle's gas station. There are no further listings.



No archival photo is available. The Site was probably along this stretch of 14th Avenue South which has now become part of the right of way for State Route 99.

Site 23

9431 14th Avenue South
Parcel Number **SR 99 ROW**

This gas station appears only in the 1948-49 Polk Directory where it is listed as Fred's Service gas station.



No archival photo is available. This gas station was likely near this off ramp from SR 99 to 14th Avenue South.

Site 24

9442 14th Avenue South
Parcel Number **0001600046**

This gas station is listed in the 1948-49 Polk Directory as Morris & Anderson's service and as Anderson's service in 1951. The address is listed as vacant in 1953 and does not appear in subsequent Directories. The site is now part of the Sea King Industrial Park.



This photo taken in 1941 shows Olsen's Automotive Service at 9442-14th Avenue South. It is not listed in the Polk Directory until 1948-49 when it was called Morris & Anderson's Service.



The Site of this station was on the east side of 14th Avenue South (on the left side of the picture above) more or less across 14th from Site 23.

Site 25

9525 14th Avenue South
Parcel Number **5624200097**

The archival photo taken in 1938 shows Coast In Service, a Union 76 dealer located where 14th Avenue South became DesMoines Memorial Way in the 1920s. Subsequent construction of SR 99 and the reconfiguration of the interchange at 14th Avenue South make it difficult to precisely pinpoint this historical station. The best guess is that it later became part of the All City Auto Wrecking site (see Historical Auto Wrecking Yard Site 25) and in 2000 was redeveloped as a convenience store and gas station (see active Regulated UST Site 6).



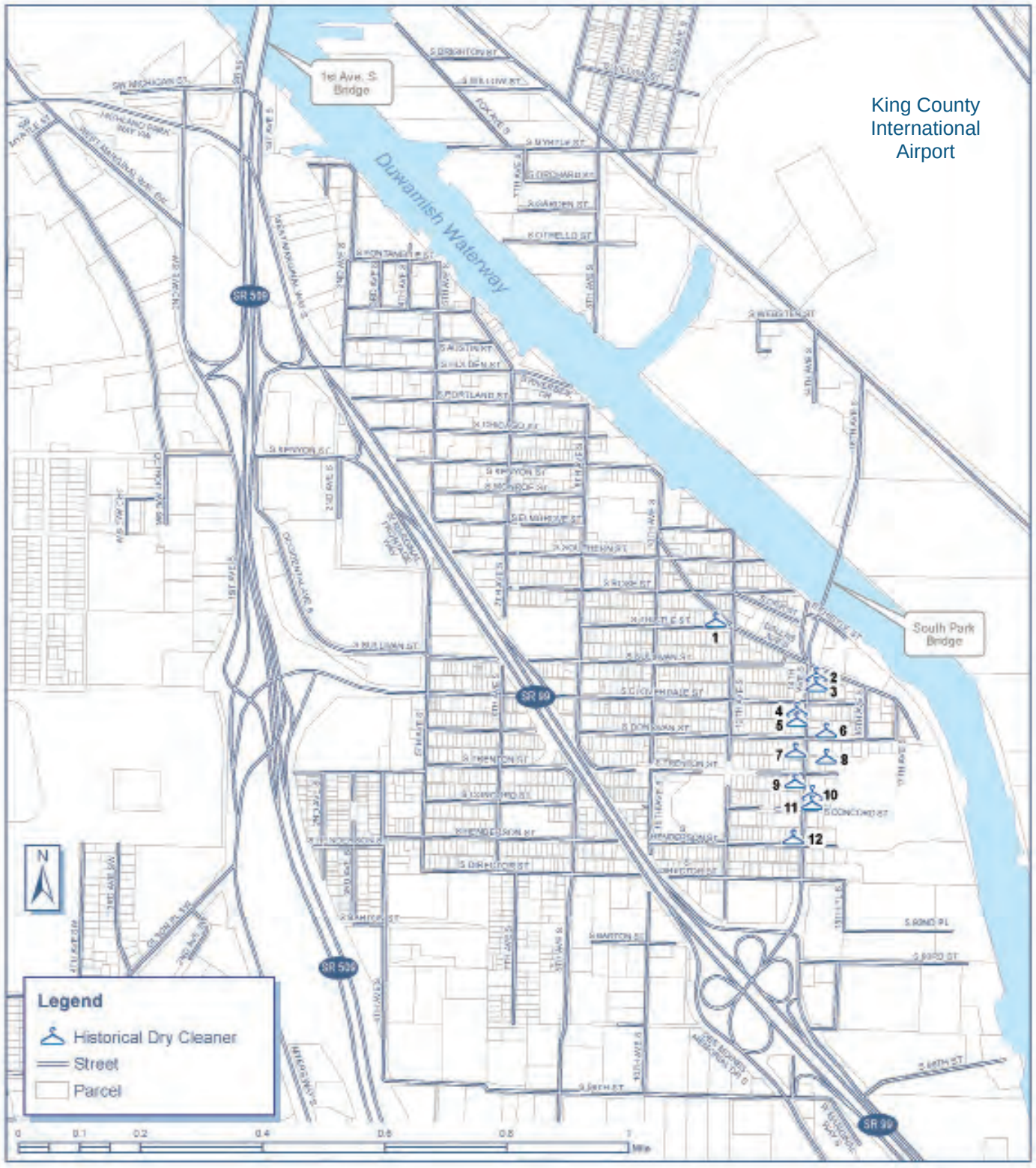
The Site in1938.



Today, it is South Park Fuel and Food.

Historical dry cleaner sites

FIGURE 3



SECTION 2

Historical dry cleaner sites

Historical dry cleaning establishments in South Park were, with one exception, located entirely along 14th Avenue South. Dry cleaning, when done on premises, usually involves chemical solvents such as tetrachloroethylene, also known as perchloroethylene (PCE or “perc”). Since the 1930s, PCE has been used by most dry cleaners because it has excellent cleaning power, is stable, nonflammable, and gentle to most garments. However, if PCE is released into the environment, it can create serious soil and groundwater contamination issues. Not all dry cleaners used PCE on-site. Some establishments were merely drop off and pick up points and the actual dry cleaning was done elsewhere. The Polk Directories do not distinguish between on-site cleaners and drop off stores, so all former dry cleaning sites must be considered as potentially having RECs.

Site 1

8333 Dallas Avenue South
Parcel Number **7883606990**

According to the Polk Directory, from 1951 to 1959, South Park Cleaners operated a commercial dry cleaning business on the ground floor of this five unit residential building in South Park that was originally built in 1901. The building was heavily damaged by a fire in 2015 and is currently vacant.



The Site in 1969, a decade after the cleaners had left.



The building is now empty following a recent fire.

Site 2

8500 - 8510 14th Avenue South
Parcel Number **7883608688**

According to the Polk Directory, this 5,870 square foot commercial building was constructed in 1940 and was home to a variety of businesses (including a restaurant) until converted primarily into a commercial dry cleaning plant in 2006. According to a Seattle Times article dated November 6, 2014, the Regency Cleaners building is now being used as marijuana grow operation by Washington Medical.



This commercial building (as it looked in 1941) was home to Kleen Rite Cleaners in the 1950s and Regency Cleaners 50 years later (Historical Dry Cleaner Site 3).



Today, the building is being used to grow marijuana.

Site 3

8506 14th Avenue South
Parcel Number **7883608688**

One of the tenants in the Regency Cleaners building from 1951 to 1955 was Kleen Rite Cleaners. Polk Directories list the space as vacant in 1956 but in 1958 it is listed as a Payday Loan office. In 2015, the space is rented to Sst Enterprises, a home security services company.



This commercial building (as it looked in 1941) was home to Kleen Rite Cleaners in the 1950s and Regency Cleaners 50 years later (Historical Dry Cleaner Site 2).



Today the building is being used to grow marijuana.

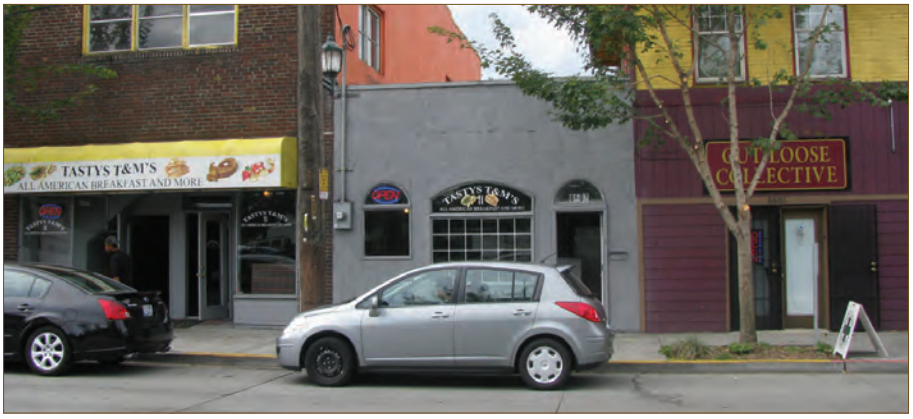
Site 4

8603 14th Avenue South
Parcel Number **7883607820**

Phillip A. Wolff Clothes Presser is listed at this address in the Polk Directories from 1940 to 1944. In 1948, it is listed as Thurber's Shoe Repair and Wolff Cleaners had moved to Site Number 7 below. From 1956 to 1963, this address is listed for EZ Way Laundry and in 1964 it becomes Art's Radio and TV Repair.



This ice cream parlor is at the same location where Wolff Clothes Presser was located in the early 1940s and EZ Way laundry in the 1950s. This photo was taken in April 1949.



Today, it is part of Tasty's T&M Restaurant.

Site 5

8613 14th Avenue South
Parcel Number **7883607810**

For a single year, 1996, this site is listed in the Polk Directory as Bel Vista Drapery Cleaning.



The South Park Hall building as it looked in 1937.



The same commercial space at 8613-14th Avenue South is currently vacant.

Site 6

8620 14th Avenue South
Parcel Number **7883608683**

A dry cleaning establishment called Hy-Tone Cleaners is listed at this address in Polk Directories from 1963 to 1966. From 1967 to 1975 the business is listed as South Park Cleaners, and from 1976 to 1990, Bel Vista Drapery Cleaning (Historical Gas Station Site 12).



This photo taken in November 1960 shows Hy-Tone Cleaners occupying the former Sam and Russ Chevron Site.



Today, the Site is Pro Tires and Wheels, selling auto and truck tires and wheels.

Site 7

8709 14th Avenue South
Parcel Number **7883608096**

This site is listed in Polk Directories as South Park Norge Cleaning Village Self Service Laundry and South Park Norge Self Service Dry Cleaning from 1965 to 1970. From 1971 to 1994 it is South Park Cleaning Village. In 1996, the Directory lists the site as the Juan Colorado Restaurant, which is its current use.



The newly constructed Norge Cleaning Village in 1960.



Juan Colorado Restaurant has been in this building since 1996.

Site 8

8706 14th Avenue South
Parcel Number **7883608629**

Polk Directories list this as the site of Wolff Cleaners from 1948 to 1957. The property was redeveloped into Sam & Russ Chevron station in 1958 (Historical Gas Station Site 9) and the R.L. Cook warehouse in 1992.



Wolff Cleaners as it looked in its new building in April 1949.



Sam and Russ Chevron was in turn demolished to make way for the R.L. Cook Co. warehouse in 1992.

Site 9

8803 14th Avenue South
Parcel Number **7883608351**

This site is listed in the Polk Directory as Westinghouse Laundromat from 1960 to 1964, then as Beth's Laundromat from 1965 to 1970. It is listed as vacant in 1971-72. It is currently a Sea-Mar Community Health Clinic.



This structure was originally built in 1923. It was a laundromat from 1960 to 1970. This photo was taken in June 1962.



Today, the building is a Sea-Mar Community Health Clinic.

Site 10

8822 14th Avenue South
Parcel Number **7883608628**

Despite the archival photo of Park Cleaners taken in February 1947, this site is not listed in the Polk Directory for 1948-49. It is listed as Boulevard Cleaners from 1951 to 1958, then Jet Cleaners from 1959 to 1960. The property is listed as vacant in 1961-62 and was redeveloped by R.L. Cook Sales & Supply Company in 1985.



A 1947 photograph of a recently opened Park Cleaners, later to be called Boulevard Cleaners.



In 1958 after a face-lift, the business became Jet Cleaners.



R.L. Cook Sales & Supply Company built this structure on the site in 1985.

Site 11

8842 14th Avenue South
Parcel Number **7883608628**

The Polk Directory for 1948-49 lists United Cleaners at this address. This name does not appear in earlier or late Polk Directories. Like Site 9, this site is now part of R.L. Cook Sales & Supply Company.



No archival photo exists for United Cleaners which was located further south in the same block as Park Cleaners in the late 1940s. R.L. Cook Sales & Supply Company built this structure on the Site in 1985.

Site 12

8915 14th Avenue South
Parcel Number **7883608513**

Sanders Coin-Op Wash 'N Dry Cleaning Mart is listed in the Polk Directories in 1963 and 1964. The building was listed as vacant in 1965-66 and became Pacific Scientific in 1967.



The new Sander's Coin-Op in 1962.



Today, the Site is SeaMar Community Health Center office and clinic.

Historical Auto Wrecking Yard Sites

FIGURE 4





SECTION 3

Historical Auto Wrecking Yard Sites

Auto wrecking, now called Auto Recycling, was a significant presence in South Park during the latter half of the 20th Century. All that was required to operate an auto wrecking yard site was empty land and a supply of junked, wrecked, or used cars. Some wrecking yards sold used cars and trucks, but the basic operation was to salvage car parts and scrap metal for the market. In this process, fluids from gas tanks, oil pans, and radiators were frequently spilled on the ground creating localized soil contamination. In a few cases, operators purposely dug pits into which waste oil, radiator fluids, battery acid, upholstery, and non-metallic materials (called “fluff”) were dumped. These waste pits were more consequential since they could contaminate groundwater. In any event, the public perception of auto wrecking yards is that they were probably contaminated and hence had one or more REC. Because auto wrecking yards did not usually have any taxable structures on them, only a few archival photographs of them exist.

Site 1

7001 West Marginal Way
Parcel Number **3024049016**

Pans Sales is listed in the Polk Directory in 1953 under Auto Wrecking. No other listings found.



No archival photo is available. The Pacific Plumbing Supply Company parking lot at right is at the Site of Pans Sales, a short-lived wrecking yard in 1953.

Site 2

7130 1st Avenue South
Parcel Number **2924049030**

Clyde Davis Auto Wrecking is listed at this address in the 1953 Polk Directory. From 1954 to 1976, the site is listed in the Directory as Farwest Auto Wrecking. Farwest then moves to 424 South Cloverdale in 1977-79 (Historical Auto Wrecking Yard Site 21).



This employee parking area east of the First Avenue South Bridge was the location of Clyde Davis and Farwest Auto wrecking from 1953 to 1976.

Site 3

7225 2nd Avenue South
Parcel Number **6871200620**

The Polk Directory lists this site as Willie's Auto Salvage Yard from 1983 to 1986. It then is listed as Rice's Salvage Yard in 1987 and J&B Auto Wrecking from 1994 to 1996. The site is not listed in the 2002 Cole Directory.



No archival photo is available. A number of operators used this storage yard next to the Duwamish River for auto wrecking activities between 1983 and 1996.

Site 4

7260 1st Avenue South
Parcel Number **2924049069**

Farwest Auto Wrecking moved to this site from Site 21 at 424 South Cloverdale Street in 1980 and is listed at this address in the Polk Directory until 1986.



No archival photo is available. This empty bit of land owned by Seattle DOT between SR 509 on the right and SR 99 on the left, may have been used by Farwest Auto Wrecking from 1980 to 1986.

Site 5

7620 2nd Avenue South
Parcel Number **7327904920**

Truck Equipment Company is listed in the Polk Directory under auto wreckers in the Polk Directories from 1966 to 1980 at this location. It is not known if this was their primary business or just a sideline.



Construction of Truck Equipment Company's building at 2nd and Austin was well under way in this 1965 photo.



Today, the Site is a general purpose industrial building.

Site 6

261 South Austin Street
Parcel Number **7327904830**

AAA Auto Wrecking is listed at this address in the 1963 and 1964 Polk Directories.



No archival photo is available. AAA Auto wrecking occupied part of this space in 1963-64. The current structure was built in 1976.

Site 7

241 South Holden Street
Parcel Number **7327904550**

Aaron's Auto Wrecking is listed in the Polk Directory at this site from 1985 to 1988 but it is not in the Directory for 1988-89.



No archival photo is available. This is now the Northwest Analytical Laboratories building built in 1989.

Site 8

143-147 West Kenyon Street
Parcel Number **3124049004**

Sittner Auto Wrecking is listed in the Polk Directory at 147 West Kenyon in 1958 and then at 143½ West Kenyon from 1959 to 1964.



No archival photo is available. Sittner auto wrecking would have occupied this space which is now Intermountain Supply's warehouse at 7001 1st Avenue South. Auto wrecking ended about 1964, and the Site became a gas station (Historical Gas Station Site 4). The current structure was built in 1979.

Site 9

110-112 South Kenyon Street
Parcel Number **2924049104**

From 1973 to 1978, the Polk Directory lists Newton Auto Parts & Wrecking Company at this location. From 1979 to 1996 it is called B&G Auto Wrecking in the Polk Directory and in the Cole Directory for 2002 it is Bry's Auto Wrecking. The site is not listed in Cole Directories again until 2007 and 2008 when it is once again called B&G Auto Wrecking. There are no further listings.



No archival photo is available. From 1973 until 2008, the west half of what now is the South Seattle Transfer Station was used as an auto wrecking yard under a variety of names.

Site 10

121-123 South Kenyon Street
Parcel Number **3224049007**

South End Auto and Truck Wreckers is listed in Polk Directories at 123 South Kenyon from 1953-1965. Newton Auto Parts & Wrecking Company is listed in the Polk Directory at 121 South Kenyon from 1957 to 1971-72. In 1973, Newton moves to 110 South Kenyon Street.



This tent-like structure may have been the only "taxable improvement" at South End Auto Wrecking as shown in this April 1956 photo.



This commercial building in the Kenyon Business Park now occupies the former Site of South End Auto and Truck Wreckers.

Site 11

225 & 257 South Kenyon Street
Parcel Number **7328400005**

From 1957 to 1965, Polk Directories list F&S Auto Wreckers at 225 South Kenyon Street. In 1967, Farwest Auto Wrecking Lot 2 is listed in the Polk Directory at 257 South Kenyon. There are no further listings of auto wreckers at this site after 1967.



No archival photo is available. Today, this is the north entrance to Seattle Public Utilities' South Park recycling facility which is part of the South Park Landfill.

Site 12

470 South Kenyon Street
Parcel Number **7328401020**

Jessie's Auto Wrecking is listed at this address in the Polk Directory for 1956 but the site is called Joe's Auto Wrecking in Directories from 1957 to 1964.



No archival photo is available. This brick office and manufacturing building owned by Elliot Bay Industries today is located where Jessie's/Joe's Auto Wrecking operated from 1956 to 1964.

Site 13

521 South Portland Street
Parcel Number **7327903180**

West Coast Auto Wrecking & Salvage is listed at this location in the Polk Directories for 1959, 1960 and 1961-62.



No archival photo is available. Today, it is an employee parking lot.

Site 14

745 South Portland Street
Parcel Number **7327903360**

Bob's Auto Wrecking is listed in the Polk Directories at this site from 1960 to 1965.



No archival photo is available. Today the Site is an empty lot.

Site 15

523 South Kenyon Street
Parcel Number **7327901990**

This address is listed in Polk Directories from 1957 to 1959 as A & B Auto Wrecking.



No archival photo is available. Today, it is a storage yard.

Site 16

543 South Monroe Street
Parcel Number **7327901605**

King Auto Wrecking is listed at this address in the Polk Directories for 1983 to 1994 and in the Cole Directories from 2002-2005, 2009, and 2011. It is the last wrecking yard in South Park proper. It was given NFA status by Ecology in July 2000 following an Ecology SHA (NFA Site 4).



No archival photo is available. Today, it is called Pennington Metals and Auto Recycling.



Site 17

8081 & 8061 Occidental Avenue South
Parcel Number **3224049008**

This is the third location for the McFarland Wrecking Company. It is listed at 8081 Occidental Avenue South in Polk Directories from 1975 to 1979 and at 8061 Occidental Avenue South in the 1980 Polk Directory. This was the location of McFarland Auto Wrecking after moving north from Site 18 in 1975.



No archival photo is available. Today, the Site is International Construction Equipment, Inc.

Site 18

8131 Occidental Avenue South
Parcel Number **3224049102**

After moving from Site 19, this was the address in the Polk Directory of McFarland Auto Wrecking in 1973 and 1974 before moving north to Historical Auto Wrecking Yard Site 17.



McFarland Auto Wrecking Site in November 1967 when it was still selling Used Building Materials.



The former wrecking yard is now occupied by a demolition contractor.

Site 19

8180 1st Avenue South
Parcel Number **SR 509 ROW**

This was the first address in the Polk Directory of McFarland Auto Wrecking in 1971-72 before moving to Historical Auto Wrecking Yard Site 18.



This December 1959 photo shows the 'junk yard' that was to become McFarland Auto Wrecking.



This is the 8100 block of 1st Avenue South today. The wrecking yard site would be in the SR 509 right of way at the left side of the photo.

Site 20

8450 1st Avenue South
Parcel Number **SR 509 ROW**

This was Frank's Auto Wrecking lot in the Polk Directory from 1958 to 1967. In 1968, Frank's moved to Historical Auto Wrecking Yard Site 21 at 424 South Cloverdale Street.



The Site in 1955. The structure was demolished to make way for SR 509 built in the late 1960s.



Today, Frank's Auto Wrecking Site would lie somewhere within the frame of this photo of the Cloverdale Street overpass over SR 509.

Site 21

424 South Cloverdale Street
Parcel Number **3224049045**

According to in the Polk Directory, Frank's Auto Wrecking was here from 1968 until 1975. The site becomes Farwest Auto Wrecking in 1978 and 1979.



No archival photo is available. The current warehouse structure was built on the site in 1980.

Site 22

8623 14th Avenue South
Parcel Number **7883607842**

This is the oldest wrecking yard site identified in South Park. It is listed as Ralph Prata's South Park Auto Wrecking in the 1928 Polk Directory. It was located at the corner of 14th Avenue South and South Donovan Street. It is also Historical Gas Station Site 11 and MTCA Site 34.



No archival photo is available. The Site today.

Site 23

9104 14th Avenue South
Parcel Number **0001600058**

William Brunell Auto Wrecking is listed at corner of 14th and South Director Street in the 1940 Polk Directory, then at this address in the 1941 Directory. There are no further listings after 1941.



No archival photo available. Based upon the Site address, the former wrecking yard could have been at the northwest corner of the Aerospace Machinists Union campus.

Site 24

9264 14th Avenue South
Parcel Number **0001600058**

Jack Baker Auto Wrecking is listed at this location in the 1940 and 1941 Polk Directories. The owner/operator name changes to Oscar Odegard in 1942. There are no further listings after 1942.



No archival photo available. Based on the Site address, the former wrecking yard would have been in the southwest corner of the Aerospace Machinists Union campus.

Site 25 **9438 Des Moines Memorial Drive (9510 & 9525 14th Avenue South)**

Parcel Numbers **5624200091 and 5624200097**





Two archival photos above illustrate All City Auto Wrecking's facilities as they appeared in 1972. The structure in the right hand photo was on the same parcel as Historical Gas Station 25.

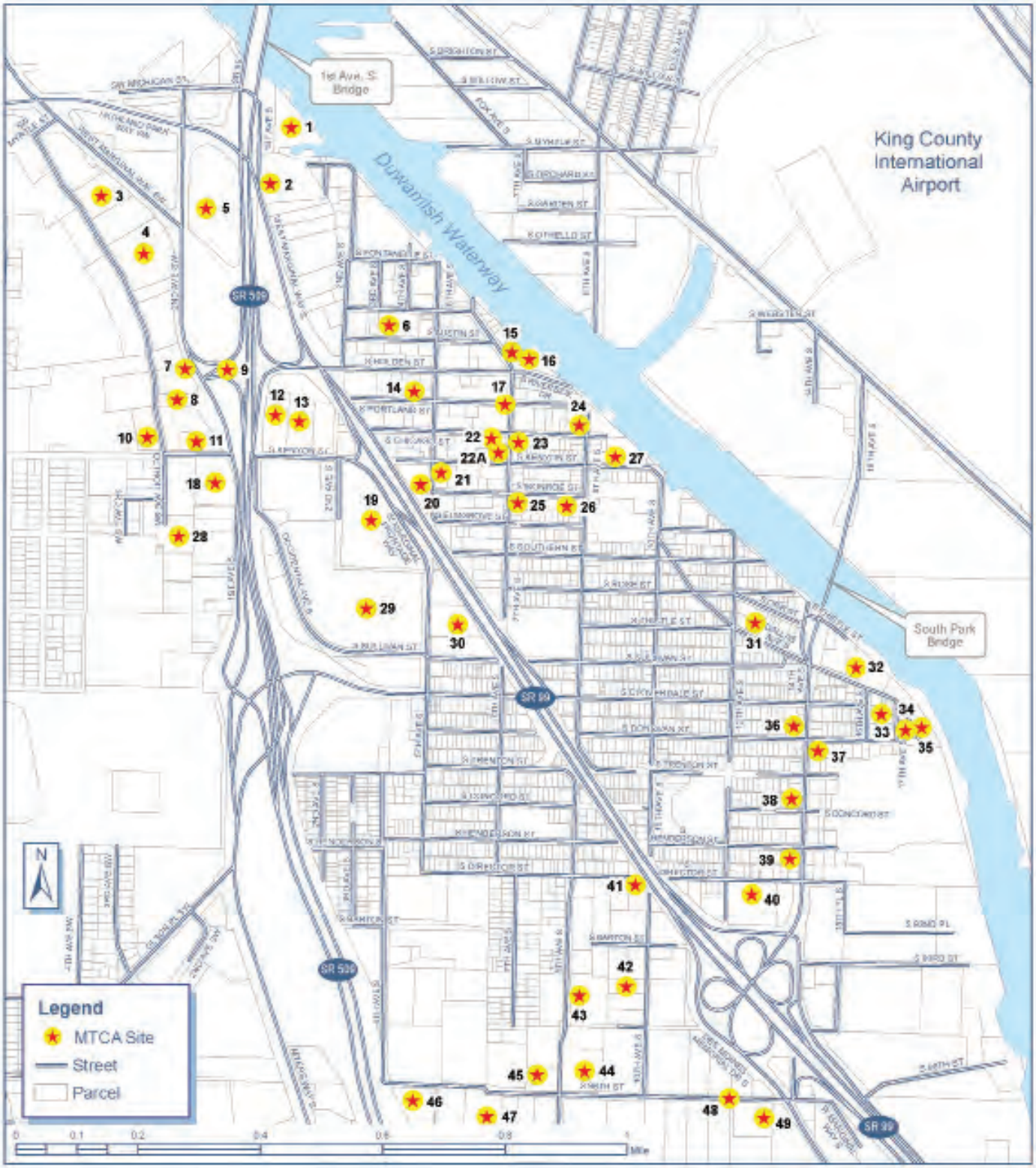
This site lies outside of the Seattle City Limits and hence is not listed in the Polk Directories. According to archival photos it was in business as early as 1972 as All City Auto Wrecking, however, Ecology records say that All City Auto Wrecking operated from 1980 until the late 1990s. It underwent a cleanup and the eastern and western parcels split - one to become a mini-mart and gas station and the other to be reborn as Absolute German Auto Wrecking. The site received an NFA in June 1999 (NFA Site 17).

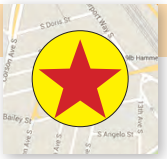


Today, the Site is Absolute German Auto Wrecking.

Model Toxics Control Act Sites

FIGURE 5





SECTION 4

Model Toxics Control Act (MTCA) Sites

As mentioned earlier under Report Organization, this section describes Sites in the South Park area that on Ecology's CSCSL and LUST lists. In this report, these are collectively referred to as MTCA Sites.

As with all Sites in this report, each MTCA Site is located on a map (Figure 5) and given a site address, parcel number, Ecology Facility ID, and designation as a CSCSL or LUST Site, or both. If the site has had an Ecology Site Hazard Assessment (SHA) it will be ranked according to the Washington Ranking Method (WARM). A SHA is an assessment to gather information about a site to confirm whether a release of hazardous substances has occurred and enables Ecology to evaluate the relative potential hazard posed by the release. A score of 1 represents the highest level of risk and a score of 5 the lowest.

The information below is based on limited reviews of site files at Ecology's Offices in the City of Bellevue and on documents available on the internet through Ecology's ISIS website.

Site number	**1**	Ecology Facility ID	**97573251**
Name	**DOUGLAS MANAGEMENT DOCK**	CSCSL	**Yes**
Address	**7100 1ST AVE SOUTH**	LUST	**Yes**
Parcel number	**2924049090**	WARM Ranking	**5**

According to a 2010 SHA, the Douglas Management Dock is a 3.1 acre industrial Site that was once part of a tidal marsh covering the lower six miles of the Duwamish River. The Site was created in the 1960s when a portion of the Duwamish Turning Basin No. 2 was filled in. It has been used for shipbuilding, salvage, equipment storage, school bus parking, containerized marine freight handling, and the operation of a concrete batch plant. It is currently used for storage of shipping containers.



This 1984 photograph from the First Avenue South Bridge shows that the Site was being used for school bus parking.

Contaminated groundwater was found on the Site in 1990. The contaminants included benzene, toluene, xylene, and diesel above MTCA Method A cleanup levels. A 12,000 gallon gasoline UST was removed in 1984 and two 10,000 gallon USTs (one gasoline and one diesel) were removed from the Site in 1991.



The Site today is used for storing shipping containers.

In 2008, a contractor working for Ecology installed five monitor wells and collected soil samples. Analyses of these samples found contamination above MTCA Method A levels for a variety of substances including arsenic, leaded gasoline, and PCBs. In 2013, another contractor working for Ecology prepared a Work Plan for a RI/FS in accordance with an Agreed Order signed in 2011. The work plan indicates that previous investigations have detected metals, PCBs, pesticides, PAHs, and petroleum hydrocarbons in soil and groundwater. The RI will, amongst other things, conduct additional soil and groundwater sampling to delineate limits of contamination, investigate stormwater/catch basin solids, and conduct a geophysical survey to seek a possible waste oil UST that may or may not have been removed in 1991. After completion of the RI, the FS will develop cleanup levels, points of compliance, and remediation levels for the Site and evaluate hazardous substances in soil, groundwater, and stormwater catch basins. As required by MTCA, the FS will develop cleanup alternatives for each contaminated medium (soil, groundwater, surface water, etc.) and screen them to obtain the best options consistent with Ecology expectations identified in MTCA regulations WAC 173-340-370.

Site number	**2**	Ecology Facility ID	**2154**
Name	**INDUSTRIAL CONTAINER SERVICES WA LLC**	CSCSL	**Yes**
Address	**7152 1ST AVE S**	LUST	**No**
Parcel numbers	**2924049030, 2924049004**	WARM Ranking	**4**

This property was developed on fill placed over alluvial sediments and has been used for drum reconditioning since the 1930s. The Trotsky family operated the business on portions of the 7.1 acre Site from 1953 to 1995 as Northwest Cooperage, Inc. Since 1995, a number of different companies have operated the facility, including Industrial Container Services since 2002, but the Trotsky family still owns the property. About 0.8 acres of the Site is an embayment of the Duwamish River created when Duwamish Turning Basin No. 2 was partially filled in with dredged spoils the 1960s. According to a 2009 Site characterization study, soil and groundwater south of the embayment is contaminated with a variety of chemicals above MTCA cleanup levels. In addition, metals, PCBs, and SVOCs were identified in sediments from the embayment. These contaminants are thought to be the result of historic drum reconditioning operations at the facility.



1984 photo of the Site also taken from the First Avenue South Bridge shows installations for reconditioning drums and barrels .



Contemporary photo of the Site.

In 2010, Ecology and the Trotsky family entered into an agreed order to conduct an RI/FS and prepare a draft cleanup action plan (DCAP). The February 2012 RI/FS work plan, identified metals (arsenic, cadmium, copper, lead, mercury, etc.), petroleum hydrocarbons, VOCs, PAHs, phthalates, pesticides, PCBs, SVOCs (pentachlorophenol, et.al.), and chlorinated benzenes as the principal contaminants of potential concern (COPC) in the upland soils. COPCs in the sediments of the embayment were similar: metals, petroleum hydrocarbons, PCBs, pesticides, phthalates, pentachlorophenol, chlorobenzenes, phenol, and polychlorinated dioxin/furans.

In order to fill in data gaps and secure information necessary to complete the FS, the work plan called for additional mapping of the shoreline at low tide to identify and sample groundwater seeps, collection of hand auger samples to assess thickness of fine grained sediment overlying the alluvial sands in the embayment, sampling of bank and intertidal sediments to identify where erosion of bank soils could represent a recontamination potential, and collection of deeper samples in the embayment to assess the depth and limits of contamination.

In the upland area, eight new monitor wells will be installed and sampled and the groundwater flow direction will be reanalyzed using the most recent technology and methods. Soil samples will also be collected with push-probes in the areas of an alleged former “lagoon” or ditch which may have been used for sludge disposal in the past. Finally, the off-site stormwater system, baghouse dust, and drum furnace ash will be sampled.

According to Ecology’s Site manager, Phase 2 of the RI is currently in progress. It is estimated that a draft RI report will be submitted to Ecology in mid- to late-2016 and the draft FS is due 90 days after the RI has been finalized.

Site number	**3**	Ecology Facility ID	**2425**
Name	**WASTE MANAGEMENT OF SEATTLE**	CSCSL	**Yes**
Address	**7201 W MARGINAL WAY SW**	LUST	**Yes**
Parcel number	**3024049167**	WARM Ranking	**5**

In the 1990s, four USTs were decommissioned at this facility, known as the Eastmont Transfer Station. In December 1991, a 1,000 gallon waste oil tank located south of the maintenance building failed a tank tightness test. The tank was emptied and an investigation conducted to determine if any product was released. A soil vapor survey indicated that there were “insignificant” organic vapors around the tank perimeter; nonetheless five borings were installed to collect soil samples. Borings 4 and 5 found significant petroleum contamination at depths of 5 to 10 feet, the average concentration being 7,000 ppm TPH. Low levels of barium, chromium, lead, and arsenic were also found. Groundwater reportedly had oil globules and a heavy sheen but was not sampled. In September 1992, the waste oil tank was removed and 150 cubic yards of contaminated soil and fill materials excavated. The excavation was backfilled with clean ground glass. The UST was in good condition and there were no obvious signs of it being the source of the release. Two monitor wells installed in the area were sampled and found to contain TPH at 1.6 mg/l and 0.6 mg/l. Current MTCA Method A cleanup levels for heavy oil in groundwater is 0.5 mg/l. Further assessment of the Site suggested that much of the contamination appeared to be derived from petroleum hydrocarbons and metals in subsurface fill materials, both above and below the water table.



Main building at the Site as it looked in May 1974.



The building today.

In March 1995, Waste Management reported a suspected release of 40 gallons of diesel fuel from a pressurized product line in Tank #3, a 10,000 gallon UST located on the north side of the maintenance building. The release was attributed to concrete settling. In July of the same year, Tank #3 and two adjacent USTs, (one 20,000 gallon and one 10,000 gallon) were emptied, cleaned, and closed in place by filling with controlled density fill. Approximately 450 tons of diesel contaminated soil was excavated and disposed of during this operation, but small pockets of visually impacted soil were left between the UST shells. The excavated area was backfilled with ground glass. Groundwater was not encountered within the excavation limits.

There are no reports in Ecology files of further cleanup plans or actions at the Site. A handwritten comment at the bottom of a letter to Ecology dated August 27, 1998 (document 5828) says:

> *“1-11-99 Steve Hamilton and I spoke. They [Waste Management] are not actively cleaning up because the entire area has tidally influenced groundwater problems, and they feel it would be fruitless. Site will stay listed as contaminated.”*

The author of this note, presumably an Ecology representative, is identified only by initials, which are illegible.

Site number	**4**	Ecology Facility ID	**94931167**
Name	**JONES WASHINGTON STEVEDORING**	CSCSL	**Yes**
Address	**7245 W MARGINAL WAY SW**	LUST	**Yes**
Parcel number	**3024049159**	WARM Ranking	**5**

According to a 1994 UST removal report in Ecology files, this Site is located on top of a former landfill. There were three 10,000 gallon USTs installed in 1982 as part of a vehicle fueling system; two of the tanks contained gasoline, and one diesel. The tanks had been buried partially in fill material then covered over with soil and connected to a pump island and fuel dispensers located about 20 feet away.



Photo of the Site looking west in 1968. Note proximity of structure to wetland located south of the First Avenue South Bridge.

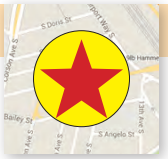


Contemporary view of structure looking northwest.

The USTs were removed in August 1994 and found to be in excellent condition with no rust, pitting, or holes. Groundwater was not encountered in the excavation and there was no visual evidence of contamination in the tank area. However, there was evidence of minor gasoline contamination at the dispenser island. About 50 cubic yards of material containing weathered asphalt, creosote treated wood, fishing net floats, clothing, and other miscellaneous debris was excavated from the dispenser island area and stockpiled on-site.

Analysis of soil samples from the UST excavation were all less than MTCA Method A cleanup levels, however a composite sample from the bottom of the dispenser island excavation had 65 ppm TPH as heavy oil and a sample of the stockpile of material from the dispenser area contained 450 ppm TPH as heavy oil. This contamination was attributed to the weathered asphalt and creosote fill materials, not to releases from the petroleum fueling system. The 50 yards of contaminated soil was transported off-site for recycling.

A SHA dated April 13, 2015 ranked the Site at 5 due primarily to the fact that soil and groundwater conditions associated with the former landfill have not been fully assessed. Site groundwater has also not been assessed with regard to the release of petroleum products from the former USTs.



Model Toxics Control Act (MTCA) Sites

Site number	**5**	Ecology Facility ID	**2537**
Name	**NORTHWEST ENVIROSERVICE 2W**	CSCSL	**Yes**
Address	**1ST AVENUE SW AND W MARGINAL WAY SW**	LUST	**No**
Parcel number	**N.A.--CITY OF SEATTLE DOT WETLAND**	WARM Ranking	**1**



No archival photo is available. Wetland owned by SDOT south of the First Avenue South Bridge.

The Northwest Enviroservice 2W Site is centered south of the First Avenue South Bridge about 650 feet from the lower Duwamish River. It is a 23 acre Site, portions of which may have been used as a landfill in the 1970s. It is currently operated as a wetland by the City of Seattle Department of Transportation (SDOT).

In the early 1990s, monitor wells were installed in the area to see if any hazardous wastes were present as a result of old landfilling operations. Toluene and arsenic were found in soil below MTCA Method A cleanup levels and traces were found of petroleum, vinyl chloride, and arsenic in groundwater, most of which were below MTCA Method A cleanup levels.

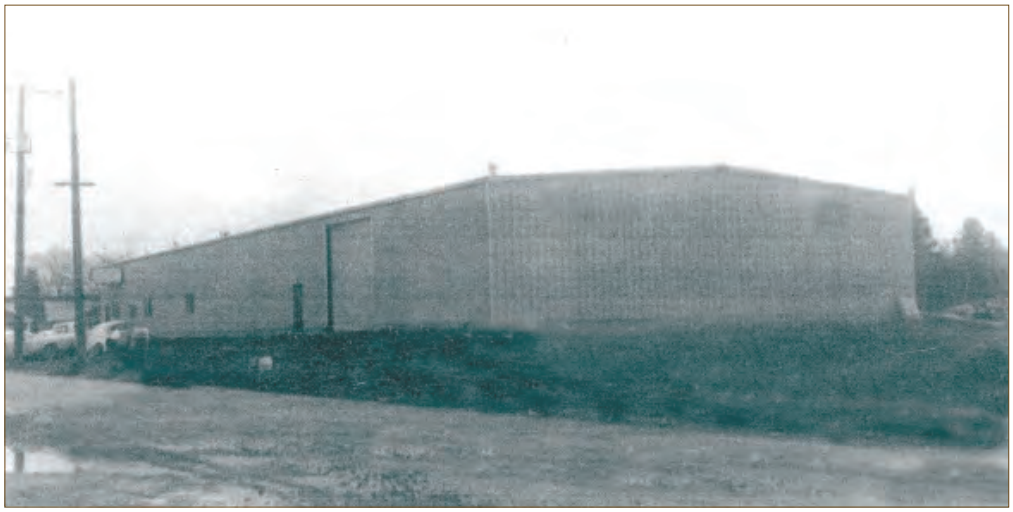
In February 1994, 5,500 gallons of a blended fuel product was released from a bulk storage container at the Northwest Enviroservice facility (MTCA Site 28) located about 1,300 feet south of the Site. This product reportedly contained over two dozen organic compounds and also some metals. The majority of the product flowed into a storm drain, through an oil water separator and eventually found its way to the Site. Vacuum trucks and sorbent pads were used to recover free product at three locations in the wetland area. It was estimated that the Site was impacted by several hundred gallons of product that were not recovered.

The following April, accumulated surficial sediments were collected from the wetlands and the Duwamish shoreline. In one area, concentrations of arsenic, cadmium, lead, PAH, and oil range petroleum were above MTCA Method A cleanup levels for soil. In another area, surficial sediments were above Method A cleanup levels for arsenic, cadmium, and lead. Sediments furthest away from the spill contained arsenic but below the Method A cleanup level for soil.

The wetland area was reconfigured in conjunction with construction of the new First Avenue South Bridge in 1998. Additional excavation or soil disturbance may have occurred at this time, however no information is available as to soil removal and the current extent of impacted soils is unknown.

Site number	**6**	Ecology Facility ID	**8162841**
Name	**ATC DISTRIBUTION GROUP**	CSCSL	**Yes**
Address	**401 S WEBSTER**	LUST	**Yes**
Parcel number	**7327905955**	WARM Ranking	**4**

This Site is a former automotive transmission repair facility where in 1994, one 3,000 gallon gasoline UST and one 2,000 gallon diesel UST were removed along with about 230 cubic yards of PCS. The removed soil was stored on the Site for treatment by land farming. The UST excavation was enlarged to recover as much PCS as possible, but along the east and northeast sides, PCS was left untouched in order to protect the structural integrity of an adjacent building foundation. Soil samples taken along the east wall of the excavation were above MTCA Method A cleanup levels for gasoline and BETX compounds and a soil sample at the east end of the north wall of the excavation contained over 15,000 mg/kg gasoline. This strongly suggests that petroleum contaminated soil may persist beneath the building.



1968 photo of former ATC Distribution Group Building.



Today, the Site is owned by MKJ properties and used as a shipping and receiving facility.

In 2004, a Phase I ESA was conducted that identified several other areas of potential concern including unsampled PCS along the southern boundary of the property, possible petroleum and transmission fluid impacts in the southwestern part of the property, and PCS associated with a floor drain. In 2008 16 direct-push borings were drilled at the Site, three of which were completed as monitor wells. Soil samples from two of the borings contained gasoline above Method A cleanup levels and one sample was found to contain TCE and another methylene chloride above Method A cleanup levels. Diesel, gasoline and oil were found in groundwater samples above cleanup standards.

Petroleum contaminated soil remains beneath the building and the disposition of the PCS recovered from the 1994 UST removals is unknown as is the extent of TCE contamination and PCS in the floor drain area.

Site number	**7**	Ecology Facility ID	**2320**
Name	**LAIDLAW TRANSPORTATION**	CSCSL	**Yes**
Address	**7739 1ST AVE S**	LUST	**NFA**
Parcel number	**3024049018**	WARM Ranking	**4**

According to a 1990 ESA report, Laidlaw Transportation has operated a school bus maintenance and storage facility at this Site since 1986. Prior to development in the 1960s, the Site had been mostly farmland. By 1964 the two structures later occupied by Laidlaw had been constructed: a 160 by 70 foot building used for office and vehicle maintenance and a 40 by 26 foot shop building. These buildings were originally used by a company called Northwest Road Equipment, Inc.



This 1980 photo shows the main building at the Site. The logo on the wall suggests that it was used by NC Machinery.

Ecology files contain a report on several UST removal projects; in 1989 two 1,000 gallon fuel tanks and two 300-500 gallon waste oil USTs were removed, and in 1997 two 8,000 gallon diesel USTs north of the shop building were taken out along with piping and dispensers. Following the 1989 removals, three soil borings were drilled and completed as monitor wells. Two of these borings were located northeast and north of the main building (B1 and B3) and one (B2) on the south side of the building adjacent to property line with Eastern Supply (Site 8 below). Soil samples from these borings contained petroleum hydrocarbons between 5 and 8 ppm, well below MTCA cleanup levels. However soils were found to be contaminated with the solvent tetrachloroethylene (PCE) in concentrations ranging from 0.36 to 0.64 mg/kg. State cleanup level for PCE in soils is 0.05 mg/kg. The PCE contamination was ascribed to a release at Eastern Supply next door.



Today, the building looks the same, but with a different tenant.

Following removal of the UST system in 1997, 644 tons of diesel contaminated soil was over-excavated from the tank pit and taken off the Site for disposal which, in the opinion of the Certified Site Assessor was sufficient to meet state Method A cleanup levels. In 1999, further investigation and soil removal was undertaken in the area where the waste oil USTs were removed in 1989. Ninety six tons of PCS were recovered and taken away for disposal. Excavation sampling indicated the soil was cleaned up to state cleanup levels. In January 2003, follow-up sampling of the former waste oil tank area found detectable diesel and oil range petroleum hydrocarbons but well below the current cleanup standard of 2,000 ppm. A soil vapor study did not indicate the presence of detectable VOCs originating at the Eastern Supply Site.

In June 2006, Ecology issued Laidlaw a Partial Sufficiency letter which determined that the independent remedial action(s) performed at the Site met the substantive requirements of MTCA for characterizing and addressing the release of petroleum hydrocarbons to the soil. However, independent remedial actions performed at the Site are not sufficient to meet the requirements for characterizing and addressing the release of PCE and daughter by-products (TCE, DCE, and vinyl chloride) from the Eastern Supply Site. Thus, the Laidlaw Transportation Site has an NFA for the leaking USTs but remains on the CSCL for solvent contaminated groundwater.

Site number	**8**	Ecology Facility ID	**2258**
Name	**EASTERN SUPPLY COMPANY**	CSCSL	**Yes**
Address	**7745 1ST AVE S**	LUST	**No**
Parcel number	**3024049164**	WARM Ranking	**2**

Eastern Supply Company was a wholesale supplier to the laundry and dry cleaning industry from 1965 until 1994. The principal product distributed by the company was tetrachloroethylene, or PCE, a commonly used dry cleaning solvent (also known as PERC) which was stored in a 5,000 gallon above ground storage tank. In 1990, Ecology conducted a site assessment and discovered PCE contamination in the soil around the tank area above state cleanup levels. Monitor wells were installed to sample groundwater which was found to be contaminated with VOCs associated with the chemical breakdown of PCE such as vinyl chloride, DCE, and TCE. Following this discovery, Eastern conducted an independent remedial action which included relocating the PERC tank, upgrading the PERC storage and dispensing system, excavating about 450 cubic yards of contaminated soil, and pumping 4,500 gallons of groundwater from the soil excavation area. In April 1992, Eastern and Ecology entered into a legal agreement to conduct an RI/FS at the Site.



The brand new Eastern Supply building in 1966.



Same building today but different name on the front.

In June 1997, a DCAP was finalized. The plan recognized that although PCE contamination in the remaining soils did not exceed MTCA cleanup levels for industrial sites, the area would be paved and the soils undergo in-situ vapor extraction and off-gas treatment to lower the concentration of residual contaminants and thereby reduce the risk of further groundwater contamination. A cut-off wall would be installed around the treatment area to reduce groundwater contamination off-site. Groundwater sparging, vapor extraction, and off-gas treatment will be performed within the cut-off wall containment area. Together, soil and groundwater treatments are expected to reduce overall contamination levels in groundwater which will be monitored to measure the rate of decrease. Three compliance monitor wells were located inside the containment area and six wells (four of which were on the Laidlaw Site to the north) were outside the cut-off wall.

The system was constructed and placed into service in April 2001. By December of that year, groundwater samples indicated significant reductions in VOCs inside and outside of the containment area. By April 2003, sampling showed that cleanup goals within the containment area had been achieved, but VOC concentrations outside were still above goals for DCE and vinyl chloride. By 2007, concentrations within the containment were still below cleanup goals even though in 2004-5 there were several ‘spikes’ in PCE and vinyl chloride levels possibly due to equipment problems. Outside the containment area, VOCs in groundwater continued to decrease except for vinyl chloride whose levels varied presumably due to the fact that vinyl chloride is produced by the breakdown of PCE, so that a reduction in PCE levels may lead to a corresponding rise in vinyl chloride.

The groundwater monitoring report for 2007 is the most recent document in Ecology files. The Site is listed as ‘construction completed, performance monitoring’ however, it appears that groundwater sampling and monitoring may have ended by 2008.

Site number	9	Ecology Facility ID	2201
Name	FIRST AVENUE SOUTH LANDFILL	CSCSL	Yes
Address	7700 BLOCK OF 2ND AVE SW	LUST	No
Parcel number	WSDOT AND CITY OF SEATTLE	WARM Ranking	4



No archival photo is available. Today, these on and off ramps connecting 2nd Avenue SW to SR 509 are near the center of the old landfill site.

In a 2004 SHA, Public Health Seattle & King County (Public Health) reports that this Site was originally reviewed by the EPA as an alleged landfill Site used by Bayside Disposal Company from 1969 to 1972. However, there are no known contacts or records to verify this information, or to indicate whether or not hazardous wastes were disposed of there. EPA referred the Site to Ecology for listing on the CSCSL in 1988. That same year, the Puget Sound Air Pollution Control Agency (PSAPCA) investigated a complaint that unlawful storage and disposal of asbestos containing waste materials had occurred at or near State Highway 509 and Second Avenue SW. According to the SHA report, "there are no records in Ecology files to indicate whether or not corrective action was taken."

Preparatory to construction of the current First Avenue South Bridge in 1994, Washington State Department of Transportation (WSDOT) and the City of Seattle installed 15 test borings within the construction zone in the summer of 1992. All but one of these borings were completed as monitor wells and two of these wells, MW 1 and MW 2, were within the First Avenue South Landfill Site. Soil samples from these two borings/wells were analyzed for TPH, acetone, arsenic, cadmium, and lead. These compounds were either not detected or below MTCA Method A cleanup levels.

Groundwater samples from MW 1 and MW 2 were collected and analyzed on three different occasions. In July 1992, the samples were analyzed for TPH, vinyl chloride, and arsenic. In MW 1, TPH and arsenic were not detected, but vinyl chloride was found at 2.7 parts per billion (ppb) which exceeds the MTCA cleanup level of 2 ppb. In MW 2, vinyl chloride was not detected, TPH was 0.49 ppb (500 ppb is the MTCA cleanup level) and arsenic was 50 ppb which is ten times the MTCA Method A cleanup level.

The second round of sampling was in September 1992 and the third in April 1993. In both cases, the samples were analyzed for vinyl chloride and arsenic only. Arsenic was the only analyte found and it was only in MW #2; at 130 ppb in September and 62 ppm the following April. The MTCA method A cleanup level for arsenic is 5 ppb.

Public Health asked WSDOT if any further sampling was conducted after 1993 and was told that no further soil or groundwater samples had been collected since the bridge was completed in 1994.

Site number	**10**	Ecology Facility ID	**2262**
Name	**WEST COAST EQUIPMENT**	CSCSL	**Yes**
Address	**7777 DETROIT AVENUE AVE SW**	LUST	**No**
Parcel number	**3024049158**	WARM Ranking	**Not ranked**

West Coast Equipment was a heavy equipment repair and sales facility from 1963 to 1991. The company stored equipment and parts at 7777 Detroit Avenue SW for its repair facility across the street at 7800 Detroit Avenue (formerly 7746 Detroit Avenue SW). This latter site is now Seaport Petroleum (MTCA Site 11).



Ecology photo of West Side Equipment in 1991.



Today, the building is occupied by Walsh Construction Company.

In April 1990, the company reported to Ecology that there had been a petroleum release from an unknown source and that the contamination may be up to 4 feet bgs. The company informed Ecology that they were planning to move and would not be doing any remedial activity. Meyers Roofing acquired the site in late 1991 and held it until 2007 when it was sold to Thidwick Management Co. A Phase I ESA performed in 1991 noted surface staining, debris, and trash and a minor amount of petroleum contamination in the vicinity of a UST. The surface stained soils were subsequently removed and samples indicated that remaining hydrocarbon contamination was below MTCA cleanup levels.

A consultant conducted a site reconnaissance in 2007 and observed over 100 drums on the site, many of which were unlabeled and in poor condition. The drums contained asphalt roofing products that may include mineral spirits and solvents, namely, methyl ethyl ketone (MEK). Extensive staining was noted around the building where equipment was steam cleaned.

There are no remedial action reports in Ecology files other than the mention of stained soils removal in 1991. The site status on Ecology's CSCSL database is Awaiting Cleanup.

Site number	**11**	Ecology Facility ID	**12276**
Name	**SEAPORT FOOD MART**	CSCSL	**Yes**
Address	**7801 DETROIT AVENUE AVE SW**	LUST	**No**
Parcel number	**3024049181**	WARM Ranking	**Not ranked**

In the fall of 2010, an inspector from Seattle Public Utilities (SPU) examined an oil/water separator at this Site that should have been draining a catch basin on the edge of one of the fuel islands. The oil/water separator had considerable amounts of floating diesel in what should have been the inlet chamber, but the inspector was unable to see any drainage that led to this vault. What he could see looked like the inlet had been plugged with a wad of concrete which led him to believe that groundwater, with free floating diesel, may be entering the vault through seals in the vault wall or floor.



Seaport Petroleum's Texaco station in 1998.



Seaport Food Mart today.

The vault was subsequently drained and cleaned, only to refill with oily water. A tank tightness test was conducted on the Site's two USTs and found no indication of leaks. In an Initial Field Investigation Report dated October 26, 2015, the Ecology investigator wrote:

"Multiple site visits conducted by Seattle Public Utilities and at least one by Ecology UST Inspector. Each time, the oil water separator at this facility had free product diesel floating on groundwater. There is no inlet from below ground, so the only source can be from groundwater infiltration. Site to be listed on Confirmed and Suspected Contaminated Sites List confirmed for diesel in GW, suspected in soil and surface water."

An Early Notice Letter was sent to the Site owner on October 30, 2015 advising that based upon available information in the department files, it is Ecology's decision to add this property to the list of sites known to be contaminated by hazardous substances.

Site number	**12**	Ecology Facility ID	**3388037**
Name	**SOUTH KENYON STREET**	CSCSL	**Yes**
Address	**110, 130, 150, AND 200 SOUTH KENYON ST**	LUST	**No**
Parcel numbers	**2924049104, 2924049006, 2924049099, and 7328401175**	WARM Ranking	**Not ranked**



This 1983 photo is of a new warehouse at 140 South Kenyon.



Today, the Site is Seattle's South Transfer Station completed in 2013.

Ecology's website for this Site has an opinion letter dated June 24, 2010 that references 15 documents, none of which were available at the time this report was written. However, the opinion letter on proposed cleanup of the Site states that Ecology has determined that should the proposed cleanup be completed, no further remedial action will be necessary. The letter defines the Site as having arsenic, cadmium, chromium, lead, herbicides, petroleum, VOCs, and PAHs in soil; and metals, herbicides, petroleum, VOCs, and PAHs in groundwater. The primary proposed cleanup action is complete removal of contaminated soil above either MTCA Method A levels or terrestrial wildlife cleanup levels, whichever is more stringent. Groundwater will be cleaned up to either MTCA Method A or B levels, whichever is lowest. At the time of writing, Ecology status was given as "cleanup started."

Site number	**13**	Ecology Facility ID	**63293426**
Name	**RYDER STUDENT TRANSPORTATION SERVICES**	CSCSL	**Yes**
Address	**130 SOUTH KENYON STREET**	LUST	**Yes**
Parcel number	**2924049006**	WARM Ranking	**Not ranked**

Ryder Student Transportation Services (renamed First Student, Inc. in January 2002), a contract school bus services provider, operated a school bus storage and maintenance facility at this address from the 1990s until August 2009. According to a map included with their 2001 Stormwater Pollution Prevention Plan (SWPPP), the facility had a 12,000 gallon diesel UST for bus fueling, a wash rack, maintenance shop, and office space as well as gravel/dirt parking area for school buses. Ecology's LUST website reports a release in August 1997 from overfill that was reported cleaned up. The website indicates that the Site entered Ecology's Voluntary Cleanup Program (VCP) in 1999 and left in 2003. A SHA was proposed for 2014, however a notice posted on the Site's webpage dated October 29, 2015 says the SHA was not completed because the Site is "believed to be an active part of a Voluntary Cleanup Program for South Kenyon Street" (MTCA Site 12).



The Polk Directory for 1966 identifies this building at 200 South Kenyon as the Elliott Bronze Company Foundry.



Today, the Site is a grassy area at the exit from the City of Seattle's brand new South Transfer Station.

Site number	**14**	Ecology Facility ID	**4612472**
Name	**ROYAL HIGHWAY TOURS COACH MAINTENANCE**	CSCSL	**Yes**
Address	**255 SOUTH HOLDEN STREET**	LUST	**Yes**
Parcel number	**7327904510**	WARM Ranking	**5**

Ecology received a report in October 1994 that two USTs had been removed from this Site the previous month. The tanks were 1,000 and 10,000 gallon capacity and had stored gasoline and diesel respectively. The report says that 188 cubic yards of soil was over-excavated and taken off-site for disposal/treatment and that there may be 18 to 20 cubic yards remaining on the adjacent property. The contamination was found at the west end of the diesel tank excavation and was attributed to a leaking dispenser pump and overfills. A composite soil sample take of the west wall of the excavation contained 6,700 ppm diesel.

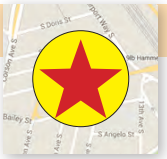
According to an August 2014 SHA, seven soil borings were installed on the property west of the former UST area in 1996. Two of the borings were completed as monitor wells. Approximately 22 cubic yards of diesel contaminated soil was identified and removed as a result of this action. A groundwater sample collected in the area of impacted soil 5 to 7 feet below ground surface (bgs) contained 32 ppm diesel, well above MTCA Method A cleanup level. The SHA scored the Site for groundwater contamination and ranked it at 5.



Photo of Service Garage in 1971.



The Site today.



Model Toxics Control Act (MTCA) Sites

Site number	**15**	Ecology Facility ID	**22726**
Name	**640 SOUTH RIVERSIDE DRIVE**	CSCSL	**Yes**
Address	**640 SOUTH RIVERSIDE \DRIVE**	LUST	**No**
Parcel number	**7327905700**	WARM Ranking	**Not ranked**

This small industrially zoned parcel was acquired by SPU in 2009 for the purpose of constructing a stormwater pump station and water quality facility. The facility will also include a 0.14 acre residential property next door at 636 South Riverside. Phase I ESAs were conducted in 2007 that found no evidence of contamination from releases, disposal, illegal dumping, or storage of hazardous materials. Nonetheless, because of the industrial history of the area, soil and groundwater sampling was carried out.

SPU's consultants collected three groundwater samples from periphery of the Site in 2007, followed by soil and groundwater samples from 14 locations in 2008. This testing revealed limited areas of vinyl chloride, lead, and VOC contamination in groundwater and cPAH in soils above MTCA Method A cleanup levels. Following Site acquisition, 21 soil samples and seven groundwater samples were collected at 23 additional locations. This sampling found no further contamination at the residential parcel but did identify soil at the 640 South Riverside Site as containing elevated levels of metals (lead and arsenic), VOCs (PCE, TCE), cPAH, TPH-oil, and TPH-diesel that exceeded MTCA Method A cleanup levels. Similarly, vinyl chloride, PCE, and TCE, were found in groundwater above MTCA Method A cleanup levels.



Masonry building built in 1960 and used by a variety of industrial tenants.



The Site today. SPU's planned flood control pumping station and water treatment facility is scheduled to be completed in early 2018.

No specific source(s) for the contamination could be identified, although it was suggested that a waterproofing services company using vinyl chloride on the Site in the late 1980s may have been a contributor.

In October 2009, SPU submitted a Cleanup Action Plan (CAP) to Ecology that called for excavation and removal of approximately 1,075 cubic yards of soil - 652 cubic yards for plant construction and 423 for cleanup. With the contamination removed, the groundwater will be remediated by natural attenuation. A sheet pile wall will be constructed on the east side of the Site adjacent to the Lower Duwamish Waterway (LDW) that will retard groundwater flow to the river and facilitate biodegradation of groundwater contamination.

In December 2010, Ecology rendered an opinion that the proposed CAP would not sufficiently clean up the Site to meet the substantive requirements of MTCA. Ecology had issues with 1) cleanup standards selected, 2) points of compliance, and 3) the completeness of the cleanup action selected. This opinion was later modified when SPU changed its CAP into an interim cleanup action that would significantly clean up the Site but not meet the full requirements of MTCA. It was also recognized that cleanup levels for the Site, which are predicated on EPA and Ecology levels for the Lower Duwamish Waterway (LDW), may not be established until sometime in the future. Therefore Ecology stated that cleanup standards for the Site need not be established until a final CAP is proposed and cleanup levels for the LDW are established.

Site number	**16**	Ecology Facility ID	**42127616**
Name	**HURLEN CONSTRUCTION**	CSCSL	**Yes**
Address	**700 SOUTH RIVERSIDE DRIVE**	LUST	**Yes**
Parcel number	**7327905350**	WARM Ranking	**4**

This Site was residential until 1947 when the current office structure was built. In 1960 a wharf was constructed adjacent to the property and by 1967 a shop, storage yard and an equipment fueling station with two USTs (a 675 gallon tank with leaded gasoline and a 1000 gallon tank with diesel), were installed.

In 1993, Hurlen Construction had the USTs decommissioned and removed from the Site. Soil sampling indicated that gasoline and xylene contamination above MTCA Method A cleanup levels was present in the tank excavation, and about 60 cubic yards of PCS was over-excavated and stored in a bermed area on-site. The excavation was backfilled with clean soil. The status of the stockpiled PCS is unknown but is believed to still be on-site. The property is currently owned by Hurlen Logistics LLC doing business as Pacific Pile and Marine Co.



Hurlen Construction Offices in 1984.



Today, the Site is known as Pacific Pile and Marine Co.

Site number	**17**	Ecology Facility ID	**7109**
Name	**SEATTLE WEST DUWAMISH TRAIL**	CSCSL	**Yes**
Address	**500 - 700 BLOCK OF SOUTH PORTLAND ST**	LUST	**No**
Parcel numbers	**7327903120, 3160, 3180, 3210, and 7327904230**	WARM Ranking	**4**

An assessment of shallow soils and groundwater was conducted in May 2013 preparatory to installation of new stormwater system as part of construction of the West Duwamish Trail along South Portland Street between West Marginal Way and 8th Avenue South. Push probe borings were completed at 13 locations, and two soil samples were collected from each. Four groundwater samples were also collected. Nine of the 13 boring Sites contained heavy oil and diesel contamination in soils less than three feet deep, and five of these exceeded MTCA Method A cleanup levels. Other contaminants found above MTCA Method A cleanup levels were: two samples with cPAH; three samples with arsenic; two samples with lead; and one sample each with barium and cadmium. PCBs were found in four samples but in concentrations less than MTCA Method A cleanup levels. Heavy oil in excess of cleanup levels was found in one groundwater sample.



Intersection of South Portland Street and 7th Avenue South in April 1975.



The same intersection today.

It was estimated that 160 cubic yards (or 260 tons) of soils that were to be excavated for the stormwater line between 5th Avenue South and 7th Avenue South would be designated as Dangerous Waste (DW) under state regulations due to high TCLP (i.e. soluble) lead and would have to be disposed of at a Class C landfill. In an e-mail of June 11, 2015, the City of Seattle Department of Transportation's (SDOT) Senior Environmental Analyst reported that 1,028,580 pounds (or 514.29 tons) of DW soil was eventually excavated and disposed of at a Class C landfill. An additional 990.9 tons of contaminated soil was removed and disposed of at a Class D landfill. Despite these removals, a SHA dated June 3, 2015 ranked the site at 4 because oil was detected in groundwater above MTCA Method A levels and has the potential to discharge into the LDW.

Model Toxics Control Act (MTCA) Sites

Site number	**18**	Ecology Facility ID	**95878752**
Name	**WASTE MANAGEMENT OF SEATTLE, 1ST AVENUE**	CSCSL	**Yes**
Address	**7901 1ST AVENUE SOUTH**	LUST	**Yes**
Parcel number	**3124049001**	WARM Ranking	**3**

This Site was developed by Global Moving and Storage in 1979. In the 1980s, Recycle America, a division of Waste Management of Seattle, operated it as a collection center for recyclable materials such as cardboard, paper, aluminum, glass, and plastic containers. A hundred feet south of the northwest corner of the property was a truck fueling facility installed by Global with two USTs: a 6,000 gallon gasoline tank and an 8,000 gallon diesel tank. In September 1997, these USTs were decommissioned and removed along with their piping and fuel dispensers. Excavation samples found gasoline contamination in soil up to 17,000 mg/kg and diesel up to 1,700 mg/kg. A cleanup action was undertaken that enlarged the excavation to a depth of 13 feet and removed 400 cubic yards of PCS. At the bottom of the excavation, soil samples found petroleum concentrations to be less than MTCA cleanup levels. However, sidewall samples at 7-8 feet deep still had PCS above MTCA levels and lateral expansion of the excavation to recover this material was not possible due to the proximity of the truck scales and truck delivery lane.



1984 photo of Recycle America building.



Today, the building is Intermountain Supply Co. and is across the street from MTCA Site 11.

In February 1999, four monitor wells were installed to depths between 15 and 17 feet to characterize water quality in the vicinity of the former USTs. Sampling results indicated there was petroleum contamination in excess of MTCA Method A groundwater cleanup levels. In August, a Phase I site assessment of the property disclosed that between 1955 and 1966 a former gas station was located at the northeast corner of the property (Historical Gas Station Site 4) and auto wrecking sites were in the vicinity (Historical Wrecking Yard Sites 8, 9, and 10). Follow-up sampling failed to find petroleum contamination associated with the former gas station, but groundwater samples collected north and south of the former UST location were contaminated with diesel.

In 2001, an air sparging system was installed to reduce the level of petroleum contamination in the groundwater. By December 2002, approximately 11 pounds of benzene and 80 pounds of gasoline had been removed, but by that time the system was no longer recovering product, so it was turned off and further contaminant reduction proceeded by natural attenuation. By the first quarter of 2004 monitor well samples, except those from MW-7, had attained levels below MTCA Method A cleanup levels. Contamination in MW-7 was a heavy oil product, unlike the gasoline and diesel from the leaking USTs. It was thought that this contamination might be from parking lot runoff that penetrated the well due to a faulty seal and impacted groundwater. Consequently, in January 2005 MW7 was abandoned and replaced with MW7-R. Initial groundwater samples from M7-R were non-detect for petroleum hydrocarbons.

Ecology required further soil sampling from the UST area to verify petroleum cleanup and between December 2004 and February 2005, 17 test probes were drilled to collect 15 selected soil samples from inside and outside of the former UST excavation area for laboratory analysis. Fourteen of the samples were non-detect or less than MTCA Method A levels for petroleum. The one sample with contamination had 190 mg/kg TPH-G and 2,000 mg/kg TPH-D and was found in test probe B-2 at 13 feet deep. There was no contamination in adjacent soil borings and the Site owner's consultant argued that this "hot spot" constituted de minimus contamination not warranting additional cleanup or institutional control. MTCA Method A cleanup levels for these two contaminants are 100 mg/kg for gasoline and 2,000 mg/kg for diesel.

In 2004 and 2005, 18 test probes were drilled on the Site to test the thickness and extent of cement kiln dust (CKD) fill beneath the Site. This material was found in a layer 1 to 3 feet thick at depths of 5 to 7.5 feet bgs. An estimate 20,000 cubic yards of in place CKD fill is on the Site. Analyses of the CKD found total arsenic levels ranging from 36.9 to 143 mg/kg and total lead from 423 to 2,210 mg/kg. Dissolved arsenic in groundwater grab samples from the probes and monitor wells ranged from non-detectable to 68 µg/L. Dissolved lead was non-detectable in all groundwater samples. Method A cleanup levels for arsenic in groundwater is 5 µg/L.

In January 2007, after receiving an independent remedial action report under the VCP, Ecology determined that the independent remedial actions performed at the Site were sufficient to meet the requirements of MTCA in characterizing and addressing the release of diesel, oil, and gasoline into the soil and groundwater. However the remedial actions performed at the Site were insufficient to address cleanup of metals associated with the historic CKD fill and a SHA dated April 3, 2015 ranked the Site at 3 for arsenic, mercury, and lead that are present in Site groundwater at concentrations above MTCA Method A cleanup levels.

Site number	**19**	Ecology Facility ID	**2175**
Name	**SEATTLE SOUTH TRANSFER STATION**	CSCSL	**Yes**
Address	**8100 2ND AVENUE SOUTH**	LUST	**No**
Parcel number	**7328400005**	WARM Ranking	**Not ranked**

The only activity shown on the CSCSL Site Summary Report for the South Seattle Transfer Station is "Site Discovery/Release Report Received March 1, 1988." Likewise, Ecology's file contains documents primarily related to operations, inspections, and stormwater management. The facility is operated by SPU and located at the north end of the old South Park Landfill. Subsurface conditions and MTCA concerns are similar to those discussed under MTCA Site 27 below.



1967 photo of Seattle's original South Transfer Station that was constructed on a portion of the old South Park Landfill (MTCA Site 29).



Today, the facility is used primarily for recycling and household hazardous waste disposal.

On November 12, 2015, Ecology published a notice in the Site Register (Ecology Publication #15-09-041 W) announcing a public comment period for a proposed partial cleanup of the Site. The notice reads:

Legal Document and Partial Cleanup Work Plan Available for Public Review and Comment

Ecology and the City of Seattle are proposing an interim action (partial cleanup) under the Model Toxics Control Act (MTCA) on part of the South Park Landfill Site. The proposed interim action is described in an amendment to the May 2009 legal agreement (agreed order) between Ecology, the City of Seattle, and South Park Property Development LLC. Proposed cleanup actions are detailed in the Interim Action Work Plan. The interim action addresses contamination on the City of Seattle's part of the Site that is operated by Seattle Public Utilities (SPU).

Site contaminants include arsenic, lead, diesel, and oil-range petroleum hydrocarbons in the soil and gas (methane, carbon dioxide, benzene, xylene) coming from landfill waste in the ground. In groundwater, contaminants of concern include arsenic, iron, manganese, and vinyl chloride, and possibly benzene and cis-1,2-dichloroethene. Proposed partial cleanup at the City of Seattle property includes a landfill cap, landfill gas and surface water control systems, institutional controls, and groundwater and landfill gas monitoring. This interim action does not foreclose reasonable alternatives for final cleanup of the whole South Park Landfill Site.

The public comment period was between November 19, 2015 and January 5, 2016.

Site number	**20**	Ecology Facility ID	**63168342**
Name	**GLITSA AMERICAN INC.**	CSCSL	**Yes**
Address	**327 SOUTH KENYON STREET**	LUST	**Yes**
Parcel number	**7328400740**	WARM Ranking	**3**

In 1959, Farwest Paint Company constructed a paint manufacturing and sales office at this Site. As part of this facility, they also installed a 7,500 gallon UST to store mineral spirits or Stoddard Solvent, a common paint thinner. In 1976, Farwest is believed to have emptied the UST preparatory to moving its paint manufacturing to a new facility in Tukwila in 1977. The following year, Glitza American purchased the building and UST which was reported to contain about 10 inches of odorless liquid thought to be water. Glitza never used the tank and, in 1992 contracted to have it decommissioned. The contractor, after pumping out all the liquids, drilled three holes in the bottom of the tank shell to collect soil samples. One of the three samples contained 3,700 mg/kg petroleum identified as heavy oil or mineral spirits. The release was reported to Ecology on September 2, 1992.



November 1967 photo of the original Farwest Paint Co. building.

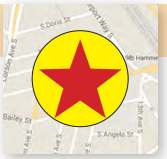


Today, the building is used by Alaska Logistics, LLC.

According to a SHA completed in June 2015, four monitor wells were installed sometime between 1992 and 2008. Nothing further was done about the tank until March 2009 when about 1,500 gallons of water were pumped out and the tank removed by a contractor for the Tenor Corp who had acquired the Site in 2003. Following removal of the tank shell, strong mineral spirit odors were noted and contaminated soil was observed associated with the piping run exiting the west end of the tank. Approximately 178 tons of this contaminated soil was over-excavated and taken off-site for disposal. Despite these removals, soil sampling indicated contaminated soil remained that contained Stoddard solvent, xylenes, ethylbenzene, chromium, and lead in excess of the MTCA Method A cleanup levels. Sampling beneath the warehouse building found soil contamination there as well. Groundwater is contaminated with Stoddard solvent, gasoline, benzene, and in one location, vinyl chloride above MTCA Method A cleanup levels.

Remedial efforts continued through the rest of 2009 that included additional contaminated soil removal, additional soil borings, and groundwater sampling. In July a groundwater pumping and SVE system was installed to reduce Stoddard solvent concentrations in groundwater. This system was still in operation as of August 2014.

The SHA ranked the site at 3 primarily because Stoddard solvent, benzene, and vinyl chloride have been detected in groundwater at concentrations above the MTCA Method A cleanup level. Heavy oil, chromium and lead were detected in soil at concentrations above the MTCA Method A cleanup levels, and have the potential to transport to groundwater.



Site number	**21**	Ecology Facility ID	**38921541**
Name	**MARINE LUMBER SERVICE-MONROE STREET RIGHT OF WAY**	CSCSL	**Yes**
Address	**7915 5TH AVENUE SOUTH**	LUST	**Yes**
Parcel number	**7327901925**	WARM Ranking	**4**



No archival photo is available. The former treated lumber storage yard at 5th and South Kenyon Street is now used to store truck trailers.

In May 2009, Ecology received a report from SPU that Marine Lumber Services was storing treated lumber outside in the South Yard without cover and that "the storage yard is stained green and stormwater is running off the Site and into the unpaved [Monroe] street right-of-way." Samples of sediment from the storage lot and street soils contained elevated levels of arsenic, copper, and zinc. These contaminants are components of Chemonite® the registered trade name for a wood treatment product containing ACZA, or ammoniacal copper zinc arsenate. The treatment protects wood against termites and fungal decay.

In January 2010, Ecology issued an Immediate Action Order requiring Marine Lumber to 1) submit a source control plan to prevent the discharge of copper, arsenic, and zinc or other associated pollutants from the outside storage of treated wood in the South Yard, 2) to update their Stormwater Pollution Prevention Plan (SWPPP), and 3) to add arsenic to the SWPPP's required sampling parameters.



The Site today. Coarse gravel on the shoulder of Monroe Street was probably used as fill following removal of contaminated soil.

By 2012, the facility's SWPPP stated that treated lumber was now stored in the West Yard under cover. Also, sometime that year, Marine Lumber conducted a limited soil removal program along the Monroe Street side of the South Yard. Surficial soil samples collected by SPU before and after this work indicated that the average arsenic concentrations were reduced from 408 to 296 mg/kg, copper from 2005 to 490 mg/kg and zinc from 740 to 598 mg/kg. The MTCA Method A cleanup level for arsenic is 20 mg/kg and Method B level is 24 mg/kg for industrial soil. The Method B levels for copper and zinc are 3200 and 24,000 mg/kg respectively. In 2015, the South Yard was being used to store trailers and shipping containers.

A SHA completed in July 2015 ranked this Site at 4 based upon analytical results from soil sampling that confirm concentrations of arsenic and copper are present above corresponding MTCA Method A or B cleanup levels and that said arsenic, copper and zinc may be available for transport to surface water, based on pre-remediation samples collected from nearby stormwater catch basins, and finally because groundwater conditions have not been characterized at the Site.

Site number	**22**	Ecology Facility ID	**38921541**
Name	**MARINE LUMBER SERVICE – PLANT YARD**	CSCSL	**Yes**
Address	**225 SOUTH CHICAGO STREET**	LUST	**Yes**
Parcel number	**7327902920**	WARM Ranking	**4**

Site number	**(22A)**	Ecology Facility ID	**73969348**
Name	**MARINE LUMBER SERVICE – SERVICE SHOP**	CSCSL	**Yes**
Address	**558 SOUTH KENYON STREET**	LUST	**Yes**
Parcel number	**7327902850**	WARM Ranking	**5**

Marine Lumber Service is a wholesale distribution facility for the sale of pre-cut lumber products, primarily for the marine industry. At the main Site on South Chicago Street, lumber products are stored, cut to order, and shipped. There are two non-contiguous satellite yards, the West Yard located a block west of the main Site at 241 Chicago Street, and the South Yard located across Kenyon Street at 7915 5th Avenue South (MTCA Site 21). The main Site consists of four sections, the Plant Yard, Plant Storage Yard, Shipping Yard, and the East Yard which contains a warehouse/service shop at 558 South Kenyon.

In June 1994, four USTs were removed from the facility. Two of the tanks, a 500 gallon tank with leaded gasoline and a 2,000 gallon tank with unleaded gasoline, came from the Plant Yard. The other two USTs, both 2,000 gallon tanks with unleaded gasoline, were removed from the service shop in the East Yard. The Plant Yard tanks were located near the northeast corner of the office building and the East Yard tanks were west of the warehouse access doors. Laboratory analyses of soil samples collected from the excavations following tank removal showed indicated there was significant gasoline contamination at both UST locations. Out of 15 soil samples collected, 14 were above the 100 mg/kg MTCA Method A cleanup level, some as high as 36,000 mg/kg. A limited amount of remediation was attempted at both sites, but nothing has been reported to Ecology since 2000.



Marine Lumber Service's East Yard area in 1984.



The same area today. The service shop is on the right where two 2,000 gallon USTs with unleaded gas were located.

Ecology has divided this facility into two separate Sites; the Plant Yard site with its two tanks at 225 South Chicago Street and the Service Shop at 558 South Kenyon Street also with two tanks. In a SHA completed in March 2015, Ecology ranked the Plant Yard Site at 4 due to soil and groundwater impacted by gasoline, benzene, ethylbenzene, and xylenes being identified north of the main office building at the Plant Yard associated with two former gasoline USTs removed in 1994. Groundwater conditions have not been reported to Ecology since 2000, and no reports documenting investigations which characterize the lateral or vertical extent of soil impacts have been submitted to Ecology. Similarly, at the Service Shop site, concentrations of gasoline, benzene, and xylenes in soil have been confirmed above MTCA Method A cleanup levels, but groundwater at the Site has not been characterized for potential impact. A SHA completed in July 2015 ranked this site at 5 since the USTs were reported in good condition when removed and no groundwater was encountered during tank removal.

Site number	**23**	Ecology Facility ID	**45787437**
Name	**OLYMPIC STEEL DOOR**	CSCSL	**Yes**
Address	**7800 7TH AVENUE SOUTH**	LUST	**Yes**
Parcel number	**7327902710**	WARM Ranking	**4**



Olympic Steel Door Co. building in 1959.



The site today. Note the expanded warehouse.

According to a 2002 consultant's report, a 3,000 gallon gasoline UST was removed in 1988 by a previous owner from beneath the parking area in front of the building on South Chicago Street. The report indicates that contamination from this tank removal was not remediated until 2000 when the current owner hired a contractor to removed 245 tons of PCS for off-site disposal. The excavation of this material disclosed that groundwater was 6 feet bgs and, after the excavation was backfilled, three monitor wells were installed to sample groundwater for contamination. Two of the groundwater samples were either non-detect or trace for gasoline and BETX, but the third groundwater sample from MW 3 contained concentrations of gasoline and total xylenes in excess of MTCA Method A cleanup levels.

In early 2002, two GeoProbe® borings were installed south and west of MW 3 to sample groundwater contamination that might be emanating from the same source area disclosed by MW 3. Selected soil samples from the GeoProbe® borings were non-detect for TPH-G and BETX to depths of eight feet as were the groundwater samples from both Sites. A groundwater sample collected from MW-3 however contained 930 µg/L TPH-G, 8.8 µg/L ethylbenzene, and 19.1 µg/L total xylenes. No benzene or toluene was detected. MTCA Method A groundwater cleanup level for TPH-G is 1000 µg/L when no benzene is present.

To date, there are no reports in Ecology files indicating any further groundwater sampling. In January 2015, Ecology released a SHA that ranked Olympic Steel Door at 4.

Site number	**24**	Ecology Facility ID	**2335**
Name	**INTERSTATE COATINGS INC.**	CSCSL	**Yes**
Address	**754 SOUTH CHICAGO STREET**	LUST	**Yes**
Parcel number	**7327903331**	WARM Ranking	**2 for soil** **3 for LUST**

The Interstate Coatings Site initially consisted of a single story 2,100 square foot residential structure on a 5,000 square foot lot. In 1975, a maintenance building was built at the north end of the lot and a 1,000 gallon gasoline UST installed in an unpaved area on the west side of the Site. These installations apparently represent the time when the Site was converted from residential to commercial use. Interstate coatings was an industrial painting company specializing in steel structures.



Originally a residential building, it was remodeled into an 'office' as shown in this 1976 photo.



Structure appears to be in residential use today, although there is an extensive shop area in the back.

In March 1990, Ecology received a report that soil on the Site was contaminated with oil, paint thinners, solvents, and sand blasting grit. A year later, an inspection revealed that because of improper storage and disposal, much of the yard area was contaminated by diesel and gasoline spills and that several cubic yards of sandblast grit was behind the garage. There was also a leaking AST containing diesel. The Site was listed on the CSCSL in March 1991.

In the spring of 1998, a SHA was conducted by Seattle King County Public Health who collected soil samples in and around the yard area and found diesel, lead, arsenic, and chromium above MTCA Method A cleanup levels. Ecology's CSCSL information sheet indicates this contamination was ranked at 2, however the actual report says the overal ranking was 3.

In September 1998, the 1,000 gallon UST was decommissioned and about 30 cubic yards of PCS was removed and disposed of off-site. Following removal of this PCS, soil sampling in the area around the tank area disclosed additional contamination. Soil sampling with a small bore drill revealed that gasoline contaminated soils extended to depths of 10 feet along the western boundary of the Site and towards a maintenance shop behind the office. An estimated 340 cubic yards of in place PCS remained on-site.

A second SHA was conducted in June 2015 to assess contamination from the UST removal in 1998. The assessment noted that the 340 cubic yards of PCS was still on-site which means that gasoline and BETX constituents are suspected to be present in soils above MTCA Method A cleanup levels. This in turn indicates that impacted groundwater is likely to discharge to the LDW. This SHA ranked the LUST site at 3.

Site number	**25**	Ecology Facility ID	**21489**
Name	**INDEPENDENT METALS PLANT STORAGE LOT**	CSCSL	**Yes**
Address	**703 SOUTH MONROE STREET**	LUST	**No**
Parcel numbers	**7327901445 and 1465**	WARM Ranking	**4**



No archival photo is available. This empty lot that formerly used to store scrap metal is now used to store scrap metal containers for Greenday Trading and Recycling Co.

Independent Metals operated this Site as an unpaved storage yard for containers of scrap metal. In January 2012 and April 2013, stormwater and catch basin sediment samples collected from this Site contained a number of COCs that exceeded surface water quality standards and/or industrial stormwater permit and sediment criteria. The COCs included PCBs, arsenic, copper, lead, mercury, nickel, cadmium, PAH, and phthalates.

Based upon these sample results, the Site was listed on the CSCSL in February 2014. A SHA completed in October 2015 ranked the site at 4 due to the confirmed release of PCBs to the stormwater conveyance system, as identified by water and accumulated sediment samples collected by Ecology in 2012 and 2013.

Site number	**26**	Ecology Facility ID	**9309618**
Name	**INDEPENDENT METALS PLANT 1**	CSCSL	**Yes**
Address	**747 SOUTH MONROE STREET**	LUST	**No**
Parcel number	**7327901365**	WARM Ranking	**4**

Independent Metals was in the business of collecting scrap metal from individuals and businesses for processing and resale at a profit. This Site was Independent Metals' principal facility from 1988 to 2014. Ecology, SPU and others have conducted a number of inspections of the facility since 2008 during which poor housekeeping and inadequate management of materials were observed.



The principal office of Independent Metals in 1991.

During a special study of metals recyclers in 2010, the King County Industrial Waste (KCIW) program collected water samples from the sanitary sewer that were found to contain elevated levels of PCBs. Findings during that study identified a concentration of 1 ug/L of PCBs in one whole water sample, and 27.8 mg/kg of PCBs in sediment obtained from the base of a manhole. A follow-up inspection in 2012, SPU inspectors noted that transformers, ballasts, and electrical switches were being accepted as scrap, and that these items were the most likely source of the PCBs. Consequently, in 2014 the Site was listed on the CSCSL.



Today, the Site is the offices and main yard for Greenday Trading and Recylcing Co.

In June 2015, three soil borings were advanced at the Site. Concentrations of petroleum hydrocarbons, PCBs, VOCs, SVOCs, PAHs, and metals in soil and groundwater were below corresponding MTCA Method A or B cleanup levels. A stormwater sample was collected in August 2015, and concentrations of petroleum hydrocarbons, PCBs, VOCs, SVOCs, PAHs, and metals were also below MTCA Method A or B cleanup levels. Nonetheless, a SHA completed in October 2015, ranked the site at 4 due to the confirmed release of PCBs to the sanitary sewer system, as identified by whole water and accumulated solids samples collected by KCIW.

Site number	**27**	Ecology Facility ID	**16139**
Name	**INDEPENDENT METALS PLANT 2**	CSCSL	**Yes**
Address	**816 SOUTH KENYON STREET**	LUST	**No**
Parcel number	**7327902520**	WARM Ranking	**4**

This Site was leased by Independent Metals from Silver Bay Logging from 2006 to 2014. In 2011, a local citizen complained about metallic dust and noxious odors being generated by the Site. In addition, oil slicks were reported in the Duwamish behind the Site following rain storms. In April 2013, treated effluent and catch basin sediment from the facility's stormwater treatment plant were sampled and found to contain exceedances of copper, lead, mercury, nickel, zinc, and PCBs in water and cadmium, copper, lead, mercury, zinc, PAH, phthalates, phenols, PCBs, dioxin/furan, and TPH-diesel in sediment.

According to a SHA dated October 27, 2015, the site was ranked at 4 because there are confirmed releases of contamination to surface water when stormwater treatment capacity exceeded and releases to the lower Duwamish River have contained PCBs at concentrations exceeding surface water quality guidelines. The site has had no environmental investigations of soil and/or groundwater conditions.



1993 photo of Silver Bay Logging facility on the Duwamish River that was leased to Independent Metals from 2006 to 2014 as Plant 2.



The same facility sits empty today.

Model Toxics Control Act (MTCA) Sites

Site number	**28**	Ecology Facility ID	**2536**
Name	**NORTHWEST ENVIROSERVICE 2**	CSCSL	**Yes**
Address	**8105 1ST AVENUE SOUTH**	LUST	**No**
Parcel number	**3124049158**	WARM Ranking	**4**

According to a recent SHA, the Northwest Enviroservice 2 Site is a 0.85 acre former transfer facility currently operated by Waste Management for parking and storage of vehicles. In February 1994 approximately 5,500 gallons of water and non-hazardous waste were released from a bulk storage container on-site. The waste was a mixture of water, diesel oil, hydraulic fluid, and other liquids, including non-halogenated paint solvents, VOCs, SVOCs, and metals. The majority of the product flowed into the storm drain where it passed through an oil/water separator and through the storm drain system to the wetlands area located about 1,300 feet to the north (MTCA Site 5).



Early 1990s photo of Northwest Enviroservice facility where a spill occurred in February 1994.



Today, the building today is a service building for Waste Management vehicles.

Following the release, about 72,000 gallons of water and product were vacuumed from the storm drain system and adsorbent pads installed around the storm drain. Northwest Enviroservice estimated that of the 5,500 gallons released, 1,650 gallons was water and 3,095 gallons was product that was recovered from the storm drain. An additional 250 gallons of product was recovered from the adsorbent pads. Thus, over 85% of the product spilled (3,345 gallons out of 3,850 gallons) was recovered.

Petroleum contaminated soil in the vicinity of the spill area and an on-site drainage ditch was excavated and stockpiled until confirmation sampling for diesel and oil range hydrocarbons and VOCs indicated MTCA Method A cleanup levels had been achieved. However, soils were not analyzed for all the contaminants contained in the product, and one soil sample reportedly had BETX compounds above MTCA Method A cleanup levels. About 390 cubic yards of PCS was disposed of off-site and the excavation backfilled with clean fill.

Four groundwater monitoring wells were installed near the spill area in December 1995 and sampled twice in 1996 and were found to contain less than the 1996 MTCA Method B cleanup levels for diesel, VOCs, and SVOCs. However, groundwater samples were not analyzed for metals and the diesel concentration in one sample was 1,500 µg/L which is above the MTCA Method A cleanup level. The following year the wells were abandoned when Northwest Enviroservice vacated the Site.

Although cleanup of contaminated soils appears to have removed concentrations of petroleum products that exceed MTCA Method A levels, there is a question whether some soil with BETX exceedances remains. Also, there are no sampling data for various metals that were known to be contained in the liquid product that was spilled. The sample data for groundwater indicate that diesel is still present above the MTCA Method A cleanup level (500 µg/L) and again there are no data for metals. For these, and some ongoing Site stormwater compliance issues, the Site remains listed on the CSCL with an overall hazard ranking of 4.

Site number	**29**	Ecology Facility ID	**2180**
Name	**SOUTH PARK LANDFILL**	CSCSL	**Yes**
Address	**8200 2ND AVENUE SOUTH**	LUST	**No**
Parcel number	**3224049005**	WARM Ranking	**2**



No archival photo is available. Today, the South Park Landfill Site is used principally for school bus parking.

The South Park Landfill Site is about 40 acres and consists principally of three parcels: 19 acres formerly owned by King County which sold it to South Park Property Development LLC (SPPD) in 2006, 10.5 acres owned by the City of Seattle for their South Recycling and Disposal Station (MTCA Site 17), and 6.5 acres privately owned by Harsch Investments dba Kenyon Business Park. The property has been used as a landfill since the 1930s and open refuse burning was allowed until 1961. Part of the Site was used as a wrecking yard (Historical Wrecking Yard Sites 17 & 18). The landfill stopped accepting refuse when the City built the South Transfer Station in 1966 to ship trash out of the area.

The main COCs at the Site are arsenic, lead, and petroleum hydrocarbons in soil and arsenic, iron, manganese, vinyl chloride, benzene, and DCE in groundwater.

In May 2013, the City of Seattle and SPPD proposed several interim actions to reduce chances of human and stormwater contacts with contamination for parts of the South Park Landfill Site in an amendment to an Agreed Order with Ecology signed in May 2009. While overall Site investigations continue, the interim measures would include 1) constructing a landfill cap to prevent human contact and stormwater infiltration, 2) installing landfill gas and surface water control systems, 3) establishing restrictions on land use activities to reduce potential exposure to contamination and maintain effectiveness of cleanup actions, and 4) establishing groundwater and landfill gas monitoring to evaluate the performance and effectiveness of interim cleanup actions.

Site number	**30**	Ecology Facility ID	**2430**
Name	**MANITOWAK WESTERN**	CSCSL	**Yes**
Address	**8105 1ST AVENUE SOUTH**	LUST	**No**
Parcel number	**7883600350**	WARM Ranking	**3**

According to a 2015 SHA, this is a 2.38 acre Site that has been used for the storage, maintenance, and supply of large mobile industrial cranes since 1974. It is currently occupied by Coast Crane Service. In 1992 following an inspection, Ecology was notified that a possible petroleum release may have occurred from an oil water separator at a wash pad that discharged to underground perforated pipe that was in operation until 1989. The inspection also noted petroleum impacted soil and an area where sandblasting grit from slag had been dumped.



Photo of the Site in 1974.

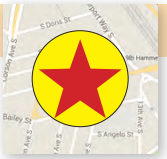


Today, the Site is the home of Coast Crane Service.

Approximately 15,800 cubic yards of imported fill was reportedly place on the Site in 1969 to 1971. Soil borings indicate that some of this material may have been CKD. In 1995, two 500 gallon USTs were reportedly removed but there are no records in Ecology files. That same year, a limited Phase II ESA was conducted in which six borings in the vicinity of the septic drain field were advanced to depths of 7 to 9 feet deep. Soil samples contained BETX and methylene chloride above MTCA Method A cleanup levels. No groundwater samples were taken.

In 2006-07 the concrete wash pad area was expanded. Prior to construction, six test pits were excavated in the area, two of which had olfactory evidence of petroleum contamination and one soil sample had concentrations of diesel and oil above MTCA Method A cleanup levels. Subsequently, over 20 soil borings were completed at the Site that found diesel, lube oil, xylenes, cPAH, methylene chloride, PCE, TCE, and lead exceedances. In May 2008, approximately 222 tons of soil from the impacted wash pad area was excavated and disposed of off-site. Confirmation samples reportedly did not contain PCE, TCE, diesel, mineral oil, or BETX constituents above MTCA Method A levels, however samples were not analyzed for lead or other metals.

In December 2008, Ecology determined that further action was required at the Site to meet the substantive requirements of MTCA. These actions should characterize the vertical and lateral extend of the CKD fill and further characterize groundwater at the Site. The SHA gave the Site an overall ranking of 3.



Model Toxics Control Act (MTCA) Sites

Site number	**31**	Ecology Facility ID	**13132191**
Name	**SPENCER INDUSTRIES INC.**	CSCSL	**Yes**
Address	**8410 DALLAS AVE S**	LUST	**No**
Parcel number	**2185001130**	WARM Ranking	**2**



Spencer Industries in 1950.

Listings in Polk and Cole City Directories indicate that Spencer Industries occupied this Site from 1946 until 2004. Spencer was a distributor of hydraulic components and fasteners for the aircraft manufacturing industry. They also conducted some light assembly operations at the Site. In 1991, a Phase I ESA was conducted to determine the potential for Site contamination. During a Site visit, two 200 gallon above ground storage tanks were noted. One contained waste oil, the other heating oil. Oil stains were noted in soils as were several empty 20 gallon drums of degreaser containing TCE. It was recommended that soil samples be taken to assess the release from the oil tanks. Four samples were collected, and only one had diesel concentrations above 200 mg/kg, the MTCA Method A cleanup level then in effect.



New construction was completed in 2015 for National Products Inc., manufacturers of RAM Mounts© for electronic devices.

Three monitor wells were installed in 1996 and samples collected. Two of the wells contained groundwater with PCE at 48.8 and 54 µg/L and TCE at 15.3 and 16.9 µg/L, three-to five-times the Method A cleanup levels. The upgradient well did not have any detectable VOCs, therefore, the Site had to be the source of solvent contamination. MW-1 and MW-3 also had arsenic and lead above MTCA Method A cleanup levels.

Subsequently, 14 soil borings and two additional monitor wells were installed. Ten soil and 15 groundwater samples were collected from these and previous installations. Analyses of these samples indicated that there was no significant soil source area for chlorinated solvents on the Site but there were two chemically distinct plumes of VOC contamination in the groundwater. In 1997 additional sampling demonstrated that that groundwater contamination near MW-1 is characterized by TCE and PCE whereas in the vicinity of MW-2 it is only TCE.

In 1998 and 1999, additional sampling was conducted to confirm the extent of PCE and TCE groundwater contamination and evaluate tidal and other conditions that would favor natural attenuation to achieve MTCA Method A cleanup levels. In April 1999, Spencer's consultant submitted a report to Ecology that conditions were favorable for natural attenuation of existing solvent plumes. Sampling data did show a small decrease in PCE and TCE in MW-1 and MW-2 over a four month period.

In August 1999, Ecology issued an interim NFA for the Site soils, but not for groundwater citing elevated PCE levels beneath Orr Street on the north side of the property. Despite entering the VCP in 1999, there was no further sampling on the Site and in May 2006 Ecology rescinded the interim NFA for soils and reinstated it on the CSCSL for solvent contamination in soil and groundwater. The Site was also removed from the VCP for lack of Site cleanup activity.

The Spencer Industries Site was sold in 2003 and passed through various owners until eventually acquired by JAC Corporate LLC in December 2009. It is currently operated as National Products Inc. (NPI) who manufacture RAM Mounting Systems for the electronics market using rubber injection, sand casting, metal fabrication, and composite injection molding as well as a die casting technologies. In 2011, Ecology received a report from an anonymous caller who said that workers at NPI were disposing of chemicals through a hole in the floor that is concealed by a plug made to look like concrete. Follow-up inspections failed to disclose any illegal dumping and the complaint was attributed to a disgruntled former employee.

A SHA was conducted in July 2015 and the Site was ranked at 2 due to TCE, PCE, lead, and arsenic in groundwater at concentrations above MTCA Method A cleanup levels.

Site number	**32**	Ecology Facility ID	**44653368**
Name	**SOUTH PARK MARINA**	CSCSL	**Yes**
Address	**8604 DALLAS AVE S**	LUST	**No**
Parcel number	**0001600001**	WARM Ranking	**2**

According to a January 2015 SHA in Ecology files, this 1.96 acre property was operated by A & B Barrel Company from 1946 until 1961 to recondition and paint used barrels and drums. During this time waste liquid containing oil, grease, and sodium hydroxide was reportedly discharged to a small settling pond on site which in turn drained into the Duwamish River. An analysis of pond waste taken in 1955 reportedly contained 940 ppm sodium hydroxide. The pond was likely in operation from the mid-1950s until 1961. When A & B Barrel vacated the Site in 1961, the buildings were removed and the settling pond filled in. There is no information about the fill material used.



The A & B Barrel Company facility on the Duwamish River in 1947.



Today, the site is the South Park Marina.

In 1970, the Site became a boat marina and maintenance facility. Next door at Terminal 117, (MTCA Site 35) was an asphalt materials manufacturing site where, up until 1993, oil containing PCB was used. Detectable quantities of PCBs were found during a shallow soil sampling program in 2004 and 2006 within the South Park Marina Site along its boundary with Terminal 117 and in the southeast corner of the property. The concentrations of PCBs were from 0.082 mg/kg to 5.0 mg/kg. MTCA Method A soil cleanup levels for unrestricted use are 1.0 mg/kg and for industrial soil, 10 mg/kg.

As part of the LDW source control program, 16 soil borings were drilled from depths of 2.5 to 20 feet in 2007 and 2008. Three borings were completed as monitor wells. Soil samples collected from within the former pond area contained heavy metals, PCBs, pesticides (DDT), petroleum hydrocarbons, and solvents above MTCA Method A cleanup levels for soil. Most of these contaminants were in the upper six inches of the soil. Samples from other parts of the property had PCBs and heavy petroleum range organics above Method A cleanup levels and arsenic above MTCA Method B cleanup levels. Groundwater samples contained arsenic above Method A levels (5µg/L) and the pesticide dieldrin and solvent PCE above Method B levels.

According to the 2007 report, despite the contaminated soil and groundwater, current Site activities are unlikely to contribute further to the magnitude or extent of contamination because most of the Site is paved. No soil excavation has been reported from the Site.

Site number	**33**	Ecology Facility ID	**8901731**
Name	**BASIN OIL DRUM STORAGE**	CSCSL	**Yes**
Address	**8617 17th AVENUE SOUTH**	LUST	**No**
Parcel number	**7884100445**	WARM Ranking	**Not ranked**

This 0.18 acre parcel was purchased by the owner of Basin Oil Company (MTCA Site 34) in November 1998 to be used for the storage of drums, vehicles, and equipment relative to Basin Oil's operations across the street. It is zoned commercial but currently is in single family residential use. There are no reports in Ecology files of sampling or inspections of this Site, only a 2004 Early Action Report on Terminal 117 which briefly mentions the property as an ancillary storage facility to Basin Oil. Presumably due to this association with Basin Oil, the Site was listed on the CSCSL in 2004. In April 2014, Ecology sent a letter to the current Site owner, South Park Marina, LTD Partnership, advising them that they are planning to conduct a SHA of the Site. However, a SHA document issued by Ecology on October 29, 2015 says the assessment was not conducted because "insufficient information was available to complete an assessment. There was no analytical laboratory data available for review. The Site file contains a release report indicating visual evidence of a petroleum hydrocarbon release."



A 1979 residential building at 8617 17th Avenue South.



A different residential building at the same address today.

Model Toxics Control Act (MTCA) Sites

Site number	**34**	Ecology Facility ID	**83476734**
Name	**BASIN OIL COMPANY – DALLAS AVENUE**	CSCSL	**Yes**
Address	**8661 DALLAS AVENUE SOUTH**	LUST	**No**
Parcel numbers	**7884100110 and 7884100145**	WARM Ranking	**1**

The Basin Oil Site is a small triangular shaped property comprised of two parcels. In 1987, Basin Oil Company leased the Site from Malarkey Asphalt (MTCA Site 35) and began using it primarily for the collection, treatment, transport, and marketing of used oil. Basin purchased the Site in 2000 and shared the space with its subsidiaries, Northwest Antifreeze Service and Basin Tank and Environmental Service, both of which had closed by 2004. By 2009, Basin Oil Company had removed all tanks, secondary confinement walls, drums, and some visibly stained soil before abandoning the Site.

In May 2009, a contractor working for Ecology undertook an environmental sampling program at the Site. This work included advancing 10 soil borings to depths of 14 to 16 feet from which soil samples were recovered every 2.5 feet. Only the top and bottom samples were analyzed and the remainder archived. However, if field screening indicated the presence of contaminants in a sample interval, that sample would be analyzed as well. The soil samples were analyzed for SVOCs, VOCs, PCBs, RCRA Metals, and total petroleum hydrocarbons for both gasoline and diesel ranges. An additional two soil samples were collected on the surface and analyzed for dioxins/furans and PCBs.

Two off-site monitor wells were installed to the west and south sides of the property. The total depths were 28 feet and 30.5 feet. Two soil samples from each were analyzed for the same compounds as the other soils, and groundwater samples were tested for SVOCs, VOCs, PCBs, cPAHs, RCRA metals (total and dissolved), TSS, gasoline, and diesel by NWTPH-Gx and NWTPH-Dx.

The results of this work found that one or more soil samples exceeded MTCA Method A or Method B soil cleanup levels for arsenic, chromium, heavy oil, gasoline range organics, benzene, and cPAH. These exceedances are localized with the highest PAH concentrations in the 0 to 6 inch deep soil interval on the west side of the property and the highest petroleum hydrocarbon concentrations in the same interval from the northern portion of the Site. Arsenic was the only contaminant found in groundwater above MTCA Method B cleanup levels.

A SHA was conducted in January 2015 that ranked the Site a 1 due to concentrations of chromium, PCBs, heavy oil, gasoline, benzene, and cPAH detected in soil above their respective MTCA Method A cleanup levels. Dioxins and furans have also been detected in soil at the Site. With the exception of arsenic and chromium, impacted soil is located primarily at depths of 0 to 6 inches bgs. Special consideration was given to the fact that petroleum-impacted soils are primarily located within the top 0 to 6 inches of Site soils, and the Site is located less than 300 feet from the Duwamish River.



Basin Oil Site in 1993.



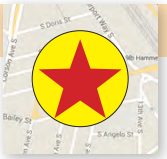
Basin Oil Site in 2007.



Basin Oil Site in 2014.



Basin Oil Site in 2015.



Model Toxics Control Act (MTCA) Sites

Site number	**35**	Ecology Facility ID	**2202**
Name	**PORT OF SEATTLE, TERMINAL 117**	CSCSL	**Yes**
Address	**8700 DALLAS AVENUE SOUTH**	LUST	**Yes**
Parcel number	**0001600044**	WARM Ranking	**0** [3]



Duwamish Manufacturing Site in 1959.



Duwamish Manufacturing Site in 1956.

This 5.5 acre parcel, of which about 40% is intertidal, is located on the banks of the Duwamish River and was once the Site of an asphalt manufacturing plant that operated as Duwamish Manufacturing from 1937 to 1978 and Malarkey Asphalt from 1978 to 1993. The plant produced roofing tar and asphalt products from heavy oil by heating the oil to drive off lighter hydrocarbons. The lighter hydrocarbons were burned off in a fume incinerator/afterburner. On site furnaces were operated 24-hours a day to keep the asphaltic products from hardening in piping and storage tanks. During the oil embargo in the early 1970s, the facility reportedly received about 1,000 gallons a month of waste oil to be burned as fuel for the furnaces. A portion of this waste

(continues on next page)



Terminal 117 in 2015.



Terminal 117 in 2015 showing backfilled area adjacent to the LDW.

[3] 0 = Ranked separately under the federal Hazard Ranking System (HRS). Site is on the federal National Priorities List (NPL) or is a sub-site or operable unit of an NPL Site.

oil was PCB contaminated transformer oil from Seattle City Light. This practice apparently terminated when oil prices stabilized.

Site inspections by numerous agencies beginning in the 1980s found problems with Site conditions, including holding pond for non-contact cooling water, "partially buried" USTs, visibly stained soils, a drainage ditch with contaminated sediments, and lack of secondary containment around ASTs, etc. A SHA performed in 1991 gave the Site a ranking of 1. At that time, soil borings found metals, VOCs, SVOCs (including PAHs), and PCBs beneath the Site from 1 to 6 feet deep. Dioxin was reported from soil in one borehole that became a monitor well. Groundwater samples had PCBs ranging from 1.7 to 77 µg/L.

Three USTs were decommissioned by removal in 1992. These included two 4,000 gallon waste oil tanks and one 10,000 gallon diesel tank. In addition, one 12,000 gallon partially buried tank car was removed. Three additional USTs located beneath buildings were closed in place by filling with concrete slurry after the original contents were pumped out. The tank decommissioning coincided with the cessation of asphalt manufacturing and Site closure in 1993. The Port of Seattle acquired the Malarkey Site in 2000 and renamed it Terminal 117.

In the fall of 1999, the Port of Seattle conducted a remedial action under EPA oversight to excavate, remove and dispose of over 2,000 tons of PCB-contaminated soil that had been detected in soil sampling programs in 1994, 1995 and 1997.

In December 2000, King County, the City of Seattle, the Port of Seattle, and the Boeing Company had entered into an Administrative Order on Consent with EPA and the Ecology to perform an RI/FS of sediment contamination in the LDW. Terminal 117 was subsequently identified as one of seven Early Action Areas (EAA) in the LDW for priority cleanup. In September 2001, the EPA added the LDW to the Superfund List due to contamination of sediments by PCBs, PAHs, mercury and other metals, and phthalates. These contaminants are a threat to bottom dwelling fish and to the people and wildlife that eat them.

From December 2003 to March 2004, the T-117 EEA was sampled to characterize the extent and nature of PCB contamination in order to identify a proposed removal boundary, identify potential sources of recontamination, and establish the general engineering characteristics of the shoreline sediments and bank soils. The program included surface and subsurface sampling with soil borings, surface samples, water samples from shoreline seeps, and groundwater samples from monitor wells.

In August 2004, sampling by SPU identified PCB concentrations in street soils and catch basin sediments well above MTCA Method A cleanup standards for unrestricted soils. The impacted areas were a section of Dallas Avenue South between 14th Avenue South and South Donovan Street, 17th Avenue South between South Dallas Avenue and South Donovan Street, and between Dallas Avenue South and 17th Avenue South. Public Health collected soils from private properties in the area and found PCBs in the front yards of two residences on 17th Avenue South. The source of this contamination has not been established, however potential sources could be related to past operations at Malarkey Asphalt and Basin Oil, or from road oiling by unknown parties.

In December 2004, SPU removed the contaminated soil from the rights of way and replaced it with clean gravel. They also regraded and repaved affected portions of Dallas Avenue South, South Donovan Street and 17th Avenue South.

An Engineering Evaluation/Cost Analysis (EE/CA) was finalized in April 2008 as the basic Site cleanup work plan. Additional soil sampling was undertaken in 2009 to finalize the boundary of PCB contamination and also test for dioxins. As a result of this sampling, additional areas of contamination were identified and, beginning in December 2012, residential yards, planting strips, and adjacent alleyways were cleaned up and replanted. Cleanup of the city streets portion, followed by installation of new pavement, gutters, catch basins, etc. was finished by December 2015.

Cleanup of the upland portion of the T-117 Site began in June 2013 and continued until March 2014. Sediment cleanup in the Duwamish was performed over two winter seasons of 2013 and 2014. Backfilling, regrading hydroseeding and fencing the upland areas continued through May 2014. All upland and in-water cleanup and construction was complete by April 2015

According to a Port of Seattle representative, "the primary construction elements of the Phase 1 T-117 Removal Action included the removal and off-site disposal of approximately 21,000 tons of sediment, and approximately 77,000 tons of upland soil."

Site number	**36**	Ecology Facility ID	**93927211**
Name	**CROSBY AUTO REPAIR**	CSCSL	**No**
Address	**8621 14TH AVENUE SOUTH**	LUST	**Yes**
Parcel number	**7883607842**	WARM Ranking	**4**

In mid-September 2000, a 4,000 gallon UST, located just off 14th Avenue South at South Donovan Street was decommissioned. The tank had been used to store gasoline at a historical gas station (Historical Gas Station Site 11) that had been closed for years. The property was owned by Stephanie Crosby and at the time used as an auto repair garage by South Park Frame and Axle. Decommissioning was complicated by the fact that the City of Seattle had recently improved utilities and built new sidewalk in the vicinity of the UST. The city would not allow these utilities to be disturbed which would be necessary for a complete excavation and removal of the tank, consequently, once the UST was pumped out and triple rinsed, it was filled with controlled density fill.



1937 photo of gas station that eventually became Crosby's Auto Repair.



In 2015, the Site is used as a sewing shop, reportedly crafting items for Boeing.

A week after the tank was closed, a borehole was drilled adjacent to the west side of the tank to collect soil and groundwater samples. A soil sample was collected at 12 feet deep and groundwater sample at 15 feet deep. Laboratory analyses of the soil found NWTPH-G was 160 mg/kg, ethylbenzene 160 mg/kg and xylene 800 mg/kg. Benzene and toluene were not detected. The groundwater sample contained gasoline at 2,400 µg/L, and benzene, ethylbenzene, toluene, and xylene (BETX) at 8.1, 110, 8.5, and 180 µg/L respectively. The gasoline, ethylbenzene and xylene in the soil sample are above current MTCA Method A clean-up levels as are gasoline, benzene, and ethylbenzene in groundwater.

The release was duly reported to Ecology in late September and the Site was included on the LUST list. The consultant's report on the Site suggests that because of certain chemical characteristics of the petroleum found, the release might be due in part to leaking USTs at the former Chevron Site (MTCA Site 37 below) across the street.

A SHA performed in July 2015 and the Site ranked at 4 primarily because of soil contamination has not been fully characterized and there is petroleum contamination in groundwater above MTCA Method A cleanup levels.

Site number	**37**	Ecology Facility ID	**43643315**
Name	**CHEVRON 98484**	CSCSL	**Yes**
Address	**8700 14TH AVENUE SOUTH**	LUST	**Yes**
Parcel number	**7883608629**	WARM Ranking	**4**

In a SHA for publication in Ecology's February 2015 Hazardous Sites List, this Site is described as former Chevron gas station (Historical Gas Station Site 13) with five USTs, all of which were removed in January 1987. A soil and groundwater investigation conducted in September 1990 advanced six soil borings, three of which were completed as monitor wells. Soil samples reportedly contained from non-detect up to 0.5 mg/kg benzene and from 2.7 mg/kg to 5,200 mg/kg total petroleum hydrocarbons. Groundwater samples contained benzene up to 0.068 mg/L (68 µg/L) and undifferentiated petroleum hydrocarbons up to 3.4 mg/L. Follow-up sampling which added 13 new borings (10 of which became monitor wells), confirmed the presence of PCS above MTCA Method A cleanup levels to depths of nine feet and a plume of groundwater contaminated with gasoline and BETX compounds in excess of MTCA Method A cleanup levels.



Historical Sam & Russ Chevron in 1958.



The Site is now R.L. Cook warehouse.

In 1991, approximately 2,600 cubic yards of PCS were excavated from the Site. Confirmation samples were collected from the sidewalls and bottom of the excavation. The results of this sampling precipitated over excavation to remove pockets of soil that contained petroleum hydrocarbons exceeding MTCA Method A cleanup levels. However, soils immediately adjacent to South Donovan Street and 14th Avenue South that exceeded cleanup levels (up to 2,200 mg/kg) were left in place to maintain the structural integrity of the roadway. The excavation was backfilled with clean imported fill and the current building constructed in 1992.

Groundwater was monitored quarterly up until 2009. Gasoline, diesel, oil-range petroleum hydrocarbons, and benzene were the principal contaminants above MTCA Method A cleanup levels until June 2007, when diesel and oil-range petroleum were last detected above MTCA Method A cleanup levels. The last sampling reported to Ecology was in December 2009 which indicated only gasoline range petroleum and benzene were still present above MTCA Method A cleanup levels.

The approximate depth to groundwater varies between 6 and 15 feet bgs and may flow generally toward the west or northwest. Petroleum impacted soils are assumed to be present beneath South Donovan Street and 14th Avenue South on the northern and western boundaries of the Site. Although downgradient impacts have not been characterized, PCS soils and the flow of groundwater may be impacting Sites like Crosby Auto Repair (MTCA Site 36) across the street.

Site number	**38**	Ecology Facility ID	**48968474**
Name	**SOUTH PARK 76**	CSCSL	**Yes**
Address	**8819 14TH AVENUE SOUTH**	LUST	**Yes**
Parcel number	**7883608370**	WARM Ranking	**4**



Historical Texaco station in 1972.



South Park '76 is now a Chevron.

The first gas station on this Site was established in mid-1960s (Historical Gas Station Site 15) and it has been used for either automotive repairs and/or petroleum sales ever since. In 1993, just before the current operator took over, three monitoring wells were installed which found gasoline and BETX contamination in soil and groundwater. Reportedly, about 200 cubic yards of PCS from the UST and southerly pump island areas were removed, and in 1995 during a UST retrofit project, additional PCS was discovered, excavated, and stockpiled on site. Soil samples collected from the ends and sides of the tanks beneath the pump islands and from a stockpile were found to have gasoline range hydrocarbons and BETX compounds above MTCA Method A cleanup levels. PCS was reportedly excavated 'to the greatest extent possible' and disposed of off-site. The USTs were relined, and left in place. No information is available on the volume of soil removed.

According to a February 2015 SHA, the geotechnical consultant reported in March 1995 that 'recent groundwater samples collected at the Site' did not contain detectable quantities of petroleum hydrocarbons. However, there are no reports available with Site maps or laboratory data to verify this statement, and remedial activity has been dormant for 20 years.

Site number	**39**	Ecology Facility ID	**1661671**
Name	**WARNER'S AUTO REPAIR**	CSCSL	**Yes**
Address	**9001 14TH AVENUE SOUTH**	LUST	**Yes**
Parcel number	**7883608556**	WARM Ranking	**5**



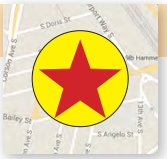
Jerry's Auto Repair in 1956 was also a Richfield gas station with a couple of USTs.



Warner's Auto Repair Site in 2015.

In December 1991, three USTs were removed from this Site which is also listed as Historical Gas Station Site 18. Two were gasoline tanks (1,000 gallons and 3,000 gallons) and one a 550 gallon waste oil tank. The consultant on site collected soil samples from beneath the bottom of each tank and all were clean except for the waste oil tank sample which contained 3,100 mg/kg TPH. All excavated soil plus additional fill was placed in the excavations to restore the Site to its original grade.

A SHA performed in July 2015 notes that in the area of the used oil tank, soils at depths greater than five feet bgs have not been analyzed for petroleum hydrocarbons, so the vertical extent of petroleum-impacted soil in this area has not been characterized. The Site was ranked at 5.



SECTION 4

Model Toxics Control Act (MTCA) Sites

Site number	**40**	Ecology Facility ID	**2056**
Name	**PRECISION ENGINEERING, INC**	CSCSL	**Yes**
Address	**1231 SOUTH DIRECTOR STREET**	LUST	**No**
Parcel number	**0001600055**	WARM Ranking	**1**



1968 photo of new Precision Engineering facility.



The same building today.

From 1968 through 2005, Precision Engineering operated a facility that manufactured and repaired large hydraulic cylinders for a variety of industrial applications. Site activities included grinding and polishing, honing, hard-chrome plating, milling, welding, and application of flame and arc-applied metal coatings. This work involved a number of chemicals including chromic acid for plating and TCE for degreasing. In the chrome shop were pickling tanks containing hydrochloric acid, sodium bicarbonate, and sodium hydroxide. These chemicals were all contained in above ground storage tanks located on the concrete shop floor. At least four trench drains were located along the eastern and western walls of the grinding and chrome shop.

In 1990, concerns about soil contamination beneath stained concrete under two chrome plating tanks led to limited removal of contaminated concrete and soil. In 1992, four more tanks were removed and more concrete and soil excavated. Soil samples from the excavation indicated elevated concentrations of hexavalent chromium were present. Excavated soil, concrete, and other debris were disposed of at a hazardous waste landfill in Arlington, Oregon.

Precision Engineering ceased operations at this Site in March 2005. In June of that year, a consultant conducted a preliminary assessment of soil and groundwater conditions of the plating tank area, plating tank 7 and caustic tanks containment vault, floor trenches and drains, and the hydraulic cylinder test vault. This study showed that concentrations of trivalent chromium, hexavalent chromium, and TCE were present in soils above MTCA Method A industrial cleanup levels and that groundwater was contaminated with diesel and oil range hydrocarbons, hexavalent chromium, dissolved total chromium, TCE, and DCE, also in excess of MTCA cleanup levels.

Precision entered the VCP in October 2005 and conducted a supplemental remedial investigation which included GeoProbe® sampling inside the building, surface sampling outside the building in a drainage ditch at the southeast corner of the property, and groundwater sampling from four existing and four new monitor wells. This work concluded that chromium and TCE contamination above MTCA cleanup levels lies beneath the eastern half of the building and that soils in the drainage ditch contained arsenic, cadmium, chromium (hexavalent and trivalent), copper, lead, chrysene, and both diesel and heavy oil range petroleum hydrocarbons. These contaminants were attributed to runoff from the Precision Site as well as street run off from 14th Avenue South, and the on-ramp to Highway 99. As an interim action in 2007, Precision removed about 100 cubic yards of soil from the ditch and backfilled the excavation with clean topsoil. Groundwater contamination at the Site consists of diesel and oil range petroleum, chromium and other metals, and TCE and its breakdown products.

A final feasibility study was completed in March 2011 that proposed four cleanup actions. The preferred option was to let the building slab serve as a cap on the subsurface contamination and place institutional controls on the Site through a restrictive covenant. However, Ecology wrote in an opinion letter dated July 8, 2011 that “Ecology has determined that your characterization of the Site is not sufficient to establish cleanup standards and select a cleanup action…”

Since 2013, Ecology has taken the lead on further investigations at the Site. They commissioned a consultant to review all previous work and prepare technical memorandum to identify data gaps and current environmental Site conditions including potential impacts to the Duwamish River. This lead to a RI/FS work plan in March 2014. The principal objective of the remedial investigation (RI) is “to characterize the nature and extent of chemically-impacted soil, groundwater, surface water, soil vapor, and indoor air at the Site and evaluate the potential risks those chemicals pose to human health and the environment, especially the Duwamish Waterway.” This will entail additional groundwater sampling from both existing and new monitor wells, indoor air and vapor sampling to evaluate TCE in soil and groundwater beneath the building and whether its vapors pose a risk to occupants.

Between April and September 2014, two quarterly groundwater sampling events occurred and three new monitor wells installed. A third quarterly sampling event was performed in December 2014 and indoor air sampling was performed in February 2015. In August 2015, a consultant prepared a remedial investigation report that was submitted to Ecology for review with the objective of determining if further remedial action was required at the Site. In an opinion letter dated December 2, 2015, Ecology replied that yes, further remedial action was necessary to clean up the Site and cited data gaps related to characterization of off-site contamination, TCE vapor concentrations inside the building, insufficient groundwater sampling on site, and failure to conduct a TEE. Furthermore, cleanup actions performed to date do not meet any cleanup standards and therefore are insufficient to meet the substantive requirements of MTCA.

Site number	**41**	Ecology Facility ID	**7727938**
Name	**GARY MERLINO CONSTRUCTION**	CSCSL	**Yes**
Address	**9125 10TH AVENUE SOUTH**	LUST	**Yes**
Parcel number	**2433700095**	WARM Ranking	**4**



Gary Merlino building in 1975.



The same building today.

In 1994, two USTs were installed on this Site to provide fuel for construction equipment and vehicles. Both tanks were 10,000 gallon capacity; one contained diesel fuel, the other unleaded gasoline. They were connected to dispensing pumps about 15 feet away. The tanks were decommissioned in 1998 and removed from the Site in July 1999. The initial UST excavation pit was about 9.5 feet deep where groundwater was encountered. Excavated soils were stockpiled on site while soil samples were collected from the pump area, sidewalls of the excavation and stockpiles. These samples were analyzed, and those from the pump area and the north edge of the excavation were found to contain benzene, ethylbenzene, and gasoline above MTCA Method A cleanup levels for industrial soil. Diesel was found in six of eight samples, but at levels below the MTCA Method A industrial soil cleanup level.

The excavation was consequently enlarged to a depth of about 12 feet and an additional 200 yards of soil removed and stockpiled on site. Confirmation sampling indicated that remaining soil contained gasoline concentrations below MTCA Method A cleanup levels. Water samples collected from the bottom of the pit however contained levels of gasoline, diesel, benzene, ethylbenzene, and xylenes above MTCA Method A cleanup levels for groundwater. The UST excavation was backfilled.

A Site Characterization Report of August 1999 describing the UST removal and sampling program does not indicate if the contaminated soil was ever taken off-site for disposal, nor does it say if the backfill material was imported clean fill or something else. The report concludes by saying:

"The source of the spill (tanks, pumps and piping) have been removed. Soils containing spilled fuel have been removed from around the tanks. The area has been backfilled and sealed with concrete. No further actions are proposed at this time."

A SHA completed in early 2015 ranked the Site at 4 based upon gasoline, benzene, and ethylbenzene detected in groundwater and soils at concentrations above MTCA Method A cleanup levels. Xylenes and diesel have also been detected in groundwater at concentrations above the corresponding MTCA Method A cleanup levels.

Site number	**42**	Ecology Facility ID	**1557860**
Name	**HAFLON CANDY COMPANY**	CSCSL	**Yes**
Address	**9229 10TH AVENUE SOUTH**	LUST	**No**
Parcel number	**2433700076**	WARM Ranking	**4**

In the spring of 2007, a SPU environmental analyst investigated the possibility of contamination in and around an electric meter box located in the parking lot of this Site. SPU crews had discovered the box covered with a dark brown liquid of unknown derivation. Samples of the liquid were found to be was somewhat alkaline with elevated levels of potassium, sodium, lead, and arsenic.

SPU contacted Ecology with this information and were advised that the liquid was probably leachate from CKD which was placed on the Site prior to construction in 1978. CKD from the cement plants on the Duwamish was pervasively used throughout South Park for fill. According to an April 2015 report[4] for Ecology, CKD is a very fine material generated by the heating process used to make cement from various raw materials including limestone. The material is produced and captured in dust collection systems attached to the rotating calcining kilns. Production began in the early 1960s when control of stack emissions at cement plants was implemented. It is primarily composed of calcium carbonate and silicon dioxide but also contains measurable amounts of metals, sulfates, chlorides and oxides depending upon source materials and fuel used in the calcining processes. In January 2008, the Site was added to the CSCSL. There are no records of remedial activity at the Site.



Photo of Pacific Wholesale warehouse in 1978 that was sold to the Haflon Candy Company about 20 years later.



Haflon Candy Company warehouse today.

A SHA dated April 9, 2015, which ranked the Site at 4, says that it is uncertain whether the contaminated liquid found in the meter box is groundwater or surface water. In either event, the metals content of the liquid exceed MTCA Methods A and B cleanup levels for surface water and Method A cleanup level for groundwater.

[4] Lower Duwamish Waterway — Cement Kiln Dust: Summary of Existing Information. Report prepared for Washington State Department of Ecology, Toxics Cleanup Program by Leidos, Bothell, WA April, 2015.

Model Toxics Control Act (MTCA) Sites

Site number	**43**	Ecology Facility ID	**97263627**
Name	**PUGET SOUND COATINGS/ MACHINISTS INC.**	CSCSL	**No**
Address	**9220 8TH AVENUE SOUTH**	LUST	**Yes**
Parcel number	**2433200215**	WARM Ranking	**Not ranked**



Several Puget Sound Coatings buildings in 1978.



Part of the Puget Sound Coatings Site today.

Since the 1960s, Puget Sound Coatings has provided sandblasting, painting, and other corrosion prevention services to industrial and commercial clients in the Puget Sound region at this facility. In 1988, before Washington State's UST regulations (173-360 WAC) were in effect, a 10,000 gallon diesel UST was removed from the Site apparently without proper oversight or sampling for contamination and replaced with an above ground storage tank (AST). In November 1991, PCS was discovered at the UST Site. A geotechnical consultant was hired who excavated a test pit and collected soil samples collected at 7 and 10 feet deep. The shallow sample contained 9.7 mg/kg TPH-D, well below MTCA Method A cleanup level of 200 mg/kg then in effect, but the deeper sample contained over 1,000 mg/kg.

In May 1992, a contractor removed and stockpiled approximately 500 cubic yards of soil. The excavation extended to a depth of 12 feet. Groundwater was encountered at around 11 feet. The excavated soil was field screened for sheen and soil vapor concentrations as measured by a combustible gas meter and segregated into two stockpiles. Stockpile A contained soils with screening indications of low level TPH-D concentrations and Stockpile B with indications of moderate to high levels of TPH-D. Ten soil samples were collected from the stockpiles, three from Stockpile A and seven from Stockpile B. Two out of the three samples from Stockpile A had detectable TPH-D and these were less than MTCA Method A cleanup levels. Six of the seven samples from Stockpile B were tested and had detectable TPH-D but only one was above the 200 mg/kg cleanup level. The others contained from 32 to 110 mg/kg TPH-D.

Eight soil samples were collected from the walls and base of the excavation after removal of PCS. All were analyzed for TPH-D, one had 13mg/kg and seven were less than the laboratory detection level of 10 mg/kg.

Both stockpiles were transported off-site for disposal. Stockpile A, containing about 100 cubic yards went to a local landfill and Stockpile B with about 400 cubic yards, went to a landfill in eastern Washington. The excavation was backfilled with imported clean gravel and sand.

In March 1998, the consultant conducted a Phase I ESA on behalf of the Site owner who was considering using the property as collateral for a loan. The consultant did not find evidence of any significant releases of hazardous substances at the Site nor were there any significant liabilities from off-site, upgradient Sites.

However, in August of the same year, Ecology notified the Site owner that MTCA requires submittal of a final cleanup report within 90 days of any cleanup action and that none had been received for the UST cleanup in 1992. Such a cleanup report requires groundwater monitoring demonstrating that groundwater meets the MTCA cleanup standards for petroleum contamination. In December 1998, the consultant installed a monitor well in the vicinity of the former UST and collected a discrete ground water sample which was found to contain less than 0.20 mg/l diesel range hydrocarbons and less than 0.5mg/l heavy oil range hydrocarbons. In February 1999, the Site owner requested an Ecology review of the remedial action reports under the VCP and at the end of March 1999, Ecology determined that no further action was required under MTCA.

In July 2010, a routine inspection of the facilities' stormwater detention pipe found infiltration of groundwater a sample of which contained 3,000 µg/l hexavalent chromium. The source of this contamination is unknown, but it may be the former Advance Electroplating Site (MTCA Site 45).

Ecology reclassified this Site on the LUST list as "Cleanup Started" on March 26, 2014. The reasons for this reclassification are unknown. No SHA has been conducted.

Site number	**44**	Ecology Facility ID	**27446996**
Name	**FRUEHAUF TRAILER INC.**	CSCSL	**Yes**
Address	**9426 8TH AVENUE SOUTH**	LUST	**Yes**
Parcel number	**5624200191**	WARM Ranking	**Not ranked**



1975 photo of Fruehauf Trailer facility.



The Site today is home of Terex Utility Rental.

In April 1998, a 2,000 gallon UST was decommissioned at this Site. The UST was used for storage of waste oil from an oil water separator that collected liquids generated by washing trucks and truck engines in a wash booth next to the UST area. Investigation and removal of PCS from the UST Site was done in May and the oil water separator was removed July, 1998.

Six soil samples were collected from the UST excavation after the tank shell was removed. Two of these samples contained diesel and heavy oil petroleum contamination in excess of MTCA Method A cleanup levels in effect at that time. In May, about 84 tons of PCS were over-excavated from the tank area and five more soil samples collected, one of which, located at the edge of the oil water separator, exceeded Method A cleanup levels for diesel and heavy oil. This led to the removal of the oil water separator and an additional 5.7 tons of PCS in July. Three confirmation samples from the oil water separator excavation were collected, two of which not contaminated. The third from the north sidewall of the pit contained 3,600 mg/kg WTPH-D and represented about 5 cubic yards of PCS left behind due to its proximity to the foundations of an adjacent building. All of the PCS excavated was taken off-site for disposal.

There are no reports or documents in Ecology file pertaining to further remedial action at this Site and no SHA has yet been conducted.

Site number	**45**	Ecology Facility ID	**2079**
Name	**ADVANCE ELECTROPLATING**	CSCSL	**Yes**
Address	**9585 8TH AVENUE SOUTH**	LUST	**No**
Parcel number	**5624200208**	WARM Ranking	**5**



Advance Electroplating in 1968.



In 2015, it was rented to All Covered Painting, a residential painting contractor.

Advance Electroplating operated a chrome plating business at this Site from the mid-1960s to the early 1990s. Waste handling practices used by Advance Electroplating caused chlorinated solvents and heavy metals to be released to soil and groundwater and in 1995-96 EPA performed a time-critical removal action that removed approximately 500 drums filled with various hazardous wastes and excavated and remediated approximately 1,500 tons of contaminated soil from the Site.

In 2002, the US Army Corps of Engineers conducted a Phase II ESA at the Site under EPA's Targeted Brownfields Assessment (TBA) program. This work included Geoprobe® direct-push sampling to collect continuous soil core or groundwater samples from 13 borings or monitoring well locations with maximum bottom depths of approximately 40 feet bgs at each location. Six locations were designated for soil core sampling only, and seven locations were designated for soil core sampling, micro well installation, and groundwater sample collection. Groundwater was also sampled at eleven existing wells. Soil samples were analyzed for VOCs, gasoline, and diesel range total petroleum hydrocarbons, PAHs, TAL metals, PCBs, and hexavalent chromium. Six surface soil samples were also collected and analyzed for VOCs, SVOCs, Pesticides, PCBs, and TAL metals. Groundwater was sampled from seven boring locations and analyzed for VOCs, TAL total and dissolved metals, hexavalent chromium, sulfate, chloride, nitrate/nitrite, total sulfides, total organic carbon, and total suspended solids. Additionally, samples were collected from the former sludge treatment area, the north-south alley between the former Chrome Room and Zinc Room, and the drop out tanks area where EPA removed soils in 1995-96.

The sampling event indicated that residual soil is not above federal direct contact cleanup limits assuming an industrial Site, however soil concentrations present throughout the Site are continuing sources of groundwater contamination for cadmium, copper, nickel, hexavalent chromium, TCA, DCE, TCE, and PCE above MTCA cleanup levels. In addition, the highest concentrations of contamination are present at the groundwater interface at depths of up to 12 feet bgs. The full vertical and horizontal extent of groundwater contamination was not determined. It was found to have migrated off-site to the Fruehauf property across 8th Avenue South. Additional source removal was not feasible because of building and road obstructions.

Shortly after completion of this ESA, this property and the Fruehauf Site were acquired by South Park Industrial Properties, LLC (SSIP). Under a PPA and Covenant Not to Sue with the EPA dated September 30, 2003, SSIP agreed to install, maintain, and monitor three groundwater wells until such time that groundwater contamination is less than MTCA Method A, B, or C cleanup levels; install and maintain two groundwater circulation wells to mitigate the levels of VOCs, perform vapor intrusion tests; and install impervious caps on both the Advance and Fruehauf properties to mitigate surface infiltration through contaminated soil. Furthermore, the agreement placed a deed restriction on the Site to maintain the integrity of the impervious caps and prohibit the extraction of groundwater.

In November 2003, SSIP notified Ecology that they were going to implement an independent remedial action as per the PPA at the Advance/Fruehauf Site to address elevated levels of volatile organic compounds and metals in soils and groundwater at the Site that were the result of past industrial use, including chrome plating operations.

Ecology's files do not contain information on the current status of cleanup at Advance Electroplating. However, an internal e-mail in Ecology files dated July 2, 2012 provides a summary of what is known to the agency:

The shallow groundwater had concentrations of TCA, DCE, TCE, PCE, cadmium, copper, nickel, and chromium (primarily hexavalent) that exceed State of Washington limits. It is likely that DCE, TCE, and methylene chloride are also present in shallow groundwater at concentrations that exceed State of Washington limits.

In deep groundwater, concentrations of DCE, TCE, PCE, and chromium exceed State of Washington limits. The full vertical and horizontal extent of the groundwater plume has not been determined. Recent investigations show that contamination from the Advance Electroplating Property has migrated to the Fruehauf Trailer Services Property, which is adjacent to and downgradient from the Advance Electroplating Property.

Soils on the Fruehauf Trailer Services Property [MTCA Site 44] contain VOCs that appear to have migrated from the Advance Electroplating Property through sewer drainage or shallow groundwater. In addition, shallow and deep groundwater beneath the Fruehauf Trailer Services Property contains elevated levels of VOCs and chromium that appear to have migrated from the Advance Electroplating Property.

Ecology's Lower Duwamish Waterway Source Control Status Report January through December 2013 (publication number 14-09-337) lists the following as an action item:

"Provide to Ecology the environmental data and sample location maps from the 1995 remedial actions and related investigations performed at the property. Ecology will review the information to determine if metals are present in soil and groundwater at concentrations exceeding current MTCA cleanup levels and to determine the potential for sediment recontamination via the groundwater discharge pathway."

Site number	**46**	Ecology Facility ID	**2077**
Name	**ACE GALVANIZING**	CSCSL	**Yes**
Address	**429 SOUTH 96TH STREET**	LUST	**No**
Parcel number	**0523049008**	WARM Ranking	**3**

ACE Galvanizing has been operating a hot dip galvanizing facility at this Site since 1963. According to their website, the process involves a number of steps utilizing hazardous chemicals. These include cleaning metal with caustic soda, “pickling” with sulfuric acid to remove rust, fluxing with zinc ammonium chloride to prepare the surface, and finally dipping the metal into a kettle of molten zinc at a temperature of 830° F.



Ace Galvanizing yard in 1967.


Ace Galvanizing yard in 2015.

In the late 1980s a number of inspections by Ecology, EPA, and others noted issues with waste handling, chemical storage and other housekeeping problems that may have contaminated soil and groundwater on the Site. In June 1991, Ecology commissioned a SHA to gather sufficient information to rank the Site in accordance with WARM. To obtain this information, soil samples were collected from five borings, one of which was completed as a monitor well from which a groundwater sample was obtained. Four surface or near surface soil samples were also collected. Two sediment samples were taken from the bottom of an off-site ditch and three more from stormwater catch basins.

All seven subsurface soil samples had detectable metals and, not surprisingly, the highest was zinc at 675 mg/kg in boring SB02 at 3.5 feet depth. The remainder was trace to 139 mg/kg for cadmium, chromium, copper, nickel, and lead. TPH, identified as hydraulic or lube oil, was only found in two samples at less than 10 mg/kg. The single groundwater sample however was found to be above MTCA Method A and B cleanup standards for cadmium, chromium, copper, nickel, and zinc. The surface soil and catch basin samples contained TPH, cadmium, copper, nickel, lead (one sample), and zinc above MTCA Method A or B cleanup levels for soil. Upon this and other Site characteristics, the Site was scored at 3 on the WARM ranking scale.

Model Toxics Control Act (MTCA) Sites

Site number	**47**	Ecology Facility ID	**37752719**
Name	**SELLAND AUTO TRANSPORT**	CSCSL	**Yes**
Address	**615 SOUTH 96TH STREET**	LUST	**Yes**
Parcel number	**5624200230**	WARM Ranking	**4**



No archival photo is available. 2015 photo of Selland Auto Transport service building built in 1980.

Selland Auto Transport has occupied this Site since the 1980s and uses it as a base and maintenance facility for its long haul trucking fleet. According to a consultant's Site Investigation Report dated November 16, 1998, two 2,000 gallon USTs containing waste oil were excavated and removed in September 1998. Since visual inspection of the tanks and soil samples indicated that no product was released from these USTs, the excavated soil was returned to the UST excavation along with clean fill and the waste tank UST Site capped with asphalt.

Two other USTs, co-located beneath a 12 inch concrete slab on the Site, were scheduled to be abandoned in place. These were a 20,000 gallon diesel tank and a 2,000 gallon gasoline tank. An investigation of soil and groundwater conditions was conducted in the vicinity of these USTs by drilling a dozen borings that yielded sixteen soil and three groundwater samples. Soil samples from seven borings were found to be contaminated above MTCA Method A cleanup levels with gasoline and diesel. The area of impacted soil was roughly 39 by 35 feet and contained an estimated 477 cubic yards of PCS. All three groundwater samples contained diesel contamination above MTCA Method A cleanup levels.

The consultant's report recommended removing the 2,000 gallon gasoline UST and the closure-in-place of the 20,000 diesel UST using inert foam to stabilize the empty tank shell. It also recommended further testing of the groundwater to better characterize the extent of the diesel plume and enrolling the Site in the VCP to evaluate remedial alternatives with the help of Ecology.

In January 1999, Selland entered the VCP. A month later, Selland's consultant told Ecology that they planned to bioremediate the groundwater only and requested information on appropriate cleanup levels. He was told that by default, MTCA Method A cleanup level for diesel TPH (which was 1000 µg/L at the time) would be appropriate. He was further advised that:

> *"It should be kept in mind that if this particular route was investigated, and all criteria were met, there still remain issues of point(s) of compliance, possible requirements of long-term monitoring of GW quality, and the possibility of a restrictive covenant on the property."*

In September, the consultant advised Ecology in an e-mail that the groundwater remediation system was installed in July and had been operating for 2.5 months. During the first two weeks, approximately 50 gallons of free product was recovered but since then only water, despite turning the system off and on about 16 times (pulsed pumping) to recover more free product. In October, the consultant reported that groundwater samples from two of the three wells were "non-detect and 320 ppb [µg/L] on the third." Also, ten soil samples were collected from the impacted area and field screening indicated only one to be above MTCA Method A cleanup levels.

A SHA dated August 4, 2015 listed the release of petroleum to groundwater at concentrations above MTCA Method A, detections of petroleum range hydrocarbons and BETX compounds in soils, and reports of excessive coper and zinc in stormwater run-off in their ranking of the Site at 4.

Site number	**48**	Ecology Facility ID	**2058**
Name	**SOUTH 96TH STREET DITCH**	CSCSL	**Yes**
Address	**1115 SOUTH 96TH STREET**	LUST	**No**
Parcel number	**5624200931**	WARM Ranking	**4**

The South 96th Street Ditch includes formerly open drainage systems located on either side of South 96th Street between Des Moines Memorial Way South and 8th Avenue South. In January 1986, an anonymous source reported to Ecology that a King County road crew was excavating petroleum contaminated soil from the ditch in front of what is now the Icon Asphalt Plant at 1115 South 96th Street. Ecology investigated and collected a composite soil sample which was found to contain lead, chromium, and total petroleum hydrocarbons in excess of MTCA Method A cleanup levels. Ecology recommended that further excavation activity be suspended until the impacted soil in the ditch could be sampled to determine the extent and degree of contamination and that all excavated soil should be safely contained and sampled to determine its classification as a dangerous waste under the state's dangerous waste regulations.



South 96th Street ditch in front of parking lot in 1977.



Same area in 2015. The ditch was "culvertized" and paved over in 2002.

In August 1987, four composite samples were collected from the ditch, one of which contained two cPAHs above the MTCA Method A cleanup level of 0.1 mg/kg for unrestricted soils and 2 mg/kg for industrial soil.

Between 1991 and 1994, 24 soil borings were made (11 of which were completed as monitor wells) and 54 surface soil samples collected. The soil samples confirmed the presence of petroleum hydrocarbons which led to the removal of about 250 cubic yards of PCS in November 1993. Ten soil samples collected in late 1993 and early 1994 were analyzed for PCBs and only one was found to contain levels equal to the Method B cleanup level. Groundwater samples collected in 1994 contained methylene chloride, PCE, and TCE above MTCA Method A cleanup levels.

King County proposed to widened and repave South 96th Street from Des Moines Memorial Way South to 8th Avenue South in 1997. The ditches on either side of the street would be excavated to a depth of three feet to remove any remaining contaminated soil. Culverts would be installed to contain flowing water where needed and dry segments would be backfilled. This work was completed in 2002. According to an Ecology SHA dated June 2015, "no report regarding the excavated soil or soil sampling during these activities was available for review in Ecology's files."

Site number	**49**	Ecology Facility ID	**3533187**
Name	**FMH MATERIALS HANDLING SOLUTIONS**	CSCSL	**Yes**
Address	**1313 SOUTH 96TH STREET**	LUST	**Yes**
Parcel number	**5624200351**	WARM Ranking	**Not ranked**

According to a 2012 Phase I ESA, this Site was vacant and probably a partial wetland prior to its development in 1977 when low spots were filled with CKD to level the Site for construction of an office/ shop building and a small shed associated with a vehicle wash station. The surrounding yards were paved. At some point, four USTs were installed: one 5,000 gallon tank for gasoline, one 1,000 gallon tank for diesel, and two for waste oil, one 2,500 gallon and the other 4,000 gallon. The larger waste oil tank was located beneath the maintenance yard west of the building just south of the parking lot, the gasoline and diesel USTs were at the southern end of the Site and the smaller waste oil tank adjacent to an equipment wash pad at the southeast corner of the property. The Site was used as a forklift service and maintenance facility until about 2010.



Same area as Site 48 archival photo but taken in 1980 to show new addition to building. The tenant was Clarklift of Washington and Alaska.

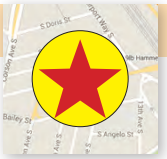


2015 photo of the same building, now used by Beckwith & Kuffel, an industrial equipment supply company.

Ecology files indicate that the gasoline, diesel, and smaller waste oil tanks were removed in 1990 and the larger waste oil tank in 2004. Ecology's Regulated UST database lists the Site operator at this time as Clarklift of Washington Alaska, Inc. A limited Phase II ESA in conducted by Clayton Environmental in 2003 reported that when the three USTs were removed in 1990, PCS was discovered with the smaller waste oil tank and excavated. This soil was stockpiled on site and subsequently taken off-site for disposal. No contamination was found associated with the gasoline or diesel tanks. None of this information was reported to Ecology so Clayton installed seven soil borings in the vicinity of the former USTs in July 2003 to obtain soil and groundwater samples for laboratory analysis in order to prepare a proper UST closure report to Ecology. The soil and groundwater samples collected were all below MTCA Method A cleanup levels for TPH-G, BETX, TPH-D and oil, PCBs, PAHs, and RCRA Metals.

At the same time the former UST Sites were being investigated, three borings were drilled along the northern boundary of the Site adjacent to the South 96th Street ditch to see if there were impacts to soil or groundwater from petroleum contaminated sediment in the ditch. Groundwater grab samples from two of these three borings contained diesel and oil range TPH; one contained 9,900 ug/l and one contained 1,600 ug/l. In September, fourteen more direct push borings were drilled in the eastern half of the parking lot to collect groundwater samples. Six of these samples were

(continues on next page)



Site number	**49** *continued*	Ecology Facility ID	**3533187**
Name	**FMH MATERIALS HANDLING SOLUTIONS**	CSCSL	**Yes**
Address	**1313 SOUTH 96TH STREET**	LUST	**Yes**
Parcel number	**5624200351**	WARM Ranking	**Not ranked**

contaminated above MTCA cleanup levels. It was at this point that the consultant learned of the existence of the large waste oil tank. According to a former tenant, the UST was part of a "septic" system that received fluid runoff from floor drains inside the building.

In December 2004, the 4,000 gallon waste oil tank was removed along with about 116 tons of PCS. Both were taken off-site for disposal. Confirmation soil sampling found detectable amounts of oil and diesel contamination, but the levels were less than MTCA Method A cleanup standards.

In January 2012, another consultant prepared a Phase I ESA on behalf of Mr. Lou Kuffel of Beckwith & Kuffel, an industrial equipment supply and service company, who planned to acquire the property. This assessment noted three RECs associated with the former USTs:

- potential for releases from floor drain pipes that were not removed in December 2004;
- groundwater samples collected in the vicinity of the USTs at the south end of the Site were collected up-gradient from the USTs and therefore may not have detected a release exceeding MTCA cleanup levels; and,
- Contaminated groundwater samples collected in September 2003 indicated that a TPH-D plume is present under the northern part of the property. This plume has not been fully characterized and appears to be migrating off-site to the north.

This Phase I was followed up with a Phase II ESA that installed three monitor wells. MW-1 was in the parking lot, north and down-gradient from the site of the former 4,000 gallon waste oil tank, MW-2 was north-northeast and down-gradient from the former gasoline and diesel USTs, and MW-3 was at the northeast corner of the property, not far from where a 2003 GeoProbe® sample had found 1,600 µg/L diesel and oil range TPH in groundwater. Drilling at MW-1 and MW-3 encountered 2.5 to 5 feet of light gray silty material which was identified as CKD that had been used as fill. Groundwater was encountered about 7.5 feet bgs at the north end of the property in MW-1 and MW-3, and at 5 feet bgs in the south half of the property in MW-2. Initial groundwater sampling in January 2012 did not detect TPH-D or TPH-O in any of the three wells.

One discrete soil sample of CKD was taken from MW-1 and analyzed for MTCA metals: arsenic, cadmium, chromium, lead, and mercury. The arsenic, cadmium, and lead content were all above MTCA Method A cleanup standards for unrestricted soil. A composite soil sample from all three wells was analyzed and found to contain arsenic, cadmium, chromium and lead, none of which exceeded MTCA Method A cleanup levels.

A second round of groundwater samples were collected in April 2012. Because of the overlying CKD, the samples from MW-1 and MW-3 were analyzed for total and dissolved arsenic and lead. The samples exceeded MTCA Method A cleanup levels for both metals at MW-1 but not at MW-3.

Between April 2012 and September 2013, numerous sampling events were conducted at the Site as an "interim action" primarily to evaluate lead contamination in groundwater from the CKD and the potential for VOC and PCB contamination related to the former waste oil tank Sites. Eleven GeoProbe® borings were installed to delineate the extent of CKD on either side of the building. Five of these borings encountered CKD on the Site; two in the parking lot in the northwest corner of the property, two on the north side of the building, and one at the southeast corner of the property. Three borings north of the Site across South 96th Street also contained CKD. Samples of CKD from the parking lot and north side of the building contained arsenic and lead exceeding MTCA Method A cleanup levels, but these samples did not contain leachable metals under TCLP testing that would characterize this material as a dangerous waste if it were to be excavated.

Although a number of groundwater samples contained total lead above MTCA Method A levels, the results were attributed to turbidity of the sample and/or locally elevated pH due to the presence of CKD. It seemed unlikely that groundwater with elevated lead content would extend off-site.

(continues on next page)

GeoProbe® GP-1, located near the Site of the former 4,000 gallon waste oil UST, collected a soil sample that contained 330 mg/kg heavy oil, well below MTCA Method A cleanup standards of 2,000 mg/kg. TPH-D, TPH-G, VOCs and PCBs were not detected. However, the groundwater sample contained 836 µg/L TPH-D which is above the MTCA Method A cleanup level of 500 µg/L.

Seven GeoProbe® borings were installed in the southeast corner of the property to test for VOC and PCB contamination that may have been related to the smaller waste oil tank removed in 1990. GP-6 found no contamination in soil above MTCA cleanup levels, but the groundwater sample contained diesel and HVOC contamination that exceeded MTCA cleanup levels. The VOC compounds were the chlorinated solvent TCE, and its breakdown products DCE, EDC, and vinyl chloride.

As a consequence of this discovery, an additional 10 GeoProbe® borings were drilled in the southeast corner to test for HVOC contamination and four more borings were drilled off-site to test downgradient extensions of the plume. Two monitor wells, MW-4 and MW-5, were also installed to obtain groundwater samples. Sampling confirmed the release of HVOCs and also revealed that the source of the contamination was likely the wash pad where machinery and equipment were routinely cleaned. Anecdotal evidence suggested that spray-can degreasers containing TCE were used during cleaning and that cracks in the concrete pad would have allowed this solvent to infiltrate into the underlying soil and groundwater. The plume was found in one off-site boring but not in another sixty five feet away downgradient.

In November 2013, a 20- by 20-foot excavation to 18 feet deep was undertaken adjacent to the wash pad. Confirmation sampling on sidewalls indicated that TCE was still present in the north, south, and east sidewalls, however excavation to the north and east was precluded by the presence of utilities and structures. Additional excavation was undertaken and the wash pad and its associated catch basin were all removed. A total of about 390 tons of soil were removed, 270 tons of which were disposed of at a RCRA Subtitle D landfill at Roosevelt, Washington and the remaining 120 tons with no detectable HVOCs were hauled to a waste landfill in Everett.

The excavation of soils required that MW-4 and MW-5 be removed. They were replaced by three new wells (MW 7, MW 8 and MW 9) to monitor the progress of in situ remediation of the HVOC plume. A program of enhanced biodegradation using Regenesis' 3D Microemulsion (3DMe®) product was selected to speed up removal of TCE and its toxic daughter products. The 3DMe® product was applied to the groundwater during remedial excavation activities. Groundwater samples from MW-6, MW-7, MW-8 and MW-9 in February, May, and August 2014 showed a marked decrease on the levels of TCE. In MW-6 the levels went from 1320 to 88.6 µg/L; in MW-7 from 1.95 µg/L to ND; in MW-8 from 878 to 615 µg/L; and in MW-9 from 275 to 179 µg/L.

The above information was all contained in a consultant's report, dated October 2014, which also requested that Ecology grant a Conditional NFA status for the north end of the property asserting that a) the USTs on-site have been closed and only minimal TPH-D contamination remains on-site in groundwater, b) CKD is present on-site but is mostly under the Site's main building and therefore capped and groundwater impacted by CKD is also limited to the Site, and c) groundwater monitoring over four more quarters in the southeast corner of the property is proposed to measure the decrease in HVOC contamination before any further remedial action is planned.

This report was submitted to Ecology, and on March 15, 2015, Ecology issued an Opinion Letter on the proposed remedial action. The opinion advised that before the path forward for remediation of the Site can be determined, a more complete Remedial Investigation (RI) report must be prepared that, in addition to the information in the October 2014 report, should include more detail on-site history, better graphics, more detailed descriptions of geology and hydrogeology, evaluation of the vertical extent of contamination in groundwater, all boring logs and analytical data attached as appendices, and a table with all analytical data with "< laboratory detection limits" expressed rather than "ND."

Furthermore, information needs to be included on stormwater collection and treatment at the Site and Ecology recommends a ground penetrating radar (GPR) survey of the property to determine if there are other USTs or structures on-site might be a source of contamination. A thorough evaluation of Applicable or Relevant and Appropriate Requirements (ARARs) and potential exposure pathways and receptors and potential cleanup levels needs to be performed. More information needs to be provided about the soil removed when the smaller waste oil tank was removed and the drains and drain lines associated with the large waste oil tank. And, finally, a TEE should be performed to determine if cleanup is protective of terrestrial species.

In April 2014, the Site owner was advised that Ecology planned to conduct a SHA. However this assessment was cancelled on September 25, 2015, possibly to await new information generated by further remedial developments.

No Further Action (NFA) sites

FIGURE 6

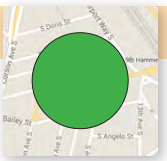


No Further Action (NFA) sites

When a MTCA site has been remediated, Ecology may conduct an analysis of whether the remedial action meets the substantive requirements of MTCA for site cleanup. This action is currently done under Ecology's VCP. If Ecology determines that the substantive requirements, which govern the sufficiency of the cleanup, have been met, they may issue an advisory opinion that "no further action" is required. This opinion is generally known as a No Further Action determination or NFA. In the past, NFAs have also been determined by an initial inspection or a Site Hazard Assessment (SHA) that establishes whether or not a release poses a threat to human health and the environment and also by Ecology's review of cleanup documents submitted under the Independent Remedial Action program (IRAP).

If the cleanup is not permanent, then institutional controls are required to meet the substantive requirements of MTCA. Such controls prohibit or limit activities on a property that may interfere with the integrity of engineered controls or result in exposure to hazardous substances. Except under certain specified circumstances, such controls must be executed through an environmental covenant on the affected property. This may require deed restrictions of the types of facilities that can be built on the site and/or use of groundwater.

There are 17 NFA sites currently listed in South Park. They are listed in Table 1 and their locations are shown on Figure 6.



SECTION 5

No Further Action (NFA) sites

TABLE 1

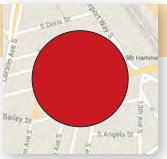
Map #	Parcel Number	Site Name	Address	Ecology Facility ID	NFA Date	Basis for NFA (See key below)	Environ-mental Covenants	Current Business Name
1	7327906585	FERGUSON CONSTRUCTION	7433 5TH AVE S	3565459	5/29/1996	IRAP	No	Renewal by Andersen
2	3024049018	LAIDLAW (UST ONLY)	7739 1ST AVE S	2320	6/1/2006	IRAP	No	Volvo Construction Equipment & Services
3	2924049099	TACOMA & SEATTLE TRAILER REPAIR	150 S KENYON ST	96838255	10/3/2011	II	No	South Seattle Transfer Station
4	7327901605	KING AUTO & TRUCK WRECKING	543 S MONROE	2278	7/21/2000	SHA	No	Pennington Metals Auto Recycling
5	7327906930	LONG PAINTING CO 10TH AVE	8025 10TH AVE S	71678662	2/4/2003	VCP	No	MV Transportation
6	7883600600	RAZORE ENTERPRISES	500 S SULLIVAN ST	38576231	10/3/2011	II	No	Coast Crane storage yard
7	3224049014	RASMUSSEN EQUIPMENT	415 S CLOVERDALE ST	81158515	10/3/2011	II	No	Rasmussen Equipment
8	7883608578	DBA & AIRBUS	9004 14TH S	92792171	10/3/2011	II	No	AAA Used Tires & Wheels
9	0001600016	KASPAC CHIYODA PROPERTY	1237 S DIRECTOR ST	2489	5/16/1998	IRAP	No	Carey Limosine Services
10	0001600060	KRS MARINE	1621 S 92ND PL	90355185	8/17/2000	VCP	No	KRS Marine
11	3224049071	REPAIR TECHNOLOGY INC	400 S 96TH	2080	2/25/2002	SHA	No	Repair Technology Inc.
12	3224049034	DESIMONE TRUST	600 S. 96TH ST	91322212	1/12/2000	VCP	No	Parking for Old Dominion Truck Lines
13	5624200253	TOXGON CORP SEATTLE	631 S 96TH ST	2329	6/6/2003	ECOL-SUP	No	WARP
14	5624200150	MARKEY PROPERTY PARCEL 4	9520 10TH AVE S	2263	9/21/2009	ECOL-SUP	No	SimplexGrinnell
15	5624200335	SEGALE M A ASPHALT PLANT	1115 S 96TH ST	93252843	10/3/2011	II	No	ICON Materials
16	5624200330	SUNNYDALE CONSTRUCTION CO	1119 S 96TH	48248356	10/3/2011	II	No	Parking and gravel storage for Icon Materials Asphalt Plant
17	5624200097	ALL CITY AUTO WRECKING & SALES INC	9438 DES MOINES MEMORIAL DR	22342251	6/24/1999	VCP	Yes	Absolute German Auto Wrecking

Key

SHA	NFA after Site Hazard Assessment (SHA)
VCP	NFA after Voluntary Cleanup Program (VCP) review
IRAP	NFA after Independent Remedial Action Program (IRAP) review
II	NFA following an Initial Investigation (II)
ECOL-SUP	NFA following an Ecology-supervised cleanup

FIGURE 7


1st Ave. S. Bridge
Duwamish Waterway
King County International Airport
South Park Bridge
SR 509
SR 99
SR 509
Legend
Regulated UST Sites:
Active
Inactive
Street
Parcel
N
0
0.1
0.2
0.4
0.6
0.8
1
Mile



Regulated Underground Storage Tank sites

In 1990 and 1991, Ecology adopted regulations (chapter 173-360 WAC) establishing a state underground storage tank (UST) program pursuant to the Legislature's direction. In 1993, the program was one of the first in the country to be approved by the U.S. Environmental Protection Agency and established that state, rather than federal, UST regulations would apply in Washington.

Under section 173-360-200 all owners or operators of UST systems (which include not just the tanks but also all connected piping and pumps) must register their systems with the Department of Ecology. If they subsequently remove or close a UST system, they must also notify Ecology 30 days in advance of closure and file a Site Closure and Assessment Notice within 30 days following closure.

Ecology maintains a database of sites with registered UST systems. Within the South Park inventory area there are 6 active sites and 54 inactive sites. The active sites are listed on Table 2A and the inactive sites are on Table 2B.

Both active and inactive sites are shown on Figure 7.

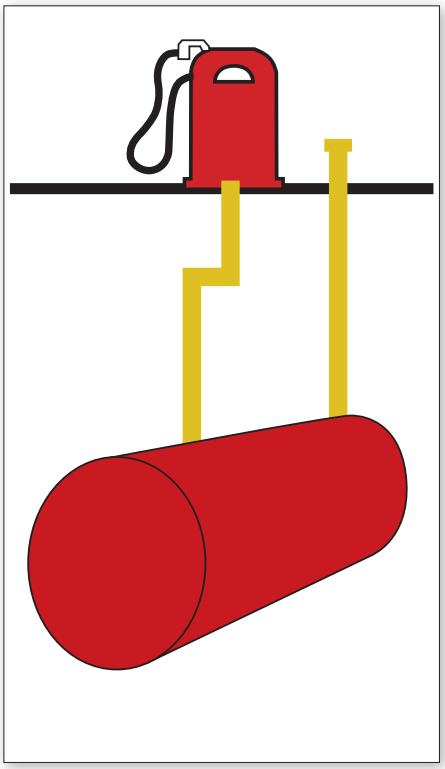


*Illustration source: University of Kentucky website**

* http://www.bae.uky.edu/awqpt/images/BMPs/Fuel_Storage.gif

TABLE 2A

Map #	Parcel #	Site Name	Address	Ecology Facility ID	Operational USTs	Tank Size	Product(s)
1	5367202505	ASSOCATED PETROLEUM PRODUCTS INC	6760 W MARGINAL WAY SW	94368646	3	10,000-20,000 gallons	Unleaded gasoline (1), diesel(2)
2	3024049181	SEAPORT FOOD MART	7801DETROIT AVENUE SW	12276	3	20,000-30,000 gallons	Unleaded gasoline (1½), diesel (1½)
3	7327901775	SEIDELHUBER IRON & BRONZE WORKS, INC.	8009 7TH AVE S	59692187	1	1,000-1,100 gallons	Unleaded gasoline
4	7883608370	SOUTH PARK BP	8819 14TH AVE S	48968474	3	10,000-20,000 gallons and 5,000-10,000 gallons	Unleaded gasoline (2) diesel(1)
5	7883608580	PETROCARD, INC.	9014 14TH AVE S	1992812	2	10,000-20,000 gallons	Unleaded gasoline (1), diesel (1)
6	5624200097	SOUTH PARK FUEL & FOOD	9525 14TH AVE S	27778576	2	10,000-20,000 gallons	Unleaded gasoline

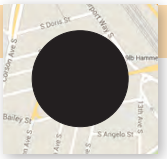


TABLE 2B

Map #	Parcel #	Ecology Facility ID	Site Name	Address	Status	Products(s)
1	7327906375	12264831	PITTSBURGH TESTING LABORATORY	7400 3RD AVE S	Removed	Unleaded gasoline
2	7327906515	78714998	UNITED IRON WORKS INC	7421 5TH AVE S	Removed	Leaded gasoline
3	7327906585	3565459	FERGUSON CONSTRUCTION	7433 5TH AVE S	Removed	Unknown
4	2924049103	87983518	SAFWAY STEEL PRODUCTS	7501 2ND AVE S	Removed	Unleaded gasoline
5	7327906045	83549384	LIQUID AIR CORP	7500 2ND AVE S	Removed	Substance
6	7327905955	8162841	ATC DISTRIBUTION GROUP (RPM MERIT)	401 S WEBSTER	Removed	Unleaded Gas
7	7327905855	7936495	RED-D INC	7510 5TH AVE S	Unknown	Leaded gasoline
8	7327904770	10128921	MODERN IRON & STEEL INC	7619 5TH AVE S	Closed in place	Unknown
9	7327905350	42127616	HURLEN CONSTRUCTION	700 S RIVERSIDE DR	Removed	Leaded gasoline
10	3024049018	2320	LAIDLAW TRANSIT	7739 1ST AVE S	Removed	Diesel and waste oil
11	7327904570	82818857	BESCO ROOFING INC	233 S HOLDEN ST	Removed	Leaded gasoline
12	7327904510	4612472	ROYAL HWY TOURS COACH MAINTENANCE	255 S HOLDEN ST	Removed	Unleaded gasoline
13	2924049006	63293426	RYDER STUDENT TRANSPORTATION SERVICES (FIRST STUDENT)	130 S KENYON ST	Removed	Unleaded gasoline and diesel
14	2924049099	96838255	TACOMA SEATTLE TRAILER REPAIR	150 S KENYON ST	Removed	Motor oil / waste oil
15	7328401020	72668839	ELLIOTT BAY INDUSTRIES INC	470 S KENYON ST	Removed	Unknown
16	7327902900	38921541	MARINE LUMBER SERVICE S CHICAGO	525 S CHICAGO ST	Removed	Leaded & unleaded gasoline
17	7327902850	73969348	MARINE LUMBER SERVICE S KENYON	558 S KENYON ST	Removed	Leaded gasoline
18	7327902710	45787437	OLYMPIC STEEL DOOR	7800 7TH AVE S	Removed	Other petroleum substance
19	7327903380	62275925	NORTHERN FREIGHT LINES INC	730 S CHICAGO ST	Removed	Unknown
20	7327903330	25623222	INTERSTATE COATINGS INC	754 S CHICAGO ST	Removed	Unleaded gasoline
21	7327902520	15388822	WFI	800 S KENYON	Closed in place	Leaded gasoline
22	7328400005	91256919	CITY OF SEATTLE SOLID WASTE DIVISION	8100 2ND AVE S	Closed in place	Unleaded gasoline and diesel
23	7328400740	63168342	GLITSA AMERICAN INC	327 S KENYON ST	Removed	Other petroleum substance
24	7328400445	61231536	CUSTOM ROOFING INC	8001 5TH AVE S	Removed	Unleaded gasoline
25a	7819500000	70748294	WEST FORK NELSON	7918 8TH AVE S	Removed	Leaded gasoline
25b	7819500000	56738526	WESTFORK NELSON INCORPORATED	7916 8TH AVE S	Removed	Leaded gasoline
26	7327906930	71678662	LONG PAINTING COMPANY	8025 10TH AVE S	Removed	Unleaded gasoline and diesel
27	3124049160	42718345	STANDARD STEEL FABRICATING CO INC	8155 1ST AVE S	Removed	Leaded gasoline

TABLE 2B *continued*

Map #	Parcel #	Ecology Facility ID	Site Name	Address	Status	Products(s)
28	3124049172	16981594	IVERSON PROPERTY	8425 1ST AVE S	Unknown	Unknown
29	3224049010	25963342	OCEAN TERMINALS INC	8151 OCCIDENTAL AVE S	Closed in place	Unleaded gasoline
30	7883600350	2430	MANITOWAK WESTERN	8250 5TH AVE S	Removed	Leaded and unleaded gasoline
31	7883600600	38576231	RAZORE ENTERPRISES	500 S SULLIVAN	Removed	Diesel and waste oil
32	3224049014	81158515	RASMUSSEN EQUIPMENT CO INC	415 S CLOVERDALE ST	Removed	Unleaded gasoline
33	7883604285	13152935	SEATTLE FIRE STATION 26	800 S CLOVERDALE ST	Removed	Diesel
34	0001600001	44653368	WILLARD S CROW	8604 DALLAS AVE S	Removed	Leaded gasoline
35	0001600044	37657495	MARLARKEY ASPHALT CO	8700 DALLAS AVE S	Closed in place / removed	Unleaded gasoline / waste oil
36	7883607842	93927211	CROSBY AUTO REPAIR SHOP (STEPHANIE CROSBY PROPERTY)	8621 14TH AVE S	Closed in place	Leaded gasoline
37	7883608629	43643315	CHEVRON 98484	8700 14TH AVE S	Removed	Leaded & unleaded gasoline
38	7883608351	2338365	AIR OIL PRODUCTS CORP	8801 14TH AVE S	Closed in place	Heating fuel
39	7883608604	23653754	TOM THURBER	1420 S HENDERSON ST	Removed	Unknown
40	7883608556	1661671	WARNER'S AUTO REPAIR	9001 14TH AVE S	Removed	Leaded gasoline
41	7883608578	92792171	DBA & AIRBUS (BUS AND AIR PARCEL SERVICE INC)	9004 14TH AVE S	Removed	Unleaded gasoline
42	2433700095	7727938	GARY MERLINO CONSTRUCTION	9125 10TH AVE S	Removed	Unleaded gasoline
43	0001600055	2056	PRECISION ENGINEERING INC	1231 S DIRECTOR ST	Exempt	Unknown
44	0001600016	2489	KASPAC CORPORATION	1237 S DIRECTOR ST	Removed	Leaded gasoline
45	2433700070	36919863	MCKINSTRY CO	855 S BARTON	Unknown	Leaded gasoline
46	2433200215	97263627	PUGET SOUND COATINGS INC	9220 8TH AVE S	Removed	Unknown
47	2433700165	42665774	MORGAN TRUCKING INC	9228 10TH AVE S	Removed	Diesel and unleaded gasoline
48	5624200191	27446996	FRUEHAUF TRAILER INC	9426 8TH AVE S	Removed	Waste Oil
49	5624200208	2079	ADVANCE ELECTROPLATING	9585 8TH AVE S	Closed in place	Leaded gasoline
50	0523049008	2077	ACE GALVANIZINGS	429 S 96TH	Removed	Leaded gasoline
51	5624200230	37752719	SELLAND AUTO TRANSPORT	615 S 96TH ST	Removed	Unleaded gasoline and waste oil
52	5624200335	93252843	M A SEGALE INC	1115 S 96TH	Removed	Unleaded gasoline and waste oil
53	5624200335	48248356	SUNNYDALE CONSTRUCTION CO INC	1119 S 96TH	Closed in place / removed	Leaded and unleaded gasoline / waste oil
54	5624200351	3533187	FMH MATERIALS HANDLING SOLUTIONS (CLARKLIFT OF WASHINGTON & ALASKA)	1313 S 96TH ST	Removed	Diesel and waste oil

South Park Inventory Errata

MTCA sites identified since completion of the final report:

Site number	**NA**	Ecology Facility ID	**12494**
Name	**WEST COAST EQUIPMENT 2 (aka SEAPORT PETROLEUM)**	CSCSL	**Yes**
Address	**7746 DETROIT AVENUE SW**	LUST	**No**
Parcel number	**3024049166**	WARM Ranking	**3**

This site is located south of Eastern Supply Company (MTCA Site 8) and between West Coast Equipment (MTCA Site 10) and Seaport Food Mart (MTCA Site 11) on the east side of Detroit Avenue SW. According to a 1996 SHA, CKD was imported to the site and placed as fill in the mid-1960s when the property was owned by Eastern Supply Company. The CKD fill layer is believed to be 1.5 to 6 feet thick and lies 4 to 6 feet below the existing grade. Periodically, imported sand, gravel, and steel mill slag were placed over the CKD as surfacing material. The total volume of CKD on the site is estimated at 60,000 cubic yards. Soil and groundwater samples collected in March 1992 contained arsenic, chromium, and lead above MTCA cleanup levels. In addition, soil samples contained TPH-D exceeding MTCA cleanup levels.

Site number	**NA**	Ecology Facility ID	**4504516**
Name	**DR CONCRETE RECYCLE**	CSCSL	**Yes**
Address	**149 SW KENYON STREET**	LUST	**No**
Parcel numbers	**3124049004 & 3124049009**	WARM Ranking	**Not Ranked**

This site is located just west of Intermountain Supply (MTCA Site 18) and, according to Ecology's Cement Kiln Dust report (referenced in the footnote on page 86), the property is one of many in this area that received CKD as fill material in the early 1970s. In 2006 and 2007, an assessment of environmental conditions was conducted as part of a planned redevelopment of the site. This study found that the general soil profile at the property consists of fill (CKD, crushed glass, or other materials) to depths of 2 to 12 feet bgs with a surficial layer of CKD over the northwest portion of the site. The CKD fill layer contains arsenic, cadmium, and lead concentrations typical of the CKD material found elsewhere in the LDW and subsequently the site was listed on the CSCSL for arsenic and priority pollutant metals. It was enrolled into the VCP in 2007, but enrolment was terminated in 2008.