South Park Landfill

7901 2nd Ave. South Cleanup Action Plan

Issued by

Washington State Department of Ecology
Toxics Cleanup Program
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Executive Summary

The South Park Landfill Site (Site) includes property that is a closed solid waste landfill in the South Park neighborhood of Seattle, Washington. It is located in the Lower Duwamish Valley near the western valley wall between State Routes (SR) 509 and 99. The 7901 2nd Ave. S property is within the Site. The landfill operated from the 1930s until 1966 when it was closed. The northwest quadrant of the landfill is occupied by two parcels with privately owned buildings leased for uses consistent with industrial zoning. The smaller is the 7901 2nd Ave. South parcel, a 0.72-acre parcel (County Tax Parcel No. 3224049077), owned by 7901 2nd Ave. S. LLC, and hereafter referred to as the 7901 parcel. The larger is the Kenyon Industrial Park (KIP) parcel, a 6.50-acre parcel owned by Schnitzer Properties, LLC. Landfilling operations on these properties ended by the early 1950s and a portion of these properties was used for auto wrecking from the early 1950s to the early 1960s. Between the mid-1960s and mid-1970s, the four buildings currently located on KIP were constructed, and in the late 1960's a 17,000 square foot building was constructed on the 7901 parcel.

Soil, groundwater, surface water, and landfill gas monitoring began in the late 1980s and have continued periodically to the present day. Today, landfill gas (methane) is still being produced at low levels, but no methane was detected in buildings on or near the landfill based on investigations conducted over four quarters in 2011. In 2017, continuous methane monitors were installed in each of the buildings at KIP and methane above the applicable regulatory standard levels were not detected. Indoor air at the 7901 parcel has not been documented. Vinyl chloride, iron, and manganese are still present in groundwater at concentrations greater than the Site's groundwater cleanup level at monitoring wells located northeast of the 7901 parcel near the Edge of Refuse at the landfill.

In February 2007, the Site was added to Washington State's Hazardous Sites List. A preliminary draft Cleanup Action Plan (CAP) for the two largest parcels within the Site and adjacent rights-of-way was prepared in 2017 under Agreed Order No. 6706. These two largest parcels and the rights-of-way are referred to as the SPPD/City Area and consist of the South Recycling and Disposal Station and associated City of Seattle-owned property (SRDS parcel), and the parcel formerly owned by South Park Property Development, LLC (SPPD), the SPPD parcel, owned since September 2022 by Centerpoint South Park LLC (CPSP)[1]. The Washington State Department of Ecology (Ecology) reviewed the preliminary and public review draft CAPs and used them to develop a Final CAP for the SPPD/City area portion of the Site. A consent decree to implement this Final CAP for a portion of the Site was entered into with SPPD and the City of

[1] On September 9, 2022, CPSP purchased the SPPD parcel from SPPD. For continuity of drafting, the CPSP-owned parcel will continue to be referred to as the SPPD parcel in CAP text and figures, but title to the SPPD parcel is with CPSP.

Seattle in 2019. The consent decree covered a portion of the Site identified as the "Settlement Area" (the SRDS and SPPD parcels).

An Agreed Order has been issued requiring 7901 2nd Ave. S LLC to implement this 7901 CAP at a portion of the site (the 7901 parcel). In addition, an Agreed Order (and associated KIP CAP) has been issued for the KIP portion of the Site.

To effectuate the work to be performed under these Site cleanup action plans in the most efficient manner, certain PLPs have elected to take the lead in performing various aspects of the required work. Language in the consent decree and agreed orders, exhibits to these documents, and the cleanup action plans may reflect this agreement. However, the PLPs remain strictly, jointly, and severally liable for the performance of any and all obligations for the Site.

This CAP describes the remedial alternative and specifies cleanup standards applicable to the 7901 parcel, which covers a portion of the north end Site, and addresses refuse and wastes associated with historical auto wrecking operations. The cleanup action is based on information and technical analyses documented in the *South Park Landfill Remedial Investigation/Feasibility Study, Revised Final* (Floyd|Snider et al. 2021; RI/FS) for the Site and consideration of public comments and community concerns.

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7901	7901 2nd Avenue S., LLC
7901 Parcel	The tax parcel owned by 7901 2nd Avenue S., LLC (tax parcel 3224049077)
ARAR	applicable or relevant and appropriate requirements
CAP	Cleanup Action Plan
CFR	Code of Federal Regulations
City	City of Seattle
CKD	cement kiln dust
COC	chemical of concern
County	King County
CPOC	conditional point of compliance
CPSP	Centerpoint South Park, LLC
CUL	cleanup level
DCE	cis-1,2-dichloroethene
Ecology	Washington State Department of Ecology
Edge of Refuse	The approximate boundary of the area where wastes were placed as part of South Park Landfill operations.
Farallon	Farallon Consulting, LLC
FS	feasibility study
Hart Crowser	Hart Crowser, Inc.

IG2	General Industrial 2 (City zoning)
KIP	Kenyon Industrial Park
KIP Area	The parcel within the Settlement Area known as Kenyon Industrial Park (KIP), owned by Schnitzer Properties, LLC (tax parcel 3224049007).
Landfill Property Boundary	The boundary of the parcels located partially or entirely within the Edge of Refuse. This includes the parcels covered under the SPPD/City area, the KIP area, and the 7901 2nd Ave S. parcel, and the 2nd Ave S right-of-way where it is located within the Edge of Refuse. The Landfill Property Boundary does not include rights-of-way located to the east and south of these parcels.
LEL	lower explosive limit
LFG	landfill gas
LFGMCP	Landfill Gas Monitoring and Contingency Plan
MFS	Minimal Functional Standards
µg/L	micrograms per liter
mg/L	milligrams per liter
MTCA	Model Toxics Control Act
NAVD 88	North American Vertical Datum of 1988
NESHAPS	National Emission Standards for Hazardous Air Pollutants
PLP	Potentially Liable Person
POC	point of compliance
ppmv	parts per million by volume
PSCAA	Puget Sound Clean Air Agency
RI/FS	Remedial Investigation/Feasibility Study; in this document this refers to the *South Park Landfill Remedial Investigation/Feasibility Study, Revised Final* (Floyd|Snider et al. 2021)
Schnitzer	Schnitzer Properties, LLC
Settlement Area	The parcels and rights-of-way covered under the 2019 Consent Decree. This includes the SPPD/City Area and adjacent rights-of-way within the Edge of Refuse.
Site	South Park Landfill Site
SPPD	South Park Property Development LLC
SPPD/City Area	The portion of the Site that includes the Centerpoint South Park, LLC-owned parcel (3224049005),the City of Seattle-owned parcels (7328400005 and

	3224049110), and adjacent City of Seattle and Washington State rights-of-way located within the Edge of Refuse.
SPU	Seattle Public Utilities
SR	State Route
SRDS	South Recycling and Disposal Station
SRDS parcel	City-owned South Recycling and Disposal Station and associated City of Seattle-owned property
USEPA	U.S. Environmental Protection Agency
WAC	Washington Administrative Code

1.0 Introduction

This 7901 2nd Ave. S. Cleanup Action Plan (7901 CAP) describes the cleanup action selected by the Washington State Department of Ecology (Ecology) for the 7901 parcel, a portion of the larger South Park Landfill Site (Site) (Figure 1.1). Per Model Toxics Control Act (MTCA), the Site is defined by where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed of, or placed, or otherwise come to be located. Based on factors currently known to Ecology, the Site is generally located at 7900 to 8100 Occidental Avenue South, Seattle, Washington, and includes a former municipal solid waste landfill located in the South Park neighborhood of Seattle, Washington. For purposes of this CAP, certain areas of the Site have been separately identified (e.g., the SPPD/City Area, the 7901 parcel and the KIP Area). Ecology considers those areas to be part of the Site.

Ecology has already approved a CAP for the two largest parcels *(South Park Property Development LLC [SPPD] and South Recycling and Disposal Station [SRDS] parcels)* and adjacent rights-of-way where wastes were placed as part of the South Park Landfill operations (Ecology 2018). The SRDS parcel is owned by the City of Seattle (City). The SPPD parcel was formerly owned by SPPD but has been owned by Centerpoint South Park, LLC (CPSP) since September 9, 2022. These two largest parcels are referred to as the "SPPD/City Area". Documents related to the Site refer to 7901 2nd Ave. S. as the "7901 parcel" and this term is used throughout this CAP (Figure 1.2).

The South Park Landfill, including the eastern portion of KIP Area, received solid waste from the 1930s until the late 1940s or early 1950s, when it was closed under the existing landfill closure laws. Following the closure of the landfill, a portion of the 7901 parcel was used for auto wrecking from the 1950s to the early 1960s. In the late 1960s, an approximately 17,000-square-foot building was constructed on the 7901 parcel.

In February 2007, the Site was added to Ecology's Hazardous Sites List, based on concerns related to groundwater contamination and the presence of potentially flammable or explosive landfill gas (LFG). Investigations of groundwater, surface water, soil, and LFG began in the late 1980s and have continued to the present day. The selected cleanup action described in this CAP fulfills the requirements of the Model Toxics Control Act (MTCA), Chapter 70A.305 of the Revised Code of Washington, administered by Ecology under the MTCA Cleanup Regulation, Chapter 173-340 of the Washington Administrative Code (WAC), for a portion of the Site.

This CAP was developed using information presented in the revised final remedial investigation (RI)/feasibility study (FS) (Floyd|Snider et al. 2021) for the South Park Landfill, which was prepared by the Floyd|Snider Team (Floyd|Snider, Aspect Consulting, Herrera Environmental

Consultants, and BHC Consultants) on behalf of the City of Seattle (City), King County (County), and SPPD, and reviewed and approved by Ecology.

The objective of this CAP is to satisfy the MTCA requirements for cleanup action plans set forth in WAC 173-340-380(5). Consistent with the requirement of that section, this CAP provides the following information:

- Site description and history
- Conceptual site model
- Contaminated media, chemicals of concern (COCs) and cleanup standards
- Applicable or relevant and appropriate requirements (ARARs)
- Description of the selected cleanup action, including institutional controls
- Implementation schedule and
- References

2.0 Site Description

The Site is situated in the South Park neighborhood, located in Section 32 of Township 24 North, Range 4 East. The Site has not been fully defined, and includes but is not limited to, the area within the Edge of Refuse, which refers to the approximate boundary where landfill operations occurred historically and solid waste was placed, the SPPD/City Area, the KIP Area, and the 7901 Parcel. Remedial actions required by this 7901 CAP address the 7901 parcel.

The 7901 parcel (Figure 1.2) is currently owned by 7901 2nd Ave. S. LLC and consists of an approximately 0.72-acre parcel (County Tax Parcel No. 3224049077). The entire parcel overlies refuse placed within the former South Park Landfill. The 7901 parcel was developed with a 17,000 square foot building in the late 1960s, and paved areas currently cover the areas surrounding the building footprint.

The SRDS parcel is located adjacent to the east of the 7901 parcel, separated by 2nd Ave. S. The KIP area is to the west and south of the 7901 parcel. S Kenyon Street is to the north.

Under the terms of this CAP, there will be ongoing operations, maintenance and monitoring obligations performed at the 7901 Parcel. These obligations include indoor air monitoring requirements described in this document and the Cap Inspection and Maintenance Plan in Appendix A.

2.1 ZONING AND LAND USE

The 7901 parcel and surrounding areas are zoned by the City as General Industrial 2 (IG2; Figure 2.1). This zoning designation includes general and heavy manufacturing, commercial uses subject to certain limitations, transportation and utility services, and salvage and recycling uses (Floyd|Snider et al. 2021). The areas west, north, and northeast of the Site are also designated as IG2. The nearest residential property to the 7901 parcel is a Lowrise 3 (L3) apartment building at the southeastern corner of 5th Avenue South and South Sullivan Street, which is approximately 1,500 feet southeast of the 7901 parcel (Figure 2.1).

Based on zoning characteristics and review of the available aerial photographs, the IG2-zoned areas near the 7901 parcel can be reasonably designated as industrial properties.

2.2 SITE HISTORY

The KIP Area contained a historical drainage channel (i.e., swale) that drained surface water from the valley wall toward wetlands closer to the Lower Duwamish Waterway (Floyd|Snider et al. 2021). East of the historical KIP swale, landfilling began in the 1930s and continued until the late 1940s. Figure 2.2 shows a sequence of aerial photographs of the KIP Area and 7901 parcel and the image from 1946 shows active dumping on the east side of the swale. Materials disposed of in the landfill primarily consisted of municipal, commercial, and industrial waste (SPU 1997; Ecology and Environment, Inc. 1988) from south and west Seattle. Waste from some parts of nearby unincorporated King County may also have been disposed of at the landfill. Solid waste was burned at the landfill prior to final disposal (Floyd|Snider et al. 2021). West of the swale were farmed fields, a house, a barn, and small farm structures.

By 1951, landfilling associated with the South Park Landfill near the 7901 parcel ceased. The 1951 aerial photograph shows that the section of the KIP Area where landfilling had occurred had been regraded and appears to be used as an auto-wrecking or used vehicle sales lot. By the mid-1950s, auto-wrecking or sales operations were occurring at the KIP Area and 7901 on both sides of the swale.

By 1960, aerial photographs show that the swale was partially filled (Figure 2.2). By the late 1960s, the first building at KIP had been constructed and occupied and is evident in the 1969 aerial photograph (Figure 2.2). By 1974, the swale on the KIP Area had been filled, the KIP Area had been paved and developed with a stormwater collection system, and all four buildings had been constructed and occupied (Figure 2.2). Investigation in the KIP area determined that the swale was partially filled with CKD. (Floyd|Snider et al. 2021).

3.0 Conceptual Site Model

The conceptual site model for the South Park Landfill and surrounding area was described in the *South Park Landfill Remedial Investigation/Feasibility Study, Revised Final* (Floyd|Snider et al. 2021; RI/FS). This includes a description of the landfill "stage" conceptual site model. This element of the conceptual site model is incorporated into this CAP by reference. This section focuses on exposure pathways and receptors at the 7901 parcel and RI conclusions that are specific to the 7901 parcel.

3.1 PHYSICAL CONCEPTUAL SITE MODEL

South Park Landfill is within the Lower Duwamish Valley, near the western valley wall, as shown in Figure 1.1. The Duwamish Valley consists of a relatively thick sequence of alluvial deposits overlain by imported fill. The alluvial deposits range from 30 to 50 feet thick near the edge of the valley to more than 100 feet thick in the center of the valley (Hart Crowser 1998). The eastern portion of the KIP Area is underlain by fill soils that were placed over refuse. The refuse ranges in thickness from less than 1 foot to more than 10 feet. The refuse is underlain by silty clay, silty sand and sand.

The Duwamish Valley Aquifer is subdivided into three zones (Perched Zone, A-Zone, and B-Zone) to assist in the classification and investigation of the aquifer conditions and chemical contamination:

- **The Perched Zone:** A shallow zone of groundwater and infiltrating stormwater, typically less than 1 foot in thickness perched on top of the Silt Overbank Deposit where it is present. This zone reflects very localized conditions.
- **A-Zone groundwater:** The groundwater in the Duwamish Valley Aquifer beneath the Silt Overbank Deposit is generally the upper 15 feet of the aquifer, extending down to approximately -15 feet North American Vertical Datum of 1988 (NAVD 88).
- **B-Zone groundwater:** Groundwater deeper in the Duwamish Valley Aquifer is saline generally located below -15 feet NAVD 88 but above the estuarine/marine deposits. This zone does not exist along the upgradient edge of the landfill near the valley wall because the Duwamish Valley Aquifer becomes thinner and only the A-Zone is present. Along the downgradient edge of the landfill, estuarine deposits are generally encountered around -40 feet NAVD 88.

Groundwater migration through the Duwamish Valley Aquifer is through both the A-Zone and the B-Zone. Near the 7901 parcel, groundwater generally flows east-northeast towards the Lower Duwamish Waterway.

3.2 EXPOSURE PATHWAYS AND RECEPTORS

3.2.1 Human Health Exposure Pathways and Receptors

The 7901 parcel was used historically as a solid waste landfill and by an auto wrecking operation. The parcel was redeveloped in the 1960s with an approximately 17,000 square foot building.

Table 3.1 lists potential exposure pathways and human receptors that are being considered at the KIP Area and for downgradient groundwater.

Table 3.1
Potential Exposure Pathways and Human Receptors

Medium	Location	Exposure Route	Receptor
Ambient Air	Building at 7901 parcel	Inhalation of volatile organic compounds	Industrial worker
Ambient Air	Building at 7901 parcel	Explosive hazard from methane	
Subsurface soil and refuse	Soils beneath existing pavement/buildings or future landfill cap at the 7901 parcel if pavement, buildings or cap is disturbed	Direct contact, including dermal	Industrial worker
Groundwater	Groundwater downgradient of the edge-of-refuse	Potential drinking water use	No current or potential future receptors
	Groundwater that discharges into the Lower Duwamish Waterway	Use of surface water by aquatic species	Aquatic species (because the Lower Duwamish Waterway is saline; there is no drinking water use)

3.2.2 Ecological Receptors

The 7901 parcel is exempt from the requirement for a terrestrial ecological evaluation consistent with WAC 173-340-7491(1)(b) because all contaminated soil "is, or will be, covered by buildings, paved roads, pavement, or other physical barriers that will prevent plants or wildlife from being exposed to soil contamination." To qualify for this exclusion, an institutional control is required under WAC 173-340-440. This institutional control is also required as part of the landfill closure. Filing an environmental (restrictive) covenant on the 7901 parcel is a remedial action required by this CAP.

3.3 REMEDIAL INVESTIGATION FINDINGS

Based on the findings of the RI and the conceptual site model described in the RI/FS (Floyd|Snider et al. 2021), the following historical information, findings, and determinations were considered during development of the FS to identify effective remedial actions for the 7901 parcel. These findings were also used to develop the final cleanup levels (CULs) for the Site, which are discussed in Section 4.

3.3.1 Age, Extent, and Condition of the Landfill

- Solid waste was disposed of in the 7901 parcel from the 1930s through the late-1940s or early 1950s; much of the waste was burned to reduce the volume. The Edge of Refuse (i.e., Revised Landfill Boundary) is shown in Figure 1.2 and is based on review of aerial photographs, available records from the City and County, and soil test pit and boring logs.

- The landfill is unlined and the bottom of the waste is in direct contact with groundwater, either a thin layer of Perched Zone groundwater resting on the Silt Overbank Deposit or the upper few feet of the A-Zone of the Duwamish Valley Aquifer where the silt layer is not present.

- Prior to development in the 1960s, the 7901 parcel was unpaved, which allowed rainfall to infiltrate. The contents of the landfill include municipal solid waste, burned waste and ash, and interbedded soil and general-purpose fill used as cover during operations and as fill during closure and post-closure activities. Because of the heterogeneous nature of the waste/fill and its presence within a closed landfill, limited characterization was performed during the RI. Based on 30 years of state and national experience with similar landfills, the waste/fill is presumed to contain one or more hazardous substances, some of which may be at concentrations greater than MTCA CULs. Some of these hazardous substances have been released to groundwater and soil vapor as discussed below.

3.3.2 Historical Auto Wrecking Wastes and Cement Kiln Dust

- By 1951 the portion of the KIP Area east of the swale where landfilling had occurred had been regraded and was being used as an auto-wrecking or used vehicle sales lot. By the mid-1950s, auto-wrecking and sales were occurring on both sides of the swale on the KIP Area. By the late 1960s auto-wrecking had ceased on the east side of the swale but continued on the west side of

the swale until at least 1969 (Figure 2.2). The nature and extent of potential wastes from auto salvage operations is unknown. The U.S. Environmental Protection Agency (USEPA) lists petroleum products, heavy metals, and chlorinated solvents (parts cleaning) as common contaminants of concern at auto salvage yards (USEPA 2006). In 1972, the main stormwater line for KIP was placed in the historical KIP swale and the swale was filled. Subsequent investigation in this area confirmed that the swale was filled primarily with CKD. Several borings on the west side of the historical KIP swale identified several feet of fill beneath the CKD that contained larger debris (e.g., charred wood, glass, plastic, brick fragments) similar to refuse observed in other borings in the KIP area (Herrera Environmental Consultants 2016a). The approximate extent of the CKD on the KIP Area and the adjacent W.G. Clark parcel is shown in Figure 3.2. CKD is a caustic substance that may contain elevated levels of trace metals such as arsenic (Ecology 2015).

3.3.3 Landfill Gas Findings

- The landfill is still producing methane in some areas but with no measurable pressure buildup (Floyd|Snider et al. 2021). Methane concentrations measured in the monitoring wells and LFG probes within the landfill on the KIP Area ranged from non-detect to 13 percent (by volume) as shown on Figure 3.2. Similar conditions have been observed at the landfill since the 1990s.

  During the RI, methane was also detected in LFG probes installed in the historical KIP swale (Figure 3.2) that was filled in the late 1960s. There are several potential sources for this methane, including: decaying plant matter (as seen in the soil logs) that was in the swale before it was filled; residual petroleum contamination within the swale potentially associated with auto wrecking operations; or methane migration from the degrading landfill waste (Floyd|Snider et al. 2021). The area of highest methane concentration is limited to the central portion of the swale and decreases rapidly to the west. Given the proximity of the swale to the landfill, it is not practical to differentiate the methane migrating from the landfill from the methane produced in the swale.

- Methane measured in the swale in 2016 and 2017 ranged from zero to 77.5% methane by volume, depending on the seasonable water table elevation (Herrera Environmental Consultants 2017).

- Screening of buildings at the KIP Area for methane and explosive gases occurred quarterly for four quarters in 2011 and no methane was detected (Floyd|Snider et al. 2021). In 2017, continuous methane monitors were installed inside each of the buildings at KIP and levels of methane above relevant regulatory standards (see Section 6.2.2) were not recorded in documentation retained by property management personnel. The data suggests that methane intrusion is not likely occurring into the buildings. Methane levels in the building at the 7901 have not been documented.

- Benzene was detected in soil vapor in the historical KIP swale outside the Edge of Refuse at concentrations greater than the screening level for benzene but is less than the screening level at all other locations.

3.3.4 Groundwater Findings

- Vinyl chloride, iron, and manganese are groundwater COCs that have exceeded CULs at the conditional point of compliance (CPOC) (i.e., monitoring wells MW-10 and MW-25) located downgradient of the 7901 parcel. (Floyd|Snider et al. 2021).

- Vinyl chloride exceeds its CUL northeast of the 7901 parcel near the Edge of Refuse at the landfill. Its CUL is 0.29 micrograms per liter (µg/L) and is based on protection of surface water. Concentrations in this area in March 2014 ranged from 0.49 µg/L (MW-10) to 0.99 µg/L (MW-25). Vinyl chloride is still present today because residual contamination is likely trapped in the fine-grained Silt Overbank Deposit; this residual contamination would slowly diffuse into the A-Zone of the Duwamish Valley Aquifer (Floyd|Snider et al. 2021).

- Iron and manganese concentrations are naturally high in the Alluvial Aquifer; therefore, a CUL based on background was calculated using the procedures in MTCA 173-340-709. Details are presented in Section 5.6.4 of the RI/FS (Floyd|Snider et al. 2021). Iron and manganese are periodically (but not consistently) elevated at concentrations greater than CULs in MW-10 and MW-25. Based on the trend plots presented in Appendix J of the RI/FS (Floyd|Snider et al. 2021), all wells are expected to be in compliance for iron and manganese within the next 10 years.

- The historical KIP swale also has a unique groundwater signature due to the presence of the CKD. Groundwater from KMW-05 (Figure 3.1) is highly alkaline (e.g., pH of approximately 13) and has concentrations of arsenic exceeding the CUL (Floyd|Snider et al. 2021). Groundwater monitoring wells downgradient of this area have pH values between 7.4 and 7.8. The CPOC wells (MW-10 and MW-25) further downgradient have neutral pH values, indicating that the alkalinity has been neutralized before the groundwater leaves the downgradient edge of the South Park Landfill.

- Downgradient arsenic concentrations are less than natural background (5 µg/L as discussed in Section 5.7 and Table 5.9 of the RI/FS) at the CPOC wells (Floyd|Snider et al. 2021). Arsenic concentrations are being monitored in wells MW-10 and MW-25 under the current Site Coordinator.

- Benzene concentrations exceeding the CULs in well KMW-05 and have been detected in MW-25. This constituent is being monitored in well MW-25 under the current Site Coordinator.
- The concentrations of *cis*-1,2-dichloroethene (DCE, a precursor of vinyl chloride) are below the CULs in all wells, and DCE is being monitored in wells MW-10 and MW-25 under the current Site Coordinator.
- A groundwater seep existed in the compactor bay of the former SRDS waste collection building. In 2018, the seep was monitored and found to be contained in its location, and a fence was installed to prohibit access to the seep area (Aspect 2020).
- A Supplemental Groundwater Investigation was performed in 2019 during which additional groundwater monitoring wells were installed at the SRDS parcel (Aspect 2020).

4.0 Contaminated Media, Chemicals of Concern, and Cleanup Standards

Environmental investigation of the KIP Area and 7901 parcel began in the 1980s. The South Park Landfill has been investigated since the late 1990s because of the ongoing presence of low concentrations of LFG and groundwater contamination. Data from various investigations at the South Park Landfill, and surrounding area were compiled in the RI/FS Revised Final (Floyd|Snider et al. 2021) to develop the list of contaminated media and COCs. This section provides a summary of these data.

4.1 SOIL CLEANUP LEVELS, POINT OF COMPLIANCE, AND COMPLIANCE REQUIREMENTS

The landfill waste and soil at the 7901 parcel is presumed to be contaminated with one or more hazardous substances related to the landfill and historic auto wrecking operations. Due to the heterogeneous nature of municipal landfill waste and its planned containment within a closed landfill, the landfill contents were not fully characterized for specific hazardous substances during the RI, although leachate and groundwater were. Soil used as daily cover during operations and as fill during closure and post-closure activities is also considered part of the landfill contents and was not fully characterized. The presence of the landfill and other wastes on the 7901 parcel requires the placement of an environmental (restrictive) covenant on the property. The environmental covenant will also state that the 7901 parcel is limited to industrial uses. Per MTCA requirements, a plan that relies on containment and use of industrial soil CULs also requires that an environmental covenant (discussed in Section 6.2.7) be recorded.

4.2 GROUNDWATER CLEANUP LEVELS AND POINT OF COMPLIANCE

For groundwater, the point of compliance (POC) is the point or points where the groundwater CULs must be attained to be in compliance with the cleanup standards. The standard POC for groundwater under MTCA is throughout the site from the uppermost level of the saturated zone extending vertically to the lowest most depth, which could potentially be affected by the site. Where it is not practicable to meet the CUL throughout the site within a reasonable restoration timeframe, Ecology may approve a CPOC.

Ecology determined it is appropriate to use a CPOC for groundwater CULs at this Site. Compliance at the CPOC for the landfill is monitored by wells located as close as possible to the Edge of Refuse, including monitoring wells MW-10 and MW-25. These two wells are included as part of the perimeter groundwater monitoring well network for the landfill.

Ecology has determined that maximum beneficial use of groundwater is drinking water; therefore, the groundwater CULs are based on CULs for potable groundwater. MTCA Method B CULs were developed for all contaminants detected in groundwater; CULs for iron, manganese, and arsenic are based on background consistent with procedures in Section 709 of MTCA regulations. The groundwater CULs consider protection of drinking water, surface water, sediment, and indoor air.

Currently vinyl chloride, iron, and manganese exceed their respective CULs at the CPOC. The chemical precursor of vinyl chloride, *cis*-1,2-DCE, is currently being monitored in all CPOC wells to aid in

understanding future vinyl chloride concentrations but has been in compliance for years and is not a COC.

Arsenic and benzene concentrations are above CULs within the KIP Area but decrease downgradient and are currently in compliance at the CPOC wells MW-10 and MW-25. Benzene is currently being monitored in MW-25, which is downgradient of where benzene exceeds the CUL. Arsenic is also being monitored in well MW-10.

Iron and manganese exceeded the CULs for the landfill during one or more sampling events between 2011 and 2014. Therefore, iron and manganese are also groundwater COCs that are being monitored at the CPOC.

The COCs and their concentration range in the two wells downgradient of KIP and the 7901 parcel (MW-10 and MW-25) and the other landfill CPOC wells located downgradient of the landfill during the groundwater monitoring event in March 2014 are summarized in Table 4.1. The restoration timeframe for groundwater compliance at the Site is 10 years, according to the trend plots in the RI/FS (Floyd|Snider et al. 2021).

Table 4.1
Chemicals and Their Groundwater Cleanup Levels

Chemical	Cleanup Level	Compliance Status in CPOC Monitoring Wells	Range in CPOC Monitoring Wells (March 2014)
Vinyl chloride	0.29 µg/L	Out of compliance	<0.02 to 0.99 µg/L
Iron (Total)	27 mg/L (A-Zone) 31 mg/L (B-Zone)	Out of compliance	A-Zone: 4 to 29 mg/L B-Zone: 21 to 33 mg/L
Manganese (Total)	2.1 mg/L (A-Zone) 1.1 mg/L (B-Zone)	Out of compliance	A-Zone: 0.15 to 2.9 mg/L B-Zone: 1.1 to 1.5 mg/L
cis-1,2-DCE	16 µg/L	No exceedances	<0.2 to 1.9 µg/L
Benzene	5.0 µg/L	No exceedances	<0.2 µg/L
Arsenic	5.0 µg/L (background)	No exceedances[1]	Dissolved: 0.2 to 0.9 µg/L Total: 0.3 to 0.7 µg/L

Note:
1 MW-27, a downgradient A-Zone well across SR 99 consistently has arsenic at concentrations greater than the CUL due to a cement kiln dust deposit that is across the street from the SPPD/City Area; this well is not a CPOC for arsenic. Arsenic concentrations at the CPOC upgradient of MW-27 are in compliance, as shown in Figure 5.13 of the RI. All other CPOC wells are in compliance for arsenic.

Abbreviations:
µg/L Micrograms per liter
mg/L Milligrams per liter

Vinyl chloride concentrations in the compliance wells range from not detected (at a detection limit of 0.02 µg/L) to 0.99 µg/L. In some locations the concentrations are greater than the MTCA Method B CUL of 0.29 µg/L.[2]

Figure 4.1 shows the vinyl chloride concentrations at the SPPD/City Area for the March 2014 sampling event. Green symbols for the wells indicate concentrations less than the CUL. Yellow symbols indicate concentrations greater than the CUL but less than the drinking water standard, and red symbols indicate concentrations greater than both. For those wells that have exceedances, trend plots are showing the trends over time for the wells.[3]

The CAP for the 7901 parcel does not have any specific groundwater monitoring requirements.

4.3 AIR CLEANUP LEVELS AND POINT OF COMPLIANCE

The 7901 parcel and the surrounding area are zoned industrial. The CULs for air at the Site are the MTCA Method C industrial standards. The standard POC is ambient air throughout the Site. Application of these standards is complex because ambient air measurements cannot distinguish between vapors associated with the landfill and chemicals typically associated with activities at the landfill parcels. Soil vapor sampling has been conducted and based on a vapor intrusion analysis performed in accordance with Ecology's *Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action* (Ecology 2016), as discussed in Section 6.5.3 of the RI/FS, vapor intrusion is not a pathway of concern (Floyd|Snider et al. 2021).

4.4 LANDFILL GAS REQUIREMENTS

Methane, the primary constituent of LFG, is regulated under MTCA. Methane as LFG is also regulated in the regulations pertaining to landfills, and these regulations are relevant and appropriate requirements for establishing CULs. These criteria are found under the Minimal Functional Standards (MFS) and are defined in WAC 173-304-460 and County Board of Health Title 10 regulations. The principal criteria and requirements relevant to the KIP Area are the following:

- Methane concentrations at the boundary of the landfill property and beyond must not exceed 5 percent by volume, the lower explosive limit (LEL) for methane. Because the landfill extends onto the adjacent properties to the south (SPPD parcel) and east (SRDS parcel), this condition only applies to the property boundaries at the northern and western portions of the KIP Area, and is a unique requirement of the KIP property. Methane concentrations in LFG perimeter probes (GP-37 and GP-38, Figure 4.3) comply with this criterion. Two additional LFG perimeter

[2] Because vinyl chloride has a state and federal drinking water number, the MTCA Method B value is modified per Ecology's guidance.
[3] Trend plots begin when data for a well were first available; wells were installed at different times.

probes will be installed along the property boundaries in the western portion of KIP and monitored as required by the KIP CAP.

- Methane concentrations inside buildings and structures within the Landfill Property Boundary[4], which includes the 7901 building are to be monitored. These measurements are collected within the buildings. During the RI, all of the KIP buildings were below trigger levels identified in this document. Prior measurements (if any) of the 7901 building have not been documented. Ongoing monitoring of the 7901 building is included as part of long-term compliance monitoring for LFG (refer to Section 6.2.2).

- During the RI, all off-site buildings within 100 feet of the landfill were inspected and methane was not detected. Ongoing monitoring of off-site buildings under certain conditions is still required as part of long-term compliance monitoring performed by other PLPs, but not addressed specifically in this CAP.

4.5 FINAL CHEMICALS OF CONCERN AND CLEANUP LEVELS

The COCs exceeding a CUL at their CPOC and their associated CULs are summarized in Table 4.2.

Table 4.2
Contaminated Media, Chemicals of Concern, and Their Cleanup Requirements

Medium	Chemical of Concern Exceeding Cleanup Level	Cleanup Level (or Equivalent)	Point of Compliance	Restoration Timeframe
Waste and soil within the Site	Multiple hazardous substances based on heterogeneity of landfill refuse	MTCA Method A and C Industrial cleanup levels	Wastes and soil that are contained within the Landfill	In compliance as long as containment remedy meets requirements of the CAP
Groundwater	Vinyl chloride (refer to Table 4.1 for other COCs that are in compliance at the CPOC)	0.29 µg/L	Groundwater throughout the aquifer at and beyond the CPOC (Edge of Refuse)	Approximately 10 years based on existing trend data
Groundwater	Iron	27 mg/L (A-Zone) 31 mg/L (B-Zone)	Groundwater throughout the aquifer at and beyond the CPOC (Edge of Refuse)	Approximately 10 years based on landfill stage model

[4] The Landfill Property Boundary is the boundary of a property partially or entirely located on South Park Landfill waste. This includes the SPPD, City, KIP, and 7901 2nd Ave S. parcels, and the 2nd Ave S right-of-way where it is located within the Edge of Refuse. The Landfill Property Boundary does not include rights-of-way located to the east and south of these parcels.

Medium	Chemical of Concern Exceeding Cleanup Level	Cleanup Level (or Equivalent)	Point of Compliance	Restoration Timeframe
Groundwater	Manganese	2.1 mg/L (A-Zone) 1.1 mg/L (B-Zone)	Groundwater throughout the aquifer at and beyond the CPOC (Edge of Refuse)	Approximately 10 years based on landfill stage model
Groundwater	Arsenic	5 µg/L	Groundwater throughout the aquifer at and beyond the CPOC (Edge of Refuse)	Approximately 10 years based on existing trend data
Soil vapor	LFG (methane)	5 percent by volume	Vadose zone at and beyond the CPOC (Edge of Refuse)	Within 1 year after the completion of construction of the individual LFG systems, as required
Indoor air	LFG (methane)	100 ppmv action level	Throughout the buildings located within the Landfill Property Boundary or Edge of Refuse	N/A
Indoor air	LFG (methane)	100 ppmv action level	Throughout offsite buildings	N/A

Notes:

CAP = Cleanup Action Plan
COC = chemical of concern
CPOC = conditional point of compliance
DCE = dichloroethane
KIP = Kenyon Industrial Park
LFG = landfill gas
µg/L = micrograms per liter
mg/L = milligrams per liter
MTCA = Model Toxics Control Act
ppmv = parts per million by volume

5.0 Applicable or Relevant and Appropriate Requirements

According to WAC 173-340-360(2) and WAC 173-340-710, all cleanup actions under MTCA must comply with applicable state and federal laws and Ecology-identified relevant and appropriate requirements. "Applicable state and federal laws" include legally applicable requirements including those cleanup standards, standards of control and other environmental protection requirements, criteria or limitations adopted under state or federal law that specifically address a hazardous substance, cleanup action, location, or other circumstance at the site. "Relevant and appropriate requirements" include those cleanup standards, standards of control, and other environmental requirements, criteria, or limitations established under state or federal law that, while not legally applicable to the hazardous substance, cleanup action, location or other circumstance at the site, are considered by Ecology to address problems or situations similar enough to those encountered at the site that their use would make common sense. These two types are referred to collectively as "applicable or relevant and appropriate requirements" or "ARARs." The remedial action must meet all Ecology-approved ARARs.

Table 5.1 lists the known ARARs for this cleanup action separated into three categories that apply to establishing CULs or conducting cleanup actions:

- Chemical-specific requirements are usually health- or risk-based numerical values or methodologies that, when applied to site-specific conditions, result in the establishment of numerical values. These values establish the acceptable amount or concentration of a chemical that may be found in, or discharged to, the ambient environment. These were used during the RI/FS (Floyd|Snider et al. 2021) to establish the CULs presented in Section 4.0.

- Location-specific requirements are restrictions placed on the concentration of hazardous substances or on activities solely because they occur in special locations.

- Action-specific requirements are usually technology-based requirements or limitations on actions taken with respect to hazardous substances.

5.1 MINIMUM FUNCTIONAL STANDARDS FOR SOLID WASTE HANDLING

Because of the size of the South Park Landfill, the fact that development that has already occurred on areas where waste is in place, and the apparent effectiveness of the current containment system, it was concluded that treatment or removal of the landfill and other wastes on the 7901 parcel is not practicable. Because that is the case, as a starting point, MTCA uses the closure requirements in the MFS for Solid Waste Handling (WAC 173-304) as an ARAR for the selected cleanup action and then modifies them as needed to meet the MTCA cleanup requirements (WAC 173-340-710(7)(c), solid waste landfill closure requirements):

> *"For solid waste landfills, the solid waste closure requirements in Chapter 173-304 WAC shall be minimum requirements for cleanup actions conducted under this chapter. In addition, when the department determines that the closure requirements in chapters 173-351 or 173-303 WAC are legally applicable or relevant and appropriate requirements, the more*

stringent closure requirements under those laws shall also apply to cleanup actions conducted under this chapter."[5]

The requirements described in the MFS are designed to ensure that a landfill is closed in a manner that accomplishes the following:

- Minimizes the need for further maintenance.
- Controls, minimizes, or eliminates threats to human health and the environment from post-closure escape of municipal solid waste constituents, leachate, LFGs, and contaminated rainfall or waste decomposition products to the ground, groundwater, surface water, and the atmosphere.
- Prepares the site for the post-closure period, which must allow for continued facility maintenance and monitoring of air, land, and water as long as necessary for the facility to stabilize and protect human health and the environment.
- Implements LFG collection and treatment, if required.
- Establishes institutional controls to supplement engineering controls.

5.2 OTHER LOCATION- AND ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

Additional ARARs for the 7901 parcel are identified in Table 5.1.

[5] Solid waste landfills operating after October 1991 are required to meet landfill requirements in WAC 173-351. Because the South Park Landfill was closed in 1966, none of the closure requirements in WAC 173-301, 173-304, or 173-351 are applicable requirements. However, as allowed by WAC 173-340-710(7)(c), Ecology used the soil waste closure requirements in WAC 173-304 as minimum requirements for the cleanup action.

Potential Chemical-Specific ARARs[1]	Source[2,3]	Description and Relevance
National Ambient Air Quality Standards	40 CFR 50	Specifies primary and secondary National Ambient Air Quality Standards, National Emission Standards for Hazardous Air Pollutants, and performance standards for new and existing stationary sources. National Ambient Air Quality Standards are applicable to those elements of the Interim Action pertaining to the collection and management of LFG.
Federal Regulations Implementing the Toxic Substances Control Act	40 CFR 700-799, as applicable	Specific testing, handling, and disposal requirements for materials contaminated with polychlorinated biphenyls (PCBs), dioxins/furans, etc. These regulations would apply to material generated during conduct of the Interim Action that is found to be contaminated with toxic substances regulated on TSCA.
Washington State Minimal Functional Standards for Landfills	WAC 173-304-460	This regulation applies to facilities that dispose of solid waste in landfills, with the exception of inert, demolition, and wood waste landfills. It specifies limits on methane concentrations at the property boundary and in on-site and off-site structures, and requires compliance with ambient air quality standards and emission standards at the property boundary. This regulation applies only to solid waste landfills that operated after 1985, but it is a minimum requirement for solid waste landfill cleanups.
PSCAA Notice of Construction	Regulation I	Requires a Notice of Construction and Application for Approval before constructing or modifying an air contaminant source. This would apply to the Interim Action due to potential emissions of LFG.
PSCAA Emission Standards for Toxic Air Pollutants	Regulation III	Implements at a regional level the NESHAPS. It requires best available control technology for sources of toxic air contaminants; and requires that toxic air contaminants be quantified and compared against acceptable source impact levels for each contaminant. PSCAA Emission Standard for Toxic Air Pollutants are applicable to air emissions from the LFG collection system.

King County Board of Health Regulations	Title 10	The requirements established in this regulation meet or exceed the requirements established by the Washington State Minimum Functional Standards for Solid Waste Handling. Applicable chemical-specific requirements are the same as those described for the Minimal Functional Standards (see WAC 173-304-460 above).
Potential Location-Specific ARARs[1]	**Source[2,3]**	**Description and Relevance**
Federal Archaeological Resource Preservation	RCW 27-53	This law addresses the discovery, identification, excavation, and study of archaeological resources, and the communication of information to state and federal agencies regarding the possible impact of construction activities on Washington State archaeological resources.
State Permits for Archaeological Excavation and Removal	WAC 25-48	This establishes application and review procedures for the issuance of archaeological excavation and removal permits, for the issuance of civil penalties for violations.
Potential Action-Specific ARARs[1]	**Source[2,3]**	**Description and Relevance**
Monitoring and Maintenance		
Federal Occupational Safety and Health Standards	29 CFR 1910.120	This requires that employers develop and implement a written safety and health program for their employees involved in hazardous waste operations. The program must be designed to identify, evaluate, and control safety and health hazards and to provide for emergency response for hazardous waste operations.
State Occupational Health Standards	WAC 296-62	This establishes rules designed to protect the health of employees and help to create a healthy workplace by establishing requirements to control health hazards. Requirements for chemical hazard communication programs, workplace lighting levels, and exposure records are in the core safety and health rules of this chapter.
Well Construction Standards	WAC 173-160, Part Two	Part Two of this regulation defines minimum standards for the construction and decommissioning of the water resource protection wells that will be installed as part of the groundwater monitoring program to be implemented as part of the cleanup action. Resource protection wells may not be used to withdraw or inject water for domestic, industrial, municipal, commercial, or agricultural purposes.

Groundwater Monitoring Plan	WAC 173-304-490	This regulation addresses groundwater monitoring requirements for solid waste landfills including provision for a minimum of one upgradient and two downgradient monitoring wells. The monitoring plan must specify procedures for sample collection, preservation and shipment, laboratory analysis and associated quality control protocols, and health and safety. Although this requirement applies only to landfills that operated after 1985, these monitoring requirements will be incorporated into the long-term groundwater monitoring program that will be conducted as part of the cleanup action.
Potential Action-Specific ARARs[1]	**Source[2,3]**	**Description and Relevance**
Excavation and Filling		
State Particulate Matter Standards	WAC 173-470	This establishes maximum acceptable levels for particulate matter in ambient air based on the criteria defining particulate matter that have been developed by the U.S. Environmental Protection Agency. This regulation establishes requirements for monitoring, measuring, and reporting particulate matter data. It applies to dust-producing activities during implementation of the cleanup action, particularly excavation and filling.
PSCAA Fugitive Dust Standards	Regulation I	This establishes emission standards for fugitive dust. Like the previous ARAR, this regulation applies to dust-producing activities during implementation of the cleanup action.
Treatment, Discharge, and Disposal		
NPDES Permit	WAC 1732-220	This established a state individual permit program, applicable to the discharge of pollutants and other wastes and materials to the surface waters of Washington State, operating under state law. Permits issued under this chapter are designed to satisfy the requirements for discharge permits under both the Federal Water Pollution Control Act and Washington State Water Pollution Control Act. This requirement is applicable to the control, collection, management, and discharge of stormwater runoff during and after construction of the cleanup action.

State Minimum Functional Standards for Solid Waste Handling	WAC 173-304-460	This regulation applies to facilities that dispose of solid waste in landfills, with the exception of inert, demolition, and wood waste landfills. The regulation establishes standards for landfill cover, surface water control, LFG collection, access control, and compliance monitoring.
King County Board of Health Regulations	Title 10	The requirements established in this regulation meet or exceed the requirements established by the Washington State Minimum Functional Standards for Solid Waste Handling (see above) and apply to the cleanup action for compliance monitoring programs and as performance standards for the design of control systems.

Notes:

[1] Because it is understood that MTCA is the overarching regulation governing all aspects of the cleanup action, it is not included in this table.

[2] Pursuant to RCW Section 70.105D.090, potentially liable persons conducting a remedial action under an agreed order with Ecology are exempt from some state-administered procedural requirements and the procedural requirements of any local laws requiring or authorizing

local government permits or approvals for the remedial action. However, the substantive requirements of state and local laws requiring permits or approvals shall be complied with.

[3] Pursuant to WAC 173-340-710(9), the state agencies and local governments that have potential permits subject to the permit exemption have been consulted. The substantive requirements of the permits that are exempt, to the extent they are currently known, have been

incorporated into this Cleanup Action Plan. Therefore, the substantive requirements of state and local laws subject to the permit exemption will be met during the cleanup action.

6.0 Implementation of the Cleanup Action

This section describes the cleanup action for the 7901 Parcel developed in accordance with WAC 173-340-360 through 173-340-390. The cleanup action is based on the presumptive remedy for solid waste landfills, which is containment (i.e., a cap), and indoor air monitoring. Groundwater monitoring is not required under this CAP. The cap will extend beyond the area where solid waste was placed and residual impacts to soil that may be attributed to historical auto wrecking activities at the 7901 parcel. Similar to the landfill wastes, treatment or removal of solid waste and auto wrecking wastes are not considered practicable given the current development at the 7901 parcel.

For the purposes of this document, the term "cap" refers to the proposed cap covering all areas of the 7901 parcel meeting the minimum standards described in Section 6.2.1.

The cleanup action also includes provisions for inspection and maintenance of the cap (Appendix A), and institutional controls, including environmental covenant, and meets the MTCA cleanup action requirements for the 7901 parcel.

6.1 USE OF THE PRESUMPTIVE REMEDY FOR LANDFILLS

Under MTCA, closed landfills are considered to be sites that have used "containment of hazardous substances" as the preferred remedy for meeting soil cleanup standards. Containment is also the preferred remedy for the remainder of hazardous substances at KIP. Under WAC 173-340-740(6)(f), MTCA defines the expectation for containment sites as follows:

> *The department recognizes that, for those cleanup actions selected under this chapter that involve containment of hazardous substances, the soil cleanup levels will typically not be met at the points of compliance specified in (b) through (e) of this subsection. In these cases, the cleanup action may be determined to comply with cleanup standards, provided:*
>
> *(i) The selected remedy is permanent to the maximum extent practicable using the procedures in WAC 173-340-360;*
>
> *(ii) The cleanup action is protective of human health. The department may require a site-specific human health risk assessment conforming to the requirements of this chapter to demonstrate that the cleanup action is protective of human health;*
>
> *(iii) The cleanup action is demonstrated to be protective of terrestrial ecological receptors under WAC 173-340-7490 through 173-340-7494;*
>
> *(iv) Institutional controls are put in place under WAC 173-340-440 that prohibit or limit activities that could interfere with the long-term integrity of the containment system;*
>
> *(v) Compliance monitoring under WAC 173-340-410 and periodic reviews under WAC 173-340-430 are designed to ensure the long-term integrity of the containment system; and*

> *(vi) The types, levels, and amount of hazardous substances remaining on-site and the measures that will be used to prevent migration and contact with those substances are specified in the draft cleanup action plan.*

As noted above, it has been concluded that treatment or removal of the wastes at the 7901 parcel are not practicable alternatives. However, the specific remedy selected for the 7901 parcel must demonstrate that the other elements of containment are met as defined by sections (ii) through (vi) above. The RI/FS (Floyd|Snider et al. 2021) focuses on screening alternative approaches consistent with the landfill closure ARAR that would meet the requirements of containment under MTCA as described above—for example, determining site-specific alternatives for LFG controls that would comply with WAC 173-340-740(6)(f).

The basic requirements for landfill closure under MFS are as follows:

- Installation of a cap, with associated grading and stormwater controls to eliminate direct contact with refuse, decrease leachate formation, and avoid contamination of stormwater by refuse.
- Installation of LFG controls as needed to control migration of LFG at unacceptable levels from the area of refuse.
- Installation of leachate controls as needed to prevent groundwater contamination from the refuse.
- Institutional controls to supplement engineering controls.
- Long-term monitoring of remedial systems for as long as the system is needed to meet CULs and containment goals.

The preferred alternative for the landfill was developed as part of the FS, with consideration of multiple technologies and/or alternatives for each of the components required as part of landfill closure.

6.2 REQUIRED CLEANUP ACTION

MTCA defines specific requirements that must be met for a selected remedy to be protective of human health and the environment and identifies criteria that must be met by each alternative. In addition, the selection of other requirements that must be met to protect human health and the environment is guided by the MFS. The regulations also ensure that a landfill must continue with operation and maintenance of the selected remedy and the appropriate long-term monitoring to ensure that the remedy is effective.

This section states the components of the cleanup action for the 7901 parcel. Additional rationale can be found in Sections 10.0 through 16.0 of the RI/FS (Floyd|Snider et al. 2021).

6.2.1 Landfill Cap

The cleanup action requires a cap covering all areas of the 7901 parcel. The primary goal of the cap is to block access or exposure to the wastes and soil; secondary goals are to limit stormwater infiltration and to facilitate the performance of the LFG systems. Minimum standards for the cap and requirements for continued monitoring and maintenance of the cap are discussed below.

6.2.1.1 Minimum Standards for Landfill Cap

All areas of the 7901 parcel must be covered by a landfill cap, which meets the minimum standards set out below. These requirements presently do not apply in areas that are covered by a structure. However, if redevelopment results in removal of a structure, then a landfill cap meeting these minimum standards must be installed unless another structure covers the same footprint.

The minimum standards for the cap are as follows:

- A minimum thickness of 12 inches of fill material will be placed over the solid waste or impacted soil. This fill material does not need to meet a low-permeability standard. Existing fill that meets this depth requirement will be considered acceptable. Imported fill must not introduce new contaminants and must be naturally occurring soil or rock (i.e., virgin material) from an established quarry. This material will not require testing prior to use at the Landfill; however, the quarry must provide testing results for the fill material that are current (i.e., within 2 years). If an alternative to these fill specifications is requested by a Subject PLP, a variance request and justification must be submitted to Ecology for approval.

- Additional fill or fill of specific geotechnical specification must be placed in order to meet the structural section requirements of road and foundation base as required by the geotechnical engineer responsible for the pavement design.

- A 3-inch minimum thickness for asphaltic concrete or a 4-inch minimum thickness for cement concrete will cover the fill.

- Pavement sections that fail to meet the primary and secondary goals of a landfill cap must be replaced. For example, a pavement section that fails and develops large cracks, potholes, or settlement issues due to insufficient or incorrect pavement design (as opposed to routine maintenance needed due to age), must be replaced with an appropriate pavement section.

- Areas, such as landscaped buffers and slopes, perimeter landscaping including trees, planter islands, or gravel road shoulders, that will not be paved or receive hardscape (i.e., concrete), will require a soil layer with a minimum thickness of 24 inches and a distinct visible barrier between the new improvements and the top of the solid waste. The soil used as fill must not introduce new contaminants or contain contaminant concentrations exceeding MTCA industrial CULs.

- Stormwater conveyance and treatment facilities located above solid waste such as swales, ditches, or ponds on the 7901 parcel are required to have cover, as prescribed by WAC 173-304-

460, consisting of a low-permeability layer with a minimum 24-inch thickness of soil and permeability of 10^{-6} centimeters per second or less, or an impermeable geomembrane that is at least 50 millimeters thick.

- There are also requirements for construction practices that will provide protection for the workers and ensure that construction at the 7901 parcel is conducted in a manner that will minimize potential exposure or release of contaminants to the environment. These practices are described in Section 9.4 of the RI/FS (Floyd|Snider et al. 2021).

6.2.1.2 Relationship with Requirements in Minimum Functional Standards

Although the minimum standards for the cap discussed above are protective of human health and the environment and meet the MTCA requirements, they are a variance to the specific cap design listed in the MFS.

A more detailed rationale for the variance, or waiver, of provisions in the MFS for the landfill cap was approved by Ecology in October 2012 and is available in Appendix B of the Interim Action Work Plan for the SPPD parcel (Farallon 2013).

6.2.1.3 Allowance for Reinterment during Cleanup

Regrading, including excavation and reinternment of the solid waste, is allowed during the implementation of the cleanup action, as long as the final configuration does not expand the footprint of the Landfill and all solid waste and contaminated soil remains contained beneath the landfill cap.

6.2.2 Landfill Gas Controls

The purpose of the LFG monitoring and contingent action is to: 1) prevent the migration of methane away from and onto adjacent properties at concentrations that exceed 5 percent by volume, the lower LEL for methane as outlined in WAC 173-304-460 and County Board of Health Title 10 regulations; and 2) prevent the accumulation of methane in the on-site and off-site buildings within the Landfill Property Boundary beyond critical thresholds per regulations.

The building at the 7901 parcel must have continuous (i.e. operate 24 hours per day, 7 days per week) methane detectors with alarms. Methane concentrations inside the building (as defined in WAC 173-350-100) much not exceed 1.25 percent by volume, or 25 percent of the LEL. Quarterly inspections (and/or calibration) of these alarms must be completed in accordance with the manufacturer's recommendations to ensure proper operation and protection of human health. The suggested level for continuous methane monitors in facility buildings and structures within the Landfill Property Boundary to be set to 0.5 percent by volume (5,000 ppmv) or 10 percent of the LEL. This allows action levels of 10 percent of the LEL and 25 percent of the LEL to trigger specific actions.

Subsurface LFG within the eastern portion of the KIP Area that overlies the landfill is present in modest concentrations (less than 20 percent methane) and has no measurable pressure; compliance LFG probes along South Kenyon Street are currently in compliance with the criteria in Section 6.2.2 above and will

continue to be monitored as part of the site-wide LFG monitoring program pursuant to the KIP CAP. Methane concentrations in the two existing probes (GP-24 and GP-25) installed in the historical KIP swale adjacent to the landfill exceed the level allowed at the property boundary, but these probes are located away from the property boundary (Figure 3.2). There are no subsurface LFG monitoring requirements as part of this 7901 CAP.

The responsibilities in this document do not supersede or exclude other relevant regulations for owners of properties located on landfills, such as Seattle Building Code 1811.2 for protection of structures for methane intrusion.

Refer to the building monitoring flow chart (Figure 6.3) for the monitoring requirements and contingent actions. The figure shows a suggested warning alarm level of 5,000 ppmv (10% LEL).

Measures to reduce methane concentration inside the 7901 parcel building in the event of a confirmed warning level alarm of 5,000 ppmv or higher would include evacuation, improving ventilation within the building, source identification to determine the entry point of the methane, and sealing the entry point if it can be identified. The 7901 parcel property owner will develop building-specific plans to mitigate and assess elevated levels of methane and prior to re-occupying the building.

In the event of a trigger, additional details regarding continuous methane monitoring property-specific contingency actions will be provided to Ecology in a separate deliverable.

6.2.3 Downgradient Groundwater Controls

Groundwater monitoring performed by other landfill PLPs includes long-term groundwater monitoring of CPOC wells including MW-10 and MW-25, which are located downgradient of the 7901 parcel. Contingent actions may be required for the landfill PLPs if triggers are met due to concentrations rising at these two monitoring wells. No additional groundwater cleanup actions are required for the 7901 parcel pursuant to this 7901 CAP.

6.2.4 Operations, Maintenance, and Monitoring

To ensure that the selected components of the cleanup action are implemented efficiently and are operating properly, long-term operations and maintenance of the various components must be implemented. Requirements that apply to the 7901 parcel include those applicable to the cap. The landfill cap, consisting of pavement, buildings, and geomembrane/soil layers, as described in Section 6.2.1, must be maintained in such a manner as to prevent contact with solid waste/soil beneath the cap, prevent “short-circuiting” of the LFG controls, and support the stormwater controls that avoid solid waste contamination of the runoff. The landfill cap is not required to entirely block infiltration of stormwater. The cap must be inspected annually, and these records must be maintained for Ecology inspection. Landfill cap maintenance must be reported in accordance with the Cap Inspection and Maintenance Plan (Appendix A).

6.2.5 Site Coordinator Responsibilities

The subject PLP may coordinate with the other PLPs of the South Park Landfill under a designated site-wide Site Coordinator to complete and submit all report requirements in this CAP document. This includes indoor air monitoring, annual reporting, inspections and coordination and submittal of data required for 5-year site reviews. The Landfill Site Coordinator will conduct the following work for the 7901 Area:

- Annual inspections of the integrity of the 7901 parcel cap.
- Annual inspections of surface water drainage effectiveness on the 7901 parcel cap.
- Annual reporting of building alarm system and methane detection system supplied by the 7901 parcel property owner.
- Creation and submittal of an annual report to Ecology of data/information related to the bullets above.
- Coordination and submittal of data required for Ecology 5-year site reviews.
- Informing Ecology of major operations and maintenance activities and incidents, acting as a central point of contact for field questions from Ecology, and routing them to the appropriate person, as needed.

If an arrangement other than a common Landfill Site Coordinator is desired, the new arrangement shall be requested to be reviewed and approved by Ecology.

6.2.6 Environmental (Restrictive) Covenants

WAC 173-340-440 establishes that when the final remedy does not remove all contaminants from the property, appropriate institutional controls shall be established in an environmental (restrictive) covenant on the property. The restrictive covenants shall run with the land and be binding on each owner's successors and assigns.

The proposed Environmental (Restrictive) Covenant for the 7901 parcel (Figure 6.3) is attached as Appendix D. As required by WAC 173-340-440(9), “the restrictive covenants shall:

a. Prohibit activities on the site that may interfere with the cleanup action, operation and maintenance, monitoring, or other measures necessary to assure the integrity of the cleanup action and continued protection of human health and the environment.

b. Prohibit activities that may result in the release of a hazardous substance that was contained as a part of the cleanup action.

c. Require notice to the department of the owner's intent to convey any interest in the site.

d. No conveyance of title, easement, lease, or other interest in the property shall be consummated by the property owner without adequate and complete provision for the continued operation,

maintenance and monitoring of the cleanup action, and for continued compliance with this subsection.

e. Require the landowner to restrict leases to uses and activities consistent with the restrictive covenant and notify all lessees of the restrictions on the use of the property.

f. Require the owner to include in any instrument conveying any interest in any portion of the property, notice of the restrictive covenant under this section.

g. Require notice and approval by the department of any proposal to use the site in a manner that is inconsistent with the restrictive covenant.

h. Grant the department and other property owners the right to enter the property at reasonable times for the purpose of evaluating compliance with the cleanup action plan and other required plans, including the right to take samples, inspect any remedial actions taken at the site, and to inspect records."

6.3 COMPLIANCE WITH MODEL TOXICS CONTROL ACT REQUIREMENTS

MTCA cleanup standards for the 7901 parcel part of the Site are described in Section 4.0. This section describes how the cleanup action meets cleanup standards.

6.3.1 Requirements for Cleanup Actions (WAC 173-340-360(3))

The threshold criteria identified in WAC 173-340-360(3)(a) that must be met by the selected remedy and the reasons why the preferred alternative meets them, are as follows:

§(a)(i) Protect human health and the environment

Cap. The cap described in Section 6.2.1 will prevent direct contact with solid waste by humans, plants, and animals. It will also ensure that stormwater that leaves the 7901 parcel through the stormwater conveyance systems has not come into contact with solid waste. By limiting infiltration of stormwater, the cap will also decrease the amount of leachate produced. As discussed in Section 6.2.3, because the wastes are already in contact with groundwater, this decrease in infiltrating stormwater is viewed as a minor benefit that may or may not produce measurable changes in groundwater quality.

Landfill gas controls. The LFG monitoring and contingent actions described in Section 6.2.2 meets system requirements for preventing worker and visitor exposure to methane concentrations that pose a risk to human health.

Stormwater controls. The stormwater controls described in Section 6.2.3 meet the MTCA requirements by effectively separating the stormwater from the landfill solid waste, CKD, and contaminated soil. The captured stormwater will be conveyed and discharged off-site in accordance with the stormwater regulations and ordinances.

Groundwater monitoring. Long-term groundwater monitoring, with contingent actions, is included in the landfill remedy. This is an appropriate remedial action for groundwater because groundwater

sampling data for the compliance monitoring well network indicate that vinyl chloride, iron, and manganese are the only COCs detected at concentrations greater than CULs for groundwater, are very close to being in compliance, and are continuing to decrease toward compliant concentrations less than CULs. The most recent concentrations of vinyl chloride data collected from CPOC wells (MW-10 and MW-25) range from not detected at <.02 to 0.99 µg/L. Ecology has established a CUL for vinyl chloride in groundwater of 0.29 µg/L. This value is protective of surface water quality. There are no current or anticipated drinking water wells between the 7901 parcel and the Lower Duwamish Waterway, located approximately 1,600 feet downgradient.

Operations, maintenance, and monitoring. Operations and maintenance requirements combined with the Environmental (Restrictive) Covenants will ensure that the cleanup action is maintained over time, is protective of human health and the environment, and meets the expectations in WAC 173-340-7491 for protection of terrestrial receptors.

§ (a)(ii) Comply with cleanup standards (WAC 173-340-700 through 173-340-760)

The containment remedy is an effective MTCA remedy for soil that complies with cleanup standards and allows wastes to be left in place as long as the requirements for a containment remedy are met. Groundwater concentrations will comply with the MTCA Method B CULs at the CPOC located downgradient of the 7901 parcel. The groundwater concentrations of all the historical contaminants except for vinyl chloride, iron, and manganese are already in compliance at the CPOC. As described in Section 6.2.4, the downgradient groundwater will meet the cleanup standards within a reasonable restoration timeframe (10 years for vinyl chloride, iron, and manganese) and will be monitored routinely, to ensure that the groundwater is achieving the desired conditions within a reasonable restoration time.

(a)(iii) Comply with applicable state and federal laws (WAC 173-340-710)

The cap specifications meet the alternative cap requirements for the landfill cap and cover allowed by WAC 173-340-710. The cap, in conjunction with the recommended stormwater infrastructure, ensures compliance with these requirements. The LFG control requirements apply to the specific landfill regulations as outlined in Section 11.0 of the RI/FS (Floyd|Snider et al. 2021). The other components of the remedy are consistent with the applicable regulations.

(a)(iv) Prevent or minimize present and future releases and migration of hazardous substances in the environment

Ongoing maintenance of the landfill cap will minimize the impact of present or future releases and the migration of hazardous substances, particularly through groundwater. Compliance monitoring of LFG and groundwater will ensure that the preferred remedy remains protective of human health and the environment.

(a)(vi) Provide for compliance monitoring (WAC 173-340-410 and WAC 173-340-720 through 173-340-750)

Compliance monitoring will be conducted for groundwater, as described in Section 6.2.4 of this CAP.

(a)(vii) Not rely primarily on institutional controls and monitoring at the site, or portion thereof, if it is technically possible to implement a more permanent cleanup action

Based on the large volume associated with the South Park Landfill, the existing development that has occurred on areas where waste is in place, and the likely effectiveness of the presumptive remedy of a landfill, it was concluded that a more permanent cleanup action on the 7901 parcel is not practicable. A landfill cap meeting the minimum standards, institutional controls and monitoring were identified as being protective of human health and the environment, while providing the most practical remedy.

(a)(viii) Not rely primarily on dilution and dispersion unless the incremental costs of any active remedial measures over the costs of dilution and dispersion grossly exceed the incremental degree of benefits of active remedial measures over the benefits of dilution and dispersion

Based on the large volume associated with the South Park Landfill, the existing development that has occurred on areas where waste is in place, and the likely effectiveness of the presumptive remedy of a landfill, it was concluded that a more permanent cleanup action on the 7901 parcel is not practicable. A landfill cap meeting the minimum standards, institutional controls and monitoring were identified as being protective of human health and the environment, while providing the most practical remedy.

(a)(ix) Provide for a reasonable restoration time frame

Cleanup actions combined with maintenance requirements in this CAP will ensure protection of human health and the environment. A schedule for implementation of the remedial action is presented in Section 7.0. Groundwater contaminant concentrations are expected to come into compliance within 10 years as residual vinyl chloride degrades and iron and manganese attenuate; there are no current or anticipated uses of or exposures to the groundwater.

(a)(x) Use permanent solutions to the maximum extent practicable

The preferred remedy is permanent to the maximum extent practicable for a site containing large volumes hazardous substances at low concentrations. The CAP requirements, along with Environmental (Restrictive) Covenants, ensure that the containment remedy will remain protective over time.

(d)(i) Public concerns, including the concerns of likely vulnerable populations and overburdened communities, identified under WAC 173-340-600 (13) and (14)

Ecology will provide this CAP, agreed orders and associated amendments for public review and comment and responded to comments raised by the public. Ecology will finalize these documents after consideration of public input.

(d)(ii) Indian tribes' rights and interests identified under WAC 173-340-620

Ecology will provide this CAP, agreed orders and associated amendments for Tribal review and respond to comments raised by the Tribes. Ecology will finalize these documents after consideration of Tribal input.

6.3.2 Requirements for Containment Systems (WAC 173-340-740(6)(f))

WAC 173-340-740(6)(f) includes specific requirements of a containment cleanup action that allow soil and solid waste with concentrations greater than the soil CULs to remain in place. These requirements are met by the preferred alternative in the following ways:

§ (f)(iv) Institutional controls are put in place under WAC 173-340-440 that prohibit or limit activities that could interfere with the long-term integrity of the containment system

An Environmental (Restrictive) Covenant will be established for the 7901 parcel to ensure that the requirements of the remedy, including maintenance of the landfill cap, LFG control systems, and groundwater monitoring, are met.

(f)(v) Compliance monitoring (WAC 173-340-410) and periodic reviews (WAC 173-340-420) are designed to ensure long-term integrity of the containment system

The cap, indoor air controls, and maintenance and monitoring plans provides details for requirements to ensure that the cleanup action components are implemented efficiently and are functioning as intended. Operations and maintenance information will be compiled and reported to Ecology in an Annual Monitoring Report. Periodic reviews of the remedial action will be done in accordance with WAC 173-340-420.

(f)(vi) Types, levels, and amount of hazardous substances remaining on-site and the measures that will be used to prevent migration and contact with those substances are specified in the CAP

The material remaining beneath the cap on the 7901 parcel is municipal solid waste and soil containing hazardous substances. Groundwater monitoring data indicates compliance with CULs is expected within 10 years. Containment of hazardous substances will be accomplished through the installation and maintenance of a landfill cap, as described in Section 6.

7.0 Schedule of Work and Deliverables

The schedule for deliverables described for the Agreed Order for the 7901 parcel is presented below. If the date for submission of any item or notification required by this Schedule of Work and Deliverables occurs on a weekend, state or federal holiday, the date for submission of that item or notification is extended to the next business day following the weekend or holiday. Nothing shall limit the PLP's ability to submit documents prior to the completion times listed below. Where a deliverable due date is triggered by Ecology notification, comments or approval, the starting date for the period shown is the date the PLP received such notification, comments, or approval from Ecology, either by email or certified mail, return receipt requested, unless otherwise noted below. Where triggered by Ecology receipt of a deliverable, the starting date for the period shown is the date Ecology receives the deliverable by email or certified mail, return receipt requested, or the date of Ecology signature on a hand-delivered item.

Table 7.1
Implementation Schedule

Item/Milestone	Due Dates
Draft Engineering Design Report for landfill cap	Within 90 days after the effective date of the agreed order
Final Engineering Design Report for landfill cap	Within 30 days of receipt of Ecology's comments on the Ecology Review Draft Engineering Design Report and issuance of final permits, whichever occurs later in time[1]
Installation of continuous methane detectors in 7901 building	Within 180 days after the effective date of the agreed order
Environmental (Restrictive) Covenant for the 7901 Parcel	Filed with the County Recorder within 180 days after the effective date of the agreed order
Begin Construction of landfill cap	Within 1 year of Ecology approval of Final Engineering Design Report unless Ecology approves an alternate schedule
Draft As-Built Report for landfill cap	Within 120 days of completion of construction activities
Final As-Built Report for landfill cap	Within 30 days of approval of Draft As-Built Report
Long-term monitoring of cap integrity	Within 180 days following the landfill cap construction.

1. Ecology will not approve the Final Engineering Design Report until the required permits have been obtained.

8.0 References

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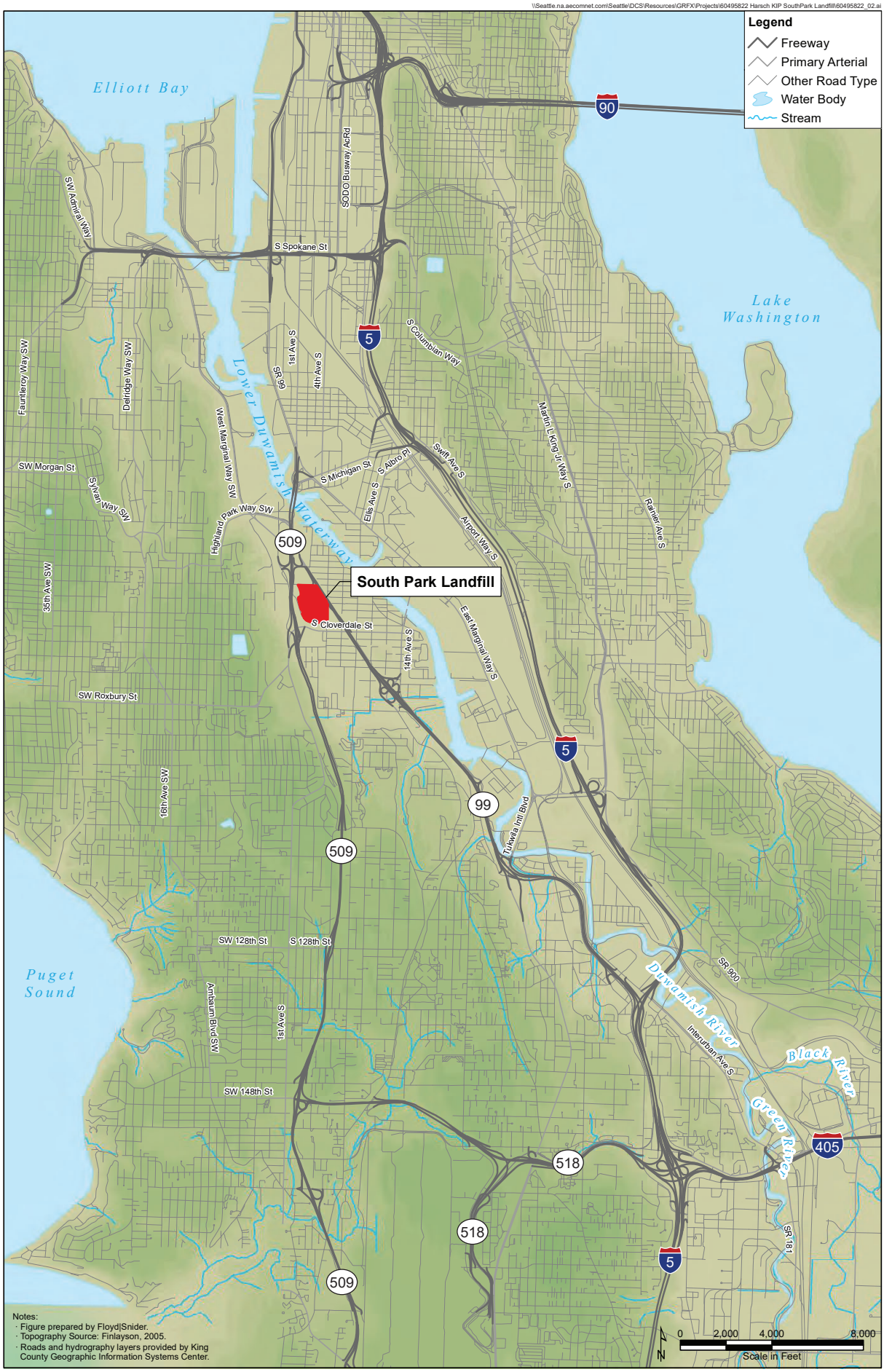


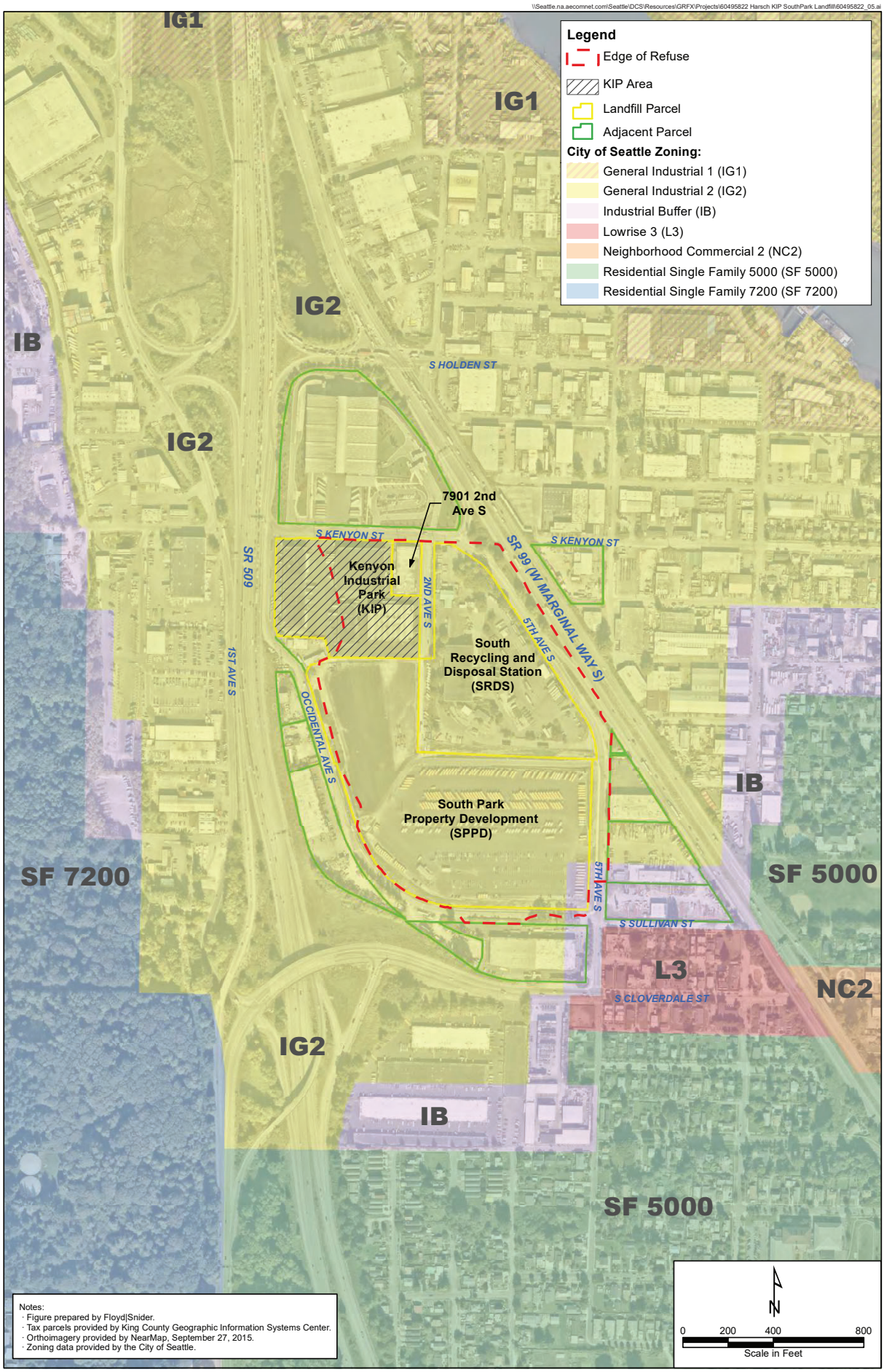
Source: Ecology 2018

Figure 1.1
Vicinity Map

Source: Ecology 2023

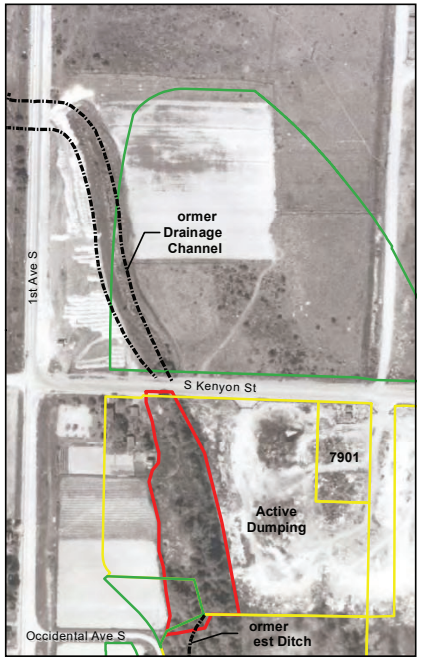
Figure 1.2

South Park Landfill Parcel Map

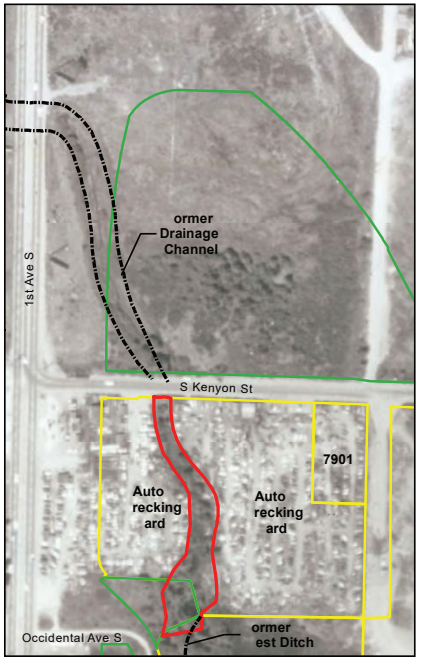


Source: Ecology 2018

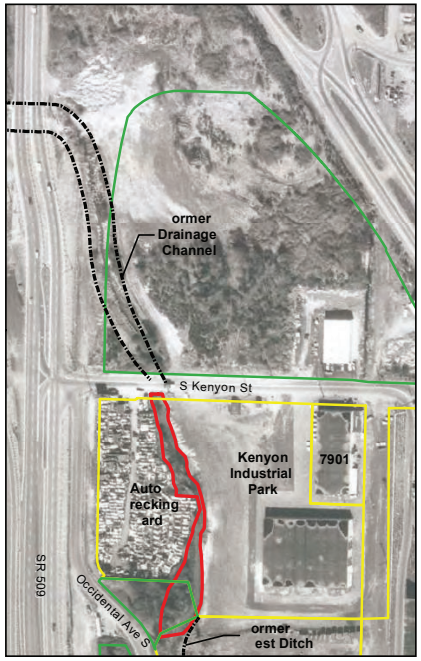
Figure 2.1
Land Use and Zoning



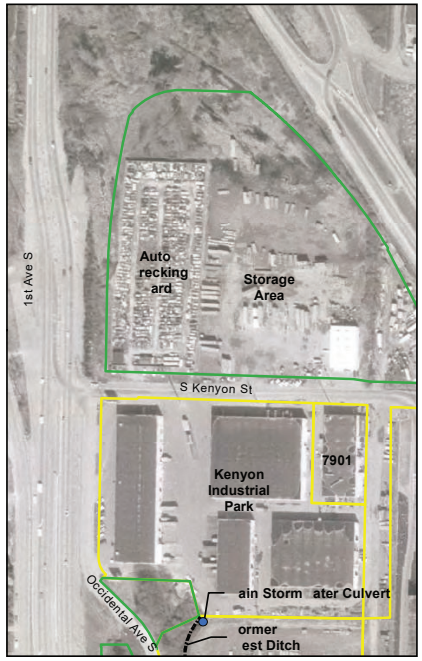
1946
Activities on the KIP 7901 parcels include active dumping, farming, commercial operating, and residential.



1960
Activities on the KIP 7901 parcels include auto wrecking.



1969
Activities on the KIP parcel include auto wrecking and the development of a building on the present day KIP parcel and another on the 7901 parcel.



1974
Activities on the KIP parcel include filling of the swale, development of the three remaining buildings, paving, and building of a stormwater collection system.

Legend

Landfill Parcel | Adjacent Parcel | KIP Swale Boundary

N

0 150 300 600

Scale in Feet

Source: Floyd|Snyder et al 2017

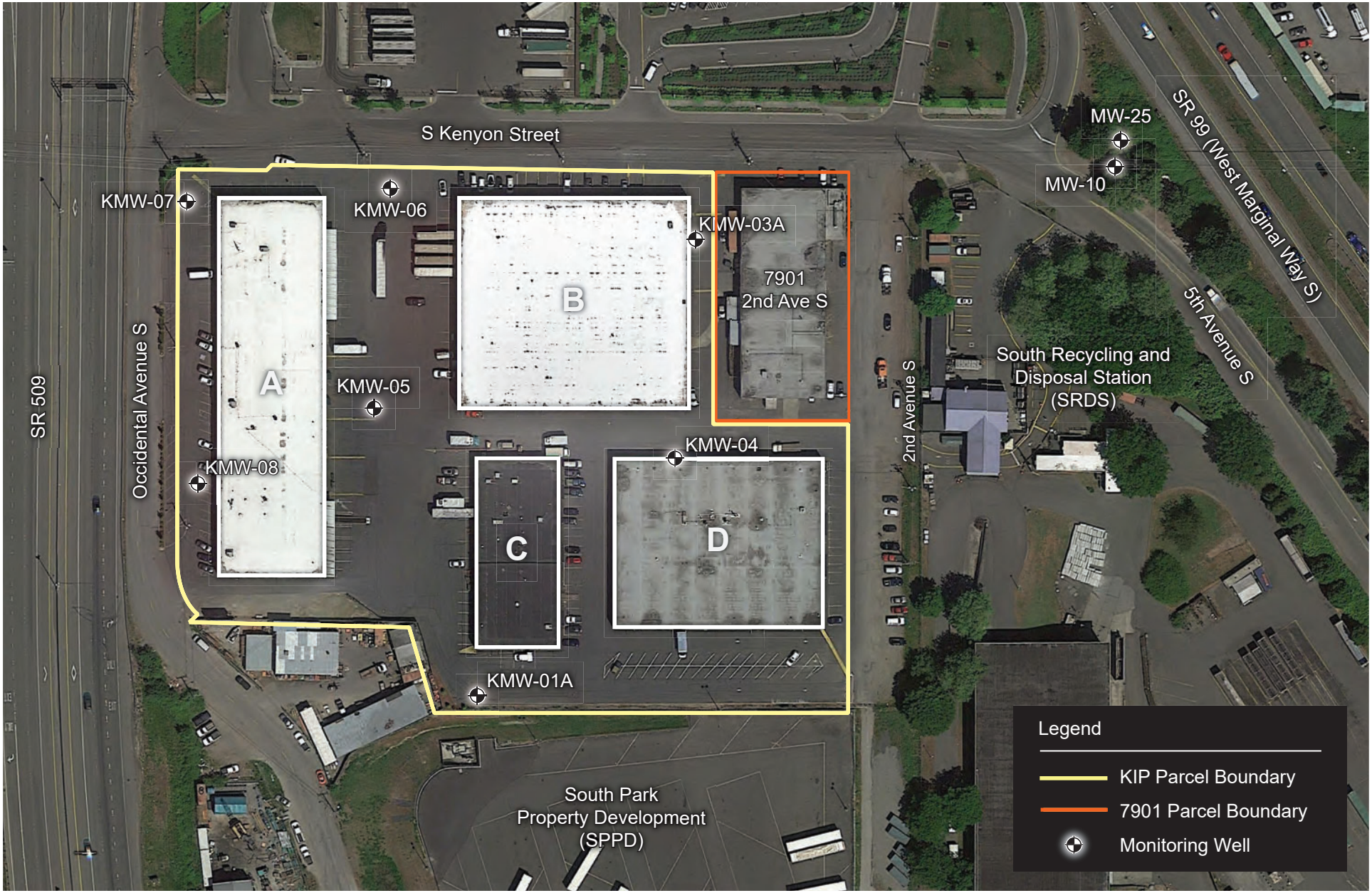
Notes:
· Tax parcels provided by King County Geographic Information Systems Center.
· Aerial imagery provided by Seattle Public Utilities.

Abbreviation:
7901 7901 2nd Ave S, LLC
KIP Kenyon Industrial Park

Figure 2.2

Time Lapse Aerial Photographs of Kenyon Industrial Park

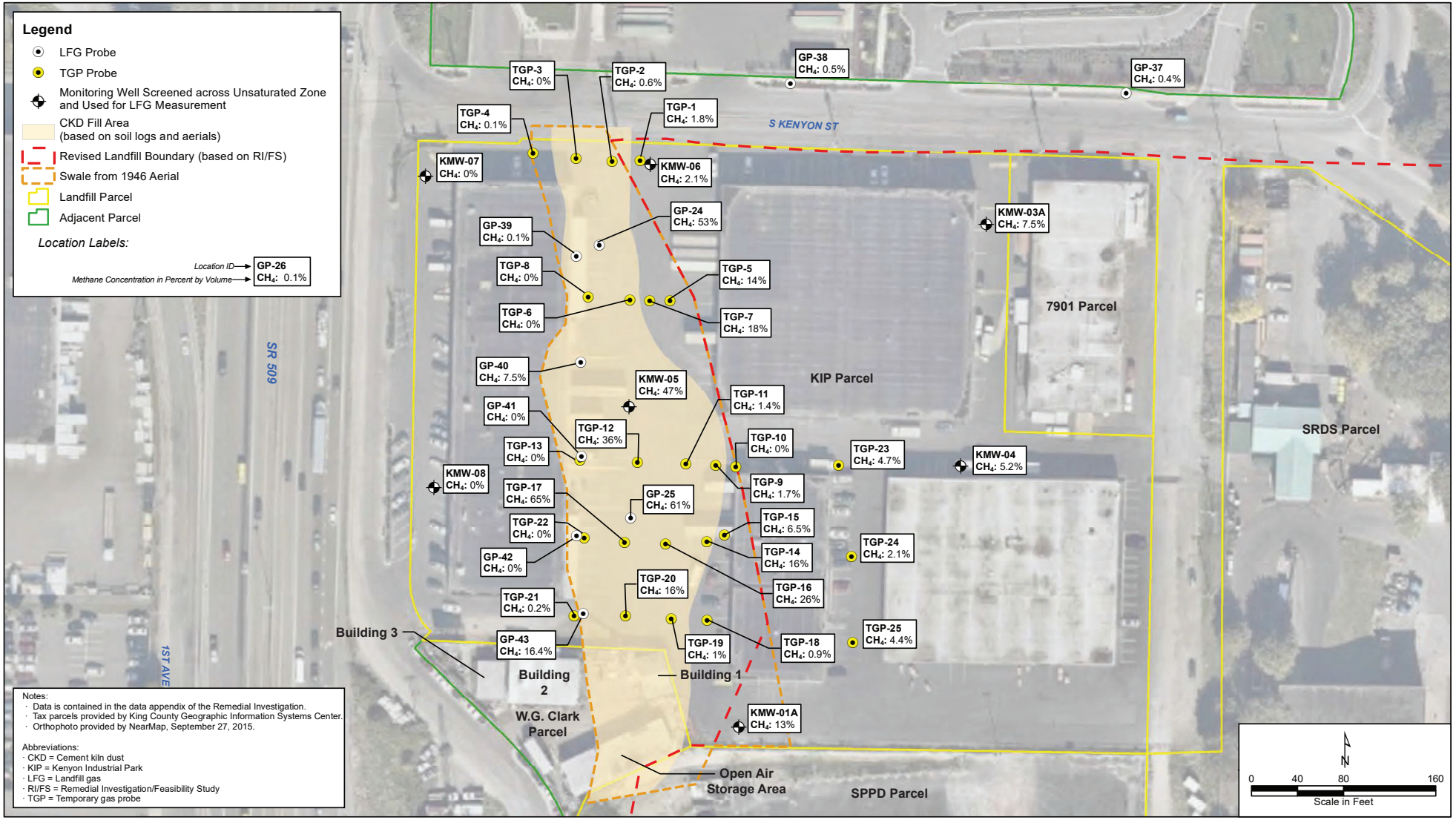
\\Seattle.na.aecomnet.com\Seattle\DCS\Resources\GRFX\Projects\60495822 Harsch KIP SouthPark Landfill\60495822_06.ai



Source: Google Earth

Figure 3.1

7901 2nd Ave. S. / Kenyon Industrial Park Site Plan



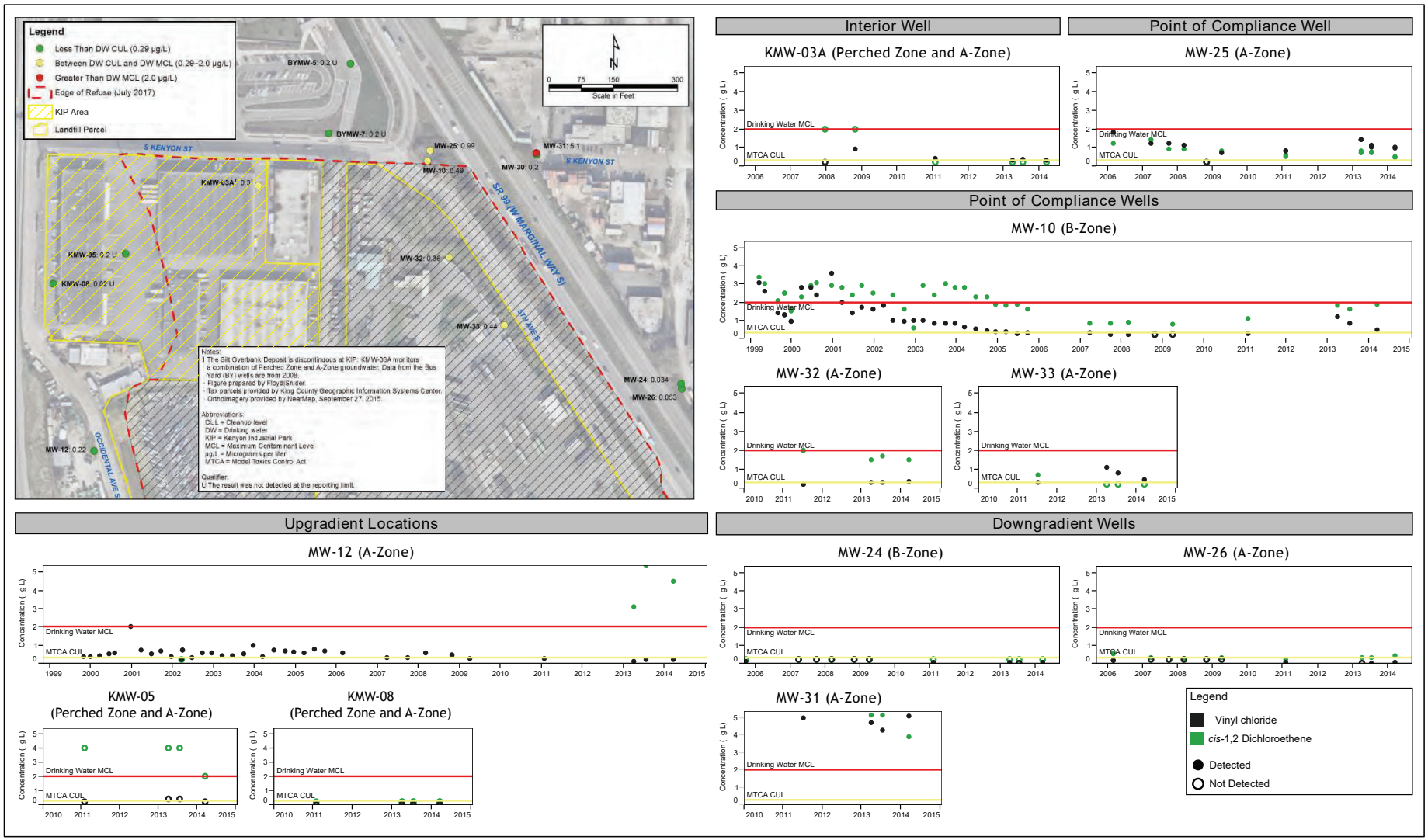
Source: Floyd|Snider et al. 2017

Figure 3.2

LFG Investigation and Extent of Cement Kiln Dust in Historical KIP Swale

DEPARTMENT OF ECOLOGY
State of Washington

Cleanup Action Plan
7901 Parcel
Seattle, Washington



Source: Ecology 2018

Figure 4.1

Vinyl Chloride in Groundwater March 2014

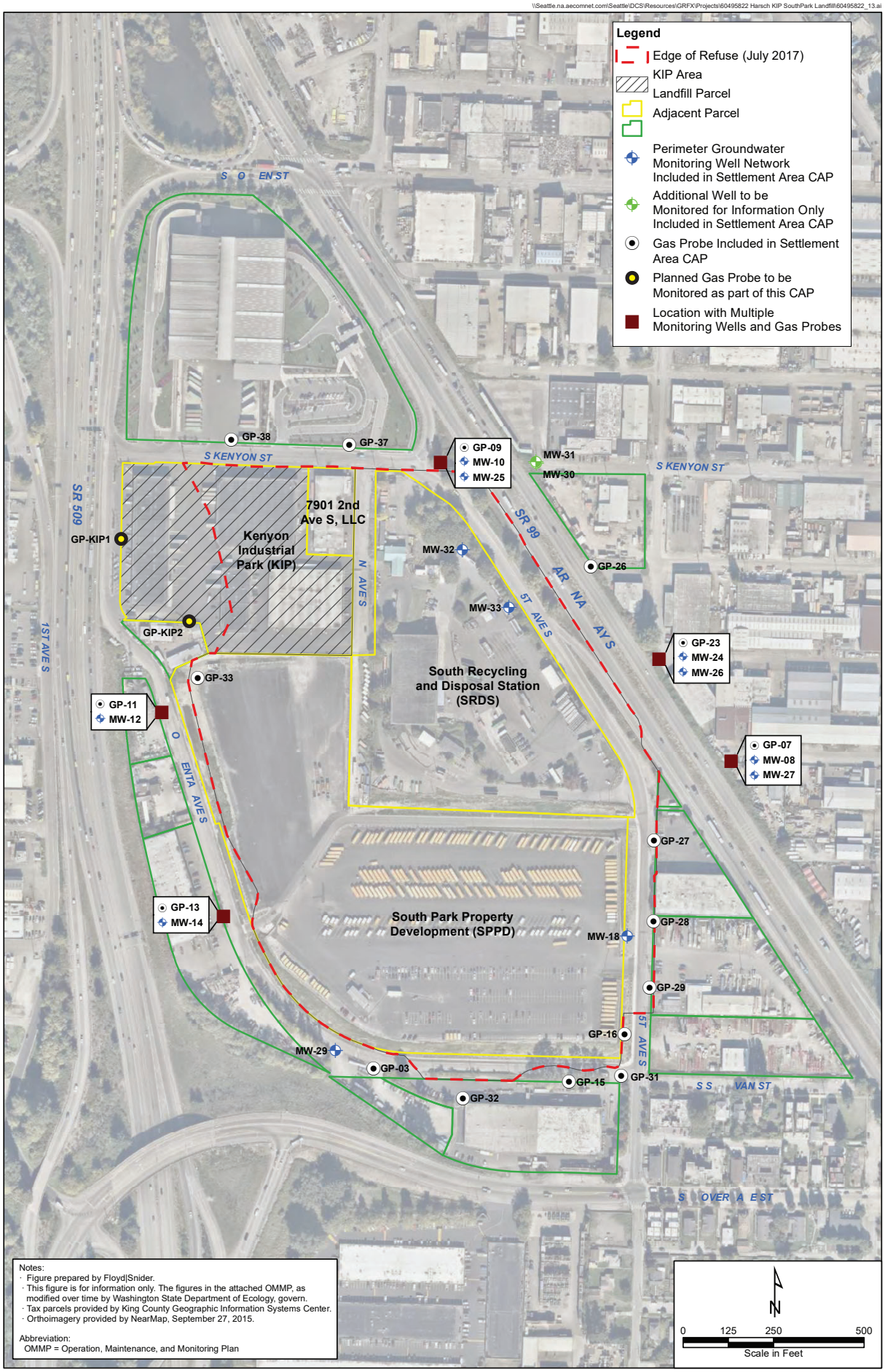
DEPARTMENT OF ECOLOGY
State of Washington

Cleanup Action Plan
7901 Parcel
Seattle, Washington

Source: Ecology 2018

Figure 4.2

Perimeter Landfill Gas Probes



Source: Ecology 2018

Figure 6.1

Location of Long-Term Monitoring Wells and LFG Probes

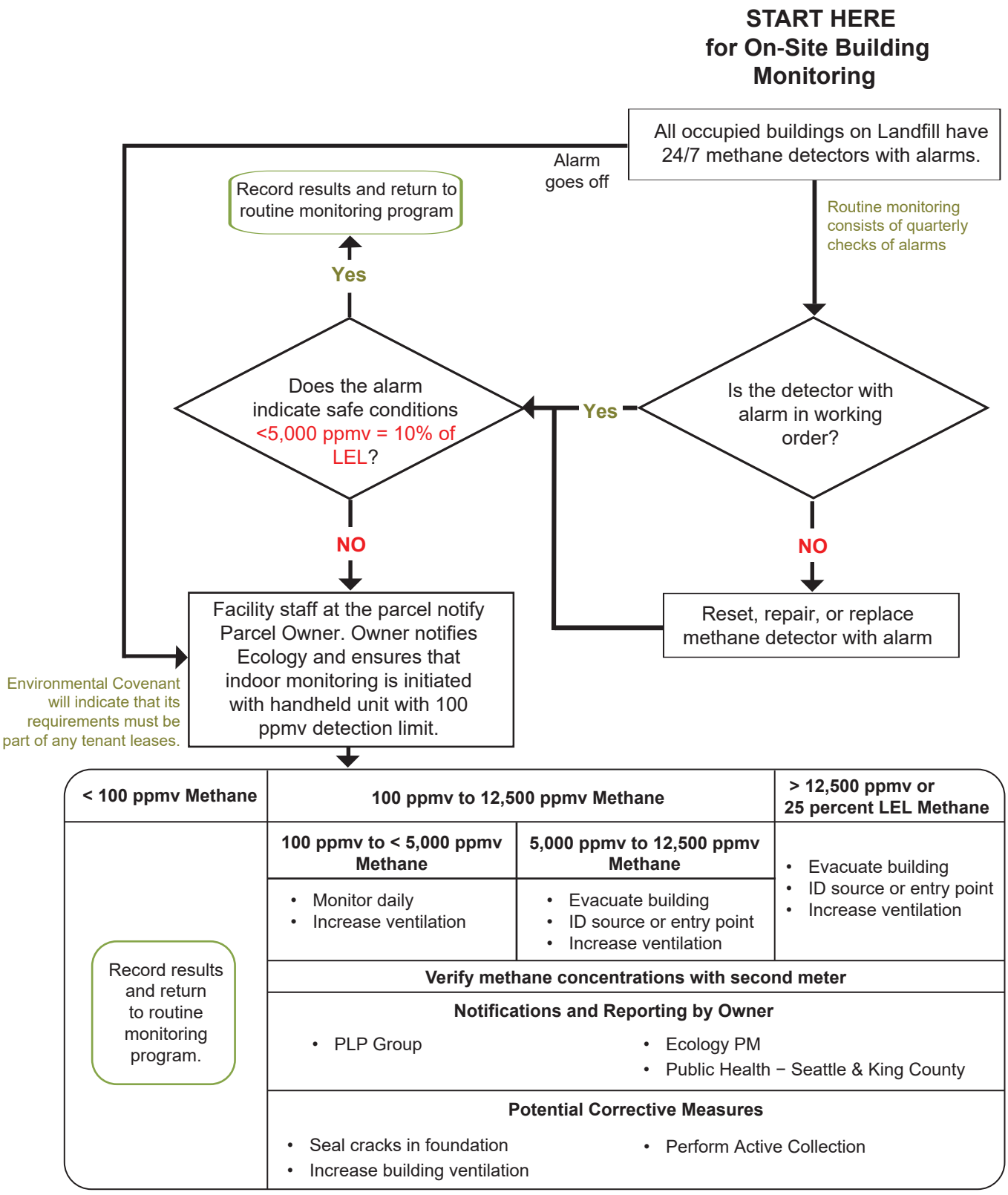
Source: Ecology 2018

Figure 6.2

Environmental Covenant

DEPARTMENT OF ECOLOGY
State of Washington

Cleanup Action Plan
7901 Parcel
Seattle, Washington



Abbreviations:
Ecology = Washington State Department of Ecology
LFG = Landfill gas
PLP = Potentially liable person
PM = Project Manager
ppmv = Parts per million by volume
LEL = Lower explosive limit

Figure 6.3

Flow Chart for Triggers and Contingent Actions for LFG Monitoring in On-Site Buildings

South Park Landfill

Appendix A
Landfill Cap Inspection and Maintenance Plan

Table of Contents

List of Exhibits

List of Acronyms and Abbreviations

Acronym/ Abbreviation	Definition
CAP	Cleanup Action Plan
CIMP	Cap Inspection and Maintenance Plan
City	City of Seattle
CPSP	CenterPoint South Park, LLC

Ecology	Washington State Department of Ecology
Edge of Refuse	The approximate boundary of the area where wastes were placed as part of South Park Landfill operations.
Harsch	Harsch Investment Properties, LLC, current owner of the KIP Area parcel
IA	Interim Action
IAWP	Interim Action Work Plan
KIP	Kenyon Industrial Park
KIP Area	The parcel known as Kenyon Industrial Park (KIP) (tax parcel 3224049007).
Landfill Property Boundary	The boundary of the parcels located partially or entirely within the Edge of Refuse. This includes the parcels covered under the SPPD/City Area, the KIP Area, the 7901 2nd Ave S. parcel, and the 2nd Ave S right-of-way where it is located within the Edge of Refuse. The Landfill Property Boundary does not include rights-of-way located to the east and south of these parcels.
LFG	Landfill gas
OMM	Operations, maintenance, and monitoring
PPE	Personal protective equipment
PLP	Potentially liable person
ROW	Right-of-way
SPPD	South Park Property Development, LLC
SPPD/City Area	The portion of the Site that includes the CenterPpoint South Park LLC -owned parcel (3224049005) and the City of Seattle-owned parcels (7328400005 and 3224049110), and adjacent City of Seattle and Washington State rights-of-ways located within the Edge of Refuse. Parcel 3224049005 was formerly owned by South Park Property Development, LLC.
SR	State Route
SRDS parcel	South Recycling and Disposal Station and associated City of Seattle-owned property[1]
STS	South Transfer Station

[1] Associated City of Seattle-owned property includes two additional strips of land that were incorporated into the original tax parcel in 2003 by City Ordinance 121306.

1.0 Introduction

This Landfill Cap Inspection and Maintenance Plan (CIMP) is an appendix to, and an integral and enforceable part of, the 7901 parcel Cleanup Action Plan (CAP) for the 7901 2nd Ave. portion of the South Park Landfill Site. The 7901 parcel is in the north portion of the South Park Landfill Site, currently owned by 7901 2nd Ave. South LLC (tax parcel 3224049077). The South Park Landfill Site is a former municipal solid waste landfill in the South Park neighborhood of Seattle, Washington (Figure 1.1, CAP). It is located in the Lower Duwamish Valley near the western valley wall between State Route (SR) 509 and SR 99. Details regarding the 7901 parcel, environmental conditions, and specific components of the remedy are documented in the CAP.

The monitoring and maintenance requirements for the landfill cap are provided in this Landfill CIMP. The Landfill CIMP implementation will begin 180 days after completion of the construction of the cap on the 7901 parcel in accordance with the schedule in the CAP.

The purpose of this Landfill CIMP is to confirm that the landfill cap remedy is performing in a manner that protects human health and the environment. The landfill cap consists of pavement, buildings, and geomembrane/soil layers and must be maintained in such a manner to prevent contact with the solid waste/soil beneath the cap, and prevent interference with the stormwater controls; the cap is not required to entirely block the infiltration of stormwater. The cap must be inspected annually, and it must be repaired if it is damaged or becomes worn.

Environmental (Restrictive) Covenants on the individual parcels allow continued access for the Washington State Department of Ecology (Ecology) and the Subject potentially liable persons (PLPs) under the enforcement order to inspect the remedy, as well as restrictions on future changes which may disturb the landfill cap.

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2.0 Landfill Parcels and Coordination

The landfill cap is a low permeability surface (i.e., asphalt and concrete) that is present at the 7901 parcel above areas containing solid waste. The landfill cap prevents direct contact with solid waste by humans, plants, and animals. The limits of the cap are consistent with the Landfill Property Boundary and the extent of solid waste at the landfill, as shown as the red dashed line on Figure 1.2 (CAP).

The 7901 area consists of an approximately 0.72-acre parcel (King County tax parcel no. 3224049077). The 7901 Area is developed with a 17,000 square foot building and paved areas covering the surfaces outside of the building footprint.

2.1 COORDINATION AND RESPONSIBILITIES

The Enforcement Order provides that the Subject PLP remain strictly, jointly, and severally liable for the performance of any and all obligations under this Landfill CIMP. To accomplish the work to be performed under this Landfill CIMP in the most efficient manner, the Subject PLP may, and is encouraged, to coordinate certain common activities, such as annual inspection and reporting. Language in this CIMP reflects this arrangement.

The following sections define the roles required for compliance with this Landfill CIMP; one person may perform more than one role.

2.1.1 Parcel Owners

The Parcel Owner owns the parcel and is responsible for filing an Environmental (Restrictive) Covenant and maintaining compliance with the parcel's Environmental (Restrictive) Covenant, which includes inspection and maintenance of the landfill cap. An Environmental (Restrictive) Covenant will be filed and recorded in accordance with the enforcement order. In regards to activities in this Landfill CIMP, the Parcel Owner is expected to perform the following:

- Perform on-going inspection and maintenance of the pavement, soil caps, and geomembranes that cover the landfill surface consistent with this plan. The annual inspection and reporting may be performed by the Site Coordinator.
- Submit information on repairs to Ecology as part of annual reporting. This may be completed per Section 4.3 to the Site Coordinator as part of their annual reporting to Ecology.
- Grant access, as needed, for cap inspection by Ecology and/or the Site Coordinator.

2.1.2 Subject Potentially Liable Person

The Subject PLP is responsible for compliance with the CAP including this Landfill CIMP, communications with Washington State Department of Ecology (Ecology) and reporting of on-parcel activities. The landfill PLPs are responsible for annual inspection and reporting to Ecology.

This work may be achieved through the Site Coordinator. In addition, in the event that Ecology becomes aware that a landfill PLP is unable to maintain the cap on their parcel, Ecology shall provide written notice to the Subject PLPs that the Parcel Owner is unable to complete the work. Upon the receipt of such notice, the landfill PLPs will repair the parcel's cap to meet minimum standards consistent with Section 6.2.1 of the CAP.

2.1.3 Site Coordinator

The Subject PLP may elect, and is encouraged, to coordinate activities with other PLPs for the South Park Landfill Site to complete annual inspections and reporting. If the Subject PLP elects to engage in a coordinated effort, the Site Coordinator would be responsible for site-wide monitoring, including the annual cap inspections and annual reporting. Additional clarification of their duties exists in the CAP, and in later sections of this Landfill CIMP.

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3.0 Description of Landfill Cap Requirements

The cleanup action requires a landfill cap covering all areas in the KIP Area that contain solid waste. The primary goal of the landfill cap is to block access or exposure to the solid waste and soil; a secondary goal is to limit stormwater infiltration. Minimum standards for the landfill cap and requirements for continued monitoring and maintenance of the cap are discussed in Section 6.2.1 of the CAP.

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4.0 Landfill Cap Inspection and Maintenance Requirements

This Landfill CIMP establishes an inspection and maintenance program to identify damaged cap systems, provide for timely repair and replacement needed to restore damaged or intruded cap systems, specify measures to minimize the potential for disturbances of solid waste, and specify requirements for record-keeping of inspections, repairs and reporting.

4.1 BASELINE CAP CONDITIONS

The first inspection conducted under this plan will occur during the first spring following the effective date of this Enforcement Order, and it will be considered a "baseline" event. The baseline inspection will gather additional information that is needed beyond what was collected under the Remedial Investigation/Feasibility Study. Specifically, the inspection will review:

- Available as-built plans from the individual Parcel Owners, including building foundations, pavement sections, and stormwater system(s).
- A field survey that identifies the location of the different pavements, buildings, and landscaped features and the generation of a scaled plan set to document the features.
- A publicly available aerial photograph taken within the prior 2 years showing the parcel. This aerial will be available electronically as a georeferenced document.

This information will be maintained by the Subject PLP and submitted to Ecology in the Year 1 Annual Report. The Subject PLP may elect to engage in a coordinated effort with a site-wide Site Coordinator for the larger South Park Landfill, in which case they would be responsible for maintaining and submitting this information.

4.2 LANDFILL CAP INSPECTIONS

A complete inspection of the 7901 parcel landfill cap must be conducted on an annual basis in late spring to allow for repairs in the dry season. Inspections will be conducted by the Subject PLP or Site Coordinator. Routine cap inspections for all parcels will consist of a visual survey of the entire cap surface exterior to buildings, including drainage features and surface components of stormwater conveyance (i.e., catch basins, swales). The integrity of the cap across the entire 7901 parcel must be documented via notes, sketches, and photographs. The main objective of the annual inspection is to document areas of the cap that are compromised and require maintenance. To facilitate the inspection, a cap inspection and maintenance field form must be completed during each routine annual inspection; a blank cap inspection and maintenance field form is included in Exhibit A.1.

If the following disturbances to the cap are identified, they must be noted on the cap inspection and maintenance field form and documented via sketches (for location) and photographs.

- Cracking
- Uneven settlement or potholes
- Pooling or ponding of stormwater
- Separation of pavement from curbs, gutters, or catch basins
- Sloughing or crumbling of edge materials
- Erosion
- Any other signs of cap damage, failure, deterioration, or disturbance

If any of the above are identified during an inspection, a recommendation for repairs should be included on the field inspection and maintenance form.

4.3 LANDFILL CAP MAINTENANCE

If the results of the annual inspection indicate that an area of the cap requires maintenance, the following procedures should be followed.

- Notify Ecology of the repair needed and the intent to follow the procedure below within a timeframe specified in the notice, unless additional planning and approval are required by Ecology.
- Repair the cap with similar materials and construction procedures; refer to the CAP Section 6.2.1 for specifications.
- Make all cuts into the cap with neat continuous lines (i.e., saw cut).
- Make sure there is a complete and effective bond between the newly placed surface and the existing surface.
    - In the case of the asphaltic concrete cap, seams and seals must be properly constructed per standard paving practices and in such a way that no cracks or weak seams occur after repair that would be conduits for transmitting infiltrating stormwater or that would present an exposure pathway to the soil beneath.
    - In the case of the low-permeability membrane cap, seams and seals must be properly constructed per manufacturer directives and in such a way that cracks that could be conduits for transmitting infiltrating stormwater or that would present an exposure pathway to the soil beneath do not occur.
- Use a seal coat to seal cracks.

The following scheduling guidelines should be followed if cap inspection indicates that cap maintenance is necessary.

- If a crack, depression, or pothole is identified that exposes the underlying material, maintenance and repair activities should be scheduled as soon as practical (within 60 days).
- Minor surface cracks or ponding (not temporary puddles that form during rainstorms) that reduces the pavements ability to transport rainfall/stormwater to catch basins, but does not expose underlying material, will require a follow-up inspection within 3 to 6 months. If the follow-up inspection indicates that differential settlement in these areas is worsening (i.e., deeper, larger footprint, or cracking), then maintenance or repair must be completed within 6 months of the follow-up inspection. If there is no change to the area during the follow-up inspection, then monitoring of the area should continue at a frequency of every 6 months.
- Repairs of minor cracks, potholes, or otherwise damaged or deteriorated cap surfaces that do not expose underlying material should be made within the calendar year before they can get worse or provide a direct conduit for infiltration.

All maintenance activities should be documented on a cap inspection and maintenance field form, with supporting sketches, figures, and/or photographs attached. An example form is provided in Exhibit A.1.

4.4 STORMWATER INFRASTRUCTURE MAINTENANCE

If applicable, a visual inspection of all surface components of stormwater conveyance and management facilities that are within the cap boundaries shall be performed during each annual cap inspection to document any disturbance, erosion, or penetration concerns. Field observations must be documented on the cap inspection and maintenance field form, along with documentation of any necessary maintenance or repairs.

4.5 FENCING

Several of the parcels contain security fencing isolating some or all of the parcel from public access. Security fencing that does not penetrate the cap may be repaired as needed. Fencing that does penetrate the cap and contacts refuse will need Ecology notification and approval for repairs.

4.6 UNFORESEEN EVENTS

An unforeseen emergency or extreme weather event, such as earthquakes, fires, or floods, or other natural or man-made disaster would trigger an out of sequence cap inspection to ensure that the cap integrity is maintained. Such unforeseen events could cause a sudden differential settlement of the cap that could affect the integrity of the cap, which may result in exposure to the underlying material or methane gas. The following criteria for unforeseen events would trigger an inspection of the landfill cap.

- An earthquake along the Seattle fault that registers 4.0 or greater on the Richter scale.

- An earthquake within 100 miles of Seattle that registers 5.0 or greater on the Richter scale.
- A flood or major storm that produces greater than 3.0 inches of rainfall within a 24-hour period.
- Any fire that occurs on or below the cap.
- Any other damage in the area of the Landfill observed by the Parcel Owners and facility workers or the public, such as damage sustained by high winds, facility or vehicular accidents.

If any of the above unforeseen events occur, then the Subject PLP or Site Coordinator should schedule a cap inspection with the appropriate personnel as soon as safe and practical (generally within 48 hours). Inspection and maintenance activities must be documented on a cap inspection and maintenance field form, with any supporting sketches, figures, and photographs attached. If the integrity of the cap is significantly compromised as a result of an unforeseen event, Ecology must be notified within 1 business day of the discovery of the event and repairs initiated as soon as practicable.

5.0 Health and Safety

Maintenance personnel and contractors must follow general health and safety procedures while performing cap inspection and maintenance activities at the 7901 parcel. Maintenance personnel and contractors must be aware of these hazards and take appropriate precautions while performing the work outlined in this Landfill CIMP. At a minimum, personnel preforming routine inspections and maintenance must wear a high visibility safety vest at all times and should be aware of traffic patterns and facility operations. If work on a specific parcel/facility requires other specific personal protective equipment (PPE), such as a hard hat or steel-toed boots, then the additional PPE requirements must be met to complete the inspection and maintenance work.

The work associated with this Landfill CIMP would not typically involve exposure to contaminated media beneath the cap; therefore, a site-specific health and safety plan is not necessary for this work.

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6.0 Reporting and Record Keeping

To document compliance with this Landfill CIMP, the Subject PLP or Site Coordinator must keep the following records to document the completion of each OMM event.

Inspection Records. These should include a completed Annual Cap Inspection and Maintenance Field Form and associated sketches and photographic documentation. These should also include any recommendations for maintenance.

In addition, the maintenance contractor must document the following and provide copies to the Subject PLP or Site Coordinator within 60 days of the completion of a maintenance event.

Maintenance Records. These should include a description of the maintenance area and type of repair. These should also include photographic documentation and a field sketch and/or figure documenting the location.

In accordance with the 7901 CAP, the results of the cap inspections and any necessary maintenance will be reported to Ecology annually in the CAP Annual Report which is due on March 31 of each year for the previous calendar year's operations and maintenance activities. The Subject PLP or Site Coordinator is responsible for compiling the necessary documentation and submittal of the CAP Annual Report covering at least the 7901 parcel.

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South Park Landfill

Cap Inspection and Maintenance Form

Date: _____ Location: _____

Inspector: _____ Owner: _____

☐**Annual Inspection** ☐**Non-Routine Inspection**

Annual Inspection must include a visual survey of the entire cap surface, including drainage features on surface components for stormwater systems. Complete the checklist (Form A) and attach to this form for documentation.

For Non-Routine Inspections, provide reason:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Attach documentation as necessary (photographs, sketches, notes).

☐**Maintenance Event, provide reason:**

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Complete Maintenance Documentation (Form B) and attach for documentation.

South Park Landfill

Cap Inspection Form A

Date: _____ Location: _____

Inspector: _____ Owner: _____

☐ **Annual Inspection** ☐ **Non-Routine Inspection**

Reason: _____

VISUAL INSPECTION CHECKLIST

Asphaltic Concrete

	Yes	No	Needs Repair	If Yes, Describe:
Minor Cracking	☐	☐	☐	_____
Open Cracks/Ruts	☐	☐	☐	_____
Differential Settlement	☐	☐	☐	_____
Pot Holes	☐	☐	☐	_____
Pooling or Ponding	☐	☐	☐	_____
Separation of Pavement from Curbs, Gutters, or Catch Basins	☐	☐	☐	_____
Sloughing or Crumbling of Edge Materials	☐	☐	☐	_____
Erosion	☐	☐	☐	_____
Other Signs of Cap Damage, Failure, Disturbance	☐	☐	☐	_____

Recommended Maintenance or Repair Type/Location:

_____

_____

Low-Permeability Membrane

	Yes	No	Needs Repair	If Yes, Describe:
Erosion of Cover Soil	☐	☐	☐	_____
Exposed Geotextile Barrier	☐	☐	☐	_____
Holes/Signs of Unauthorized Digging	☐	☐	☐	_____

Recommended Maintenance or Repair Type/Location: _____

_____

Stormwater Management Facilities

	Yes	No	Needs Repair	If Yes, Describe:
Signs of Water Infiltration below Structures	☐	☐	☐	_____
Erosion of Soil	☐	☐	☐	_____
Exposed Geotextile Membrane	☐	☐	☐	_____
Holes/Signs of Unauthorized Digging	☐	☐	☐	_____
Invasive/Deep-Rooted Plants	☐	☐	☐	_____

Recommended Maintenance or Repair Type/Location: _____

_____

Attach necessary documentation such as photographs, sketches, and additional notes.

South Park Landfill

Cap Maintenance Form B

Date: _____ Location: _____ Owner: _____

Maintenance Contractor: _____

Reason for Maintenance: _____

_____

Describe maintenance location (attach sketch, photographs).

_____

_____

_____

Describe maintenance or repair performed (attach photos and additional documentation as necessary).

_____

_____

_____

_____

_____

_____

_____

Is the maintenance activity complete? ☐ Yes ☐ No

If no, explain:

_____

_____

_____

_____

Approval/inspection of maintenance/repair:

_____ _____

SITE COORDINATOR DATE

All maintenance and repair documentation must be provided to the Site Coordinator within 60 days of the completion of the maintenance/repair OR by March 1 if the activity is completed within 60 days prior to March 1.

South Park Landfill

Appendix B
Draft Environmental Covenant

After Recording Return
Original Signed Covenant to:
Washington State Department of Ecology
Ryan Gardiner
Toxics Cleanup Program
Department of Ecology
Northwest Regional Office
15700 Dayton Ave. N.
Shoreline, WA 98133

Environmental Covenant

Grantor: 7901 2nd Ave. S LLC
Grantee: State of Washington, Department of Ecology (hereafter "**Ecology**")
Brief Legal Description: See Exhibit A
Tax Parcel Nos.: 3224049077

RECITALS

a. This document is an environmental (restrictive) covenant (hereafter "**Covenant**") executed pursuant to the Model Toxics Control Act ("**MTCA**"), chapter 70A.305 RCW, and Uniform Environmental Covenants Act ("**UECA**"), chapter 64.70 RCW.

b. The Property that is the subject of this Covenant is part of a site commonly known as South Park Landfill (Facility Site ID # 2180). The property is legally described in Exhibit A, and illustrated in Exhibit B, both of which are attached (hereafter "**Property**"). If there are differences between these two Exhibits, the legal description in Exhibit A shall prevail.

c. The Property is the subject of remedial action conducted under MTCA. This Covenant is required because residual contamination remains on the Property after completion of remedial actions. Specifically, the following principal contaminants remain on the Property:

Medium	Principal Contaminants Present
Landfill Waste and soil within the Property	Multiple hazardous substances based on heterogeneity of landfill refuse and other historic uses of the Property
Groundwater	Vinyl chloride, iron, manganese, arsenic
Soil vapor	Landfill gas (methane)

d. It is the purpose of this Covenant to restrict certain activities and uses of the Property to protect human health and the environment and the integrity of remedial actions conducted at the site. Records describing the extent of residual contamination and remedial actions conducted are available through Ecology. This includes the following documents:

- "Final 7901 2nd Ave. South Cleanup Action Plan, South Park Landfill Site", Washington State Department of Ecology, [June 2025] (hereafter "**7901 CAP**"). Appended hereto as Exhibit C.
- "2020 Operations, Maintenance, and Monitoring Annual Report, South Park Landfill", Parametrix and HWA GeoSciences, Inc., March 2021.

- "South Park Landfill, Remedial Investigation/Feasibility Study", Floyd | Snider, Aspect Consulting, LLC, BHC Consultants, Herrera Environmental Consultants, Inc., Revised Final, February 2021.
- "South Park Landfill, Final Cleanup Action Plan", Department of Ecology, March 2018.

e. This Covenant grants Ecology certain rights under UECA and as specified in this Covenant. As a Holder of this Covenant under UECA, Ecology has an interest in real property, however, this is not an ownership interest which equates to liability under MTCA or the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9601 *et seq.* The rights of Ecology as an "agency" under UECA, other than its' right as a holder, are not an interest in real property.

COVENANT

Harsch Investment Properties, LLC (hereafter "**Grantor**") as grantor and fee simple owner of the Property hereby grants to the Washington State Department of Ecology, and its successors and assignees, the following covenants. Furthermore, it is the intent of the Grantor that such covenants shall supersede any prior interests the Grantor has in the property and run with the land and be binding on all current and future owners of any portion of, or interest in, the Property.

Section 1. General Restrictions and Requirements.

The following general restrictions and requirements shall apply to the Property:

a. Interference with Remedial Action. The Grantor shall not engage in any activity on the Property that may impact or interfere with the remedial action and any operation, maintenance, inspection or monitoring of that remedial action without prior written approval from Ecology.

b. Protection of Human Health and the Environment. The Grantor shall not engage in any activity on the Property that may threaten continued protection of human health or the environment without prior written approval from Ecology. This includes, but is not limited to, any activity that results in the release of residual contamination that was contained as a part of the remedial action or that exacerbates or creates a new exposure to residual contamination remaining on the Property.

c. Continued Compliance Required. Grantor shall not convey any interest in any portion of the Property without providing for the continued adequate and complete operation, maintenance and monitoring of remedial actions and continued compliance with this Covenant.

d. Leases. Grantor shall restrict any lease for any portion of the Property to uses and activities consistent with this Covenant and notify all lessees of the restrictions on the use of the Property.

e. Preservation of Reference Monuments. Grantor shall make a good faith effort to preserve any reference monuments and boundary markers used to define the areal extent of coverage of this Covenant. Should a monument or marker be damaged or destroyed, Grantor shall have it replaced by a licensed professional surveyor within 30 days of discovery of the damage or destruction.

Section 2. Specific Prohibitions and Requirements.

In addition to the general restrictions in Section 1 of this Covenant, the following additional specific restrictions and requirements shall apply to the Property.

a. Land use. The remedial action for the Property is based on a cleanup designed for industrial property. As such, the Property shall be used in perpetuity only for industrial uses, as that term is defined in the rules promulgated under Chapter 70A.305 RCW. Prohibited uses on the Property include but are not limited to residential uses, childcare facilities, K-12 public or private schools, parks, grazing of animals, growing of food crops, and non-industrial commercial uses.

b. Containment of soil/waste materials.

The remedial action for the Property is based on containing landfill waste under a cap consisting of buildings, asphalt, concrete, and soil layers. The primary purpose of this cap is to prevent direct contact with the solid wastes and is an inherent element of the stormwater and landfill gas controls that are part of landfill closure. The following restrictions shall apply to the Property:

i. Any activity on the Property that will compromise the integrity of the cap, which includes the substrate, including: drilling; digging; piercing the cap with sampling device, post, stake or similar device; grading; excavation; installation of underground utilities; removal of the cap; or, application of loads in excess of the cap load bearing capacity, is prohibited without prior written approval by Ecology. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of or causation of any damage to the cap. Unless an alternative plan has been approved by Ecology in writing, the Grantor shall promptly repair the damage and submit a report documenting this work to Ecology within thirty (30) days of completing the repairs.

ii. The Grantor shall not alter or remove the existing structures on the Property in any manner that would expose contaminated soil and landfill waste, result in a release to the environment of contaminants, or create a new exposure pathway, without prior written approval of Ecology.

iii. The Grantor covenants and agrees that it shall annually, or at other time as approved in writing by Ecology, inspect the cap and building floor or foundation and report within thirty (30) days of the inspection the condition of the cap and building floor or foundation and any changes to the cap and building floor and foundation that would impair its performance.

d. Landfill Gas Controls and Protections. The residual contamination on the Property includes biodegradable wastes/chemicals that may generate methane, a combustible gas. As such, the following restrictions shall apply on the Property to minimize the potential for exposure to these vapors:

i. Grantor shall equip all buildings on the Property with methane alarms operating 24 hours, 7 days per week. Grantor shall maintain the alarms in good working order, and will replace any alarm that fails within 7 days after discovery of the failure.

ii. No building or other enclosed structure shall be constructed on the Property unless approved by Ecology.

iii. Grantor shall ensure that any new building or other enclosed structure constructed on the Property will comply with all City Code requirements related to methane mitigation, and will contain, at a minimum, a sealed foundation and a gas venting system unless otherwise approved in writing by Ecology.

e. Landfill Gas Monitoring. Grantor shall monitor landfill gas on the Property. The following monitoring is required:

i. The Grantor will monitor indoor spaces using the methane alarms in 2(d) above to ensure that concentrations of methane gas in (a) buildings overlying refuse illustrated in Exhibit B do not exceed 1.25 percent by volume, or 25 percent of the lower explosive limit (LEL), and (b) buildings outside the area of the Property overlying refuse illustrated in Exhibit B do not exceed 100 parts per million by volume.

ii. The Grantor will monitor performance of the landfill gas controls installed on the Property as part of 2(d) above;

iii. The Grantor shall promptly report to Ecology any exceedance of methane gas allowable limits, and shall take immediate, appropriate action to respond to such exceedances.

e. Stormwater facilities. To minimize the potential for mobilization of contaminants remaining in soil, waste materials, and groundwater on the Property, no stormwater infiltration facilities or unlined ponds shall be constructed on the portion of the Property that overlies refuse as detailed in the 7901 CAP. All stormwater catch basins, conveyance systems, and other appurtenances installed on the Property shall be of water-tight construction.

f. Groundwater Use. The groundwater beneath the Property remains contaminated and shall not be extracted for any purpose other than temporary construction dewatering, investigation, monitoring or remediation. Drilling of a well for any water supply purpose is strictly prohibited. Groundwater extracted from the Property for any purpose shall be considered potentially contaminated and any discharge of this water shall be done in accordance with state and federal law.

g. Groundwater Monitoring. Groundwater monitoring wells are located on the Property to monitor the performance of the remedial action. The Grantor shall maintain clear access to these devices and protect them from damage. The Grantor shall report to Ecology within 14 calendar days of the discovery of any damage to any monitoring device located on the Property. Unless Ecology approves of an alternative plan in writing, the Grantor shall arrange for the prompt repair of the damage and submission of a report documenting this work to Ecology within thirty (30) days of completing the repairs.

Section 3. Access.

a. The Grantor shall maintain clear access to all remedial action components necessary to construct, operate, inspect, monitor and maintain the remedial action.

b. The Grantor freely and voluntarily grants Ecology and its authorized representatives, upon reasonable notice the right to enter the Property at reasonable times to evaluate the effectiveness of this Covenant and associated remedial actions, and enforce compliance with this Covenant and those actions, including the right to take samples, inspect any remedial actions conducted on the Property, and to inspect related records.

c. No right of access or use by a third party to any portion of the Property is conveyed by this instrument.

Section 4. Notice Requirements.

a. Conveyance of Any Interest. The Grantor, when conveying any interest in any part of the Property, including but not limited to title, easement, leases, and security or other interests, must:

i. Provide written notice to Ecology of the intended conveyance at least thirty (30) days in advance of the conveyance.

ii. Include in the conveying document a notice in substantially the following form, as well as a complete copy of this Covenant:

NOTICE: THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL COVENANT GRANTED TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY ON [DATE] AND RECORDED WITH THE KING COUNTY AUDITOR UNDER RECORDING NUMBER [RECORDING NUMBER]. USES AND ACTIVITIES ON THIS PROPERTY MUST COMPLY WITH THAT COVENANT, A COMPLETE COPY OF WHICH IS ATTACHED TO THIS DOCUMENT.

iii. Unless otherwise agreed to in writing by Ecology, provide Ecology with a complete copy of the executed document (with confidential business terms redacted) within thirty (30) days of the date of execution of such document.

b. Reporting Violations. Should the Grantor become aware of any violation of this Covenant, Grantor shall promptly report such violation in writing to Ecology.

c. Emergencies. For any emergency or significant change in site conditions due to Acts of Nature (for example, flood or fire, water main or sewer main break) resulting in a violation of this Covenant, the Grantor is authorized to respond to such an event in accordance with state and federal law. The Grantor must notify Ecology in writing of the event and response actions planned or taken as soon as practical but no later than within 24 hours of the discovery of the event.

d. Notification procedure. Any required written notice, approval, reporting or other communication shall be personally delivered or sent by first class mail to the following persons. Any change in this contact information shall be submitted in writing to all parties to this Covenant. Upon mutual agreement of the parties to this Covenant, an alternative to personal delivery or first class mail, such as e-mail or other electronic means, may be used for these communications.

7901 2nd Ave. S. LLC Attn: Gretchen Hill P.O. Box 80464 Seattle, WA 98108	Environmental Covenants Coordinator Washington State Department of Ecology Toxics Cleanup Program P.O. Box 47600 Olympia, WA 98504 – 7600 (360) 407-6000 ToxicsCleanupProgramHQ@ecy.wa.gov

Section 5. Modification or Termination.

a. Grantor must provide written notice and obtain approval from Ecology at least sixty (60) days in advance of any proposed activity or use of the Property in a manner that is inconsistent with this Covenant. For any proposal that is inconsistent with this Covenant and permanently modifies an activity or use restriction at the site:

i. Ecology must issue a public notice and provide an opportunity for the public to comment on the proposal; and

ii. If Ecology approves of the proposal, the Covenant must be amended to reflect the change before the activity or use can proceed.

b. If the conditions at the site requiring a Covenant have changed or no longer exist, then the Grantor may submit a request to Ecology that this Covenant be amended or terminated. Any amendment or termination of this Covenant must follow the procedures in MTCA and UECA and any rules promulgated under these chapters.

Section 6. Enforcement and Construction.

a. This Covenant is being freely and voluntarily granted by the Grantor.

b. Within ten (10) days of execution of this Covenant, Grantor shall provide Ecology with an original signed Covenant and proof of recording and a copy of the Covenant and proof of recording to others required by RCW 64.70.070.

c. Ecology shall be entitled to enforce the terms of this Covenant by resort to specific performance or legal process. All remedies available in this Covenant shall be in addition to any and all remedies at law or in equity, including MTCA and UECA. Enforcement of the terms of this Covenant shall be at the discretion of Ecology, and any forbearance, delay or omission to exercise its rights under this Covenant in the event of a breach of any term of this Covenant is not a waiver by Ecology of that term or of any subsequent breach of that term, or any other term in this Covenant, or of any rights of Ecology under this Covenant.

d. The Grantor shall be responsible for all costs associated with implementation of this Covenant. Furthermore, the Grantor, upon request by Ecology, shall be obligated to pay for Ecology's costs to process a request for any modification or termination of this Covenant and any approval required by this Covenant.

e. This Covenant shall be liberally construed to meet the intent of MTCA and UECA.

f. The provisions of this Covenant shall be severable. If any provision in this Covenant or its application to any person or circumstance is held invalid, the remainder of this Covenant or its application to any person or circumstance is not affected and shall continue in full force and effect as though such void provision had not been contained herein.

g. A heading used at the beginning of any section or paragraph or exhibit of this Covenant may be used to aid in the interpretation of that section or paragraph or exhibit but does not override the specific requirements in that section or paragraph.

{The remainder of the page is intentionally blank}

The undersigned Grantor warrants he/she holds the title to the Property and has authority to execute this Covenant.

EXECUTED this _____ day of _____, 20___.

7901 2ND AVE SOUTH, LLC

_____ [SIGNATURE] _____

by: _____ [PRINTED NAME] _____

Title: _____

REPRESENTATIVE ACKNOWLEDGEMENT

STATE OF WASHINGTON
COUNTY OF KING

On this _____ day of _____, 20__, I certify that _____ personally appeared before me, acknowledged that **he/she** signed this instrument, on oath stated that **he/she** was authorized to execute this instrument, and acknowledged it as the _____ [TYPE OF AUTHORITY] of 7901 2nd Ave. S., LLC to be the free and voluntary act and deed of such party for the uses and purposes mentioned in the instrument.

_____
Notary Public in and for the State of Washington
Residing at _____
My appointment expires _____

The Department of Ecology**,** hereby accepts the status as GRANTEE and HOLDER of the above Environmental Covenant.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

_____ [SIGNATURE] _____

by: _____ [PRINTED NAME] _____

Title: _____

Dated: _____

Exhibit A

LEGAL DESCRIPTION

[TO UPDATE]

Exhibit B

PROPERTY MAP

[TO UPDATE]

Exhibit C

7901 CLEANUP ACTION PLAN

[TO UPDATE]