Draft Cleanup Action Plan

Former Precision Engineering Property
1231 South Director Street
Seattle, Washington

for

Dick Morgan

October 16, 2026

DRAFT

554 West Bakerview Road
Bellingham, Washington 98226
360.647.1510

GeoEngineers

Draft Cleanup Action Plan

Former Precision Engineering Property
1231 South Director Street
Seattle, Washington

File No. 25806-001-03
October 16, 2026

Prepared for:

Dick Morgan
425 Clearwater Trail
Manhattan, Montana 59741

Attention: Dick Morgan

Prepared by:

GeoEngineers, Inc.
554 West Bakerview Road
Bellingham, Washington 98226
360.647.1510

Garrett R. Leque, LG
Senior Environmental Geologist

Sydney J. Bronson, PE
Environmental Engineer

Terry R. McPhetridge, LG, LHG
Principal

GRL:SJB:TRM:kjb

www.geoengineers.com/feedback

Disclaimer: Any electronic form, facsimile, or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

DRAFT

Table of Contents

Acronyms and Abbreviations iii
1.0 Introduction 1
1.1 Regulatory Framework 1
1.2 Purpose and Contents of the Cleanup Action Plan 1
1.3 Site Location and Description 2
1.4 Site History 2
1.4.1 Previous Studies 2
1.4.2 Prior Remedial Actions 3
2.0 Nature and Extent of Contamination 4
3.0 Cleanup Requirements and Objectives 5
3.1 Cleanup Standards 5
3.2 Points of Compliance 5
3.3 Cleanup Action Objectives 5
4.0 Remedial Alternative Development, Evaluation and Selection 6
4.1 Remedial Alternatives Considered 6
4.2 Evaluation of Alternatives 7
4.3 Cleanup Action Selection Process 8
4.4 Other Considerations 8
4.4.1 Environmental Justice 9
4.4.2 Climate Change Evaluation 9
5.0 Description of Selected Remedy 10
5.1 AOC 1 – In-Situ Solidification/Stabilization 10
5.2 AOC2 – In Situ Chemical Reduction with Activated Carbon 11
5.3 AOC3 – Ditch Excavation 11
5.4 AOC4 – MNA 11
5.5 Institutional and Engineering Controls 12
5.6 Contamination to Remain in Place and Restoration Timeframe 12
6.0 Implementation of Cleanup Action 13
6.1 Remedial Design 13
6.2 Applicable, Relevant and Appropriate Requirements (ARARs) 14
6.3 Compliance Monitoring and Operations and Maintenance 14
6.4 Schedule for Implementation 15
7.0 References 15

DRAFT

List of Tables

Table 1. Soil Cleanup Levels
Table 2. Groundwater Cleanup Levels
Table 3. Air Cleanup Levels
Table 4. Applicable Laws and Relevant and Appropriate Requirements (ARARs)

List of Figures

Figure 1. Vicinity Map
Figure 2. Site and Surroundings
Figure 3. Site Features – 2026
Figure 4. Areas Requiring Cleanup
Figure 5. Cleanup Action Summary

DRAFT

Acronyms and Abbreviations

AO	Agreed Order
bgs	below ground surface
CAO	Cleanup Action Objectives
CAP	Cleanup Action Plan
Chromium	All forms of chromium, unless noted otherwise
CSID	cleanup site ID
CWA	Clean Water Act
DCA	disproportionate cost analysis
DCAP	Draft Cleanup Action Plan
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
FS	feasibility study
FSID	facility site ID
IHS	indicator hazardous substances
ISCR	in-situ chemical reduction
ISS	in-situ solidification/stabilization
MTCA	Model Toxics Control Act
MNA	monitored natural attenuation
O&M	operation, maintenance and monitoring
the Property	1231 South Director Street in Seattle, Washington
RCRA	Resource, Conservation and Recovery Act
RI	Remedial Investigation
the Site	Where contamination is located
TCE	trichloroethylene
TPH	total petroleum hydrocarbon (diesel- and/or oil-range)
WAC	Washington Administrative Code

DRAFT

1.0 Introduction

This draft Cleanup Action Plan (DCAP) presents the proposed cleanup action at the Former Precision Engineering, Inc. site (the Site) located south of Seattle's South Park neighborhood at 1231 South Director Street in Seattle, Washington (Figure 1). The Site was used by Precision Engineering, Inc. (Precision) for industrial manufacturing and repair which included hard chromium plating among other activities between approximately 1968 to 2005. These former operations resulted in releases of hazardous substances to soil and groundwater at the Site, including, but not limited to, chromium, trichloroethene (TCE), and petroleum hydrocarbons. A remedial investigation and a feasibility study (RI and FS) defined the nature and extent of contamination and evaluated potential cleanup action alternatives to address contamination at the Site (GeoEngineers, Inc. [GeoEngineers] 2024 & 2026).

This DCAP was prepared pursuant to Agreed Order (AO) No. DE 18079 between the Washington State Department of Ecology (Ecology) and the Potentially Liable Persons (PLPs) Dick Morgan, CL Frazier Properties, and Precision (Ecology 2020), in accordance with the requirements of the Washington State Model Toxics Control Act (MTCA) cleanup regulation administered by Ecology under Chapter 173-340 of the Washington State Administrative Code (WAC).

1.1 REGULATORY FRAMEWORK

The Site is on the Contaminated Sites List maintained by Ecology with cleanup site ID (CSID) 4532 and facility site ID (FSID) 2056. The Site is defined by the area where hazardous substances associated with Precision's historical operations are located in environmental media from historical releases and subsequent environmental fate and transport mechanisms.

AO No. DE 18079 was negotiated between Ecology and the PLPs with an effective date of December 18, 2020. The AO requires preparation of the RI (GeoEngineers 2024), FS (GeoEngineers 2026), and this DCAP.

1.2 PURPOSE AND CONTENTS OF THE DRAFT CLEANUP ACTION PLAN

This purpose of this DCAP is to describe Ecology's proposed cleanup action for this site and set forth the requirements that the cleanup must meet. More specifically, this plan includes the following:

- Describes the Site and summarizes current Site conditions (Sections 1 & 2).
- Identifies site-specific cleanup levels and points of compliance for each hazardous substance and medium of concern for the cleanup action (Section 3).
- Summarizes the cleanup action alternatives considered in the remedy selection process (Section 4).
- Describes the selected cleanup action for the Site and the rationale for selecting this alternative (Sections 4 and 5).
- Identifies residual contamination remaining on the site after cleanup and restrictions on future uses and activities at the site to ensure continued protection of human health and the environment (Section 5).

DRAFT

- Identifies applicable state and federal laws for the cleanup action (Section 6).
- Discusses compliance monitoring requirements (Section 6).
- Presents the schedule for implementing the cleanup (Section 6).

Ecology has determined that a cleanup conducted in conformance with this DCAP will comply with the requirements for selection of a remedy under WAC 173-340-360.

1.3 SITE LOCATION AND DESCRIPTION

The Precision property on which the Site is primarily located is an approximately 3.5-acre property (King County tax parcel no. 0001600055) zoned for industrial use. The property is developed with one large building (approximately 62,000 square feet) housing three warehouse bays and supplemental structures attached near the southeast corner. The property is mostly covered with asphalt and concrete paving, except for vegetated borders, including a vegetated drainage ditch to the south.

The surrounding area is a mix of industrial and residential properties, including residential homes to the north, the former Kaspac/Chiyoda property (an Ecology cleanup site [CSID 2540]) to the east, the northbound on-ramp for State Route (SR) 99 to the south, and Seattle Refrigeration, a business that repairs and sells refrigerators, to the west as shown on Figure 2. Other nearby industrial properties and past and present Ecology cleanup sites, including the former Kaspac/Chiyoda property, Warner's Auto Repair, DBA & Airbus, KRS Marine, and Delta Marine Industries, are also shown in Figure 2.

1.4 SITE HISTORY

Precision operated an industrial manufacturing business on the property from 1968 to 2005. Operations included manufacturing and repair of hydraulic cylinders, metal rolls used in the manufacturing of paper and sheet metal products, and other equipment. Services included grinding and polishing, honing, hard chromium plating, milling, welding, and application of flame- and arc-applied metal coating, much of which involved the use of chromic acid. Hard chromium plating equipment was removed in 2005 when Precision ceased operations. The Property was sold to CL Frazier Properties, LLC. in 2007 and has been occupied by Pacific Industrial Supply, a wire rope and marine/industrial supply distributor, from 2007 to present (2026). Pacific Industrial Supply operations include retail space in Warehouses 1 and 2, wire rope manufacturing in Warehouse 2, and storage in Warehouse 3 and the building areas south of Warehouse 1. The current site layout, including the warehouses, stormwater drainage features, and onsite monitoring wells, are shown in Figure 3.

Historical areas of interest associated with Precision's operations were primarily located within and around Warehouse 1 where former chromic acid (chromium) plating tanks, parts washing operations using TCE, and scrubbing and steam cleaning operations associated with potential petroleum release(s) were located.

1.4.1 Previous Studies

Previous studies to evaluate environmental conditions at the Site were conducted from 1988 to 2024. Sampling performed during previous studies included collection and analysis of soil samples, installation and sampling of 23 groundwater monitoring wells, and air monitoring studies as detailed in the RI. Previous studies include:

DRAFT

- Sweet-Edwards/EMCON, Inc. 1988. Status Report Soils/Ground Water Investigation, Seattle Facility. Dated 15 December 1988.
- Sweet-Edwards/EMCON, Inc. 1989a. Tank #7 Precision Engineering, Inc. Seattle, Washington June 1989.
- Sweet-Edwards/EMCON, Inc. 1989b. Precision Engineering, Drainage Ditch Soil EP Tox Results. Dated 28 April 1989.
- Sweet-Edwards/EMCON, Inc. 1989c. Precision Engineering, Letter regarding results from soil and groundwater investigation. Dated 24 August 1989.
- Sweet-Edwards/EMCON, Inc. 1989d. Surface Soil Sampling, Precision Engineering Seattle Facility. Dated 30 August 198
- Sweet-Edwards/EMCON, Inc. 1990. Soil Sample Results: Tank No. 1 and Drainage Ditch, Precision Engineering, Inc. Seattle Facility. Dated 4 January 1990.
- Sweet-Edwards/EMCON, Inc. 1990. Soil Sampling, Precision Engineering, Inc. Seattle Washington. Dated 26 February 1990
- Precision Engineering. 1993. Precision Engineering, Inc. Independent Remedial Action Report. Dated 2 July 1993
- Maul Foster Alongi. 2005. Preliminary Soil and Groundwater Site Assessment Report. Dated 5 August 2005.
- Maul Foster Alongi. 2006. Supplemental Remedial Investigation. Dated 22 February 2006.
- Maul Foster Alongi. 2008. Final Remedial Investigation and Risk Assessment Report. Dated 21 July 2008.
- Maul Foster Alongi. 2011. Final Feasibility Study. Dated 3 March 2011.
- Kennedy/Jenks Consultants. 2015. Remedial Investigation Report, Former Precision Engineering Property. Dated August 6, 2015.
- Maul Foster Alongi. 2020. Vapor Report. Vapor Intrusion Assessment, Interim Remedial Actions, Vapor Intrusion Priority Work Plan. Dated 30 December 2020.
- GeoEngineers. 2024. Public Review Draft Remedial Investigation. Former Precision Engineering Property. Dated November 11, 2024.
- GeoEngineers. 2026. Public Review Draft Feasibility Study. Former Precision Engineering Property. Dated April 24, 2026.

1.4.2 Prior Remedial Actions

Prior remedial actions completed to address contamination associated with former operations generally include the following:

- The removal of former chromium plating tanks and associated infrastructure and remedial excavations of chromium-contaminated soil in 1990 and 1992 to depths of approximately 13 feet below ground surface (bgs) and 1.5 feet bgs, respectively. Residual chromium contamination was left in place beneath the 1990 excavation area. The approximate excavation extents are shown on Figure 3.

DRAFT

- Excavation and off-site disposal of soil within a portion of the stormwater drainage ditch south of Warehouse 1 which was impacted by site runoff. The excavation took place in 2007 and-2008 and the approximate extents are shown in Figure 3.
- Sealing of the concrete foundation of Warehouse 1, including backfilling and sealing a former evaporator pit to prevent vapor intrusion of TCE into indoor air in April 2020. Indoor air monitoring for TCE has been completed on at least an annual basis since that time.

Prior remedial actions are described further in the RI.

2.0 Nature and Extent of Contamination

The nature and extent of contamination at the Site are described in the RI (GeoEngineers 2024) and summarized in the FS (GeoEngineers 2026). The RI identified four areas of concern (AOC) at the Site, each with associated indicator hazardous substances (IHSs) for impacted media, which encompass locations where chemical concentrations exceed cleanup levels and thus define the areas requiring cleanup. AOCs are shown in Figure 4 and are summarized as follows:

- **AOC1: Former (Plating) Tank Area.** AOC1 is situated within the southern portion of Warehouse 1 where the former chromic acid plating tanks and a TCE tank were located, including where the 1992 remedial excavation was completed (Section 1.4.2). AOC1 generally includes the highest levels of contamination at the Site and encompasses an area of approximately 3,500 square feet (sf). IHSs and impacted media in this area include:
  - Hexavalent chromium in soil and shallow groundwater.
  - TCE in soil and shallow groundwater.
- **AOC2: Warehouse 1 – North.** AOC2 is located within the northern portion of Warehouse 1 where TCE was used in former grinding and cleaning operations. Contamination in AOC2 is generally much lower than in AOC1 and encompasses an area of approximately 3,000 sf. IHSs and impacted media in this area include:
  - TCE in soil and shallow groundwater.
  - Hexavalent chromium in soil.
- **AOC3: Ditch.** AOC3 is located within a portion of the stormwater drainage ditch south of the property. Contamination within AOC3 is present at relatively low levels encompassing an area of approximately 2,000 sf. IHSs and impacted media in this area include:
  - Total petroleum hydrocarbon (TPH) in shallow soil.
  - Chromium in shallow soil.
- **AOC4: Three TPH Hotspots.** AOC4 includes three isolated TPH hotspots where discrete releases of petroleum products may have historically occurred. Each hotspot is estimated to encompass an area of approximately 50 sf. IHSs and impacted media in this area include:
  - TPH in soil.

DRAFT

3.0 Cleanup Requirements and Objectives

This section describes both the requirements, including cleanup standards and points of compliance, and objectives of the cleanup. Cleanup standards consist of: (1) chemical concentrations in environmental media that are protective of human health and the environment (cleanup levels); and (2) location(s) where the cleanup levels must be met (point of compliance). Cleanup action objectives (CAOs) are specific goals for the cleanup to eliminate, reduce or otherwise control to the extent practicable unacceptable risks to human health and the environment posed by hazardous substances in impacted media in accordance with the MTCA cleanup regulation (WAC 173-340) and other applicable regulatory requirements.

3.1 CLEANUP STANDARDS

Contaminants detected in soil and groundwater were evaluated relative to a broad range of screening levels in the RI. The list of chemicals exceeding screening levels was further condensed to a group of IHSs, which were then used to evaluate cleanup needs and propose cleanup standards as part of the FS. Those standards are now established in this DCAP. IHSs vary by media but collectively include chromium, TCE, and TPH. The cleanup levels for soil, groundwater, and air are presented in Tables 1 through 3, respectively. The cleanup levels are protective of human health and the environment, as described in the RI/FS reports.

In addition to cleanup standards, applicable or relevant and appropriate requirements (ARARs) are other regulatory requirements that apply to the cleanup action at the Site. ARARs are discussed as part of cleanup action implementation in Section 6.

3.2 POINTS OF COMPLIANCE

Points of compliance were developed for contaminants in soil, groundwater, and air, and include:

- **Soil**: The standard point of compliance for soil based on the protection of groundwater is throughout the Site. The standard point of compliance for soil is from ground surface to 15 bgs for the protection of human health via direct contact.
- **Groundwater**: The standard point of compliance for groundwater is throughout the site. MTCA allows use of a conditional point of compliance when it can be demonstrated that it is not practicable to meet cleanup levels throughout the site within a reasonable restoration time frame (WAC 173-340-720[8][c]). The proposed cleanup is expected to meet cleanup levels at a conditional point of compliance which is at the property boundary.
- **Air**: The standard point of compliance for air is in the ambient (outdoor) air and air within any building, utility vault, manhole or other structure large enough for a person to fit into throughout the site.

3.3 CLEANUP ACTION OBJECTIVES

The CAOs for the Site are to eliminate, reduce or control, to the extent feasible, risks from hazardous substances in soil and groundwater associated with the following primary transport mechanisms and potential exposure routes:

- Dermal contact with, and/or incidental ingestion of, chemicals in the soil at the Site.
- Inhalation of airborne particles (dust) generated from soil at the Site.

DRAFT

- Inhalation of air vapors emanating from soil and/or groundwater via vapor intrusion into the building or outdoors.
- Dermal contact with or incidental ingestion of chemicals in groundwater.

Beyond the CAOs, the cleanup must be compatible with continued industrial/commercial use of the Site.

4.0 Remedial Alternative Development, Evaluation and Selection

This section summarizes the remedy development, evaluation, and selection process, as presented in the FS, and identifies the preferred alternative which is the subject of this DCAP.

4.1 REMEDIAL ALTERNATIVES CONSIDERED

Five main alternatives were evaluated in the FS to meet the CAOs for the Site. Common elements to each alternative included long-term groundwater monitoring and institutional and engineering controls as needed to address contamination to be left in place. The key elements of the alternatives evaluated in the FS are summarized below.

- **Alternative 1:** Monitored Natural Attenuation (MNA)

  This alternative included MNA for each AOC and long-term monitoring for both groundwater and indoor air. MNA alone did not meet the minimum MTCA requirements for cleanup.

- **Alternative 2:** Enhanced Bioremediation in AOC1 and AOC2, Excavation in AOC3, and MNA in AOC4

  This alternative included in-situ treatment of the most contaminated saturated soil and groundwater in AOC1 and AOC2 via enhanced bioremediation. Peripheral areas of AOC1 and AOC2 where concentrations are much lower would be treated by MNA. Contaminated soil in AOC3 would be excavated and disposed off-site and the ditch would be backfilled with clean material. MNA would be used to treat residual petroleum contamination in soil in AOC4 and in the meantime institutional controls would ensure the existing asphalt caps remain in place and in good condition.

- **Alternative 3:** In-situ Chemical Reduction (ISCR) with Activated Carbon (AC)-based Treatment in AOC1 and AOC2, Excavation in AOC3, and MNA in AOC4

  This alternative is the same as Alternative 2, except AOC1 and AOC2 are treated using a different treatment technology, ISCR with AC. Activated carbon is used to trap the contamination in place before it is transformed via chemical reduction. ISCR with AC is expected to be more effective and work more quickly to remediate hexavalent chromium and TCE than bioremediation (Alternative 2).

- **Alternatives 4:** In-situ solidification/stabilization (ISS) in AOC1, ISCR with AC in AOC2, Excavation in AOC3, and MNA in AOC4

  This alternative is the same as Alternative 3, except AOC1 would be treated using ISS. ISS stabilizes the contamination in place by turning the contaminated zone into a solid mass with low permeability to greatly reduce or eliminate contaminant leaching to groundwater. ISS is expected to be more effective and work more quickly to remediate hexavalent chromium and TCE than ISCR with AC.

DRAFT

- **Alternatives 5:** Targeted excavation of AOC1, AOC2, and AOC4, and Excavation of AOC3

  This alternative addresses soil contamination in AOCs 1, 2, and 4 via targeted shallow soil excavation to approximately 5 feet bgs and complete excavation of AOC3 to approximately 2 feet bgs. Excavated soil would be disposed off-site at a permitted facility. This alternative is expected to leave more contamination in place than Alternatives 2 through 4 because of the assumed depth limitations for excavation inside and adjacent to the building.

4.2 EVALUATION OF ALTERNATIVES

Each of the alternatives were evaluated with respect to the criteria outlined in WAC 173-340-360 which details the minimum requirements and procedures for selecting a cleanup action. These requirements, including general requirements, media specific requirements, consideration of public concerns and tribal rights and interests, and the disproportionate cost analysis (DCA) process, are described below.

- **MTCA General Requirements**

MTCA cleanup actions must comply with general requirements. Cleanup action alternatives that do not comply with the general requirements are not considered suitable alternatives under MTCA. As provided in WAC 173-340-360(3)(a), the ten general requirements for remedial actions are:

  - Protect human health and the environment, including likely vulnerable populations and overburdened communities.
  - Comply with the cleanup standards.
  - Comply with applicable state and federal laws.
  - Prevent or minimize present and future releases and migration of hazardous substances in the environment.
  - Provide resilience to climate change impacts that have a high likelihood of occurring and severely compromising the cleanup's long-term effectiveness.
  - Provide for compliance monitoring.
  - Not rely primarily on institutional controls and monitoring at a Site, or portion thereof; if it is technically possible to implement a more permanent cleanup action.
  - 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.
  - Ensure a reasonable restoration time frame.
  - Use permanent solutions to the maximum extent practicable.

- **Other Requirements**
  - Comply with applicable media-specific requirements for soil and groundwater.
  - Consider public concerns and tribal rights and interests.

- **Disproportionate Cost Analysis:** The DCA is the key process by which the cleanup action that is permanent to the maximum extent practicable (PMEP) is identified per WAC 173-340-360(5) and Ecology's PMEP guidance document (Ecology 2025). The costs and benefits of the alternatives are iteratively compared, starting with the two most permanent alternatives to identify the alternative that

DRAFT

is the most cost-effective for the benefits it provides (highest benefit per unit cost). The environmental benefits for the alternatives are evaluated based on six criteria in WAC 173 340 360(5)(d):

- Protectiveness
- Permanence
- Long-term effectiveness
- Management of implementation risks
- Technical and administrative implementability
- Cost

Each alternative is scored for the six criteria and the scores are weighted and summed. The total weighted benefit scores are compared to the estimated cost to implement the alternative. A cost-to-benefit ratio is calculated and used to iteratively compare alternatives, as described above, to select the alternative which is PMEP.

4.3 CLEANUP ACTION SELECTION PROCESS

The cleanup action for the Site was selected in accordance with the MTCA requirements and the DCA process summarized in the previous section and discussed in detail in the FS. In general, the cleanup action selection process included the following steps:

- Identified and evaluated remedial technologies: Remedial technologies and implementation options that were potentially applicable to the cleanup of Site contaminants and media were identified and screened to retain those most appropriate for the Site. Screening criteria included relative cost, implementability, and effectiveness. Technologies which were considered implementable and effective relative to their costs were retained for potential use in alternatives.
- Assembled alternatives: A subset of the retained technologies was assembled to develop remedial alternatives.
- Evaluated alternatives: The alternatives were evaluated in accordance with procedures set forth in MTCA to determine the PMEP (preferred) alternative for the Site in accordance with WAC 173-340-360.

Alternative 4 was identified as being protective of human health and the environment, including likely vulnerable populations and overburdened communities, and was determined to be the most permanent alternative with the highest benefit per cost (or alternatively the lowest cost per benefit) ratio. Alternative 4 was therefore selected as the PMEP alternative (preferred alternative) for the Site. Alternative 4 uses in-situ solidification/stabilization (ISS) in AOC1, ISCR with AC in AOC2, Excavation in AOC3, and MNA in AOC4.

4.4 OTHER CONSIDERATIONS

In addition to the PMEP process described above, environmental justice and potential climate change impacts were considered as part of cleanup action selection. These considerations are discussed separately in the sections below.

DRAFT

4.4.1 Environmental Justice

Effective January 1, 2024, WAC 173-340-380(5)(c) requires that cleanup action plans contain a summary of how impacts on likely vulnerable populations and overburdened communities were considered when selecting the cleanup action and developing the plan. Ecology Publication No. 24-09-044 (Ecology 2024) defines criteria for whether a potentially exposed population includes a likely vulnerable population or overburdened community. These criteria were evaluated by comparing factors on the Washington State Department of Health's Environmental Health Disparities (EHD) Map (DOH 2024) with the criteria in Ecology Publication No. 24-09-044. Vulnerable populations and overburdened communities are indicated by EHD ranks of 9 or 10. The potentially exposed population near the Site has an EHD Index rank of 10.

The alternatives considered were evaluated for potential short-term and long-term impacts, including exposure to contaminated media, construction-related noise, dust, truck traffic, and disruption associated with implementation. The selected cleanup was identified as protective of human health and the environment and is expected to minimize adverse impacts to vulnerable populations and overburdened communities nearby by reducing or eliminating potential exposure pathways to the maximum extent practicable and limiting construction-related effects through implementation of appropriate measures.

4.4.2 Climate Change Evaluation

A climate change evaluation was performed by reviewing information in the Climate Mapping for a Resilient Washington tool (GIS Mapping Tool) developed by the Climate Impacts Group (Raymond, C., M. Rogers 2022) to evaluate whether cleanup of the Site may be susceptible to climate change impact from factors including sea level rise, wildfire, reduced snowpack, flooding, extreme precipitation, extreme heat, and drought.

The likelihood of climate change-related impacts adversely affecting the Site and surrounding area are as follows:

- **Sea Level Rise**: The GIS Mapping Tool indicates areas where there is a 50 percent or greater likelihood of sea level rise resulting from climate change in the next 30 years relative to the average sea level in the period from 1991 to 2009. The Site is not included in the areas identified on the map; therefore, it is not anticipated that cleanup at the Site would be impacted by sea level rise due to climate change.
- **Wildfire:** The GIS Mapping Tool indicates areas where changing conditions would result in an increase in high fires or days on which 100-hour fuel moisture is less than the historical 20th percentile. The map indicates that the Site is estimated to experience an increase of 6 high fire days from 2010 to 2039. However, the Site is not located in a heavily forested area that would be subject to wildfire; therefore, it is not anticipated that cleanup at the Site would be impacted by wildfires due to climate change.
- **Reduced Snowpack**: The GIS Mapping Tool indicates areas where there may be decreased snowpack as measured on April 1, resulting from climate change in the next 30 years. The Site is not included in the areas identified on the map; therefore, it is not anticipated that cleanup at the Site would be impacted by changes in snowpack due to climate change.
- **Flooding**: The GIS Mapping Tool indicates areas where the 25-year peak streamflow events based on 1980 to 2009 high stream flow values occur at return intervals more frequently than 25 years during the time period from 2020 through 2049. The Site is not included in the areas identified on the map;

DRAFT

therefore, it is not anticipated that cleanup at the Site would be impacted by flooding due to climate change.

- **Extreme Precipitation**: The GIS Mapping Tool indicates areas where there is an increase in the intensity of a 2-year storm event resulting from climate change from 2020 to 2049 relative to rainfall intensity data from 1980 to 2009. The Site is part of an area identified on the map where intensity may increase by 8 percent. However, cleanup of the Site is not expected to be impacted by this increase in rainfall intensity because there will be no difference between pre- and post-cleanup conditions in any of the AOCs insofar as precipitation is concerned. AOCs 1 and 2 are inside a building. AOC3 is the ditch which will be excavated during the dry season, backfilled, reseeded, and monitored until natural vegetation is re-established. AOC4 is undergoing MNA with controls and the ground surface (currently paved) will not be altered.
- **Extreme Heat**: The GIS Mapping Tool indicates areas where there will be a change in average summer maximum temperature compared with baseline 1980 to 2009 baseline data. The map indicates that the Site is estimated to experience an increase of 3.7°F in average summer maximum temperature from 2020 to 2049. The change in average summer maximum temperature is an indicator of heat stress for people, ecosystems, and infrastructure; however, it is not anticipated that the cleanup will affect or be affected by the temperature increase. AOCs 1 and 2 will be remediated inside a building. AOC3 is the ditch which will be excavated and restored with clean soil, and AOC4 is undergoing MNA with controls and the ground surface (currently paved) will not be altered.
- **Drought**: The GIS Mapping Tool indicates areas where there will be a change in total annual precipitation compared with 1980 to 2009 baseline data. The map indicates that the Site is estimated to experience an increase of 5 inches (approximately 2.8 percent) from 2020 to 2049. This nominal increase is not expected to impact cleanup of the Site.

Climate change is unlikely to impact conditions at the Site based on a review of information in the GIS Mapping Tool. Therefore, the cleanup strategy for the Site will not be impaired by climate change.

5.0 Description of Selected Remedy

The selected cleanup action for the Site includes elements to address contamination in the four remedial areas (AOCs) identified based on the findings of the RI and FS and shown in Figure 4. The remedial elements of the cleanup action are summarized below by AOC and in Figure 5 and by Site-wide requirements, including the institutional and engineering controls and associated long-term monitoring which will be required. Estimates of the contamination to remain in place are also provided. Final design details will be developed in an Engineering Design Report (EDR).

5.1 AOC 1 – IN-SITU SOLIDIFICATION/STABILIZATION

ISS will be used to treat chromium- and TCE-contaminated soil that is impacting groundwater within AOC1 (approximately 1,700 cubic yards). The treated soil mass will reduce contaminant mobility and thus leaching to groundwater and will also have significantly reduced permeability which will divert groundwater flow around and below the ISS-treated area through cleaner soil. This will enhance natural attenuation processes of any residual contamination in soil or groundwater left following treatment.

DRAFT

ISS will be used to treat the contaminated soil from below the existing concrete floor of Warehouse 1 to approximately 15 feet bgs which is approximately 10 feet into groundwater. The concrete floor will need to be cut and removed or cored prior to ISS treatment and existing monitoring wells MW5 and MW15 will need to be decommissioned. ISS treatment will be implemented using excavator bucket mixing, auger mixing/injection, or other alternative methods which will be evaluated and detailed in the EDR. Regardless of the selected implementation method, ISS treatment within the building will be achieved using stabilizing reagents and other admixtures such as portland concrete cement, fly ash, bentonite clay, and/or granular activated carbon mixed with soil. Treatability testing will be used to evaluate the appropriate ISS mix specifications, and those details will be included in the EDR. Soil within the ISS area is anticipated to swell during the mixing process and excess soil will require off-site disposal at a permitted facility. The former concrete floor, or portions of the floor, within AOC1 will be replaced following ISS remedial actions to allow the owner/tenant to continue operations for commercial purposes.

5.2 AOC2 – IN SITU CHEMICAL REDUCTION WITH ACTIVATED CARBON

ISCR with AC will be used to treat TCE- and chromium-contamination in saturated soil and groundwater within AOC2 (approximately 1,600 cubic yards). This treatment technology relies on the passive flow of groundwater through subsurface permeable zones of reactive material to treat dissolved-phase contaminants. Contaminants in saturated soil are desorbed via diffusion as the groundwater is treated.

ISCR with AC is planned below the existing concrete floor of Warehouse 1 from the top of the groundwater table, approximately 5 feet bgs, to the bottom of the contaminated zone, approximately 20 feet bgs. The concrete floor will be cored and existing monitoring well MW14 will need to be decommissioned prior to treatment. Direct-push drilling, if feasible based on the geologic conditions, will be used to inject the ISCR/AC products such as zero-valent iron or other iron-based solutions (which act as the reduction reagents) and colloidal activated carbon. A grid of injections will be used across the AOC2 footprint with an assumed radius of influence (or injection point spacing) of approximately 5 to 8 feet. Pilot testing is planned to verify the drilling method feasibility and the radius of influence of the injections prior to full-scale implementation. Either the boreholes will be repaired or the entire floor area in AOC2 may be replaced following injections to allow warehouse operations to continue to be used for commercial purposes.

5.3 AOC3 – DITCH EXCAVATION

Excavation of shallow soil will be performed in the ditch (AOC3) to remove contamination (approximately 140 cubic yards). Excavation will be performed during the dry season using standard erosion control measures and excavation equipment. The ditch will be excavated to approximately 2 feet bgs and confirmation soil samples will be collected to confirm contaminants were removed to concentrations at or below cleanup levels. The ditch will be backfilled with clean soil, seeded with an appropriate seed mix, and monitored and maintained through the first wet season to ensure vegetation is re-established. Excavated soil will be disposed off-site at a permitted facility.

5.4 AOC4 – MNA

MNA will be used to treat isolated residual petroleum contamination in the vadose zone within AOC4 (approximately 50 cubic yards in total). Monitoring will document natural attenuation processes, including biodegradation, sorption, dilution, volatilization, and/or chemical reactions. MNA is appropriate for AOC4 because petroleum hydrocarbons are typically amenable to natural attenuation, groundwater is not

DRAFT

contaminated, and risks associated with the contamination in the vadose zone such as direct contact will be mitigated via existing surface caps. Monitoring is expected to consist of quarterly sampling of existing wells for a year or more. The actual monitoring schedule will be established in a Compliance Monitoring Plan which will be completed following cleanup action construction. Groundwater concentrations of petroleum hydrocarbons are expected to remain the same (i.e., below cleanup levels) or decrease over time. Institutional and engineering controls, as described further in the next section, will be used to mitigate risks associated with soil contamination beneath the existing asphalt cap while natural attenuation is taking place.

5.5 INSTITUTIONAL AND ENGINEERING CONTROLS

Institutional controls are measures undertaken to limit or prohibit activities that interfere with the integrity of a cleanup action or that may result in exposure to hazardous substances at a site. An environmental covenant will be recorded for the property in accordance with WAC 173-350-400(8)(e). Specific institutional controls for the cleanup action will be defined in an environmental covenant recorded for the property. However, the covenant will likely include the following prohibitions and requirements, in addition to financial assurances:

- **Land use.** The land shall continue to be used for commercial/industrial purposes.
- **Containment of waste materials.** AOCs 1, 2 and 4 will be covered by impermeable surfaces (concrete, asphalt, buildings). Any activity that may result in the release or exposure to the environment of contaminants or create a new exposure pathway will require Ecology notification and planning to ensure activities are performed safely and do not cause a release. Some examples of activities that are restricted, but are not limited to, include the following: disturbing impermeable surfaces, drilling, excavating or digging more than 1 foot deep with mechanical equipment. The Grantor shall notify Ecology and contractors of these covenant restrictions prior to performing any work such as utility work or other excavations.
- **Groundwater use.** No water supply well shall be installed on the property.
- **Monitoring.** Groundwater shall be monitored in accordance with a Compliance Monitoring Plan to be developed after construction. Monitoring will be used to evaluate treatment efficacy (including attenuation) and long-term stability of lower concentration dissolved contaminants outside active treatment areas in AOC1 and AOC2. Groundwater monitoring wells shall be decommissioned in accordance with Chapter 173-160, WAC when they have achieved cleanup levels and as approved by Ecology. Indoor air will also be monitored until TCE concentrations in groundwater in AOC1 and AOC2 no longer pose a vapor intrusion risk.

Engineering controls will be required to maintain the existing surface caps over AOC1, AOC2, and AOC4, while contamination remains in place during the treatment/attenuation phase or, in the case of AOC1, in perpetuity. Controls may also be required to address TCE in indoor air, however, this is considered unlikely as indoor air TCE concentrations have been below cleanup levels since interim actions were performed in 2020.

5.6 CONTAMINATION TO REMAIN IN PLACE AND RESTORATION TIMEFRAME

Contaminated media will remain at the Site at concentrations exceeding cleanup levels following implementation of the cleanup action. Approximately 1,600 cubic yards of soil will remain in place in AOC1;

DRAFT

this soil will be contained via ISS treatment and surface capping. Soil sample locations and soil chemical analytical results for AOC1 are provided in the RI.

ISS will limit contaminant mobility and cut off exposure pathways to reduce risks to human health and the environment. Cleanup standards for soil and groundwater will be met in treatment area within AOC1 when construction is complete, acknowledging that solidified/stabilized contaminated soil will remain in place. Cleanup standards are also expected to be met immediately following construction in AOC3.

The restoration timeframe for the active treatment area within AOC2 is estimated to be approximately 1 year for soil and 5 years for groundwater, considering conditional point(s) of compliance will be used for groundwater. The restoration timeframes for AOC4 (soil) and residual areas outside the AOC1 and AOC2 treatment areas (groundwater) are likely on the order of 10 or more years. Indoor air is already below cleanup levels.

These timeframes are considered reasonable based on the requirements of WAC 173-340-360(4)(b):

- Potential risks to human health and the environment are low. Contamination in AOCs 1, 2, and 4 are and will remain covered by impermeable surfaces (concrete, asphalt, buildings). Contaminated groundwater is not moving offsite as demonstrated by perimeter wells. Indoor air has been below cleanup level after interim actions were performed.
- Achieving a shorter restoration time frame is not practical or necessary.
- Institutional and engineering controls will be effective and reliable. Source control actions and natural attenuation will effectively and reliably reduce concentrations of contaminants in affected media over time.
- With the exception of several locations in AOC1 (which will be remediated), the toxicity and/or the concentrations of the Site contaminants are generally low.

6.0 Implementation of Cleanup Action

The cleanup action will be implemented based on this DCAP. Implementation includes remedial design, permitting, preparation of plans and specifications, construction, and post-construction monitoring and operation and maintenance (O&M).

6.1 REMEDIAL DESIGN

Design details will be established in an EDR that will be subject to Ecology review and approval. The Ecology-approved EDR will serve as the basis for developing permit applications, construction plans and specifications, and final compliance monitoring plans. The plans and specifications will be developed to guide construction of the cleanup action and to serve as the basis for bidding the work to contractors. Pre-design investigation/evaluation activities will be performed to support the design process, including, but not limited to, a treatability study for ISS mix design (AOC1) and a pilot study for the ISCR with AC treatment to verify implementation details (AOC2).

DRAFT

6.2 APPLICABLE, RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS)

Cleanup actions conducted under MTCA must comply with the state and federal laws that have jurisdiction over the cleanup or that Ecology determines may apply to the cleanup. These laws, implementing regulations, standards, limitations or other requirements are referred to as ARARs.

The ARARs identified for cleanup of the Site are listed in Table 4. The procedures, standards, and other requirements specified in MTCA are the primary ARARs governing cleanup actions at the Site. Additional ARARs regulate specific components of the cleanup, including disposal of hazardous waste, management of extracted groundwater during construction, and worker safety during implementation.

MTCA cleanup actions conducted under an AO are generally exempt from the procedural requirements of many state and local permits. Typically, cleanup actions are exempt from the procedural requirements of the Washington State Clean Air Act, solid waste management, water pollution control, and local regulations. However, permits associated with two national programs that are administered by the State - the Clean Water Act (CWA) (National Pollution Discharge Elimination System permits) and those permits required for treatment, storage or disposal of hazardous waste under the Resource, Conservation and Recovery Act (RCRA) - still apply, as do the federally-required permits. Regardless of the permit exemptions, the cleanup action must meet the substantive requirements of the subject regulations.

6.3 COMPLIANCE MONITORING AND OPERATIONS AND MAINTENANCE

Three types of compliance monitoring are required under MTCA for site cleanup: protection (or construction) monitoring, performance (or post-construction) monitoring which may include both short and long-term phases, and confirmation (or long-term compliance) monitoring. A long-term O&M plan will also be required because contamination will be left in place in accordance with the selected cleanup action.

The following specific MTCA monitoring plans will be prepared for the Site:

- **Construction Protection and Short-Term Performance Monitoring Plan:** This plan will be part of the construction documents, as the requirements in these plans will need to be implemented during and immediately following construction.
- **Operations, Maintenance and Monitoring Plan (O&M):** This plan will be prepared to guide care and monitoring of the cleanup after construction is complete. This document will include the plan for long-term performance and confirmation monitoring as described below, an institutional control (implementation and assurance) plan, and contingency response measures.
- **Long-Term Performance and Confirmation Monitoring Plan:** This plan will be prepared for the post-construction period to track areas that do not meet cleanup standards immediately following construction and to confirm that the cleanup continues to be effective over the long term. Confirmation monitoring will be required for each chemical of concern until the concentrations of that chemical attenuates to below the cleanup level at the monitoring location. This plan will be prepared in accordance with WAC 173-340-410(3) for inclusion into the O&M plan described above.

These plans will be submitted to Ecology for review and approval, either as part of another deliverable or as stand-alone documents.

DRAFT

6.4 SCHEDULE FOR IMPLEMENTATION

Ecology and the PLPs will negotiate and finalize a new Agreed Order or Consent Decree to implement the cleanup action. It is anticipated that the design phase, including necessary design-related investigations/evaluations, can be completed in approximately 1 year following finalization of the Agreed Order or Consent Decree. Construction is estimated to take one year after design is complete. Construction for AOC1 and AOC2 inside the buildings will not be constrained by weather considerations, while the excavation in AOC3 will need to occur during the dry (summer) season. The new Agreed Order or Consent Decree between Ecology and the PLPs will establish the schedule of deliverables for preparing and submitting documents necessary to conduct the cleanup action, including the EDR, short and long-term monitoring and maintenance plans, periodic monitoring reports as applicable, and the specific construction schedule.

7.0 References

Ecology 2020. "Agreed Order No. DE 18079 in the matter of remedial action by Dick Morgan, CL Frazier Properties, LLC and Precision Engineering, Inc.: Washington State Department of Ecology," dated December 18, 2020.

Ecology 2024. Implementation Memorandum No. 25: Identifying Likely Vulnerable Populations and Overburdened Communities under the Cleanup Regulations, Ecology Publication No. 24-09-044. January 2024.

Ecology 2025. "Guidance for Determining if a Cleanup Action used Permanent Solutions to the Maximum Extent Practicable using Disproportionate Cost Analysis," Washington State Department of Ecology, Toxics Cleanup Program, Publication Number 25-09-059, Draft for Public Comment, February 2025.

GeoEngineers 2026. "Public Review Draft Remedial Investigation, Former Precision Engineering Property, 1231 South Director Street, Seattle, Washington," dated November 11, 2024. Revised April 8, 2026.

GeoEngineers 2026. "Public Review Draft Feasibility Study, Former Precision Engineering Property, 1231 South Director Street, Seattle, Washington," dated April 24, 2026.

Washington State Department of Health (DOH) 2024. Washington Environmental Health Disparities Map, https://doh.wa.gov/data-and-statistical-reports/washington-tracking-network-wtn/washington-environmental-health-disparities-map. 2024.

Raymond, C., M. Rogers 2022. Climate Mapping for a Resilient Washington. Prepared by the Climate Impacts Group, University of Washington, Seattle and Research Data & Computing Services, University of Idaho, Moscow. https://data.cig.uw.edu/climatemapping/. Accessed September 1, 2026.

DRAFT

Tables

DRAFT

Table 1

Soil Cleanup Levels

Former Precision Engineering Property

Seattle, Washington

Contaminant of Concern (COC)	Cleanup Level[1] (mg/kg)
Chromium, total	100
Chromium, trivalent	100
Chromium, hexavalent	0.027
TPH	2,000
Trichloroethylene	0.002

Notes:

[1] Cleanup levels shall not be set below the practical quantitation limit per WAC 173-340-740(5)(c)

TPH = Total petroleum hydrocarbons (diesel and heavy oil range hydrocarbons)

mg/kg = milligrams per kilogram

DRAFT

Table 2

Groundwater Cleanup Levels

Former Precision Engineering Property

Seattle, Washington

Contaminant of Concern (COC)	Cleanup Level[1] (µg/L)
Chromium, total	100
Chromium, trivalent	24,000
Chromium, hexavalent	1.4
TPH	500
Trichloroethylene	4

Notes:

[1] Cleanup levels shall not be set below the practical quantitation limit per WAC 173-340-720(7)(c)

TPH = Total petroleum hydrocarbons (diesel and heavy oil range hydrocarbons)

µg/L = microgram per liter

DRAFT

Table 3

Air Cleanup Levels

Former Precision Engineering Property

Seattle, Washington

Contaminant of Concern (COC)	Cleanup Level[1] (µg/m^3)
Trichloroethylene	0.33

Notes:

[1] The indoor air screening level for commercial workers for TCE is 7.5 ug/m^3

µg/m^3 = microgram per cubic meter

DRAFT

Table 4

Applicable Laws and Relevant and Appropriate Requirements (ARARs)

Former Precision Engineering Property
Seattle, Washington

SUBJECT REGULATED	STATE/LOCAL STATUTES AND IMPLEMENTING REGULATIONS	FEDERAL STATUTES AND IMPLEMENTING REGULATIONS	NOTES
General Cleanup			
Hazardous waste cleanup	Model Toxics Control Act (MTCA) Cleanup Regulation (RCW 70.105D; Chapter 173-340 WAC)	Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 USC Chapter 103; 40 CFR Chapter I, Subchapter J)	State law has precedence; primary regulations governing cleanup actions at the Site. Most state and local permits are waived because the work is being conducted under an Agreed Order, but MTCA requires that permit substantive requirements must be met. All federal permits governing the remedial action are still required.
Environmental impact review	State Environmental Policy Act (SEPA) (RCW 43.21C, Chapters 197-11 and 173-802 WAC)	National Environmental Policy Act (NEPA) (42 USC Chapter 55 § 4321 et seq.; 40 CFR Chapter V, Parts 1500-1508)	Ecology would likely be the lead agency and make the determination of compliance with SEPA.
Water Quality			
General	Water Pollution Control Act (RCW 90.48); Water Quality Standards for Surface Waters of Washington (Chapter 173-201A WAC); Underground Injection Control (UIC; Chapter 173-218 WAC)	Federal Water Pollution Control Act (aka Clean Water Act [CWA]) (33 USC Chapter 26 §1251 et seq.; 40 CFR Chapter 1, Subchapter D)	State implements most components of the CWA. Water quality is considered in the development of cleanup objectives, short-term performance during construction, and long-term performance of the remedy. UIC requirements apply as in-situ injection of remedial products is planned.
Discharge of Construction-generated water	Water Pollution Control Act (RCW 90.48); National Pollution Discharge Elimination System Program (Chapter 173-220 WAC)	CWA Section 402	If discharge of extracted water is required in connection with implementation of the cleanup remedy, an NPDES permit administered by the State will be required. Local NPDES requirements for stormwater will also apply.
Disposal of Contaminated Material			
Management, transport and disposal of hazardous wastes	Solid and Hazardous Waste Management Act (RCW 70.105); Dangerous Waste Regulations (Chapter 173-303 WAC)	Resource Conservation and Recovery Act (RCRA) (40 CFR 260 and 261); 49 USC Chapter 51 Transportation of Hazardous Material; 40 CFR 171-180	Federal regulations are implemented by the State. Pertains to soil, water, and debris waste handling and landfill disposal. Management and disposal process is administered by the State and all substantive requirements must be met. Transportation is regulated by the US Department of Transportation.
Management, transport and disposal of solid wastes	Solid and Hazardous Waste Management Act (RCW 70.95; Chapters 173-305, 173-350 WAC and others)	RCRA (40 CFR 257 Subpart A)	Affects land disposal and transportation of excavated material and debris from the Site; process is administered by the State and all substantive requirements must be met.
Other Laws or Requirements			
Air quality	Clean Air Act (RCW 70.94); Ambient Air Quality Standards (Chapter 173-746 WAC); Puget Sound Clean Air Agency Regulation 1	Clean Air Act (42 USC, Chapter 85 Air Pollution, Prevention and Control)	Administered by the State and local authorities; substantive requirements apply to construction activities during implementation of the remedy including control of fugitive dust.
Health and safety	Washington Industrial Safety and Health Act (RCW 49.17; Chapters 296-62, 296-843 WAC and others)	Occupational Safety and Health Act (OSHA) (29 USC Chapter 15; 29 CFR 1910, 1926)	Applicable to investigation and construction phases of the cleanup.
Cultural Resource Protection: Objects, landscapes or structures of historical or archaeological significance	Regulations addressing these resources include SEPA and the Governor's Executive Order 05-05 (i.e., no one single regulation or authority). RCW's 27.44, 27.53, 68; WAC's 25-48, 365-196-450, 173-340-815 and others also apply.	National Historic Preservation Act (NHPA) (54 USC 300101 et seq.), Archaeological and Historic Preservation Act (54 U.S.C. 312501 et seq.), Archeologic Resources Protection Act (ARPA) (16 U.S.C. 470aa et seq.), The Native American Graves Protection and Repatriation Act (25 U.S.C. 3001 et seq.)	State laws govern local projects; federal law governs those requiring federal permits or funds. Protection of significant historic, archaeological and traditional cultural sites from damage or loss during development is coordinated by the State's Department of Archaeological and Historic Preservation (State Historic Preservation Office) and includes evaluating compliance with Section 106 of the federal law. Ecology may require an Inadvertent Discovery Plan (IADP) for construction activities.
City of Seattle: Earthwork and Grading	Seattle Municipal Code 22.804	--	A City of Seattle DPD Grading Permit will be needed for excavation activities.
City of Seattle: Electrical Installations	Seattle Municipal Code 18.30	--	Electrical installations to support remedial activities at the site. Potentially applicable to the site to support remedial activities depending on construction means and methods. All electrical installations to be weatherized per National Electrical Manufacturers Association 4 standards.

DRAFT

Table 4

Applicable Laws and Relevant and Appropriate Requirements (ARARs)

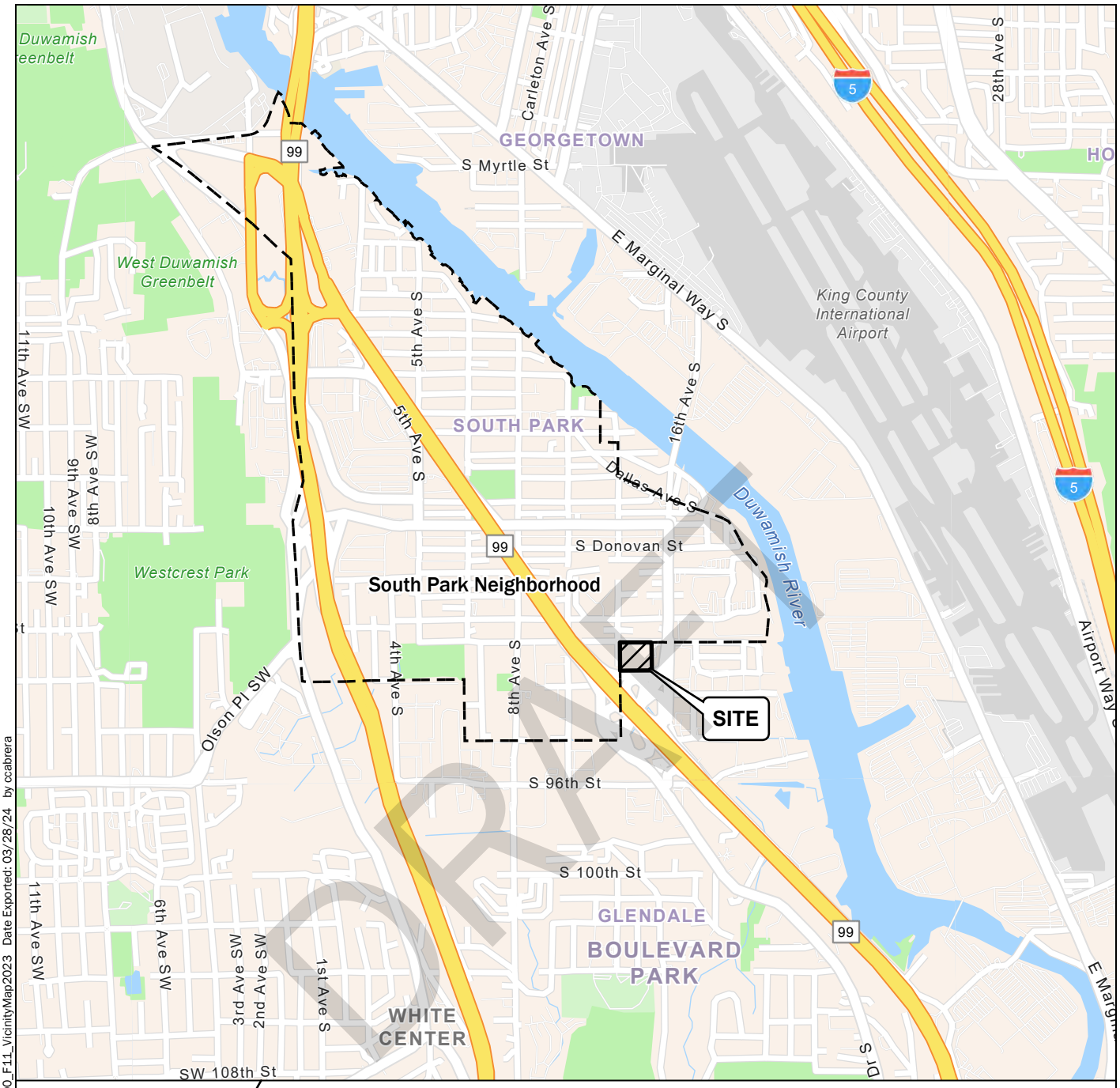
Former Precision Engineering Property
Seattle, Washington

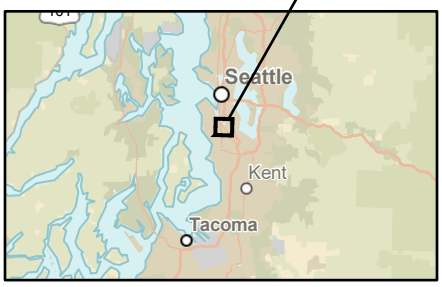
SUBJECT REGULATED	STATE/LOCAL STATUTES AND IMPLEMENTING REGULATIONS	FEDERAL STATUTES AND IMPLEMENTING REGULATIONS	NOTES
City of Seattle: Traffic Control and Truck Haul Routes	Seattle Municipal Code (SMC Title 15)	--	A City of Seattle Department of Transportation Street Use Permit will be needed for traffic control and truck haul routes.
City of Seattle: Noise	Seattle Municipal Code 25.08	--	Applicable to investigation and construction phases of the cleanup.
City of Seattle: Stormwater	2026 Seattle Stormwater Code (SMC Title 22, Subtitle VIII)	--	Applicable to construction phases of the cleanup.

DRAFT

Figures

DRAFT





N
W E
S

2,000 0 2,000

Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: ESRI

Projection: NAD 1983 UTM Zone 10N

Vicinity Map

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 1

P:\25\25806001\GIS\25806001_Project\25806001_Project.aprx\2580600100_F11_VicinityMap2023 Date Exported: 03/28/24 by ccabrera

DRAFT



Legend

- Former Precision Engineering Property
- Nearby Current and/or Former Contaminated Sites
- King County Parcels

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: 2021 image and GIS data from King County GIS.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

N W E S

200 0 200

Feet

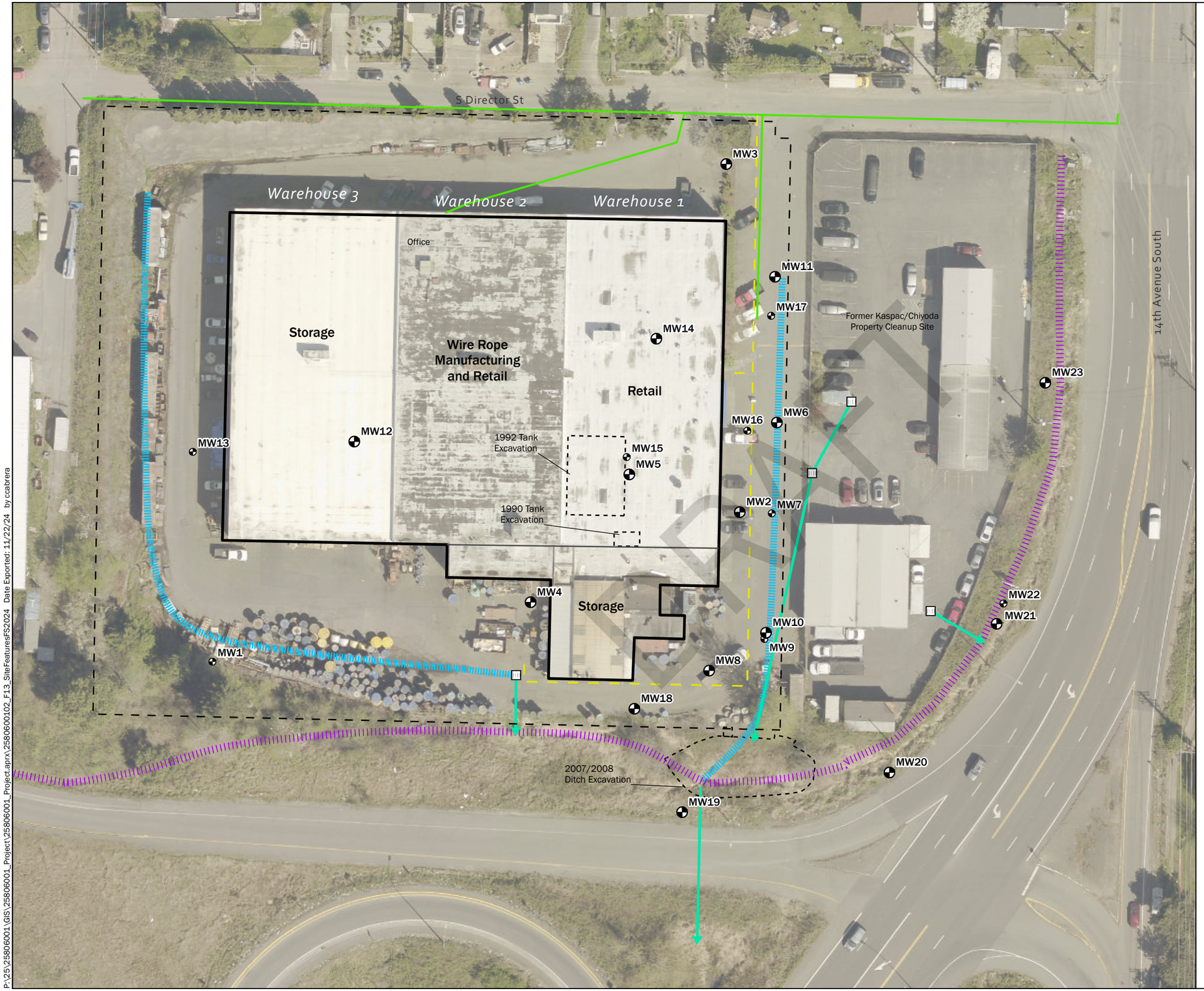
Site and Surroundings

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 2

P:\25\25806001\GIS\25806001_Project\25806001_Project.aprx\25806001_F21_SiteSurroundings Date Exported: 05/17/24 by ccabrera



Legend

- Shallow Monitoring Well
- Deep Monitoring Well
- Former Tank/Ditch Excavation Area
- Drainage Ditch
- Stormwater Runoff
- Catch Basin
- Stormwater Piping with Outfall
- Sanitary Sewer
- Natural Gas
- Property Parcel

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: 2021 image from King County GIS.

Projection: NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet

N W E S

60 0 60

Feet

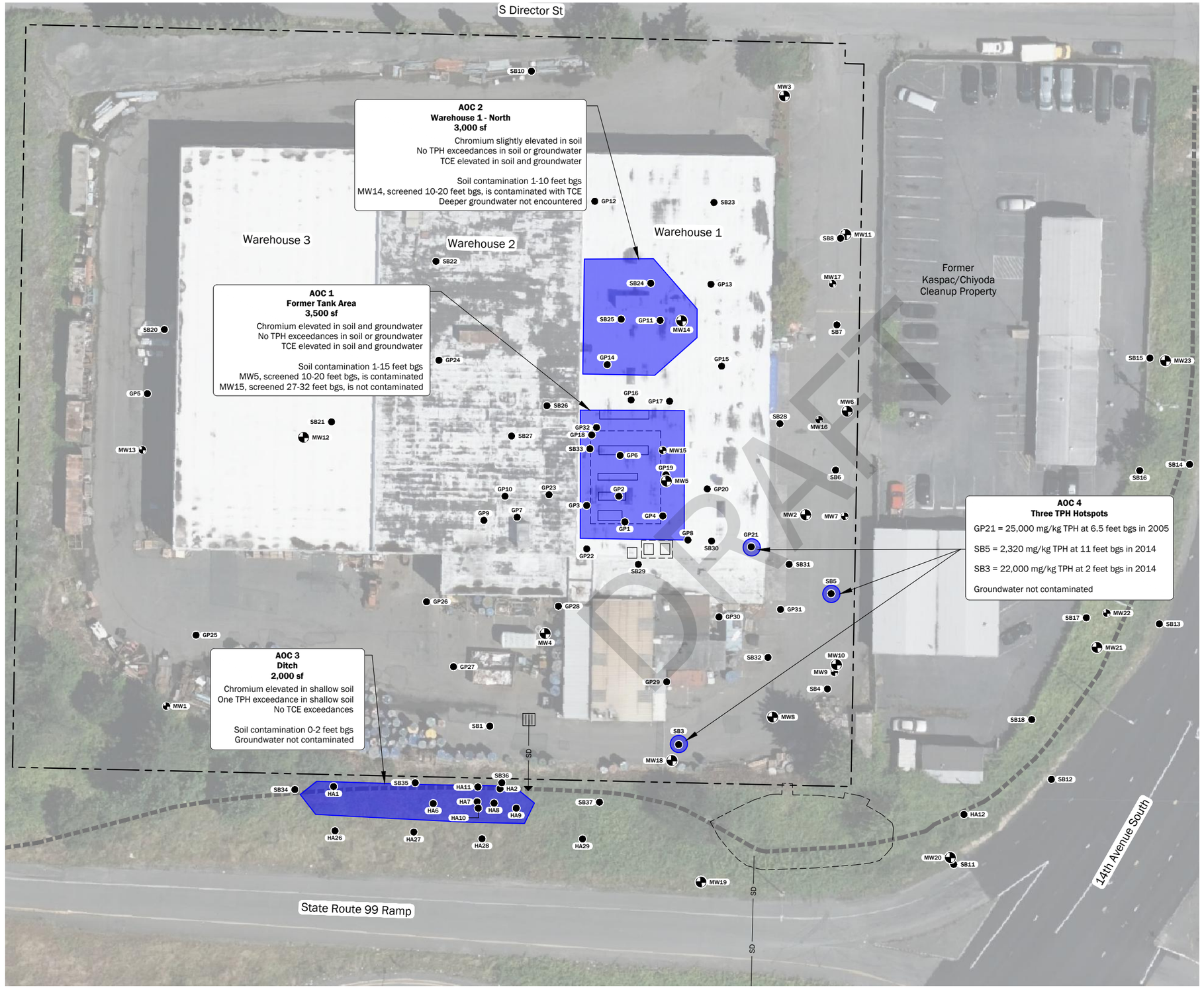
Site Features - 2026

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 3

P:\25\258060001\GIS\258060001_Project\258060001_Project.aprx\2580600102_F13_SiteFeaturesFS2024 Date Exported: 11/22/24 by:ccabrera



Legend

- Soil Boring/Hand Auger
- Shallow Monitoring Well
- Deep Monitoring Well
- Former chromic acid tank
- Drainage Ditch
- Catch Basin
- SD — Stormwater Piping with Outfall
- Former Tank/Ditch Excavation Area
- Property Parcel

Notes:

AOC = Area of Concern
SF = square feet
TPH = Total Petroleum Hydrocarbons (oil-range)
TCE = Trichloroethylene

Source:

- Aerial from Microsoft Bing, 2022

Projection: WA State Plane, North Zone, NAD83, US Foot

Disclaimer: This figure was created for a specific purpose and project. Any use of this figure for any other project or purpose shall be at the user's sole risk and without liability to GeoEngineers. The locations of features shown may be approximate. GeoEngineers makes no warranty or representation as to the accuracy, completeness, or suitability of the figure, or data contained therein. The file containing this figure is a copy of a master document, the original of which is retained by GeoEngineers and is the official document of record.

N

0 50
Feet

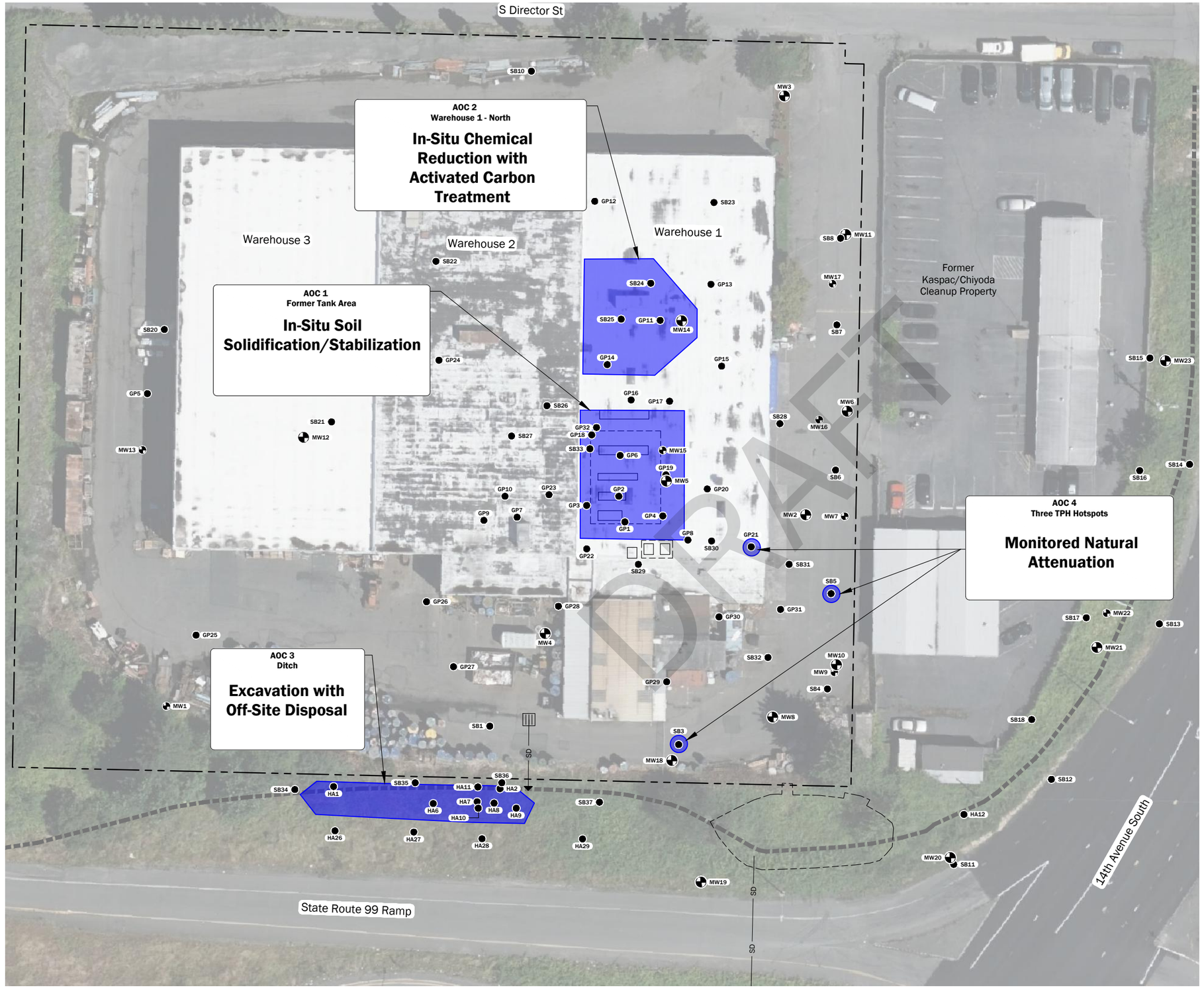
Areas Requiring Cleanup

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 4

P:\25\25806001\CAD\03\FS Report\258060103_F3-1_Areas Requiring Cleanup.dwg 3-1 Date Exported:1/2/2025 10:44 AM - by Michael R. Woods



Legend

- Soil Boring/Hand Auger
- Shallow Monitoring Well
- Deep Monitoring Well
- Former chromic acid tank
- Drainage Ditch
- Catch Basin
- SD — Stormwater Piping with Outfall
- Former Tank/Ditch Excavation Area
- Property Parcel

Notes:

AOC = Area of Concern
SF = square feet
TPH = Total Petroleum Hydrocarbons (oil-range)
TCE = Trichloroethylene

Source:
- Aerial from Microsoft Bing, 2022

Projection: WA State Plane, North Zone, NAD83, US Foot

Disclaimer: This figure was created for a specific purpose and project. Any use of this figure for any other project or purpose shall be at the user's sole risk and without liability to GeoEngineers. The locations of features shown may be approximate. GeoEngineers makes no warranty or representation as to the accuracy, completeness, or suitability of the figure, or data contained therein. The file containing this figure is a copy of a master document, the original of which is retained by GeoEngineers and is the official document of record.

N

0 50
Feet

Cleanup Action Summary

Precision Engineering, Inc.
Seattle, Washington

GeoEngineers

Figure 5

DRAFT

P:\25\25806001\CAD\03\FS Report\2580600103_F3-1_Areas Requiring Cleanup.dwg 3-1 Date Exported:1/2/2025 10:44 AM - by Michael R. Woods