

# COMPLIANCE MONITORING PLAN

# Former Washington Cold Storage Building 240 15<sup>TH</sup> Street Southeast Puyallup, Washington

Farallon PN: 2636-001

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#### 1.0 INTRODUCTION

Farallon Consulting, L.L.C. (Farallon) has prepared this compliance monitoring plan on behalf of CREF3 Puyallup to provide details regarding soil and groundwater compliance monitoring that will be conducted during the planned cleanup action at the property at 240 15<sup>th</sup> Street Southeast in Puyallup, Washington (herein referred to as the Property) (Figures 1 and 2). The Property currently is enrolled in the Washington State Department of Ecology (Ecology) expedited Voluntary Cleanup Program and has been assigned Voluntary Cleanup Program Project Identification No. XS0012.

The Property consists of Pierce County Parcel Nos. 0420274123, 7845000161, and 7845000170, which total approximately 7.95 acres of land. The Property historically was developed with a 101,933-square-foot warehouse and freezer building constructed in 1985, which was largely destroyed by a fire in 2021; and a one-story 19,885-square-foot industrial warehouse constructed in 1960 and used as a smokehouse, which was destroyed by a fire in 2023.

Following the fire at the Property in 2021, constituents of concern (COCs), including total petroleum hydrocarbons (TPH), benzene, halogenated volatile organic compounds (HVOCs), and per- and polyfluoroalkyl substances (PFAS), were detected in soil and/or groundwater at concentrations exceeding Washington State Model Toxics Control Act Cleanup Regulation (MTCA) cleanup levels and/or Washington State Action Levels.

Between May and July 2023. Farallon submitted a Remedial Investigation/Focused Feasibility Study and Cleanup Action Plan (RI/FFS-CAP) and conducted a PFAS evaluation for Ecology's review to support planned redevelopment and cleanup activities at the Property. Following review of Farallon's RI/FFS-CAP and PFAS evaluation, Ecology issued an opinion indicating that a No Further Action determination likely would be issued for the Property following completion of the cleanup action proposed in Farallon's RI/FFS-CAP and PFAS evaluation, and following evaluation of the down-gradient extent of petroleum and HVOC impacts in groundwater on adjoining properties.

Cleanup activities will be conducted in advance of and in conjunction with Property redevelopment and will include source removal excavations to remove localized areas of contaminated soil, engineering controls to mitigate the potential for vapor intrusion into the new building that will be constructed on the Property, and remedial injections to remediate



COC impacts in groundwater and prevent off-Property migration of contaminated groundwater.

Remedial injections were conducted in April 2024 in three treatment areas, identified as Treatment Areas 1, 2, and 3. Treatment Area 1 targeted petroleum hydrocarbons and benzene in groundwater, Treatment Area 2 targeted HVOCs in groundwater, and Treatment Area 3 targeted PFAS in groundwater. The scope of work for remedial injections is presented in Farallon's Letter Regarding Remedial Injection Basis of Design dated February 28, 2024.¹. As described in Section 4.0: Reporting, the completed scope of work for remedial injections also will be summarized in a Cleanup Action Report that will be submitted to Ecology following completion of the cleanup action.

A vapor mitigation plan has not yet been provided to Ecology for review because Property development plans have not yet been finalized. Vapor mitigation measures may include sufficient lateral and horizontal separation of the proposed building from potential sources of vapor intrusion and/or installation of a vapor barrier and/or passive venting beneath portions of the proposed building that may be susceptible to vapor intrusion. The potential for vapor intrusion will be evaluated based on Ecology's *Guidance for Evaluating Vapor Intrusion in Washington State, Investigation and Remedial Action* revised March 2022.

This compliance monitoring plan has been developed to summarize compliance monitoring activities that will be implemented to evaluate the effectiveness of the planned source removal excavations and the completed remedial injections at the Property.

#### 1.1 REPORT ORGANIZATION

This compliance monitoring plan has been organized into the following sections:

**Section 2, Compliance Soil Monitoring**, describes the soil performance and confirmation sampling protocols to be conducted at the Property during source removal excavation activities, and procedures to address unforeseen conditions that may be encountered during Property redevelopment.

**Section 3, Compliance Groundwater Monitoring**, describes the performance and compliance groundwater monitoring program to be implemented at the Property following completion of remedial injection activities.

<sup>1</sup> Farallon. 2024. Letter Regarding Remedial Injection Basis of Design, Former Washington Cold Storage Building, 240 15<sup>th</sup> Street Southeast, Puyallup, Washington. From Yusuf Pehlivan and Pete Kingston. To Frank Winslow, Ecology. February 28.

1-2



**Section 4, Reporting,** describes documentation and reporting of the compliance monitoring activities that will be conducted at the Property.

Section 5, References, provides a list of the documents cited in this report.



#### 2.0 COMPLIANCE SOIL MONITORING

Compliance soil monitoring will include collecting performance and confirmation soil samples proximate to four source removal excavation areas where TPH, benzene, and/or HVOCs were detected in soil at concentrations exceeding MTCA cleanup levels. Analytical results for soil samples collected on the Property are presented in Farallon's RI/FS-CAP. Source removal excavation activities will be conducted to depths extending to the top of the water table in the following areas as shown on Figure 3:

- Proximate to boring A-2 in the northern portion of Property where TPH was detected at concentrations exceeding MTCA Method A cleanup levels in soil;
- Proximate to boring A-22 within the footprint of the former Property building where benzene was detected at concentrations exceeding MTCA Method A cleanup levels in soil;
- Proximate to boring FB-05 within the footprint of the former Property building where HVOCs were detected at concentrations exceeding MTCA Method A cleanup levels in soil; and
- Proximate to monitoring well FMW-10 in the northern portion of Property where HVOCs were detected at concentrations exceeding MTCA Method A cleanup levels in soil.

Soil samples collected during excavation activities submitted to a Washington State-certified analytical laboratory under standard chain-of-custody protocols for analysis of one or more of the following:

- TPH as diesel-range organics and as oil-range organics (DRO and ORO, respectively)
   by Northwest Method NWTPH-Dx;
- TPH as gasoline-range organics (GRO) by Northwest Method NWTPH-Dx; and
- Volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (EPA)
   Method 8260D.

Soil samples will be analyzed on a 24-hour turnaround time to expedite excavation activities, if needed, and maintain redevelopment schedule.



#### 2.1 PERFORMANCE MONITORING

Performance soil samples were collected during the RI to assist with defining the lateral and vertical extent of contaminated soil. Additional performance soil sampling is anticipated to refine the extent of the source removal excavation areas. Performance soil samples will be collected during or in advance of excavation activities and will entail collection of in-situ soil samples for laboratory analysis to quantify concentrations of COCs in soil. Samples will be submitted for laboratory analysis based on field indications of potential contamination such as staining, odor, and concentrations of volatile organic vapors as measured using a photoionization detector. Performance soil samples will be used as confirmation soil samples where analytical results confirm that MTCA cleanup levels are attained at the final limits of the excavation areas.

#### 2.2 CONFIRMATION MONITORING

Confirmation soil samples were collected during the RI to assist in defining the extent of contaminated soil on the Property. Additional confirmation soil samples will be collected as needed from the floor and sidewalls at the final extent of each source removal excavation area. Confirmation soil sampling will consist of collecting and analyzing in-situ soil samples from the base and sidewalls of the excavation areas to confirm that no COCs are present at concentrations exceeding their respective cleanup levels. At least one soil sample will be collected from each of the four sidewalls and floor of each source removal excavation area. Additional soil samples will be collected as necessary at the rate of approximately one per 30 feet of sidewall and one per 900 square feet of floor area.

#### 2.3 UNFORESEEN CONDITIONS

Unforeseen conditions that may be encountered during redevelopment implementation of the cleanup action include discovery of an underground storage tank (UST) or contaminated media outside the source removal excavations identified in Figure 3.

In the event that a UST is encountered during Property redevelopment, the general contractor will temporarily suspend excavation activities proximate to the UST, and will immediately notify CREF3 Puyallup Owner LLC and Farallon. Any UST encountered will be permanently decommissioned by excavation and removal in accordance with Washington State Underground Storage Tank Regulations (WAC 173-360) and Ecology *Guidance for Remediation of Petroleum Contaminated* Sites revised June 2016 (Ecology Guidance). A certified specialty subcontractor selected by CREF3 Puyallup Owner LLC will provide a UST Decommissioner to conduct the UST decommissioning and removal activities, which will



include inerting and rinsing the interior of the UST, as necessary, and removing the UST from the Property for recycling.

At the request of CREF3 Puyallup Owner LLC, Farallon will support the permitting and inspection activities required for permanent decommissioning of any UST encountered during redevelopment activities. Farallon will provide a Washington State-certified Site Assessor to observe the UST decommissioning activities, and will perform performance and/or confirmation soil sampling at the limits of soil excavation related to removal of the UST in accordance with Ecology regulations. Confirmation soil samples will be collected from the UST excavation and submitted for analysis for applicable constituents based on field observations, Ecology Guidance, and regulatory requirements. Farallon will complete the UST Site Check/Site Assessment Checklist and submit it to Ecology following receipt of confirmation soil sample analytical data. The results from the UST decommissioning activities will be incorporated into the Cleanup Action Report that will be prepared for the Property.

If field observations indicate the presence of potentially contaminated soil, groundwater, and/or stormwater related to a UST, or other potentially affected media during construction excavation, the general contractor will immediately notify CREF3 Puyallup Owner LLC and Farallon. In the event potentially contaminated media are encountered, the General Contractor will direct the excavation subcontractor to do the following:

- Stop excavation in the area of potential contamination;
- Isolate the area with barrier tape;
- Restrict vehicle and equipment traffic to avoid cross-contamination;
- Control personnel access; and
- Photograph and maintain notes documenting the encounter.

Following the characterization of potentially contaminated media and development of an appropriate treatment and/or disposal alternative by Farallon that is approved by CREF3 Puyallup Owner LLC, the general contractor will direct the appropriate subcontractor(s) to implement the selected treatment and/or disposal remedy.

In the event of an unforeseen condition, Farallon will observe the condition, and will implement the following procedures:

 Estimating the boundaries of potentially contaminated media using field-screening methods (e.g., presence of stains or odors, photoionization detector readings);



- Further marking the area as necessary, possibly using white paint and/or wooden stakes;
- Photographing and maintaining notes documenting the preliminary nature and extent of potentially contaminated media in-situ or stockpiled;
- Collecting performance samples in accordance with applicable regulations and/or
  guidance to identify the nature and extent of potential contamination, and to identify
  and develop one or more feasible alternatives for treatment and/or removal or
  disposal, for purposes of disposal profiling, manifesting, and regulatory closure;
- Coordinating analytical testing and managing analytical data pertaining to the
  encountered contaminated media, including expedited laboratory analysis as
  needed, in coordination with the general contractor to minimize disruption to the
  construction schedule;
- Consulting with CREF3 Puyallup Owner LLC, the general contractor, and/or the Excavation Subcontractor to develop and implement a contaminated media removal and disposal plan, as needed;
- Collecting confirmation samples in accordance with applicable regulations and guidance to confirm complete removal of contaminated media; and
- Completing the treatment and/or disposal profiles, and assisting with identification of appropriate treatment and/or disposal facilities.



#### 3.0 COMPLIANCE GROUNDWATER MONITORING

Following completion of remedial injection activities, Farallon will implement a performance and compliance groundwater monitoring program to evaluate the effectiveness of the remedial injections.

#### 3.1 GROUNDWATER MONITORING SCHEDULE

The performance and compliance groundwater monitoring program will begin approximately 3 months following completion of remedial injection activities, and the scope and schedule for the groundwater monitoring program will be specific to each treatment area. The monitoring schedule for Treatment Areas 1 and 2 will consist of one year of quarterly groundwater monitoring following completion of injection activities. Based on groundwater analytical results upon completion of the first year of quarterly groundwater monitoring, the performance and compliance groundwater monitoring program may be extended to include additional monitoring events if COCs remain in groundwater at concentrations exceeding MTCA cleanup levels at the selected points of compliance. The scope and frequency of the monitoring program will be discussed with Ecology following completion of the first year of quarterly groundwater monitoring.

The monitoring schedule for Treatment Area 3 will consist of conducting groundwater monitoring event at 15-month intervals for a period of 5 years following completion of remedial injection activities to evaluate the effectiveness of the proposed permeable reactive barrier (PRB) in preventing PFAS from migrating off the Property. The groundwater monitoring program for Treatment Area 3 may be extended following completion of the first 5 years of groundwater monitoring depending on groundwater conditions and feedback from Ecology.

The exact number of monitoring events necessary in each Treatment Area for Ecology to issue a No Further Action determination will be determined based on review of groundwater analytical data, and the frequency and/or need for continued monitoring events will be reevaluated during Ecology's 5-year review.



#### 3.2 GROUNDWATER MONITORING PROCEDURES

The performance and compliance groundwater monitoring events will include measuring depth to groundwater and collecting groundwater samples from monitoring wells associated with each injection treatment area as described below (Figure 4):

- Treatment Area 1: Existing monitoring wells MW-1, MW-7, FMW-08, and FMW-09 will
  be retained as for performance and compliance monitoring within and down-gradient
  of Treatment Area 1. Due to the planned construction of a building south of
  Treatment Area 1, monitoring well FMW-13, located along the southern Property
  boundary will be retained as the up-gradient compliance monitoring well for
  Treatment Area 1.
- Treatment Area 2: Monitoring wells FMW-10 and FMW-16 will be retained as for performance and compliance monitoring within and down-gradient of Treatment Area 2. Due to the planned construction of a building south of Treatment Area 2, monitoring well FMW-13, located along the southern Property boundary, will be retained as the up-gradient compliance monitoring well for Treatment Area 2.
- <u>Treatment Area 3</u>: Monitoring well FMW-17 is located immediately down-gradient of the proposed PRB, and monitoring well FMW-18 is located within the footprint of the proposed PRB for performance and compliance monitoring. Due to the planned construction of a building south of Treatment Area 3, monitoring well FMW-14, located between the PRB and the proposed building, will be retained as the upgradient compliance monitoring well for Treatment Area 3.

Monitoring wells located within the proposed building footprint are anticipated to be decommissioned during Property redevelopment and are not included in the compliance groundwater monitoring program. Monitoring wells included in the performance and compliance groundwater program that require decommissioning during redevelopment will be replaced as needed with input from Ecology to ensure that a sufficient compliance monitoring well network is present to monitor post-injection groundwater conditions.

During each performance and compliance groundwater monitoring event, Farallon field personnel will remove the locking well cap from each monitoring well and allow groundwater levels to equilibrate to atmospheric pressure for at least 45 minutes. The depth to groundwater will be measured to the nearest 0.01 foot using a water level meter from the top of the well casing. Reusable equipment will be decontaminated between each location.



Groundwater samples will be collected from the monitoring wells in accordance with standard EPA low-flow groundwater sampling procedures. During purging, the temperature, pH, specific conductance, dissolved oxygen, oxidation-reduction potential, and turbidity will be monitored to determine when stabilization of these parameters occurs. Farallon field personnel also will measure concentrations of ferrous iron in monitoring wells FMW-10 and FMW-16 using a field test kit. Following stabilization of the parameters, groundwater samples will be collected directly from the low-flow pump outlet. Groundwater samples will be transported to a Washington State-certified analytical laboratory under standard chain-of-custody protocols for analysis of one or more of the following, as presented in Table 1:

- GRO by Northwest Method NWTPH-Gx;
- DRO and ORO with and without silica gel cleanup by Northwest Method NWTPH-Dx;
- Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8260D;
- VOCs by EPA Method 8260D;
- PFAS by Modified EPA Method 537;
- Total organic carbon by Method SM5310C;
- Sulfate and nitrate by EPA Method 300.0;
- Methane, ethane, and ethene by Method RSK175; and
- Total iron by EPA Method 6020B.



#### 4.0 REPORTING

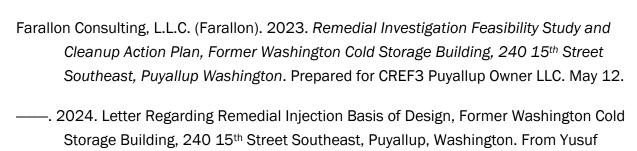
Farallon will prepare a Cleanup Action Report for submittal to Ecology following completion of the cleanup action. The Cleanup Action Report will include a summary of the results from the remedial action conducted at the Property, and a determination of whether a request for a No Further Action determination for the Property from Ecology is supported by the results of the cleanup action. The Cleanup Action Report will include the following elements:

- A summary of the characterization and remediation activities conducted at the Property;
- Documentation of the contaminated media treated, transported, and/or disposed of off the Property;
- Documentation of engineering and/or institutional controls implemented on the Property as necessary;
- Plan maps and summary tables summarizing completed cleanup action activities and analytical results for performance and confirmation samples collected during the cleanup action;
- Conclusions regarding the effectiveness of the cleanup action in accordance with MTCA requirements; and
- A request for a No Further Action determination if cleanup levels are attained at the standard point of compliance for all affected media.



Ecology. February 28.

#### 5.0 REFERENCES



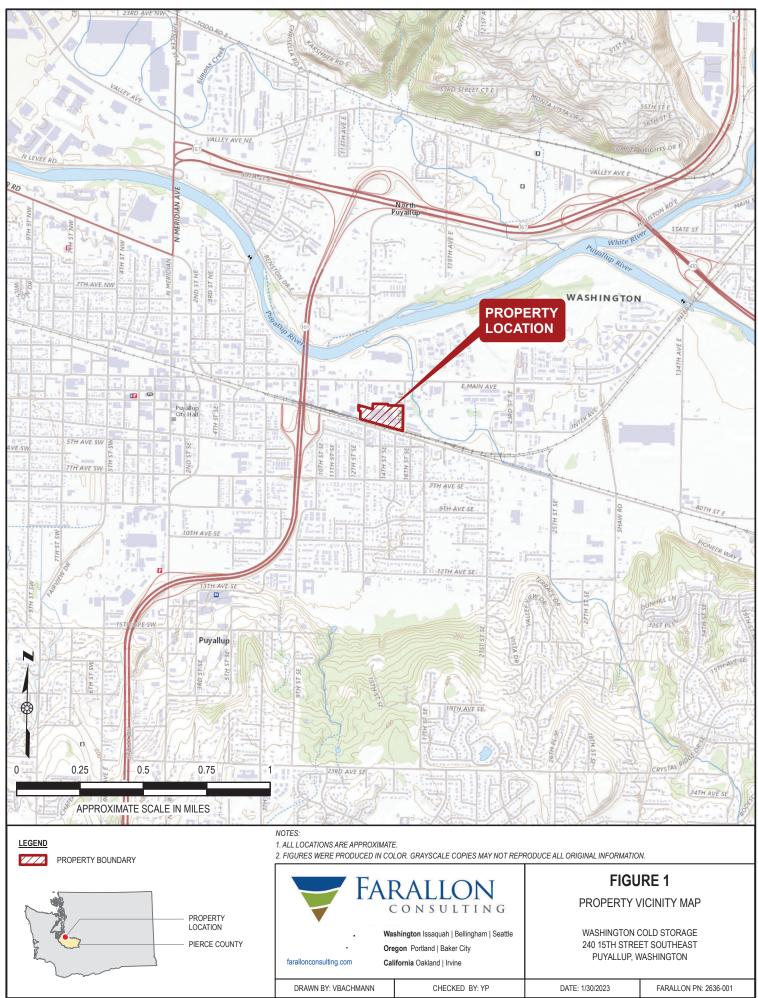
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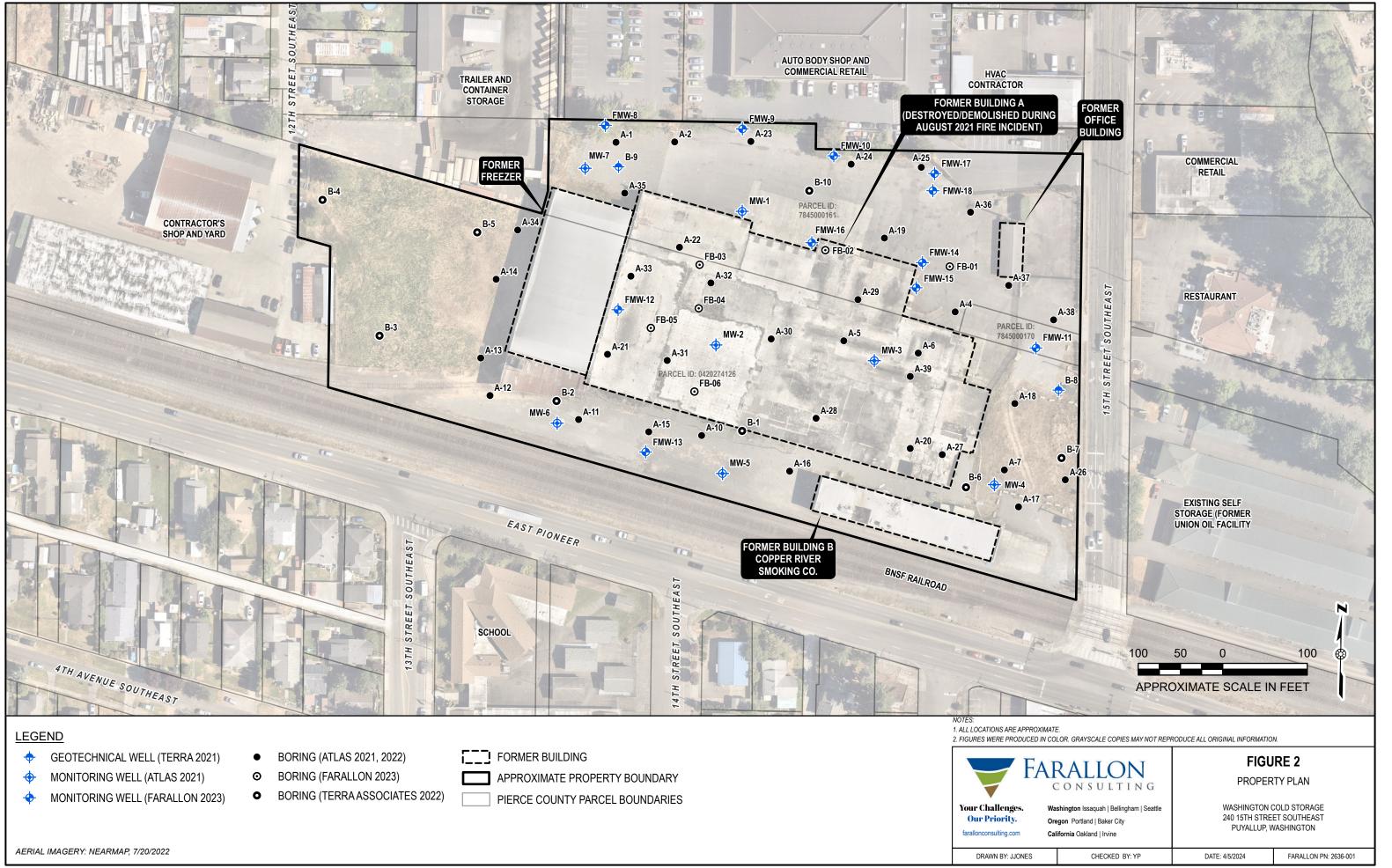
- Washington State Department of Ecology (Ecology). 2010. *Guidance for Remediation of Petroleum Contaminated Sites*. Publication 10-09-057. Revised June 2016. November.
- ——. 2009. Guidance for Evaluating Vapor Intrusion in Washington State, Investigation and Remedial Action. Publication No. 0909-024. Revised March 2022. October.
- ——. 2023. Letter Regarding Opinion on Proposed Cleanup of a Property Associated with the following Site: Washington Cold Storage, 240 15<sup>th</sup> Street Southeast, Puyallup, Pierce County, Washington 98372. From Frank Winslow. To Brady Thomson, CREF3 Puyallup Owner, LLC. July 19.

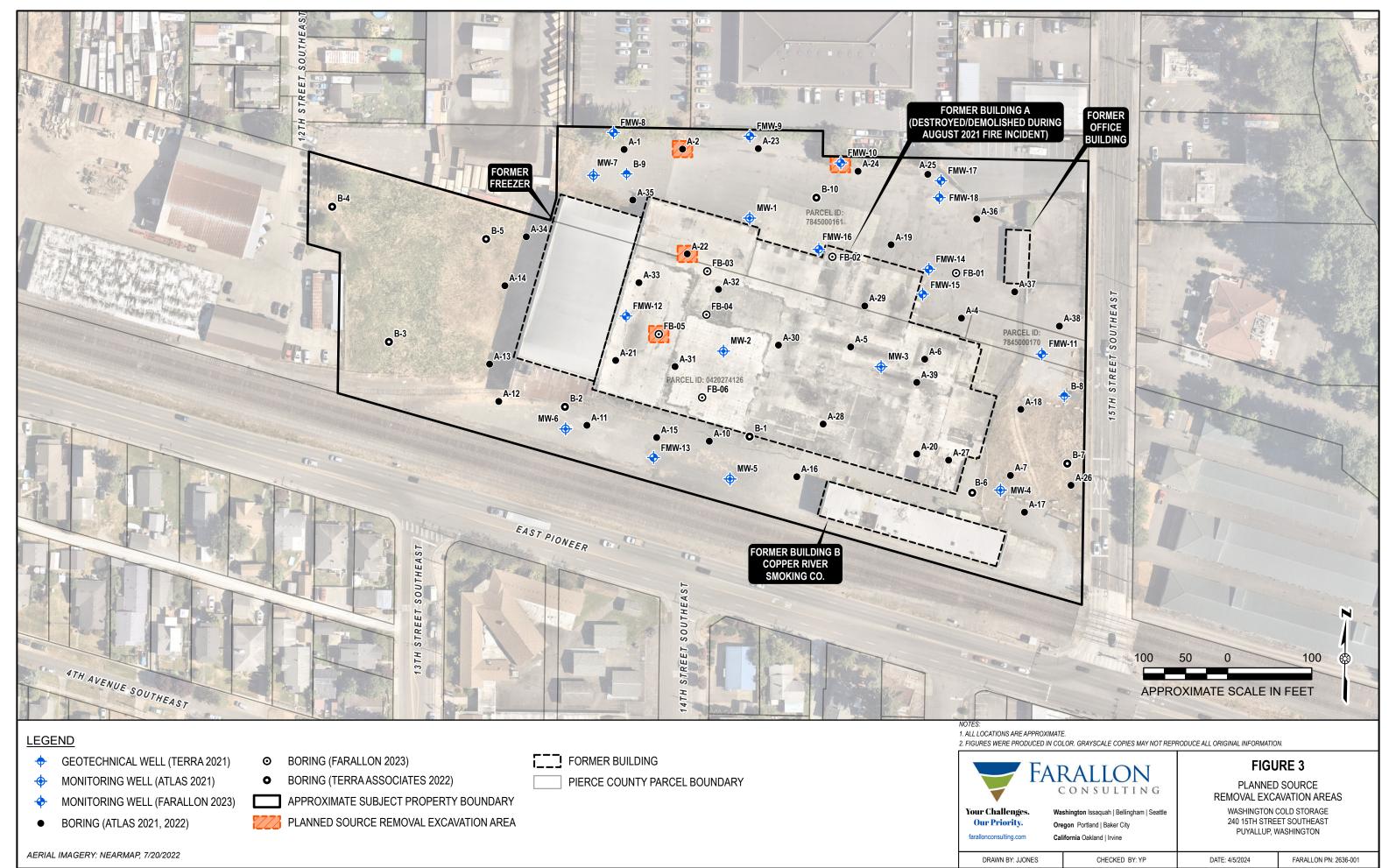
# **FIGURES**

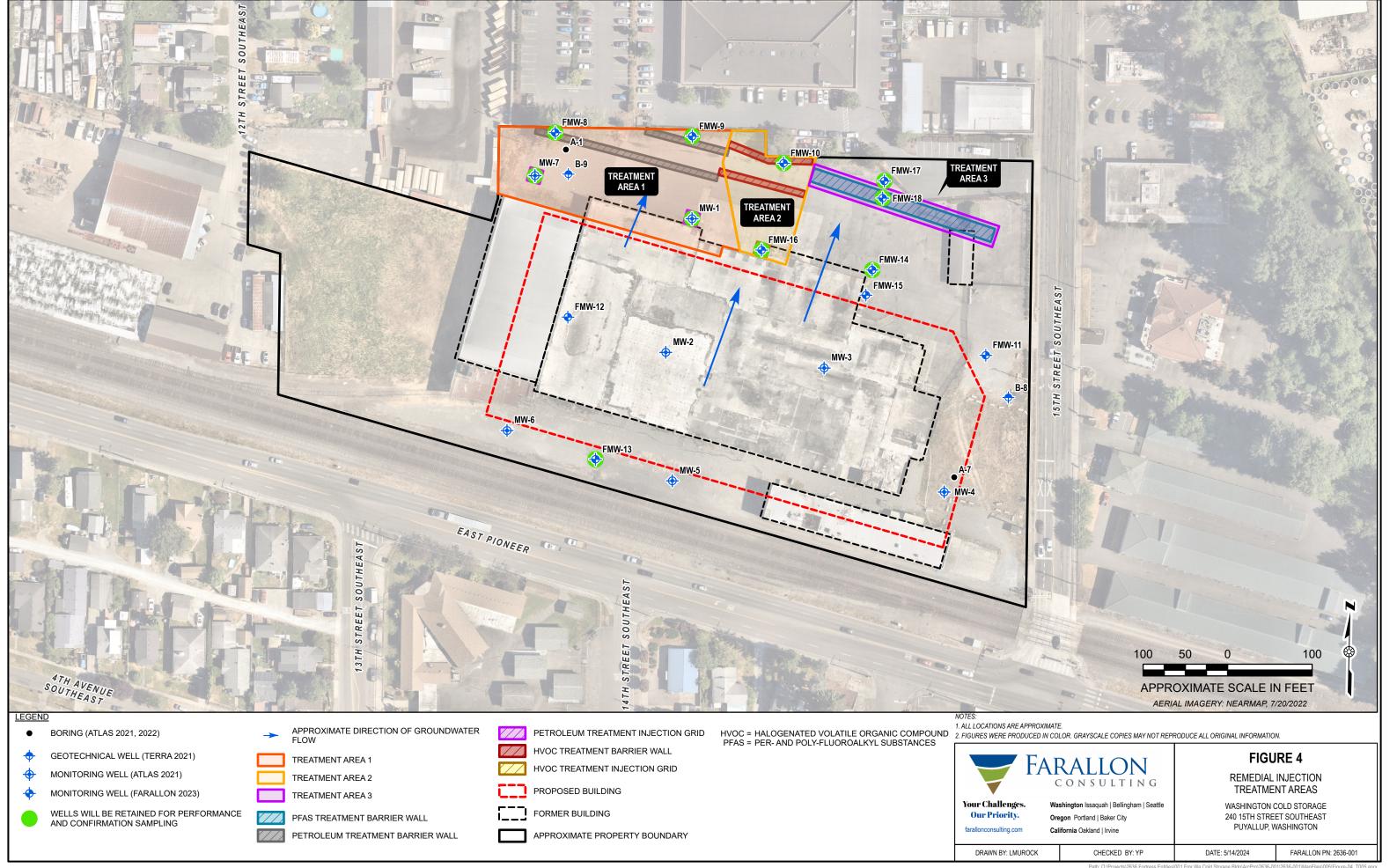
COMPLIANCE MONITORING PLAN Former Washington Cold Storage Building 240 15<sup>th</sup> Street Southeast Puyallup, Washington

Farallon PN: 2636-001









# **TABLE**

COMPLIANCE MONITORING PLAN Former Washington Cold Storage Building 240 15<sup>th</sup> Street Southeast Puyallup, Washington

Farallon PN: 2636-001

#### Table 1

# **Proposed Groundwater Analyses**

# Former Washington Cold Storage Building Puyallup, Washington

Farallon PN: 2636-001

	Screened Interval (feet bgs)	Proposed Laboratory Analyses							
Monitoring Well		DRO, ORO, and GRO	втех	VOCs	PFAS	Total Organic Carbon	Methane, Ethane, Ethene	Sulfate and Nitrate	Total Iron/ Ferrous Iron
MW-1	5 to 15	Х		Х		Х		Х	
MW-7	4 to 13	Х	Χ			Х		Х	
FMW-8	3 to 13	Х	Χ			Х		Х	
FMW-9	3 to 13	Х		Х		Х		Х	
FMW-10	3 to 13	Х		Х		Х	Х		Х
FMW-13	3 to 13	Х		Х		Х			
FMW-14	3 to 13			Х	Х				
FMW-16	3 to 13	Х		Х		Х	Х		Х
FMW-17	5 to 15			Х	Х				
FMW-18	5 to 15				Х				

#### NOTES:

BTEX = benzene, toluene ethylbenzene, and xylenes

DRO = total petroleum hydrocarbons (TPH) as diesel-range organics

GRO = TPH as gasoline-range organics

PFAS = per- and polyfluoroalkyl substances

ORO = TPH as oil-range organics

VOCs = volatile organic compounds