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June 30, 2023  
File: 238000337.R15a

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**Reference: Revised ExxonMobil ADC Draft Cleanup Action Plan**  
ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington  
Ecology Facility Site ID 2728

Mr. Cook,

At the request of ExxonMobil Environmental and Property Solutions, on behalf of ExxonMobil Oil Corporation (ExxonMobil) and American Distributing Company (ADC), Stantec Consulting Services Inc. (Stantec) conducts environmental activities at the ExxonMobil ADC site (Site). Stantec prepared the enclosed *Revised ExxonMobil ADC Draft Cleanup Action Plan (CAP)*, dated June 30, 2023, at the request of the Washington State Department of Ecology (Ecology). The CAP was prepared in accordance with Washington Administrative Code (WAC) 173-340-380. The purpose of the CAP is to describe the cleanup standards for the Site, the cleanup methods selected to achieve the cleanup standards, and the rationale for these decisions.

### Site Identification

Agreed Order DE 6184  
Facility Site ID No. 2728  
Cleanup Site ID No. 5182

### Ecology Contacts

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### Site Location

2717 and 2731 Federal Avenue  
Everett, Washington 98201  
Port Gardner / Possession Sound

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Stantec is requesting a review of the CAP to progress to the public notice and minimum 30-day public comment period per WAC 173-340-600(14).

## REVISED EXXONMOBIL ADC DRAFT CLEANUP ACTION PLAN

ExxonMobil ADC

June 30, 2023

Please contact Mr. Bobby Thompson, Stantec Project Manager for this Site, at (206) 510-5855, or Mr. Jeff Johnson, ExxonMobil Project Manager for this Site, at (815) 860-7290 with questions.

Regards,

**Stantec**



**Bobby Thompson**

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Attachment: Stantec's *Revised ExxonMobil ADC Draft Cleanup Action Plan*, dated June 30, 2023

c. w/enclosure

Mr. Erik Gerking, Port of Everett (*Email*)

Mr. Steve Miller, American Distributing Company (*Email*)

Ms. Sandra Caldwell, Washington State Department of Ecology (*Email*)

Mr. Jeff Johnson, ExxonMobil Environmental and Property Solutions Company (*Project folder*)





## Revised ExxonMobil ADC Draft Cleanup Action Plan

ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington  
Ecology Site ID 2728

June 30, 2023

Prepared for:

ExxonMobil Environmental and Property  
Solutions Company and American Distributing  
Company

Prepared by:

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File: 238000337.R15a



**REVISED EXXONMOBIL ADC DRAFT CLEANUP ACTION PLAN**

ExxonMobil ADC

June 30, 2023

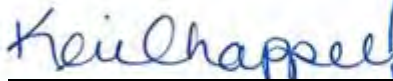
This document entitled *Revised ExxonMobil ADC Draft Cleanup Action Plan* was prepared by Stantec Consulting Services Inc. (“Stantec”) for the account of ExxonMobil Environmental and Property Solutions Company and American Distributing Company (the “Clients”). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec’s professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Clients. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

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**Keri L. Chappell**  
**L.G. 2719**



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## Acronyms and Abbreviations

1996 Order	Agreed Order DE 95TC-N402
1998 Order	Agreed Order DE 98TCP-N223
2010 Order	Agreed Order DE 6184
ADC	American Distributing Company
ARAR	Applicable, Relevant, and Appropriate Requirement
AST	Aboveground storage tank
bgs	Below ground surface
BNSF	BNSF Railway Company
CAP	Cleanup Action Plan
COCs	Contaminants of concern
cPAH	Carcinogenic polycyclic aromatic hydrocarbon
CPOC	Conditional point of compliance
CSO	Combined sewer overflow
Ecology	Washington State Department of Ecology
EDR	Engineering Design Report
Excavation Delineation Work	2020 and 2021 delineation soil borings to predefine the extents of the remedial excavations on the ExxonMobil ADC Property and Port property
ExxonMobil	ExxonMobil Oil Corporation
FFS	Focused Feasibility Study
HASP	Health and safety plan
ISS	In-situ soil stabilization
LNAPL	Light non-aqueous phase liquid
mg/kg	Milligram per kilogram
MIDP	Monitoring and Inadvertent Discovery Plan
Miller	Mr. Aven P. Miller (former ADC property owner)
MNA	Monitored natural attenuation
Mobil	Mobil Oil Corporation
MTCA	Model Toxics Control Act
ORP	Oxygen reduction potential
POC	Point of compliance
Port	Port of Everett
Port Interim Action	Interim action conducted on Port of Everett property to the west of the ExxonMobil Property in accordance with the June 2022 amendment to the 2010 Agreed Order ExxonMobil and ADC-owned parcels located at 2717 and 2731 Federal Avenue, in Everett, Washington
Property	
RAO	Remedial Action Objective
RZA	Rittenhouse-Zeman & Associates, Inc.
SC/FFS	Site characterization/focused feasibility study
SEPA	Washington State Environmental Policy Act
Site	ExxonMobil and ADC Property and the surrounding parcels where hydrocarbons have migrated
Stantec	Stantec Consulting Services Inc.





# REVISED EXXONMOBIL ADC DRAFT CLEANUP ACTION PLAN

ExxonMobil ADC

June 30, 2023

Strider	Strider Construction Company, Inc.
TEE	Terrestrial Ecological Evaluation
TPHd	Total petroleum hydrocarbons as diesel
TPHg	Total petroleum hydrocarbons as gasoline
TPHmo	Total petroleum hydrocarbons as motor oil
µg/L	Microgram per liter
WAC	Washington Administrative Code
WISAARD	Washington Department of Archaeology and Historic Preservation
Wood	Wood Environment & Infrastructure Solutions, Inc.
WSP	WSP USA Environment & Infrastructure Inc.



## EXECUTIVE SUMMARY

This document presents the draft Cleanup Action Plan (CAP) for the ExxonMobil ADC Site (Site) located at 2717/2731 Federal Avenue, Everett, Snohomish County, Washington. This CAP was prepared by ExxonMobil Environmental and Property Solutions, on behalf of ExxonMobil Oil Corporation (ExxonMobil) and American Distributing Company (ADC). This CAP was prepared to meet the requirements of the Model Toxics Control Act (MTCA) administered by the Washington State Department of Ecology (Ecology) under Chapter 173-340 of the Washington Administrative Code. This CAP describes ExxonMobil and ADC's proposed cleanup action for the Site, accepted by Ecology in previous documents and meetings, and sets forth the requirements that the cleanup must meet.

Historical releases of hydrocarbons to soil and groundwater at the Site were related to the former operation of bulk storage, transfer, and distribution of petroleum and petroleum-related products. Light non-aqueous phase liquid (LNAPL) has been observed in soil and groundwater beneath the Site. The ExxonMobil ADC Site is defined as the ExxonMobil and ADC properties and the surrounding rights-of-way and properties that were affected by the migration of hydrocarbons in soil and groundwater.

Based on the evaluation of cleanup alternatives using the MTCA remedy selection criteria and the disproportionate cost analysis results, Source Area Alternative 1: LNAPL Area Excavation and Natural Source Zone Attenuation and Groundwater Alternative 1: Monitored Natural Attenuation, were selected as the comprehensive cleanup remedies for the Site (Wood, 2021; Ecology, 2021). Due to shoring engineering constraints, in-situ soil stabilization (ISS) will be applied for the remediation of accessible areas between 15 to 20 feet bgs adjacent to the Terminal Avenue Overpass. The selected cleanup remedies consist of the following:

- Excavation and disposal or ISS of accessible soils containing LNAPL and where analytical results exceeded the Site-specific residual saturation remediation levels within the source areas located on the ExxonMobil and ADC properties.
- An interim action to remove accessible soils containing LNAPL and where analytical results exceeded the Site-specific residual saturation remediation levels was completed on Port of Everett (Port) property in 2023.
- Natural source zone attenuation to remediate contaminants of concern (COCs) remaining in the source areas and inaccessible areas to assess the effectiveness of the remedy.
- A groundwater monitoring program to assess potential LNAPL mobility near the inaccessible areas and to assess groundwater quality downgradient of the source areas, including the Port property.
- Monitored natural attenuation to confirm degradation of COCs in groundwater across the Site.
- Restrictive covenant(s), including requirements that affected soil and groundwater that may potentially be exposed during future construction is managed in accordance with the MTCA and solid and dangerous waste regulations, and that future development addresses potential risks related to soil vapor intrusion.
- Risk management planning by ExxonMobil and ADC with the City of Everett, Port, and BNSF Railway Company property owners to address worker safety and management of LNAPL, affected soil, and/or affected groundwater resulting from potential future work within inaccessible areas on or near the Port properties including former Everett Avenue, Federal Avenue, and/or the Terminal Avenue Overpass.



## 1.0 INTRODUCTION

This draft Cleanup Action Plan (CAP) was prepared for the ExxonMobil ADC Site (Site) located at 2717/2731 Federal Avenue, Everett, Snohomish County, Washington. The location of the Site is shown on Plates 1 and 2. A CAP is required as part of the cleanup process under Washington Administrative Code (WAC) Chapter 173-340 – Model Toxics Control Act (MTCA) Cleanup Regulations (WAC, 2007).

Historical releases of hydrocarbons to soil and groundwater at the Site (Plate 3) were related to the former operation of bulk storage, transfer, and distribution of petroleum and petroleum related products. Light non-aqueous phase liquid (LNAPL) has been observed in soil and groundwater beneath the Site (including on neighboring properties). The ExxonMobil ADC Site is defined as the ExxonMobil Oil Corporation (ExxonMobil) and American Distributing Company (ADC) owned properties (Property) and the surrounding rights-of-way and properties that were affected by the migration of hydrocarbons in soil and groundwater.

The cleanup action decision is based on the final draft *Site Characterization/Focused Feasibility Study Report*, dated May 12, 2023 (SC/FFS; WSP, 2023), prepared by WSP USA Environment & Infrastructure Inc. (WSP) and Stantec Consulting Services Inc.'s (Stantec) *Revised Site Characterization/Focused Feasibility Study Addendum*, dated June 30, 2023 (Addendum; Stantec, 2023). The SC/FFS and this CAP were prepared in accordance with the MTCA and Agreed Order No. DE 6184 (2010 Order) entered into between the Washington State Department of Ecology (Ecology), ExxonMobil, and ADC in March 2010 (Ecology, 2010). ExxonMobil and ADC have completed investigation activities under two previous Agreed Orders – DE 95TC-N402 (1996 Order) and DE 98TCP-N223 (1998 Order).

### 1.1 PURPOSE

The purpose of the CAP is to identify the proposed cleanup action for the Site and to provide an explanatory document for public review:

- Describes the Site.
- Summarizes current Site conditions.
- Summarizes the cleanup action alternatives considered in the remedy selection process.
- Describes the selected cleanup action for the Site and the rationale for selecting this alternative.
- Identifies cleanup levels, Site-specific residual saturation remediation levels, points of compliance (POCs), and conditional points of compliance (CPOCs) for each hazardous substance and medium of concern for the proposed cleanup action.
- Identifies applicable state and federal laws for the proposed cleanup action.
- 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.
- Discusses compliance, protection, and performance monitoring requirements.
- Presents the tentative schedule for implementing the CAP.

Based on the approval of the SC/FFS, Ecology has made a preliminary determination that a cleanup conducted in conformance with this CAP will comply with the requirements for selection of a remedy under WAC 173-340-360 (WAC, 2007).



## 1.2 PREVIOUS STUDIES

This section briefly discusses previous investigations at the Site. Since 1985, various consultants have conducted environmental investigations to characterize the nature and extent of contaminants of concerns in soil and groundwater at the Site. In May 2023, WSP submitted the final draft SC/FFS (WSP, 2023) to Ecology in accordance with the 2010 Order. Previous investigations are summarized in Appendix A. Interim actions conducted to date are summarized in Appendix B and Sections 1.2.1 and 1.2.2. Boring logs from the 2020 and 2021 excavation delineation investigations (Excavation Delineation Work) are included in Stantec's Revised SC/FFS Addendum (Stantec, 2023).

### 1.2.1 Federal Avenue Trenching and Utility Installation

Strider Construction Company, Inc. (Strider), a subcontractor of the Port of Everett (Port), conducted trenching and utility installation within Federal Avenue in 2022. Strider conducted the work in accordance with the *Norton Terminal Development & MTCA 3<sup>rd</sup> Interim Action Soil Removal, Stockpiling, and Disposal Plan*, dated September 25, 2021 (Strider, 2021). Cardno (now Stantec), on behalf of ExxonMobil and ADC, collected soil samples from the bottom of utility trenches and test pits located within the Site boundary to characterize soil that will remain in place beneath the planned utility trench in the City of Everett right-of-way beneath and adjacent to Federal Avenue.

Cardno collected soil samples at approximately 50-foot intervals along the bottom of the Federal Avenue utility trench in accordance with Section 6.8.3 of Ecology's *Guidance for Remediation of Petroleum Contaminated Sites* (Ecology, 2016a). Soil samples were analyzed for gasoline-, diesel-, and motor oil-range total petroleum hydrocarbons (TPHg, TPHd, TPHmo), benzene, toluene, ethylbenzene, total xylenes, and carcinogenic polycyclic aromatic hydrocarbons (cPAHs). A summary of soil analytical results and sample locations were provided in Cardno's *Federal Avenue Trenching – Sampling and Analysis Report*, dated August 22, 2022 (Cardno, 2022c).

### 1.2.2 Port of Everett Interim Action

In March 2023, an interim action was completed on the Everett Ship Repair property leased from the Port (Port Interim Action) in accordance with the Ecology-approved *ExxonMobil ADC Site – Port of Everett Property Interim Action Work Plan* (Cardno, 2022b). The Port Interim Action was conducted as part of this cleanup action and is described in Section 7.0.

## 1.3 REGULATORY FRAMEWORK

This section summarizes the regulatory background of the Site, including the three Agreed Orders and definition of the MTCA Site.

The cleanup of the Site is regulated under WAC Chapter 173-340 – MTCA Cleanup Regulations (WAC, 2007). Environmental site investigation and interim actions have been conducted at the Site beginning in 1985 (WSP, 2023). There have been three Agreed Orders issued under the MTCA to date that direct cleanup actions at the Site (Ecology, 2010).

In April 1996, Ecology entered into the 1996 Order (DE 95TC-N402) with Mobil Oil Corporation (Mobil), ADC, and Miller (Mr. Aven P. Miller – former ADC property owner) requiring cleanup, elimination, and/or containment of petroleum releases at and near the City of Everett's combined sewer overflow (CSO)



discharge line into Port Gardner Bay. In accordance with the 1996 Order, the interim actions were completed, and Ecology agreed that the interim containment measures, CSO repair, and cleanup were satisfactorily completed and the exposure pathway to Port Gardner Bay had been removed.

Periodic groundwater monitoring and sampling began in 1988 at the Site (WSP, 2023). In October 1998, Ecology entered into the 1998 Order (DE 98TCP-N223), with Mobil, ADC, and Miller, requiring the preparation of a Remedial Investigation/Focused Feasibility Study (FFS) Report, Interim Action Work Plan, and the subsequent completion of the work described in the Interim Action Work Plan. Per the developed FFS, an interceptor trench and cap were installed in 1999. Additionally, quarterly groundwater monitoring and monthly measurement and removal of LNAPL from affected wells began in 2002. In 2007, the groundwater monitoring frequency for the Site was reduced from quarterly to semiannually (Plates 4 and 5).

In March 2010, Ecology entered into the 2010 Order (DE 6184), with ExxonMobil and ADC requiring an FFS and development of a draft CAP to identify the nature and extent of hydrocarbons in soil and groundwater and select a preferred final interim action to remediate the Site in accordance with the MTCA (Ecology, 2010). Wood Environment & Infrastructure Solutions, Inc. (Wood) submitted the initial SC/FFS to Ecology on August 23, 2019 (Wood, 2019). A revised SC/FFS was submitted to Ecology on June 11, 2021 (Wood, 2021). A subsequent revised SC/FFS was submitted by Wood on January 13, 2022 (Wood, 2022). A final draft of the SC/FFS was submitted by WSP on May 12, 2023 (WSP, 2023). The proposed cleanup action described in this CAP is based on WSP's 2023 final draft SC/FFS and Stantec's 2023 Revised SC/FFS Addendum (WSP, 2023; Stantec, 2023).

In June 2022, an amendment to the 2010 Order was executed by Ecology, ExxonMobil, and ADC to implement the Port Interim Action (Ecology, 2022). The amendment specified that upon approval, Cardno's *ExxonMobil ADC Site – Port of Everett Property Interim Action Work Plan*, dated June 14, 2022 (Cardno, 2022b) would become a part of the 2010 Order. The scope of the Port Interim Action included excavation of LNAPL and soil above residual LNAPL saturation remediation levels, transportation and disposal of excavated soil, excavation backfill, and site restoration including reinstallation of the asphalt cap. Additionally, a permanent barrier was installed along the western side of Federal Avenue to limit LNAPL migration.

A draft Consent Decree will be prepared by Ecology, ExxonMobil, and ADC, and will supersede the 2010 Order (DE 6184). The new Consent Decree will build on the work performed under the 2010 Order and authorize performance of the Site-specific requirements for the remediation actions outlined in this CAP.

As noted in the 2010 Order, the MTCA Site is defined as a release of TPHg, TPHd, TPHmo, benzene, total xylenes, cPAHs, and lead in soil and groundwater (Ecology, 2010). Additionally, ethylbenzene has been detected exceeding the MTCA Method A Cleanup Level in soil (Ecology, 2010). The Site includes the ExxonMobil ADC Property and extends into former Everett Avenue, Federal Avenue, and the Port property just west of Federal Avenue. It also includes portions of the City of Everett rights-of-way to the east and south and the land underneath the Terminal Avenue Overpass to the east and southeast of the Property, and the BNSF Railway Company (BNSF) parcel east of the Property.



## 2.0 SITE DESCRIPTION

### 2.1 CURRENT LAND USE

The ExxonMobil and ADC owned parcels (Property) are currently an asphalt-paved parking lot with no structures present. The Site is comprised of City of Everett rights-of-way to the west, east, and south (including the Terminal Avenue Overpass); the Port property to the west of Federal Avenue (including the active port and the property leased and currently occupied by Everett Ship Repair) and to the north including former Everett Avenue; and the BNSF parcel and railway corridor easement to the east of the Property.

### 2.2 SITE PROPERTY USE

The lateral extent of the Site extends onto neighboring properties to the north, south, east, and west. To the west of the Property is Federal Avenue and Port property beyond. To the east of the Property is a City of Everett right-of-way and the BNSF parcel beyond. To the east and southeast is the Terminal Avenue Overpass. To the north is former Everett Avenue. The ExxonMobil ADC Property and surrounding parcels are shown on Plate 3. The following sections summarize the ExxonMobil ADC Property and surrounding properties (Snohomish County, 2023; WSP, 2023).

#### 2.2.1 ExxonMobil ADC Property

Historical ExxonMobil and ADC operations were located at 2717/2731 Federal Avenue, Everett, Snohomish County, Washington, adjacent to Port Gardner Bay. The Property consists of three tax parcels: 00437161900101, 00437161900100, and 00437161901000. The northern parcels are owned by ADC, and the southern parcel is owned by ExxonMobil. The ExxonMobil ADC Property occupies 0.86 acre of land (Snohomish County, 2023). The northern ADC parcels at 2717 Federal Avenue occupy approximately two-thirds of the Property (0.65 acre). The southern ExxonMobil parcel at 2731 Federal Avenue occupies approximately one-third of the Property (0.21 acre). City of Everett rights-of-way are located immediately east and south of the Property boundary.

The Property historically operated as a bulk petroleum storage, transfer, and distribution facility. Additional potential sources of contaminants of concern include releases from the former rail loading racks located east of the Property, underneath the current Terminal Avenue Overpass (WSP, 2023). In the early 1900s, the historical shoreline was located approximately along present-day Federal Avenue. As development continued, the shoreline was extended westward until it reached its current extent in 1976 (WSP, 2023).

#### 2.2.2 The Port of Everett

The properties beyond Federal Avenue to the west are owned by the Port and abut the Port Gardner Bay shoreline (Snohomish County, 2023). Various portions of the Port properties are leased to other businesses, including Dunlap Towing and Everett Ship Repair (WSP, 2023).



### **2.2.3 Former Everett Avenue**

Former Everett Avenue was historically an east/west public road located just north of the ExxonMobil ADC Property. The portion of former Everett Avenue located within in the Site boundary was formerly owned by Kimberly-Clark Corporation and is currently owned by the Port (Snohomish County, 2023).

### **2.2.4 BNSF Rail Line and Parcel**

An active BNSF rail line and adjacent BNSF parcel are located east and southeast of the Property (Google, 2020; Snohomish County, 2023). The BNSF railway corridor crosses underneath the Terminal Avenue Overpass. The adjacent BNSF parcel is paved with asphalt.

### **2.2.5 Federal Avenue**

The City of Everett right-of-way Federal Avenue is located west of the Property (Snohomish County, 2023). Federal Avenue is a north to south trending public road and utility corridor that is currently paved with asphalt.

### **2.2.6 Terminal Avenue Overpass**

The City of Everett right-of-way Terminal Avenue Overpass is located east and southeast of the Property (Google, 2020). Terminal Avenue is a northeast to southwest trending road that is currently paved with asphalt. The overpass crosses the BNSF railway corridor and then intersects at grade with Federal Avenue southwest of the Site. A portion of the right-of-way was previously part of the southern portion of the ExxonMobil parcel but was transferred to the City of Everett as part of the Terminal Avenue Overpass project (WSP, 2023).

## **2.3 SITE HISTORY**

The following is a summary of historical Site development and use. Additional details regarding historical use and operations of the Property and surrounding areas are available in WSP's final draft SC/FFS (WSP, 2023).

Indigenous people historically inhabited the shoreline along Port Gardner Bay. Development of the original shoreline (near present-day Federal Avenue) began in the late 1800s and continued until 1976, when the current shoreline was established. The Property and surrounding properties were used for storage and transfer of petroleum and petroleum products as early as 1920. From the 1920s until 1990, various portions of the Site were used for bulk storage, transfer, and distribution operations; marine offloading; truck loading; and rail loading and/or unloading of petroleum products that included fuel oils, stove oil, Bunker C fuel oil, diesel, and gasoline.

Peak operations at the Site occurred from the 1920s through the early 1980s. Historical Property features included various configurations of aboveground storage tanks (ASTs), warehouse buildings, pump houses, diked fuel storage areas, a boiler room, loading racks, and overhang canopies. A detailed summary of surrounding properties and historical use and features are included in Section 2.0 of the final draft SC/FFS (WSP, 2023).



In May 1985, Rittenhouse-Zeman & Associates, Inc. (RZA), conducted an environmental investigation that indicated a release of hydrocarbons to the surface and subsurface had occurred. ExxonMobil terminated bulk fuel operations on the ExxonMobil parcel in 1987 and demolished the ASTs and other structures. By 1993, the ExxonMobil parcel had been covered with asphalt with no above-grade structures present. ADC operations terminated in 1990. In 1998, all structures on the ADC parcels were demolished. In 1999, the Property was capped with asphalt to meet the requirements of the 1998 Order. Since then, the Site has been used intermittently as a parking lot by neighboring businesses and has remained unimproved with no above-grade structures (Plate 2).

## 3.0 HUMAN HEALTH AND ENVIRONMENTAL CONCERNS

This section discusses the nature and extent of contamination in soil and groundwater at the Site, the associated environmental risks, and the specific exposure pathways for human health and environmental receptors.

### 3.1 SOURCES OF CONTAMINANTS OF CONCERN

Contaminants of concern (COCs) in soil and groundwater were a result of petroleum product releases during operation of bulk fueling activities on the Property and adjacent properties. The nature and extent of COCs in soil and groundwater are detailed in the final draft SC/FFS (WSP, 2023). The current extent of COCs in soil was defined via the 2020 and 2021 Excavation Delineation Work conducted on the Port property and on and near the ExxonMobil ADC Property. The Excavation Delineation Work was conducted in accordance with the following work plans:

- *Excavation Delineation Work Plan – Port of Everett Property*, dated September 1, 2020 (Cardno, 2020a).
- *Subsequent Excavation Delineation Drilling Work Plan*, dated December 21, 2020 (Cardno, 2020b).
- *Excavation Delineation Drilling Work Plan*, dated July 15, 2021 (Cardno, 2021b).

The purpose of Excavation Delineation Work was to predefine the excavation vertical and lateral extents to the Site-specific residual saturation remediation levels so that the collection of performance soil samples during excavation and in-situ soil stabilization (ISS) will not be necessary. Results of the Excavation Delineation Work and anticipated excavation and ISS extents are shown on Plates 6 through 25 and Tables 1 and 2. Results of trenching activities in Federal Avenue are summarized in Tables 3 and 4. The extent of COCs in groundwater has been defined via groundwater sampling beginning in the 1990s (Plates 4 and 5; Tables 5 and 6).

### 3.2 FATE AND TRANSPORT

The fate and transport of the COCs are governed by the specific properties of the contaminants and the surrounding environmental conditions of the Site. The COCs were released to soil; the hydrocarbons then spread by leaching to groundwater and by volatilization to soil vapor from vadose soil. Groundwater flows east to west across the Site and historically carried COCs to neighboring properties and rights-of-way.





### 3.3 CONCEPTUAL SITE MODEL

The MTCA Section 173-340-200 defines the conceptual site model as a “conceptual understanding of a site that identifies potential or suspected sources of hazardous substances, types, and concentrations of hazardous substances, potentially contaminated media, and actual and potential exposure pathways and receptors” (WAC, 2007).

The SC/FFS details the conceptual site model, which was established by considering the geology, hydrogeology, Site history and use, and the nature and extent of COCs in soil and groundwater (WSP, 2023). A conceptual site model is shown on Plate 26.

### 3.4 EXPOSURE PATHWAYS AND RECEPTORS

The Site is located within a heavily developed commercial and industrial area that includes public rights-of-way and commercial properties. The streets, sidewalks, and parking lots are covered with asphalt or concrete. Small sections of the City of Everett rights-of-way along Federal Avenue are capped with gravel. A portion of the City of Everett right-of-way along the eastern Property boundary is unpaved. There is little to no natural habitat in the immediate vicinity of the Site.

- **Dermal contact or ingestion of soil, groundwater, or LNAPL:** These exposure pathways are complete for commercial/industrial and/or construction worker receptors.
- **Inhalation of outdoor air from volatilization of soil or groundwater:** Currently, the Site is capped with gravel, asphalt, or concrete. If the cap were to be removed, these pathways, which are currently incomplete, would be complete.
- **Inhalation of indoor air from volatilization of soil or groundwater:** Building construction is possible in the future. If buildings are constructed on the Site, these pathways, which are currently incomplete, would be complete.
- **Ingestion of groundwater via potable water supply:** Groundwater is not used as a potable water source at or near the Site. Therefore, this pathway is incomplete for residential/commercial beneficial use receptors.
- **Soil leaching to groundwater:** Current groundwater data at the Site indicates that dissolved hydrocarbons are present in groundwater exceeding the MTCA Method A Cleanup Levels (Tables 5 and 6). Therefore, this exposure pathway is complete.
- **Groundwater transport to surface water:** Multiple tidal studies have been completed at the Site (WSP, 2023). Groundwater levels in select Site wells are influenced by tidal fluctuations in Port Gardner Bay; however, tidal flux was estimated to travel less than 0.56 foot laterally inland at its maximum measured high tide, indicating that tidal exchange of surface water and groundwater occurs only at the shoreline (WSP, 2023). COCs in groundwater are laterally defined in the downgradient direction by wells MW-A3, MW-A4, MW-A6, and MW-A9 located approximately 230 feet inland from the shoreline (Plate 4; Tables 5 and 6). Therefore, this pathway is incomplete.
- **Ecological pathways as outlined in the Terrestrial Ecological Evaluation (TEE):** No undeveloped contiguous land greater than 1.5 acres is on or within 500 feet of any part of the Site. Due to the heavily developed commercial and industrial nature of the properties surrounding the Site, the Site qualifies for a TEE exclusion (Section 3.6; Appendix C). Therefore, these pathways are incomplete.



### 3.5 BENEFICIAL USE OF GROUNDWATER

The Site is currently zoned commercial and industrial for the ExxonMobil and ADC parcels (Snohomish County, 2023). In accordance with WAC 173-340-720(2), even if zoning changes in the future, Site groundwater will not be suitable for potable use for the following reasons (WAC, 2007):

- Groundwater does not currently serve as a source of potable water.
- The groundwater is not a potential future source of water due to the Site's proximity to the marine water of Port Gardner Bay (directly west of the Site).
- The groundwater and neighboring marine surface water are connected, as confirmed in WSP's tidal studies, rendering groundwater not practicable for use as drinking water (WSP, 2023). The COCs in groundwater are laterally defined in the downgradient direction by wells MW-A3, MW-A4, MW-A6, and MW-A9 located approximately 230 feet inland from the shoreline (Plate 4; Tables 5 and 6) and have not impacted the neighboring marine surface water (i.e., COCs in groundwater at these wells are less than MTCA Method A Cleanup Levels).
- A portion of the Site, east of Federal Avenue, was used as a refuse disposal area prior to 1917 (WSP, 2023).
- Fill material was used to extend the historical shoreline from approximately Federal Avenue to its current western extent. The fill consists of sands, silty sands, and organic substances, as documented to be present in the subsurface (WSP, 2023; Stantec, 2023). This fill material first encountered groundwater during multiple emplacements between 1914 (prior to development of the Property) and 1976, as noted on WSP's Figure 2-6 in the SC/FFS (WSP, 2023).

### 3.6 TERRESTRIAL ECOLOGICAL EVALUATION

No wetlands, streams, shorelines, floodplains, or wildlife habitat are present on the Site (US FWS, 2021; WSP, 2023). As summarized in the SC/FFS, soil concentrations are considered protective of terrestrial receptors via a simplified TEE. The Site meets the requirements for an exclusion from performing a TEE (Appendix C) as outlined in WAC 173-340-7492 (WAC, 2007).

## 4.0 CLEANUP STANDARDS

This section summarizes the proposed cleanup standards for the selected cleanup action that were discussed in WSP's final draft SC/FFS (WSP, 2023). The cleanup standards will be met across the Site POCs and CPOCs as described in Section 7.5. These standards must be established for affected media and must be considered appropriate for projected land uses, groundwater uses, and relevant potential exposure pathways identified in the conceptual site model (Plate 26).

### 4.1 CONTAMINANTS OF CONCERN

Soil and groundwater data have been collected at the Site since 1988. Soil analytical data from the Excavation Delineation Work activities are summarized in Tables 1 and 2. Soil analytical data from trenching activities in Federal Avenue are summarized in Tables 3 and 4. Recent semiannual groundwater monitoring results are summarized in Tables 5 and 6.



### 4.1.1 Contaminants of Concern in Soil

Soil data was first collected at the Site in 1988 during an environmental investigation conducted by RZA. Numerous investigations have been conducted at the Site and are summarized in Appendix A and Sections 1.2.1 and 1.2.2. Cardno conducted the Excavation Delineation Work on and near the ExxonMobil ADC and Port property to characterize current soil conditions and prepare for the proposed cleanup action. Results of Excavation Delineation Work at the Site are summarized in Plates 6 through 25 and Tables 1 and 2. The field protocol, boring logs, laboratory analytical results and chain-of-custody documentation along with waste documentation for the Excavation Delineation Work is summarized in Stantec's *Site Characterization/Focused Feasibility Study Addendum* (Stantec, 2023) for the ExxonMobil ADC Property and in the *Port of Everett – Excavation Delineation Report* (Cardno, 2021a) for the Port property.

COCs in soil, as identified in the SC/FFS (WSP, 2023), are summarized in the following table:

Contaminants of Concern in Soil
TPHg
TPHd
TPHmo
Benzene
Ethylbenzene
Total Xylenes
Total cPAHs
1-Methylnaphthalene

### 4.1.2 Contaminants of Concern in Groundwater

Periodic groundwater monitoring at the Site began in the early 1990s. Quarterly groundwater monitoring at the Site began in 2002 as part of the requirements in the 1998 Order. In August 2007, the monitoring frequency was reduced to semiannual during a meeting between Ecology and Wood. Semiannual groundwater monitoring is ongoing; recent monitoring and sampling data is summarized on Plates 4 and 5 and Tables 5 and 6 (Cardno, 2022a; Cardno, 2022d). Samples collected from the groundwater monitoring wells near Port Gardner Bay consistently demonstrate that COCs in groundwater exceeding the MTCA Method A Cleanup Levels are not discharging to bay.

Laboratory results from the first half 2022 groundwater sampling and monitoring event at the Site indicated 10 of 11 groundwater samples collected contained COCs in groundwater less than the MTCA Method A Cleanup Levels (Plate 4; Tables 5 and 6). A concentration of TPHd was present exceeding the MTCA Method A Cleanup Level in the sample collected from well MW-A1. Recent data indicated that groundwater flows to the west (towards Port Gardner Bay) with a hydraulic gradient of 0.016 (Plate 5; Cardno, 2022a).



COCs in groundwater, as identified in the SC/FFS (WSP, 2023), are summarized in the following table:

Contaminants of Concern in Groundwater
TPHg
TPHd
TPHmo
Benzene
Total Xylenes
Total cPAHs
1-Methylnaphthalene

## 4.2 REMEDIATION AND CLEANUP LEVELS

Site-specific residual saturation remediation levels for soil and cleanup levels for soil and groundwater were identified in the SC/FFS (WSP, 2023) and are applicable for the selected cleanup action. Numerical remediation and cleanup levels for each affected medium are summarized for soil and groundwater in Sections 4.2.1 and 4.2.2.

The MTCA Method A Cleanup Levels may be used if they meet one of the two criteria under WAC 173-340-704 (WAC, 2007):

- Sites undergoing a routine cleanup action as defined in WAC 173-340-200; or
- Sites where numerical standards are available in this chapter or applicable state and federal laws for all indicator hazardous substances in the media for which the Method A Cleanup Level is being used.

According to WAC 173-340-200 (WAC, 2007), routine cleanup actions must meet the following criteria:

- Cleanup standards for each hazardous substance addressed by the cleanup are obvious and undisputed and allow for an adequate margin of safety for protection of human health and the environment.
- The cleanup action involves an obvious and limited choice among cleanup action alternatives and uses an alternative that is reliable, has proven capable of accomplishing cleanup standards, and with which the department has experience.
- The cleanup action does not require preparation of an environmental impact statement.
- The site qualifies under WAC 173-340-7491 for an exclusion from conducting a simplified or site-specific TEE, or if the site qualifies for a simplified TEE, the evaluation is ended under WAC 173-340-7492(2) or values in Table 749-2 are used.

A review of historical investigations indicates that the Site meets the criteria for undergoing a routine cleanup action. Furthermore, numerical standards for the COCs are available for soil and groundwater under the MTCA Method A Cleanup Levels, except for 1-methylnaphthalene. The MTCA Method B Cleanup Level for 1-methylnaphthalene has been selected to demonstrate compliance. Therefore, the MTCA Method A Cleanup Levels are applicable and are used for soil and groundwater at this Site to assess the effectiveness of the selected cleanup action.



### 4.2.1 Soil Remediation Levels

In the August 2019 draft SC/FFS (Wood, 2019), Wood established residual saturation remediation levels using Site-specific data. Wood defined residual saturation as “fluid distributed within a porous medium and held in place by capillary action” and noted that LNAPL under these conditions is not connected between pores and does not flow (Wood, 2019). Additionally, “the distinction between residual LNAPL and potentially mobile LNAPL is based on research into how much LNAPL is expected to be retained by saturated soils of various textures for different LNAPL viscosities” (Wood, 2019).

Historically, attempts at LNAPL collection via interceptor trenches, absorbent socks installed in groundwater wells, and other methods have failed to produce a significant reduction in LNAPL volume in the soils beneath the Site, as indicated by hydrocarbons concentrations in soil samples at magnitudes high enough to indicate the presence of LNAPL. These observations support Wood’s assertion that the LNAPL present at the Site is not mobile. LNAPL has only been observed to be mobile during the artificially increased hydraulic gradients induced during dewatering in support of historical excavation activities (Wood, 2019).

Areas of the Site observed to have immobile LNAPL are identified as source areas in the 2019 draft SC/FFS. Remediation alternatives were developed to address soil and groundwater to the maximum extent practicable within the source areas (Wood, 2019). Using Site-specific data, including soil types and viscosity of LNAPL observed at the Site, Wood used guidance from Brost and DeVaul’s *Non-Aqueous Phase Liquid (NAPL) Mobility Limits in Soil* (Brost and DeVaul, 2000) to establish residual saturation remediation levels in ranges for TPHg, TPHd, and TPHmo:

- TPHg: 2,470 to 3,410 milligrams per kilogram (mg/kg).
- TPHd: 4,800 to 8,840 mg/kg.
- TPHmo: 5,810 to 11,000 mg/kg.

In Ecology’s May 6, 2019 response to the 2019 draft SC/FFS, Ecology recommended the use of the more stringent limits of the proposed residual saturation remediation level ranges (Ecology, 2019), which were incorporated into the final draft SC/FFS (WSP, 2023) and have been selected for this cleanup action.

Contaminant	Site-Specific Residual Saturation Remediation Level in Soil (mg/kg)
TPHg	2,470
TPHd	4,800
TPHmo	5,810

The Site-specific residual saturation remediation levels will be used to ensure that excavation and ISS has been completed to the maximum extent practicable in accessible areas on the Site.

### 4.2.2 Soil and Groundwater Cleanup Levels

In the final draft SC/FFS, WSP outlined various cleanup levels for soil and groundwater (WSP, 2023). During development of this CAP, Ecology confirmed that the cleanup levels for soil and groundwater at the Site will be the MTCA Method A Cleanup Levels.



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ExxonMobil ADC

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Natural source zone attenuation to remediate COCs remaining in soil following excavation and ISS will be monitored to better project the anticipated time for soil at the Site to approach the MTCA Method A Cleanup Levels for soil. Section 7.0 contains further information regarding the selected remedies and how natural source attenuation will be assessed in the future.

Concentrations of COCs in soil during performance and confirmation monitoring will be compared to the MTCA Method A Cleanup Levels presented below.

Contaminants of Concern in Soil	MTCA Method A Cleanup Level in Soil (mg/kg)
TPHg	30/100 <sup>a</sup>
TPHd	2,000
TPHmo	2,000
Benzene	0.03
Ethylbenzene	6
Total Xylenes	9
Total cPAHs	0.1 <sup>b</sup>
1-Methylnaphthalene	34 <sup>c</sup>

- TPHg cleanup level for soil is 30 mg/kg unless benzene is not detected in the sample, or if toluene, ethylbenzene, and total xylenes constitute less than 1% of the TPHg present in the sample. If these conditions are met, the cleanup level for TPHg may be elevated to 100 mg/kg.
- The MTCA Method A Cleanup Level for cPAHs is based on benzo(a)pyrene and is the sum of concentrations calculated using the toxic equivalency factors.
- The MTCA Method B Cleanup Level for 1-methylnaphthalene is used to demonstrate compliance.

Groundwater monitoring and sampling is currently conducted semiannually. Concentrations of COCs in groundwater during performance and confirmational monitoring will be compared to the MTCA Method A Cleanup Levels presented below.

Contaminants of Concern in Groundwater	MTCA Method A Cleanup Level in Groundwater in Micrograms per Liter (µg/L)
TPHg	800/1,000 <sup>a</sup>
TPHd	500
TPHmo	500
Benzene	5
Total Xylenes	1,000
Total cPAHs	0.1 <sup>b</sup>
1-Methylnaphthalene	1.5 <sup>c</sup>

- TPHg cleanup level for groundwater is 800 µg/L if benzene is present; TPHg cleanup level is 1,000 µg/L if benzene is not present.
- The MTCA Method A Cleanup Level for cPAHs is based on benzo(a)pyrene and is the sum of concentrations calculated using the toxic equivalency factors.
- The MTCA Method B Cleanup Level for 1-methylnaphthalene is used to demonstrate compliance.



## 5.0 REMEDIAL ACTION OBJECTIVES

The Remedial Action Objectives (RAOs) are Site-specific goals established to protect human health and the environment and will be achieved by the selected remedial alternatives. The RAOs provide a general framework, along with other requirements specified in the MTCA regulations, for developing and evaluating remedial action technologies and alternatives. The RAOs identified for this Site in WSP's final draft SC/FFS (WSP, 2023) will protect human health and the environment through completion of the selected remedial alternatives, other completed interim actions, engineering controls, and institutional controls at the Site.

- LNAPL/Source Area Excavation and ISS:
  - Expedite natural attenuation via source removal and ISS of soil containing LNAPL and soil exceeding Site-specific residual saturation remediation levels in accessible areas.
  - Reduce the potential for COCs to leach from Site soil to groundwater.
  - Remove LNAPL to the maximum extent practicable.
- Installation of a barrier wall along western edge of Federal Avenue:
  - Prevent COCs from migrating off the Site from source areas.
  - Prevent future migration of LNAPL (after removal to the extent practicable) at the Site.
  - Reduce the potential for the extent of dissolved-phase hydrocarbons in groundwater to migrate downgradient.
- Placement of environmental covenants and maintenance of the existing asphalt cap(s):
  - Prevent hydrocarbon-containing soil from becoming air- or waterborne and impacting surface water or sediment.
  - Prevent vapor intrusion into future buildings on the Site greater than indoor air cleanup levels from volatile COCs in soil and groundwater.
  - Prevent direct human contact (dermal and incidental ingestion) and inhalation exposure to hydrocarbon-containing soil and groundwater greater than the MTCA Method A Cleanup Levels.
- Attain cleanup standards in soil and groundwater at the applicable POCs and CPOCs as identified in the Engineering Design Report (EDR) within a reasonable restoration timeframe and in accordance with the MTCA regulations.

## 6.0 CLEANUP ACTION ALTERNATIVES AND ANALYSIS

Three source area cleanup action alternatives and two groundwater cleanup action alternatives were outlined in the final draft SC/FFS (WSP, 2023) and are summarized in Sections 6.1 and 6.2.

### 6.1 SOURCE AREA CLEANUP ACTION ALTERNATIVES

The SC/FFS outlined and evaluated three source area cleanup action alternatives (WSP, 2023).

#### 6.1.1 Source Area Alternative 1: LNAPL Area Excavation and Natural Source Zone Attenuation

Alternative 1 proposed the excavation of accessible source area soils containing LNAPL and soils that exceed the Site-specific residual saturation remediation levels (Section 4.2.1). Any source areas located



within inaccessible zones would be monitored for natural attenuation. The Port Interim Action was completed as shown on Plates 6 through 15. The proposed ExxonMobil Property cleanup action is shown on Plates 16 through 25.

### 6.1.2 Source Area Alternative 2: LNAPL Area Excavation and Source Area Stabilization

Alternative 2 combines the actions outlined in Source Area Alternative 1 with the in-situ soil stabilization of the remaining affected soils that exceed the Site-specific residual saturation remediation levels (Section 4.2.1). Remaining soils within the source areas would be treated with a mixture of Portland cement and bentonite to further immobilize remaining COCs. Additionally, immobilization would limit or eliminate any potential migration risks. Similar to Source Area Alternative 1, any inaccessible source areas with remaining impacts would be monitored for natural attenuation.

### 6.1.3 Source Area Alternative 3: Source Area Excavation

Alternative 3 consists of a comprehensive excavation of accessible soils that exceed the MTCA Method A Cleanup Levels (Section 4.2.2). As outlined in both Alternatives 1 and 2, any inaccessible source areas with remaining impacts would be monitored for natural attenuation.

## 6.2 GROUNDWATER CLEANUP ACTION ALTERNATIVES

The SC/FFS outlined and evaluated two cleanup action alternatives for groundwater downgradient of the source areas (WSP, 2023).

### 6.2.1 Groundwater Alternative 1: Monitored Natural Attenuation

Groundwater COCs would be monitored for degradation through natural attenuation.

### 6.2.2 Groundwater Alternative 2: Funnel and Gate

Groundwater would be directed through permeable reactive barriers and monitored for natural attenuation of COCs.

## 7.0 DESCRIPTION OF SELECTED REMEDIES

As outlined in Section 14 of the final draft SC/FFS, Source Area Alternative 1 and Groundwater Alternative 1 were selected after evaluation of three proposed Source Area Alternatives and two proposed Groundwater Alternatives (WSP, 2023). Due to shoring engineering constraints, ISS as discussed in Wood's 2021 SC/FFS will be applied for the remediation of accessible areas between 15 to 20 feet bgs adjacent to the Terminal Avenue Overpass.

## 7.1 SELECTION RATIONALE

The source area and groundwater alternatives selected for the Site are protective of human health and the environment and comply with remedy selection requirements under the MTCA, including the disproportionate cost analysis.





The source area is defined as LNAPL or residual LNAPL saturation in subsurface soil. The selected source area alternative will remove LNAPL and soils that exceed the Site-specific residual saturation remediation levels from accessible areas within the Site. Soil beneath the Terminal Avenue Overpass, Federal Avenue, and former Everett Avenue is inaccessible as it would require removal and reinstallation of permanent structures and utilities. Additionally, various underground utility corridors and overhead power lines also limit the accessible areas. Contaminants within these areas are expected to degrade over time through natural processes. Institutional controls (e.g., restrictive covenants) and a contaminated media management plan (or similar document) will be implemented to ensure use of the properties within the Site continues to be industrial or commercial and potential future exposure to remaining contaminants in soil and groundwater are managed appropriately (Sections 7.4 and 7.9). The contaminated media management plan (or similar document) will be included as an addendum to the restrictive covenant(s).

## 7.2 ECOLOGY'S SUPPORT OF SELECTED ALTERNATIVES

In a technical memorandum dated August 12, 2021, Ecology agreed with the selected remedies proposed in Wood's 2021 draft SC/FFS (Ecology, 2021; Wood, 2021):

*Three permanent soil remedies and two groundwater remedies were evaluated. Ecology concurs with the preferred/selected remedies outlined in the SC/FFS:*

- *Soil/Source Area Alternative no. 1 – LNAPL Excavation & Natural Source Zone Attenuation.*
- *Groundwater Remediation Alternative no. 1 – Monitored Natural Attenuation with Conditional Points of Compliance and associated monitoring.*

On June 27, 2023, Ecology conditionally approved the use of ISS to remediate accessible areas between 15 to 20 feet bgs via email communication.

## 7.3 DESCRIPTION OF THE CLEANUP ACTION

Based on the evaluation of cleanup alternatives using the MTCA remedy selection criteria and disproportionate cost analysis results, Source Area Alternative 1: LNAPL Area Excavation and Natural Source Zone Attenuation and Groundwater Alternative 1: Monitored Natural Attenuation, were selected as the comprehensive cleanup remedies for the Site (WSP, 2023; Ecology, 2021). Due to shoring engineering constraints, ISS will be applied for the remediation of accessible areas between 15 to 20 feet bgs adjacent to the Terminal Avenue Overpass. The selected cleanup remedies consist of the following:

- Excavation and ISS of predetermined extents defined by the Excavation Delineation Work conducted from October 2020 to October 2021. The Excavation Delineation Work results are shown on Plates 6 through 25. The completed Port Interim Action and the proposed ExxonMobil ADC Property excavation are shown on Plate 27. Further details regarding the proposed excavation activities are summarized in Section 7.8.2.1.
- Transport excavated accessible soils containing LNAPL and where analytical results exceeded the Site-specific residual saturation remediation levels for final treatment or disposal.
- Natural source zone attenuation to remediate COCs remaining in the source and inaccessible areas to assess the effectiveness of the remedy as described in Section 7.8.2.2.



- Upon completion of the excavation and ISS portion of the proposed cleanup action, groundwater monitoring will assess potential LNAPL mobility near the inaccessible areas and groundwater quality downgradient of the source areas, including the Port property, per Section 7.8.2.3.
- Monitored natural attenuation (MNA) will be performed to confirm degradation of COCs in groundwater across the Site.
- Implementation of restrictive covenant(s) as described in Section 7.9.

## 7.4 CONTINGENCY PLANNING

If inaccessible areas become accessible in the future (e.g., as a result of development projects), ExxonMobil and ADC will use the opportunity to work with the affected property owners to remove accessible LNAPL or soils that exceed the Site-specific residual saturation remediation levels, and to maintain worker safety and establish protocols for proper management and disposal of media affected by LNAPL and other Site COCs in the areas described in Section 7.9.

## 7.5 CLEANUP STANDARDS AND POINTS OF COMPLIANCE

As outlined in WAC 173-340-200, cleanup standards for each hazardous substance addressed by the cleanup must be obvious and undisputed and allow for an adequate margin of safety for protection of human health and the environment (WAC, 2007). Cleanup levels applicable to this cleanup action are established in Section 4.0; Site-specific residual saturation remediation levels were selected for soil and the MTCA Method A Cleanup Levels were selected for soil and groundwater. The POCs, locations where the remediation and cleanup levels shall be achieved, are established for each applicable media at the Site. These media include soil and groundwater.

### 7.5.1 Soil Points of Compliance

The standard POC for soil under the MTCA is generally considered to be all soils throughout the Site to uppermost groundwater and/or 15 feet below ground surface (bgs), depending on which exposure pathway is being protected (WAC 173-340-740[6][b-d]). However, because source material will be left in place at inaccessible locations across the Site (including surrounding properties and rights-of-way), WAC 173-340-740(6)(f)(i-vi) provides for the cleanup action to comply with cleanup standards if the remedy is permanent to the maximum extent practicable, protective of human health and of terrestrial ecological receptors, institutional controls are implemented, and compliance monitoring is completed (WAC, 2007).

The POCs for soil at this Site are based on the two complete pathways of exposure:

- Soil direct contact – The soil POC at the Site is any soil between surface and 15 feet bgs. Compliance is determined by direct sampling of soil.
- Soil leaching COCs to groundwater – This is a cross-media pathway that concerns all Site soil that is a potential source of COCs to groundwater. Compliance is demonstrated empirically by directly comparing groundwater concentrations at the Site's CPOC following the cleanup action. If groundwater at the CPOC is less than the groundwater cleanup levels (MTCA Method A, summarized in Section 4.0), this pathway will be empirically demonstrated to be in compliance.



## 7.5.2 Groundwater Conditional Points of Compliance

The standard POC for groundwater under the MTCA is “throughout the site from the uppermost level of the saturated zone extending vertically to the lowest depth that could potentially be affected by the site” (WAC 173-340-720[8][b]; WAC, 2007). However, because source material will be left in place at inaccessible places within the Site, including surrounding properties and rights-of-way, a CPOC may be applied by Ecology under WAC173-340-720(8)(c). The CPOC for groundwater consists of two existing monitoring wells (MW-A4 and MW-A9), located on Port property west of the source area excavations as shown on Plate 28. Compliance is determined by direct sampling of groundwater and comparison to the MTCA Method A Cleanup Levels.

## 7.6 APPLICABLE, RELEVANT, AND APPROPRIATE REQUIREMENTS (ARARs)

Section 173-340-710 of the WAC states that the selected cleanup action must comply with various federal and state level regulatory requirements (WAC, 2007). Some requirements will be refined during the design process and will be summarized in the EDR or other supporting documents. As discussed in the final draft SC/FFS (WSP, 2023), the following regulatory requirements are applicable to the selected cleanup action:

- MTCA Requirements (Section 4.0).
- State Environmental Policy Act (Section 7.6.3).
- Public Works Permits (EDR).
- Washington State and Federal Worker Safety (EDR; health and safety plan [HASP]).
- Air Quality (EDR).
- National Recommended Water Quality Criteria (EDR).
- Native American Graves Protection and Repatriation Act (Sections 7.6.1 and 7.6.2).
- Archaeological Resources Protection Act (Sections 7.6.1 and 7.6.2).
- Washington Dangerous Waste Regulations (EDR).
- Washington Solid Waste Handling Standards (EDR).
- Federal Waste Transportation Standards (EDR).

### 7.6.1 Cultural Resource Background Review

A literature search of previously recorded cultural resources for the Site and surrounding area was conducted. This included a thorough review of existing cultural resource data (i.e., archaeological, ethnohistoric, and historic) and previously completed cultural resources surveys. Information from the following sources were reviewed:

- Washington Department of Archaeology and Historic Preservation (WISAARD).
  - Washington Information System for Architectural and Archaeological Records Data.
  - Previous regional cultural resource investigations.
  - Previously recorded cultural resources.
- Historical registers (National Register of Historic Places).
- Local libraries and historical societies (if accessible).
  - Secondary sources, newspapers, historical documents, maps, photographs, and interviews.
- Tax assessor data.



- Site-specific data (including project plans provided by ExxonMobil).

The background data was compared to the proposed cleanup action to determine any potential disturbance to previously recorded archaeological resources, and to assess the archaeological significance of the project area. A project number within the WISAARD database will be initiated, as appropriate.

### 7.6.2 Monitoring and Inadvertent Discovery Plan

A Monitoring and Inadvertent Discovery Plan (MIDP) has been prepared for the Site. The MIDP (Appendix D) contains a project description, pertinent cultural resources laws and regulations, protocols for a preconstruction meeting and archaeological monitoring by a professional archaeologist, maps depicting the monitoring locations, email updates to the applicable agencies and tribes, and relevant contact information.

### 7.6.3 Washington State Environmental Policy Act Review

In accordance with Washington State Environmental Policy Act (SEPA), a revised SEPA checklist was prepared for the Site (Ecology, 2016b). The revised SEPA checklist, included as Appendix E, identifies measures to avoid, counter, or minimize likely impacts to the environment. If Ecology determines that there is no significant environmental impact associated with the selected cleanup action, Ecology will issue a Determination of Non-Significance or a mitigated Determination of Non-Significance with conditions.

## 7.7 RESTORATION TIMEFRAME

Upon completion of the cleanup action, Site-wide monitoring (Section 7.8.2) of natural source zone attenuation will help to better estimate the restoration timeframe. For the purposes of the final draft SC/FFS, WSP estimated that 50 years may be needed for COCs to become sufficiently degraded such that they are permanently immobile (WSP, 2023).

## 7.8 COMPLIANCE MONITORING

Three types of compliance monitoring will be performed in accordance with WAC 173-340-410 (WAC, 2007): protection, performance, and confirmational monitoring.

### 7.8.1 Protection Monitoring

Protection monitoring will be conducted to confirm that human health and the environment are adequately protected during the construction and operation/maintenance period of the cleanup action. Protection monitoring requirements will be outlined in the Site-specific HASP and other guidance and best practice documents. The HASP will be reviewed periodically and updated as needed throughout the cleanup action.

### 7.8.2 Performance Monitoring

Performance monitoring will be conducted to confirm that the selected action has attained the cleanup objectives: removal of LNAPL in soil by excavation, removal and ISS of accessible soil which exceeds the



Site-specific residual saturation remediation levels, natural source zone attenuation of soil remaining on-Site at inaccessible areas, assess potential LNAPL mobility near the inaccessible areas, and MNA of groundwater.

### 7.8.2.1 Soil – Excavation and ISS

To predetermine the extents of the proposed remedial excavations, the Excavation Delineation Work was conducted at accessible areas of the Site, including the ExxonMobil ADC Property and the Port properties.

Borings were completed in 2020 and 2021 on the ExxonMobil ADC Property and the immediate surrounding areas, which included City of Everett rights-of-way (to the east, west, and south) and properties owned by the Port (former Everett Avenue to the north and the Everett Ship Repair-leased property to the west). The purpose of the borings was to predefine the extents of the LNAPL excavation areas such that performance monitoring in the form of soil sampling at the time of excavation and ISS is not necessary. Analytical results for soil samples collected during the Excavation Delineation Work are summarized in Tables 1 and 2.

The extents of the Port Interim Action completed in 2023 were defined by soil analytical results as shown on Plates 6 through 14 and the cross section is shown on Plate 15. The extents of the excavation measured approximately 300 linear feet north to south along Federal Avenue and approximately 80 feet east to west from Federal Avenue toward Port Gardner Bay. The overall surface area of the excavation measures approximately 20,000 square feet.

On the southern end of the Port Interim Action, soil exceeding the Site-specific residual saturation remediation levels was encountered between surface and approximately 5 feet bgs (Plates 6 and 7). As a result, the excavation was advanced to approximately 7.5 feet bgs, where soil less than the Site-specific residual saturation remediation levels was observed (Plate 8). Advancing northward, soil exceeding the Site-specific residual saturation remediation levels was encountered at approximately 7.5 feet bgs for about 125 linear feet. Consequently, the excavation along this section was advanced to approximately 10 feet bgs where soil less than Site-specific residual saturation remediation levels was observed (Plate 9). On the northern end of the Port Interim Action, soil containing LNAPL and soil where analytical results exceeded the Site-specific residual saturation remediation levels was encountered between surface and approximately 17.5 feet bgs (Plates 6 through 13). The northern portion of the excavation was advanced to approximately 15 and 20 feet bgs where soil less than the Site-specific residual saturation remediation levels was observed (Plates 12 and 13). The depth of the excavation gradually decreased from north to south in this northernmost excavation section (Plates 6 through 15).

The extents of the ExxonMobil ADC Property excavation and ISS have been defined by the Excavation Delineation Work shown on Plates 16 through 24 and the cross section shown on Plate 25. The extents of the proposed excavation measure approximately 320 linear feet north to south along Federal Avenue and approximately 170 linear feet east to west from Federal Avenue toward the former BNSF excavation. The overall surface area of the excavation will measure approximately 47,000 square feet.

Similar to the Port Interim Action, the proposed depth of excavation at the ExxonMobil ADC Property gradually decreases from north to south. The excavation on the southwestern portion of the ExxonMobil ADC Property will be advanced to 7.5 feet bgs where soil less than the Site-specific residual saturation remediation levels was observed (Plates 16 through 25). Progressing northeast, and to remove soil



greater than the Site-specific residual saturation remediation levels, the proposed excavation depths gradually increase from 10 to 12.5 feet bgs and then to 15 feet bgs (Plates 19, 20, and 21). With each step-in depth, the surface width of the excavation becomes smaller. In addition to the excavations (7.5, 10, 12.5, and 15 feet bgs excavations), ISS will be used at two smaller areas between 15 and 20 feet bgs to remediate soil greater than the Site-specific residual saturation remediation levels on the eastern portion of the Site (Plate 23). Due to soil encountered greater than the Site-specific residual saturation remediation levels in the northwest corner of the Property, an additional, non-contiguous excavation will be advanced to 15 feet bgs (Plate 21).

The excavation extents were established to remove accessible soils containing LNAPL and soil where analytical results exceeded the Site-specific residual saturation remediation levels and remediate with ISS where excavation is not feasible. Performance monitoring in the form of soil sampling will not be necessary at the time of excavation or ISS, as the extent necessary to attain remediation levels has been identified by the Excavation Delineation Work.

### **7.8.2.2 Soil – Natural Source Zone Attenuation**

Soil containing concentrations of COCs exceeding the MTCA Method A Cleanup Levels will remain on Site following completion of the LNAPL source area excavations and ISS. Additionally, soil containing LNAPL or exceeding the Site-specific residual saturation remediation levels will remain on Site at inaccessible areas. These soils are expected to be remediated by natural source zone attenuation.

Natural source zone attenuation will be monitored by collecting samples in soil, groundwater, and soil vapor. The COC degradation rate will be determined by measuring natural source zone depletion parameters and other biodegradation by-products at multiple representative locations at the Site. The natural source zone attenuation rate will be used to estimate the quantity of LNAPL remaining at inaccessible areas and the restoration time for the Site.

Natural source zone attenuation details regarding placement of monitoring locations, methodology, and analyses will be provided in a sampling and analysis plan following completion of the LNAPL source area excavation. Natural source zone attenuation will be monitored following remedial excavation on a frequency based on the findings of the scope proposed in the sampling and analysis plan.

### **7.8.2.3 Groundwater**

Performance monitoring in the form of groundwater sampling will be conducted to evaluate the effectiveness of the LNAPL excavation, assess potential LNAPL mobility near the inaccessible areas, and evaluate groundwater quality downgradient of the source areas. The petroleum hydrocarbon analytical suite is expected to include TPHg, TPHd, TPHmo, benzene, toluene, ethylbenzene, total xylenes, cPAHs, and 1-methylnaphthalene. Additionally, select wells will be monitored for a variety of MNA parameters such as dissolved oxygen, nitrate, ferrous oxide, sulfate, temperature, pH, specific conductance, total alkalinity, and oxygen reduction potential (ORP).

Groundwater performance sampling will continue until cleanup standards are achieved and confirmational monitoring is implemented.



### 7.8.3 Confirmational Monitoring

The groundwater cleanup standard for the Site will be four consecutive semiannual monitoring events with concentrations less than the MTCA Method A Cleanup Levels. ExxonMobil and ADC will work with Ecology to determine what long-term confirmational soil and groundwater monitoring will be necessary.

## 7.9 INSTITUTIONAL CONTROLS

MTCA Section 173-340-440 defines institutional controls as “measures undertaken to limit or prohibit activities that may interfere with the integrity of an interim action or cleanup action or that may result in exposure to hazardous substances at a site.”

Because COCs exceeding the MTCA Method A Cleanup Levels will remain on the Site, institutional controls in the form of restrictive covenants will be implemented to protect human health and the environment and ensure the integrity of the cleanup action. The restrictive covenants are expected to include the following measures:

- Limit the future use of the Property to commercial or industrial uses.
- Maintain the existing asphalt cap over areas exceeding cleanup levels and inaccessible areas.
- Prohibit use of groundwater from the Site.
- Permanent buildings constructed within the source area boundaries will require the incorporation of vapor barriers to limit the potential migration of soil vapor into the buildings.

Restrictive covenants are proposed for the Property and other properties and rights-of-ways located within the Site boundary. The City of Everett will be consulted to confirm that zoning for the Site will remain commercial/industrial. Locations of the parcels that may require a restrictive covenant are summarized in the following table and shown on Plate 29.

Property Description	Property Owner	Location	Tax Parcel Description
ADC	ADC	Northern portion of Property	00437161900101 00437161900100
ExxonMobil	ExxonMobil	Southern portion of Property	00437161901000
City of Everett Right-of-Way	City of Everett	East and south of Property	Right-of-way
Former Everett Avenue	Port	North of Property	00597761803901
Federal Avenue	City of Everett	West of Property	Right-of-way
BNSF	BNSF parcel	East of Property	00437161901702
BNSF Easement	City of Everett	East of Property	Right-of-way
Terminal Avenue Overpass	City of Everett	East and south of Property	00437161901801 00437161901400
Port properties	Port	West and north of Property	29051900301600 29051900302500 29051900302700 29051900302800 29051900302900



ExxonMobil and ADC will prepare a sampling and analysis plan as an addendum to the environmental covenants for the City of Everett, Port, and BNSF property owners to address worker safety and management of LNAPL, affected soil, and/or affected groundwater resulting from potential future work within inaccessible areas on or near Federal Avenue, former Everett Avenue, the BNSF parcel, and/or the public rights-of-ways including Terminal Avenue Overpass. A contaminated media management plan (or similar document) will be included as an addendum to the restrictive covenant(s).

## 7.10 PUBLIC PARTICIPATION

Following Ecology approval of the draft CAP, a public notice announcement of the availability of the following documents will be provided for a public comment period in accordance with WAC 173-340-600(14) (WAC, 2007):

- WSP's *Site Characterization/Focused Feasibility Study Report*, dated May 12, 2023.
- Stantec's *Revised Site Characterization/Focused Feasibility Study Addendum*, dated June 30, 2023.
- Stantec's *Revised ExxonMobil ADC Draft Cleanup Action Plan*, dated June 30, 2023.

Ecology will seek public comments on a new proposed agreement to remediate the ExxonMobil ADC Site. The comment period will last at least 30 days, after which comments will be reviewed and addressed. As part of the public comment period, individuals will be given the opportunity to review the documents and provide comments during the public comment period for Ecology's evaluation. Following Ecology's evaluation of the public comments, the draft CAP will be revised to incorporate the public input accordingly.

## 7.11 OVERVIEW OF REMEDIAL DESIGN AND REMEDIAL ACTION PROCESS

After the CAP has been finalized, ExxonMobil and ADC will proceed with the remedial design for the selected cleanup action. This section summarizes the steps included in the remedial design and implementation process.

ExxonMobil and ADC will prepare an EDR for Ecology's review and approval. The EDR will be prepared in collaboration with the excavation subcontractor awarded the work. The EDR will include final shoring design plans, water management specifications, excavation methodologies, and method statements on the means and measures to execute technical components of the work. Roles and responsibilities for the subcontractors of the excavation work will be defined in the EDR. Additional means and methods for utility disconnection and restoration, haul routes, waste disposal facilities, Site-specific best management practices, site layout plans, detailed construction schedules, means to meet permit requirements, impermeable barrier wall specifications, backfill specifications/method statement, and Site restoration plans and method statements will also be included in the EDR. Additionally, mobilization and demobilization plans for the excavation subcontractor, as well as a Site-specific HASP, will be included in the EDR.

A MIDP has been prepared for the Site. The MIDP (Appendix D) contains a project description, pertinent cultural resources laws and regulations, protocols for a preconstruction meeting and archaeological monitoring by a professional archaeologist, maps depicting the monitoring locations, email updates to the applicable agencies and tribes, and relevant contact information. Project permits will be obtained, as





necessary. Substantive requirements of laws for which the MTCA creates a permit exemption will also be determined.

Upon completion of the cleanup action, a report summarizing field activities (including shoring, excavation, ISS, backfill, and Site restoration) and waste documentation will be submitted to ExxonMobil, ADC, Ecology, and property owners affected by the cleanup action. The report will be signed by a State of Washington licensed geologist or engineer.

## 7.12 SCHEDULE FOR IMPLEMENTATION

The cleanup action will be initiated after the CAP has been finalized. A tentative implementation schedule with more detail, including estimated completion time, will be included in the EDR. The Port Interim Action was initiated in June 2022 and completed in March 2023. The timeframes for planned activities are estimated and are subject to change. A projected schedule is summarized in the following table.

Date	Planned Activities
June 2022 – March 2023	Performed Port Interim Action.
March 2023	Port property restoration completed, relocated Everett Ship Repair structure to its original location, and demobilized from the Port property.
July 2023	Initiate ExxonMobil ADC Property excavation permitting and planning.
October 2023	Excavation contractor mobilization to the ExxonMobil ADC Property and initiate remedial excavation.
October 2023 – April 2024	Perform ExxonMobil ADC remedial excavation.
April 2024	ExxonMobil ADC Property restoration completion and demobilization from the Property.



## 8.0 REFERENCES

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## REVISED EXXONMOBIL ADC DRAFT CLEANUP ACTION PLAN

ExxonMobil ADC

June 30, 2023

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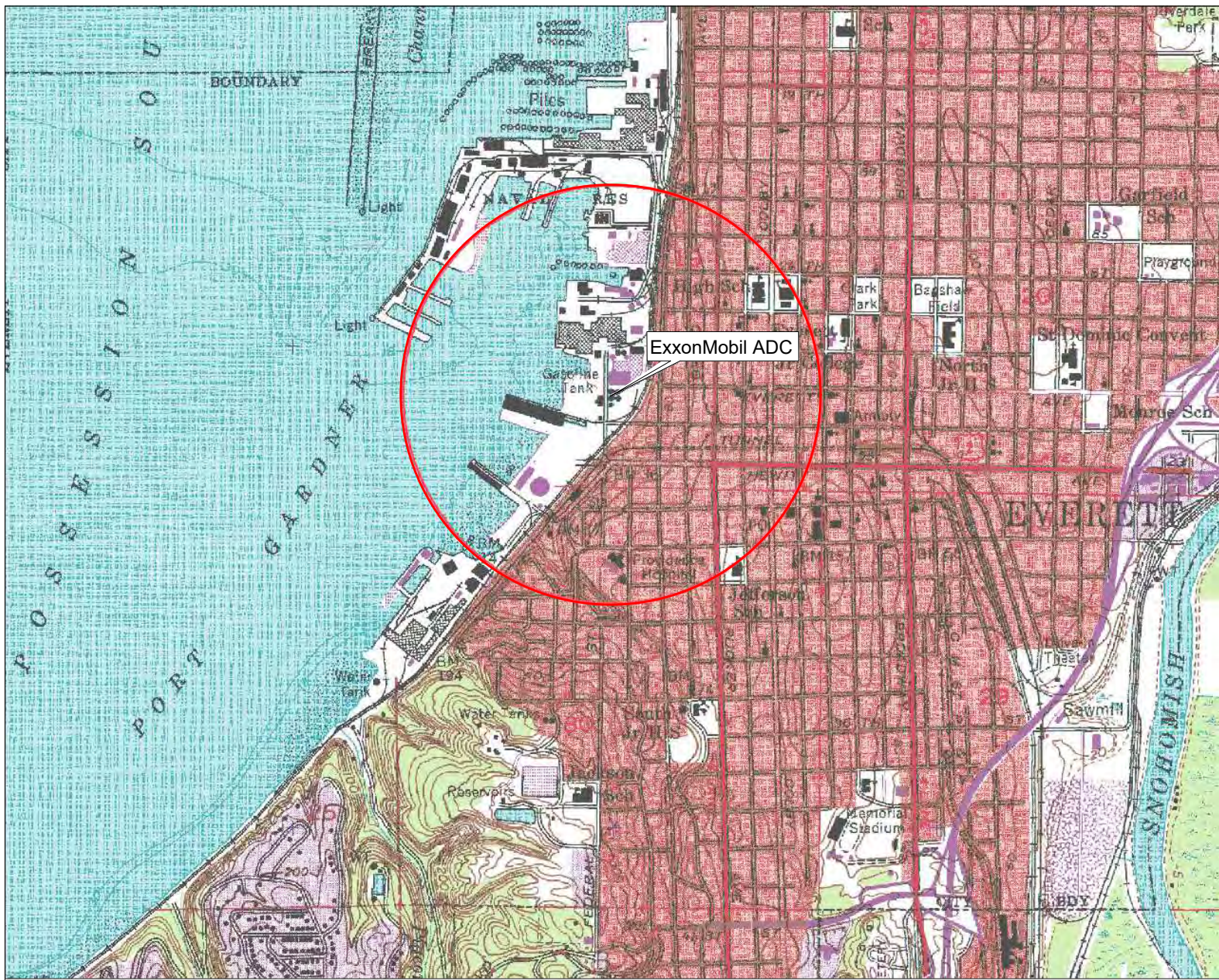
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3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS 544 ft Scale: 1 : 19,200 Detail: 13-0 Datum: NAD27

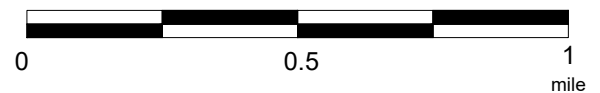
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**EXPLANATION**

 1/2-mile radius circle



**APPROXIMATE SCALE**



**SITE LOCATION MAP**

EXXONMOBIL ADC  
2717/2731 Federal Avenue  
Everett, Washington

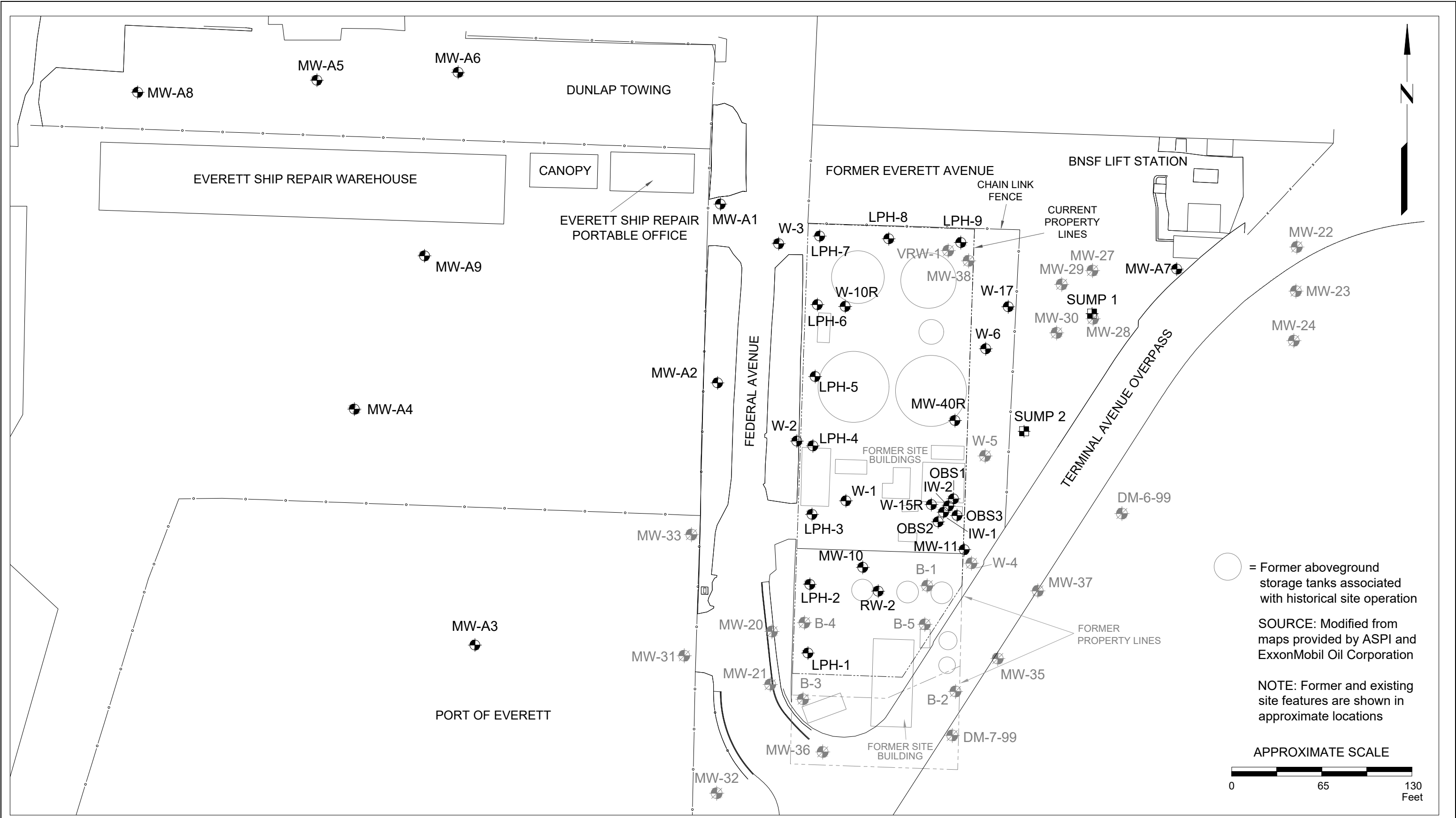
**PROJECT NO.**

238000337

**PLATE**

1

LEC: 01/24/23



FN 2380003370002



# GENERALIZED SITE PLAN

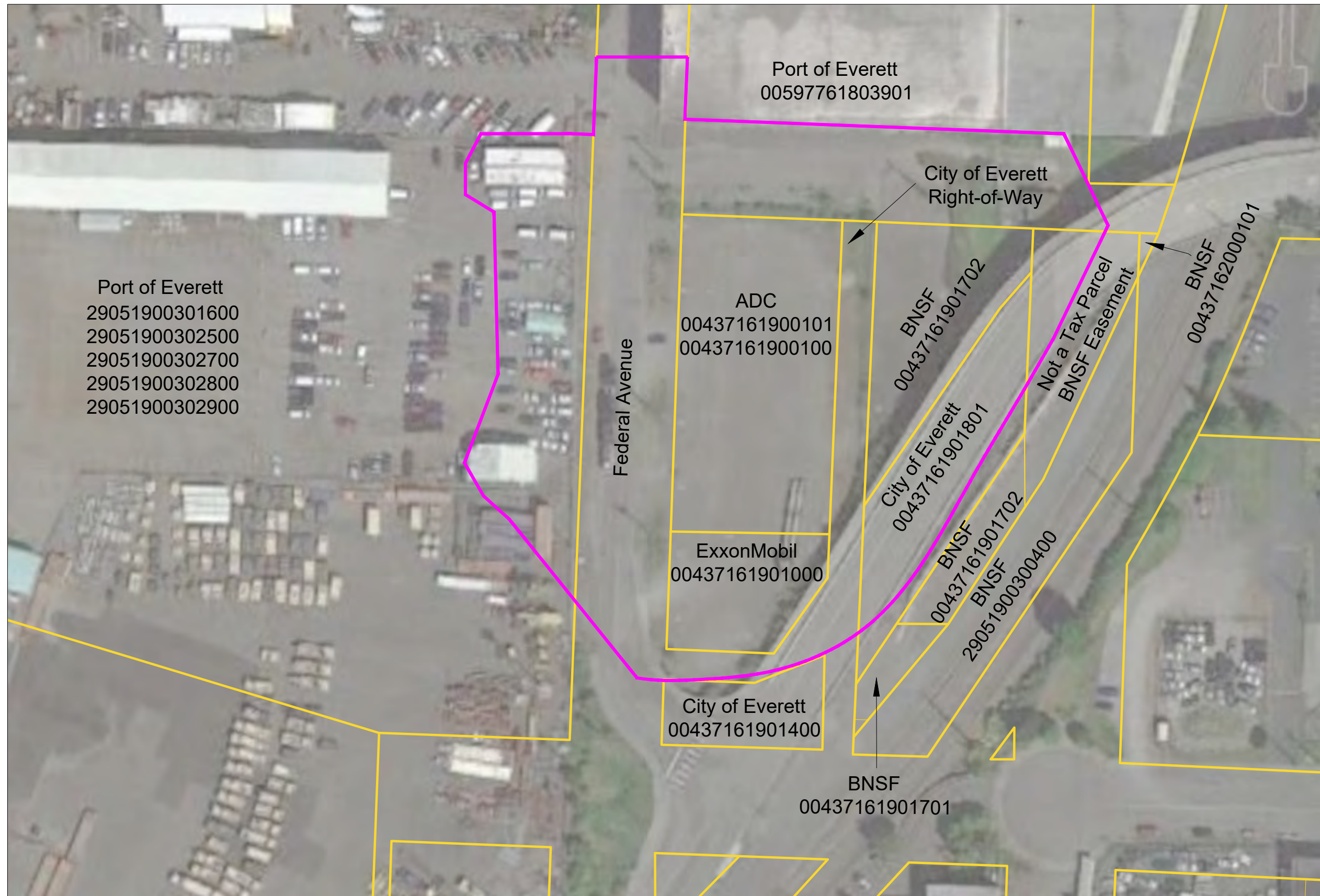
EXXOMOBIL ADC  
2717/2731 Federal Avenue  
Everett, Washington

**EXPLANATION**



- MW-A9 Groundwater Monitoring Well
- SUMP 2 Groundwater Sump
- MW-38 Destroyed Groundwater Monitoring Well
- OBS1 Observation Well

**PROJECT NO.**  
238000337

**PLATE**  
2  
LEC: 03/28/23

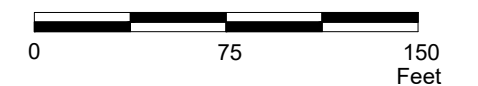


**EXPLANATION**

-  MTCA Site Boundary
-  Tax Parcel Boundary

SOURCE: Modified from maps provided by the Snohomish County Assessor

APPROXIMATE SCALE



FN 2380003370002

**SITE BOUNDARY MAP**

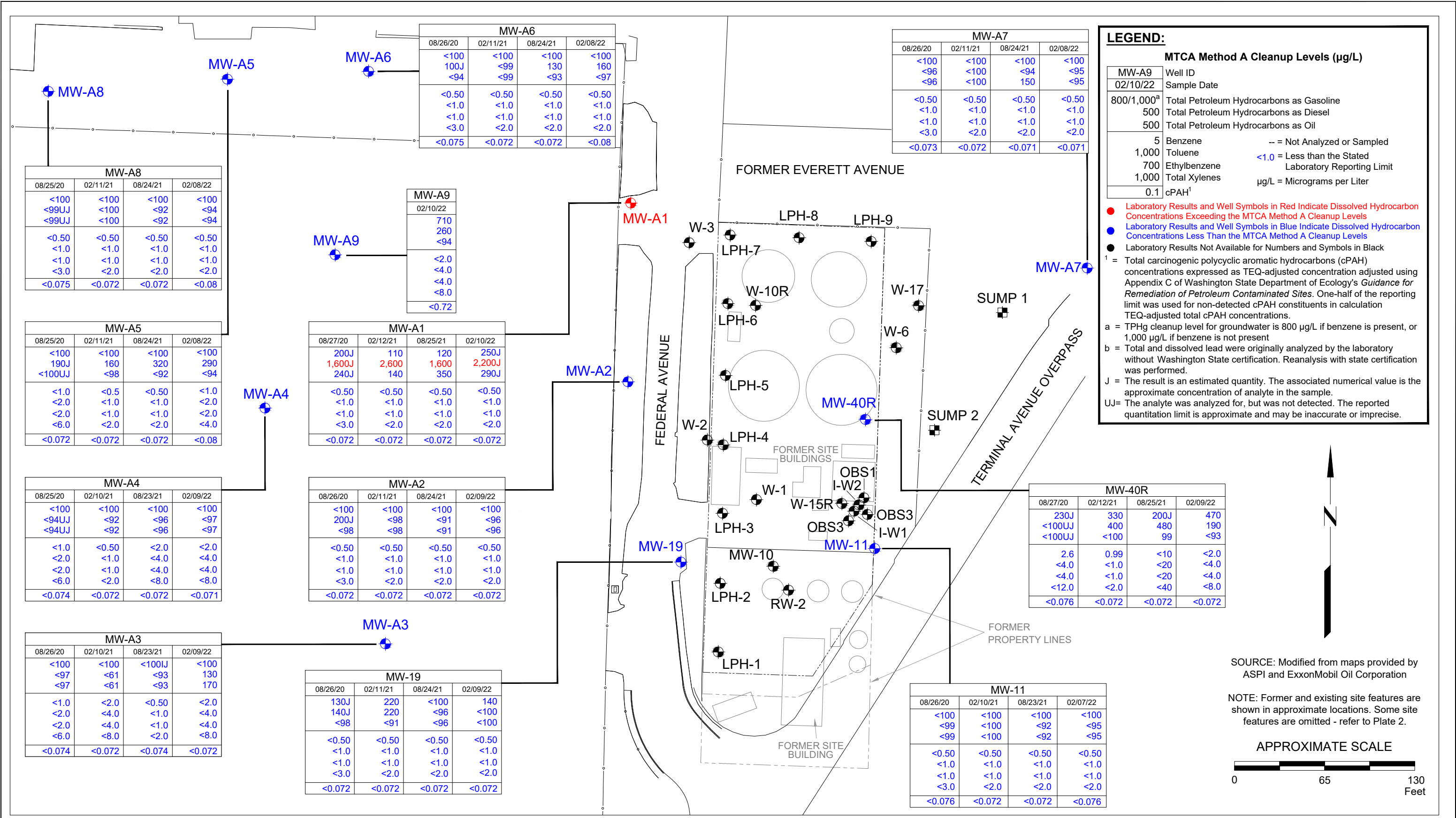
EXXONMOBIL ADC  
2717/2731 Federal Avenue  
Everett, Washington



PROJECT NO.  
238000337

PLATE  
3

LEC: 03/28/23



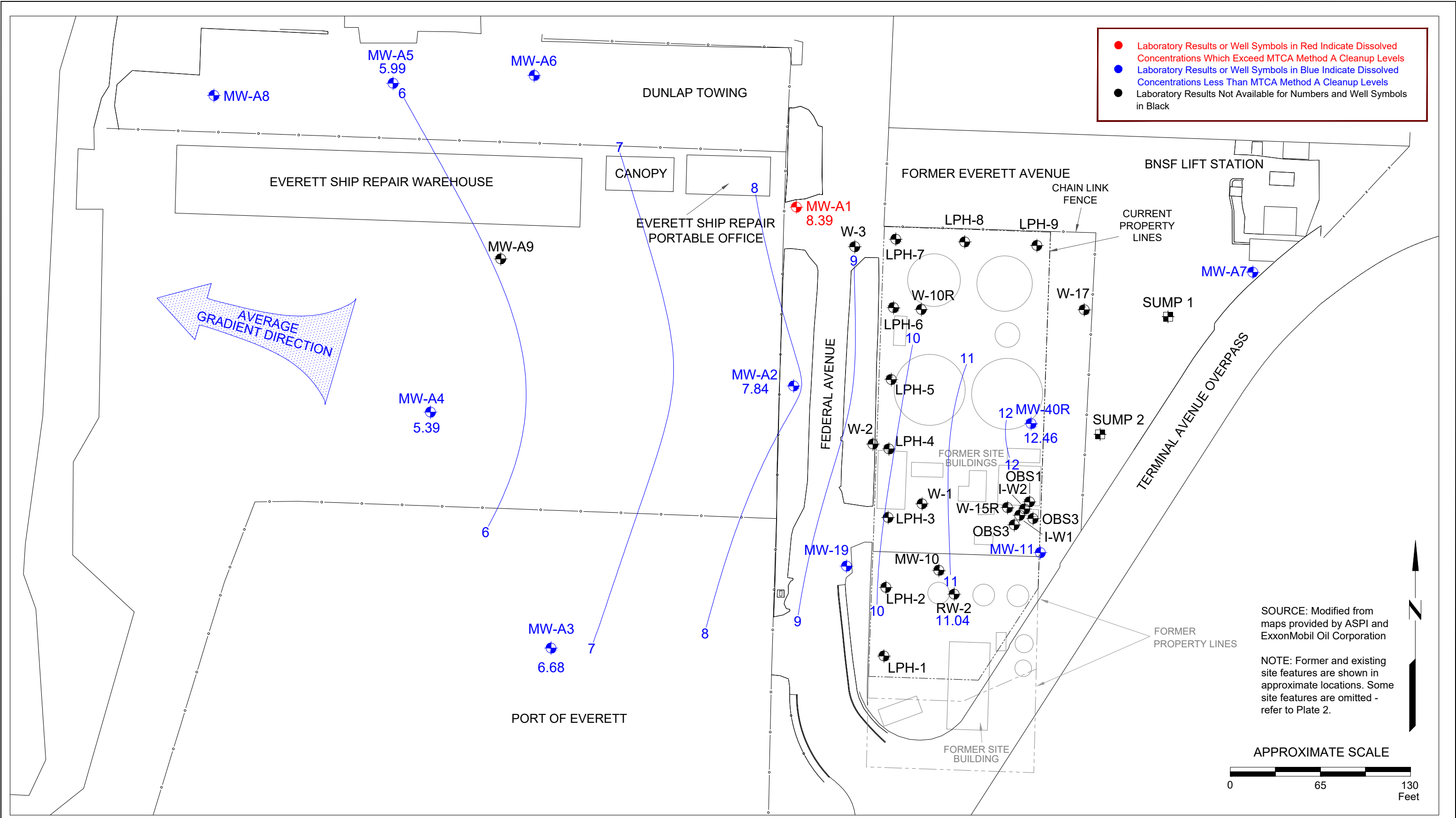
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# GROUNDWATER SAMPLE ANALYSES MAP - 02/07 - 02/10/22

ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington

EXPLANATION	PROJECT NO.
MW-A9 ● Groundwater Monitoring Well	<b>238000337</b>
SUMP 2 ■ Groundwater Sump	<b>PLATE</b>
	<b>4</b>
	<b>LEC: 03/28/23</b>



FN 2380003370002

## 25-HOUR AVERAGED GROUNDWATER ELEVATION CONTOUR MAP - 10/01 - 10/02/21

EXXONMOBIL ADC  
2717/2731 Federal Avenue  
Everett, Washington



EXPLANATION	
MW-A9	Groundwater Monitoring Well
12.46	Groundwater Elevation
SUMP 2	Groundwater Sump
	Groundwater Elevation Contour Line

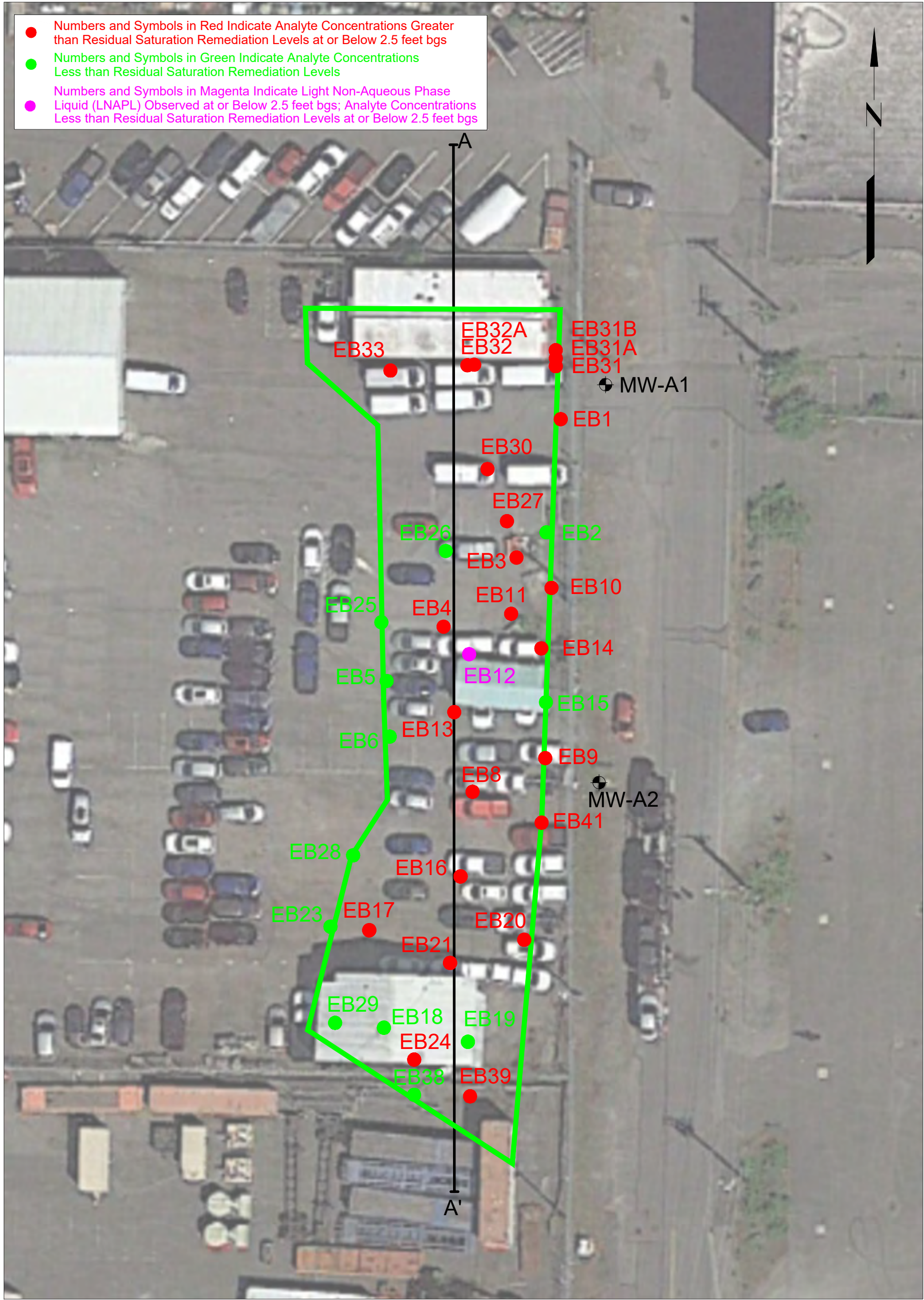
**PROJECT NO.**  
238000337

**PLATE**  
5

LEC: 03/28/23



- Numbers and Symbols in Red Indicate Analyte Concentrations Greater than Residual Saturation Remediation Levels at or Below 2.5 feet bgs
- Numbers and Symbols in Green Indicate Analyte Concentrations Less than Residual Saturation Remediation Levels
- Numbers and Symbols in Magenta Indicate Light Non-Aqueous Phase Liquid (LNAPL) Observed at or Below 2.5 feet bgs; Analyte Concentrations Less than Residual Saturation Remediation Levels at or Below 2.5 feet bgs



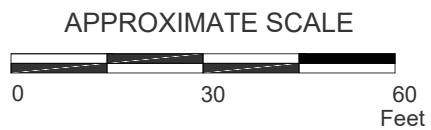
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SOURCE: Modified from images provided by Google Earth

**EXPLANATION**

- MW-A2  
● Groundwater Monitoring Well
- EB41  
● Excavation Delineation Boring

- A A'  
— Cross Section Traverse
- BGS Below Ground Surface
- Defined Excavation Extents



**PORT OF EVERETT EXCAVATION DELINEATION MAP - 2.5 FEET BGS**

EXXONMOBIL ADC  
2717/2731 Federal Avenue  
Everett, Washington

**PROJECT NO.**

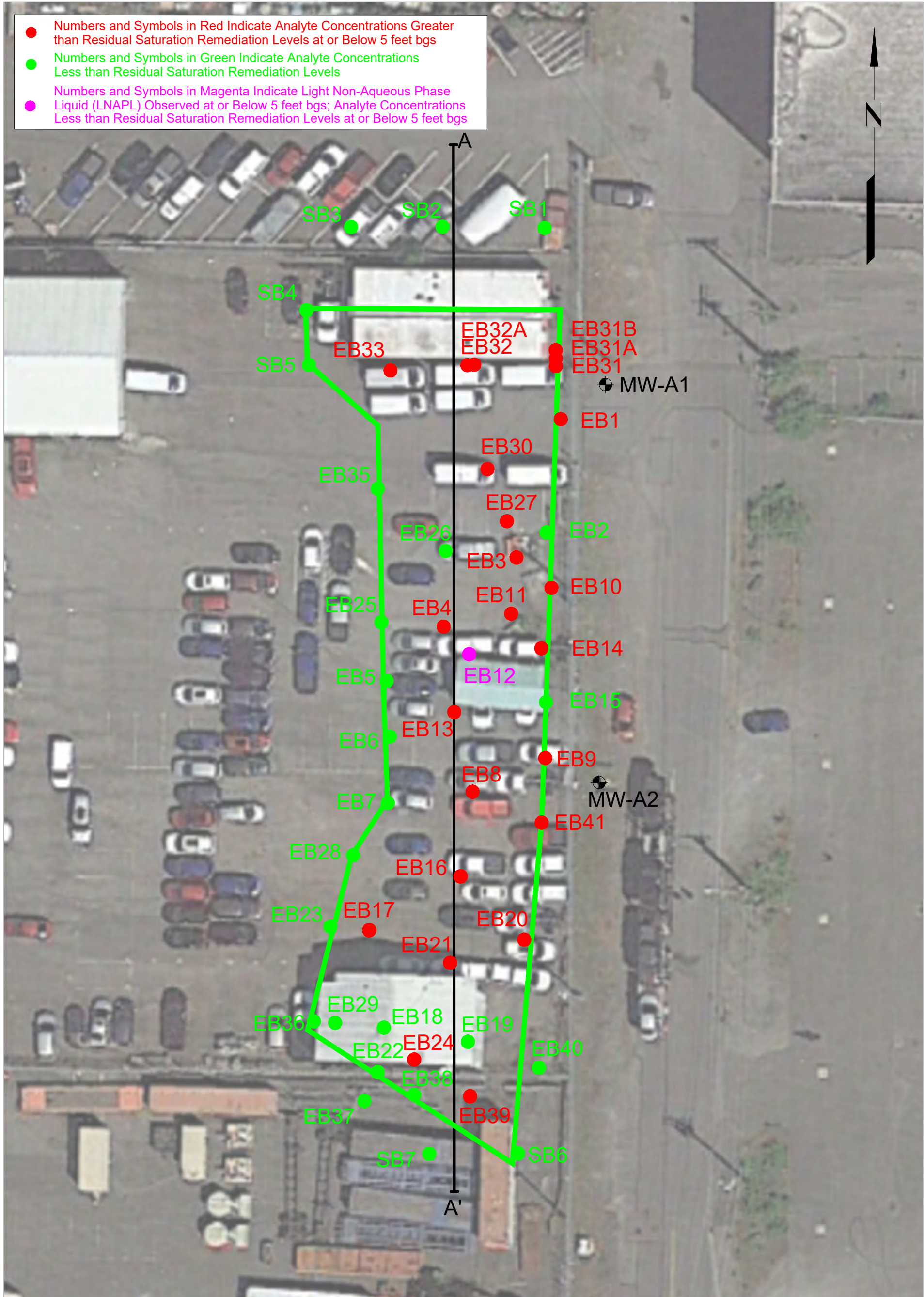
238000337

**PLATE**

6

LEC: 06/28/23

- Numbers and Symbols in Red Indicate Analyte Concentrations Greater than Residual Saturation Remediation Levels at or Below 5 feet bgs
- Numbers and Symbols in Green Indicate Analyte Concentrations Less than Residual Saturation Remediation Levels
- Numbers and Symbols in Magenta Indicate Light Non-Aqueous Phase Liquid (LNAPL) Observed at or Below 5 feet bgs; Analyte Concentrations Less than Residual Saturation Remediation Levels at or Below 5 feet bgs



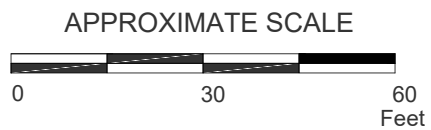
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SOURCE: Modified from images provided by Google Earth

**EXPLANATION**

- MW-A2  
● Groundwater Monitoring Well
- EB41  
● Excavation Delineation Boring

- A A'  
— Cross Section Traverse
- BGS Below Ground Surface
- Defined Excavation Extents



**PORT OF EVERETT EXCAVATION DELINEATION MAP - 5 FEET BGS**

EXXONMOBIL ADC  
2717/2731 Federal Avenue  
Everett, Washington

**PROJECT NO.**

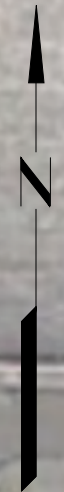
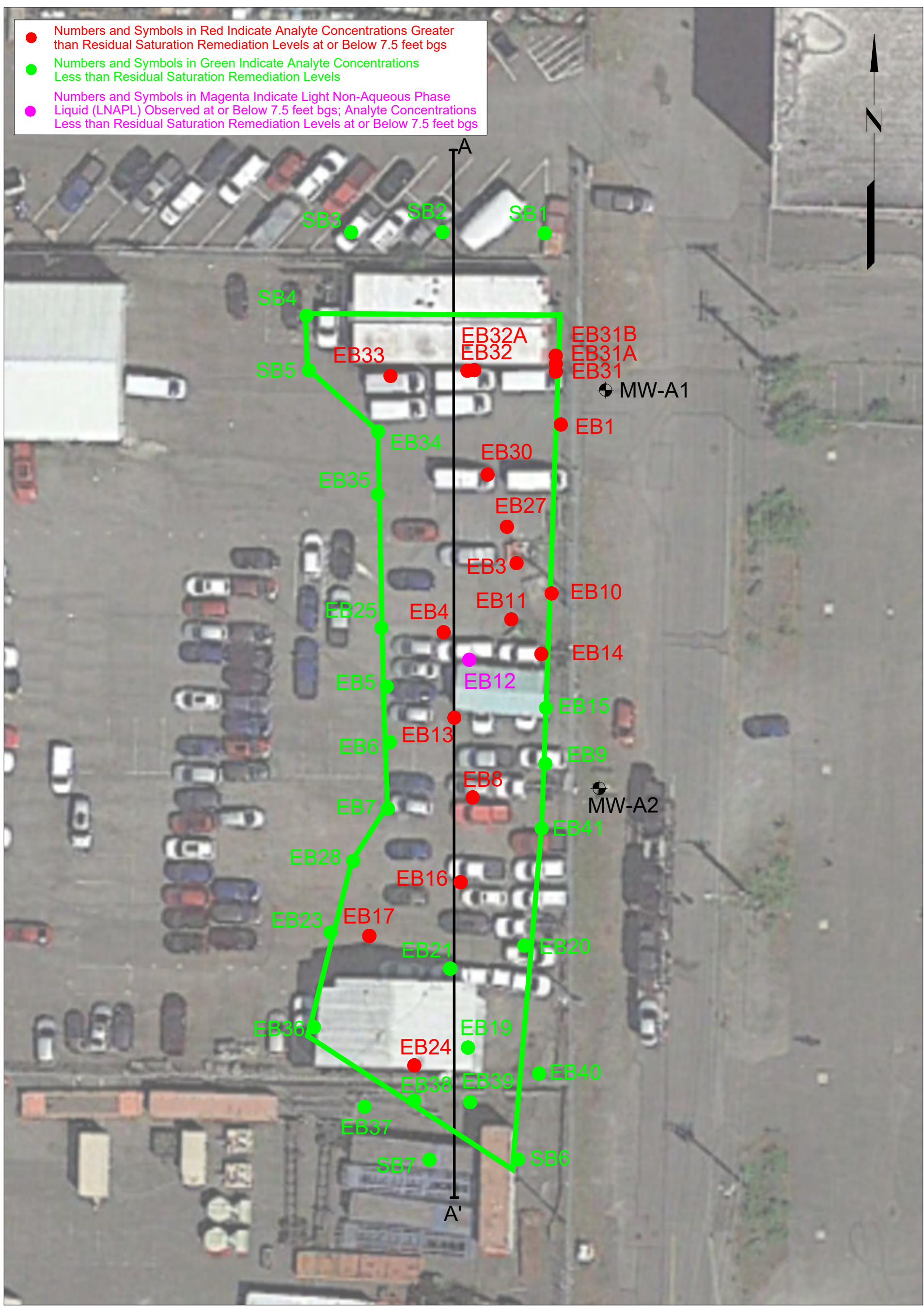
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**PLATE**

7

LEC: 06/28/23

- Numbers and Symbols in Red Indicate Analyte Concentrations Greater than Residual Saturation Remediation Levels at or Below 7.5 feet bgs
- Numbers and Symbols in Green Indicate Analyte Concentrations Less than Residual Saturation Remediation Levels
- Numbers and Symbols in Magenta Indicate Light Non-Aqueous Phase Liquid (LNAPL) Observed at or Below 7.5 feet bgs; Analyte Concentrations Less than Residual Saturation Remediation Levels at or Below 7.5 feet bgs



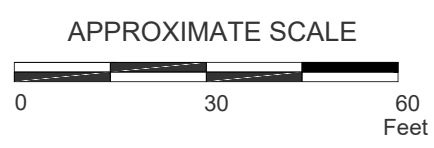
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SOURCE: Modified from images provided by Google Earth

**EXPLANATION**

- MW-A2  
● Groundwater Monitoring Well
- EB41  
● Excavation Delineation Boring

- A A'  
— Cross Section Traverse
- BGS Below Ground Surface
- Defined Excavation Extents



**PORT OF EVERETT EXCAVATION DELINEATION MAP - 7.5 FEET BGS**

EXXONMOBIL ADC  
2717/2731 Federal Avenue  
Everett, Washington

**PROJECT NO.**  
238000337

**PLATE**  
8

LEC: 06/28/23

- Numbers and Symbols in Red Indicate Analyte Concentrations Greater than Residual Saturation Remediation Levels at or Below 10 feet bgs
- Numbers and Symbols in Green Indicate Analyte Concentrations Less than Residual Saturation Remediation Levels
- Numbers and Symbols in Magenta Indicate Light Non-Aqueous Phase Liquid (LNAPL) Observed at or Below 10 feet bgs; Analyte Concentrations Less than Residual Saturation Remediation Levels at or Below 10 feet bgs



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SOURCE: Modified from images provided by Google Earth

**EXPLANATION**

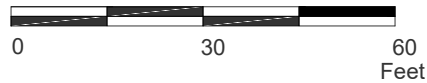
- MW-A2  
● Groundwater Monitoring Well
- EB41  
● Excavation Delineation Boring

A A'  
— Cross Section Traverse

BGS Below Ground Surface

— Defined Excavation Extents

**APPROXIMATE SCALE**



**PORT OF EVERETT EXCAVATION DELINEATION MAP - 10 FEET BGS**

EXXONMOBIL ADC  
2717/2731 Federal Avenue  
Everett, Washington

**PROJECT NO.**

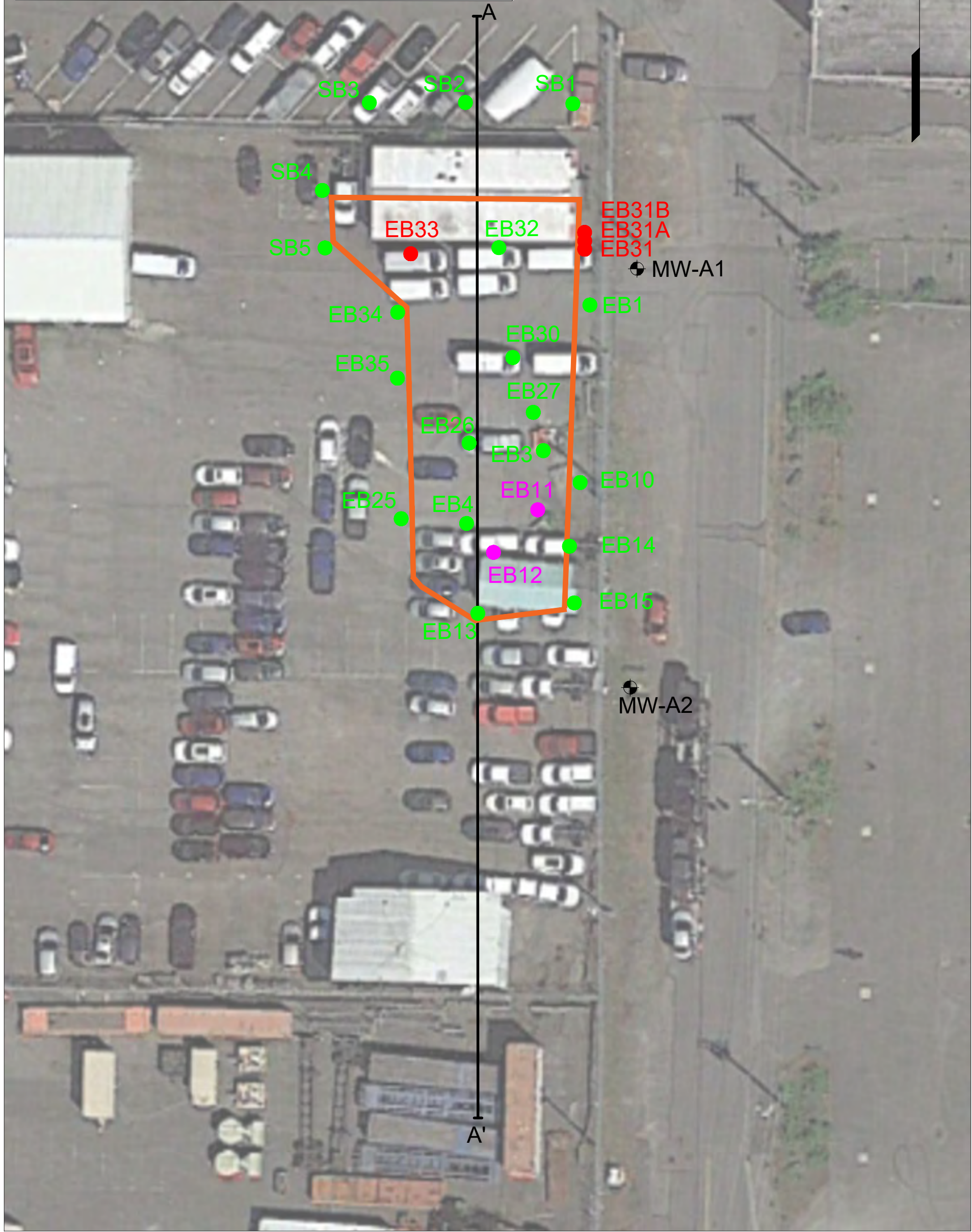
238000337

**PLATE**

9

LEC: 06/28/23

- Numbers and Symbols in Red Indicate Analyte Concentrations Greater than Residual Saturation Remediation Levels at or Below 12.5 feet bgs
- Numbers and Symbols in Green Indicate Analyte Concentrations Less than Residual Saturation Remediation Levels
- Numbers and Symbols in Magenta Indicate Light Non-Aqueous Phase Liquid (LNAPL) Observed at or Below 12.5 feet bgs; Analyte Concentrations Less than Residual Saturation Remediation Levels at or Below 12.5 feet bgs



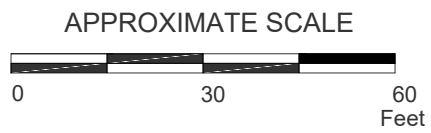
FN 2380003370002

SOURCE: Modified from images provided by Google Earth

**EXPLANATION**

- MW-A2  
● Groundwater Monitoring Well
- EB41  
● Excavation Delineation Boring

- A A'  
— Cross Section Traverse
- BGS  
Below Ground Surface
- Defined Excavation Extents



**PORT OF EVERETT EXCAVATION DELINEATION MAP - 12.5 FEET BGS**

EXXONMOBIL ADC  
2717/2731 Federal Avenue  
Everett, Washington

**PROJECT NO.**  
238000337

**PLATE**  
10

LEC: 06/28/23

- Numbers and Symbols in Red Indicate Analyte Concentrations Greater than Residual Saturation Remediation Levels at or Below 15' bgs
- Numbers and Symbols in Green Indicate Analyte Concentrations Less than Residual Saturation Remediation Levels
- Numbers and Symbols in Magenta Indicate Light Non-Aqueous Phase Liquid (LNAPL) Observed at or Below 15 feet bgs; Analyte Concentrations Less than Residual Saturation Remediation Levels at or Below 15 feet bgs



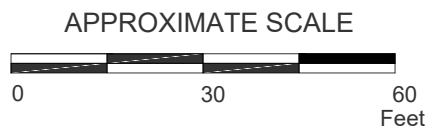
FN 2380003370002

SOURCE: Modified from images provided by Google Earth

**EXPLANATION**

- MW-A2  
● Groundwater Monitoring Well
- EB41  
● Excavation Delineation Boring

- A A  
—|— Cross Section Traverse
- BGS Below Ground Surface
- Defined Excavation Extents



**PORT OF EVERETT EXCAVATION DELINEATION MAP - 15 FEET BGS**

EXXONMOBIL ADC  
2717/2731 Federal Avenue  
Everett, Washington

**PROJECT NO.**

238000337

**PLATE**

11

LEC: 06/28/23

- Numbers and Symbols in Red Indicate Analyte Concentrations Greater than Residual Saturation Remediation Levels at or Below 17.5' bgs
- Numbers and Symbols in Green Indicate Analyte Concentrations Less than Residual Saturation Remediation Levels
- Numbers and Symbols in Magenta Indicate Light Non-Aqueous Phase Liquid (LNAPL) Observed at or Below 17.5 feet bgs; Analyte Concentrations Less than Residual Saturation Remediation Levels at or Below 17.5 feet bgs



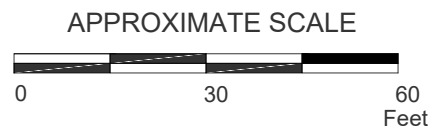
FN 2380003370002

SOURCE: Modified from images provided by Google Earth

**EXPLANATION**

- MW-A2  
● Groundwater Monitoring Well
- EB41  
● Excavation Delineation Boring

- A A'  
—|— Cross Section Traverse
- BGS Below Ground Surface
- Defined Excavation Extents



**PORT OF EVERETT EXCAVATION DELINEATION MAP - 17.5 FEET BGS**

EXXONMOBIL ADC  
2717/2731 Federal Avenue  
Everett, Washington

**PROJECT NO.**  
238000337

**PLATE**  
12  
LEC: 06/28/23

● Numbers and Symbols in Green Indicate Analyte Concentrations Less than Residual Saturation Remediation Levels



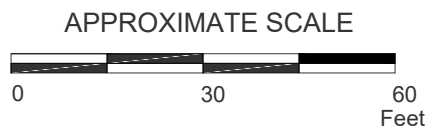
FN 2380003370002

SOURCE: Modified from images provided by Google Earth

**EXPLANATION**

- MW-A2  
● Groundwater Monitoring Well
- EB41  
● Excavation Delineation Boring

- A A'  
— Cross Section Traverse
- Defined Excavation Extents



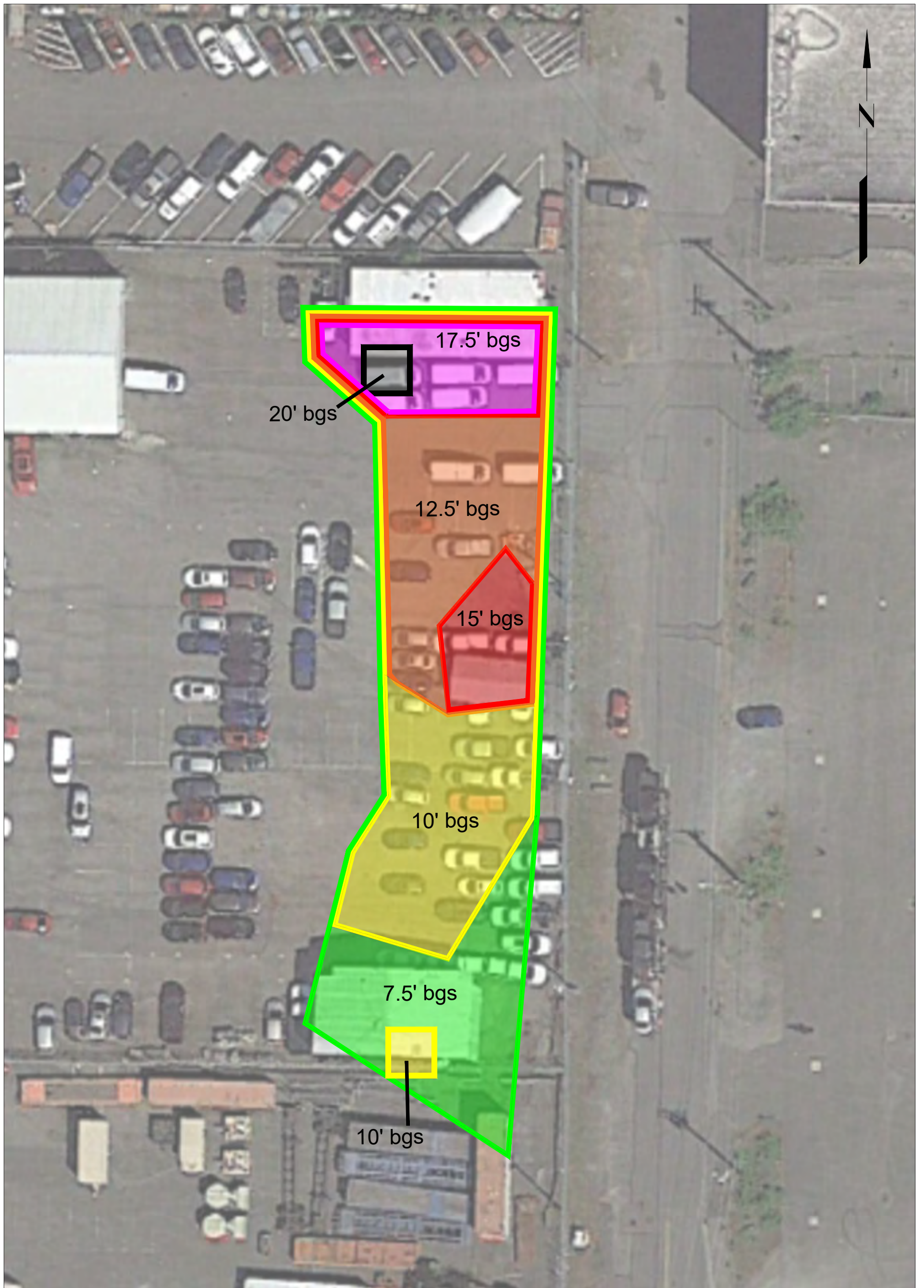
**PORT OF EVERETT EXCAVATION DELINEATION MAP - 20 FEET BGS**

EXXONMOBIL ADC  
2717/2731 Federal Avenue  
Everett, Washington

**PROJECT NO.**  
238000337

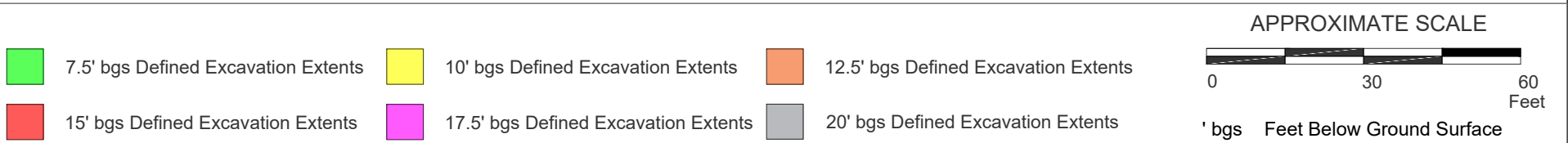
**PLATE**  
13  
LEC: 06/28/23





FN 2380003370002

SOURCE: Modified from images provided by Google Earth



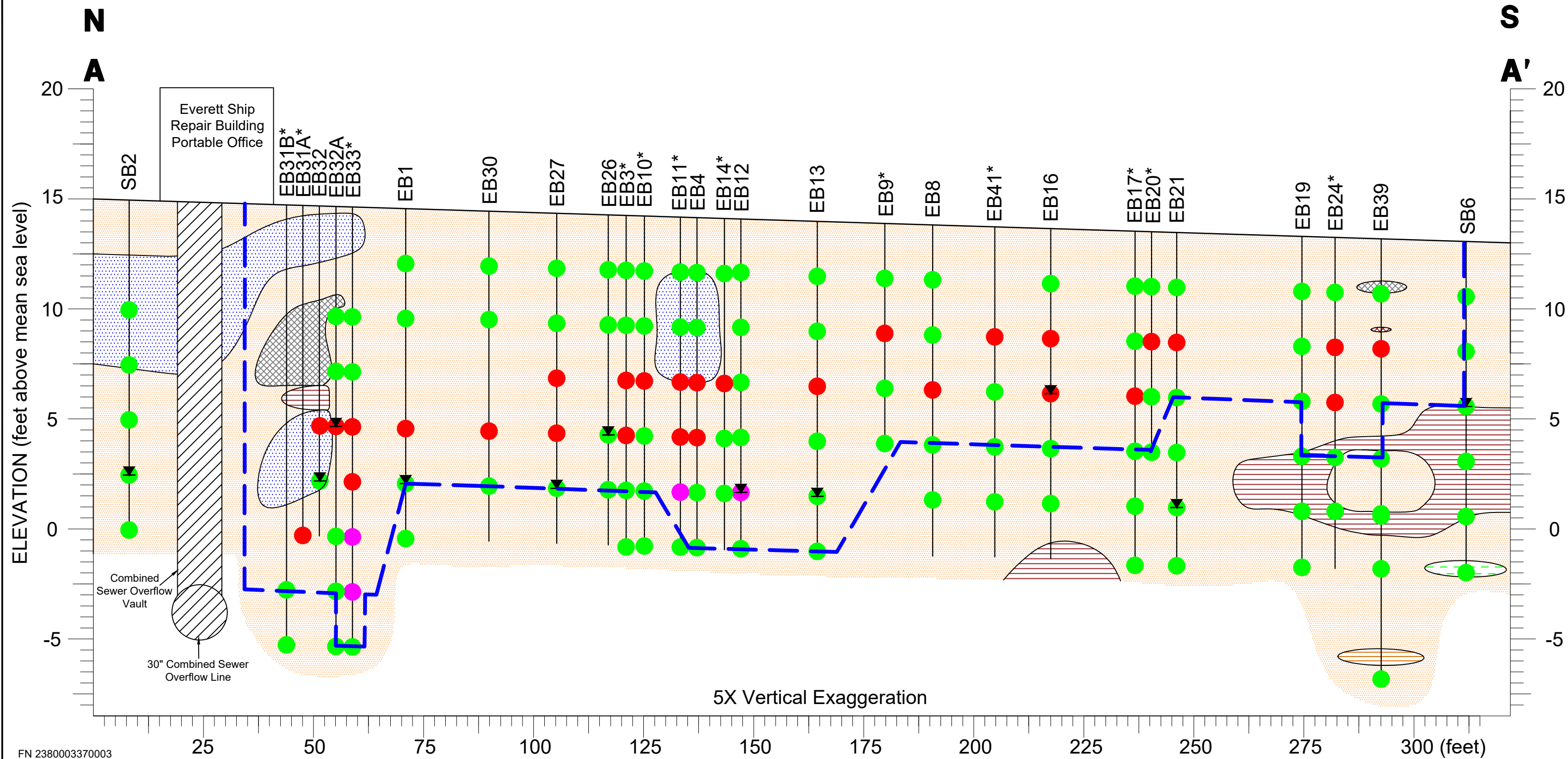
**PORT OF EVERETT EXCAVATION EXTENTS BY DEPTH**

EXXONMOBIL ADC  
2717/2731 Federal Avenue  
Everett, Washington

**PROJECT NO.**  
238000337

**PLATE**  
14  
LEC: 06/28/23

\* = Borings EB1, EB3, EB9, EB10, EB11, EB14, EB17, EB20, EB24, EB31A, EB31B, EB33, and EB41 are projected onto the cross section for hydrocarbon concentration distribution purposes; projected borings were not used to construct lithology illustration



FN 2380003370003



**PORT OF EVERETT CROSS SECTION N-S**

EXXONMOBIL ADC  
2717/2731 Federal Avenue  
Everett, Washington

**EXPLANATION**

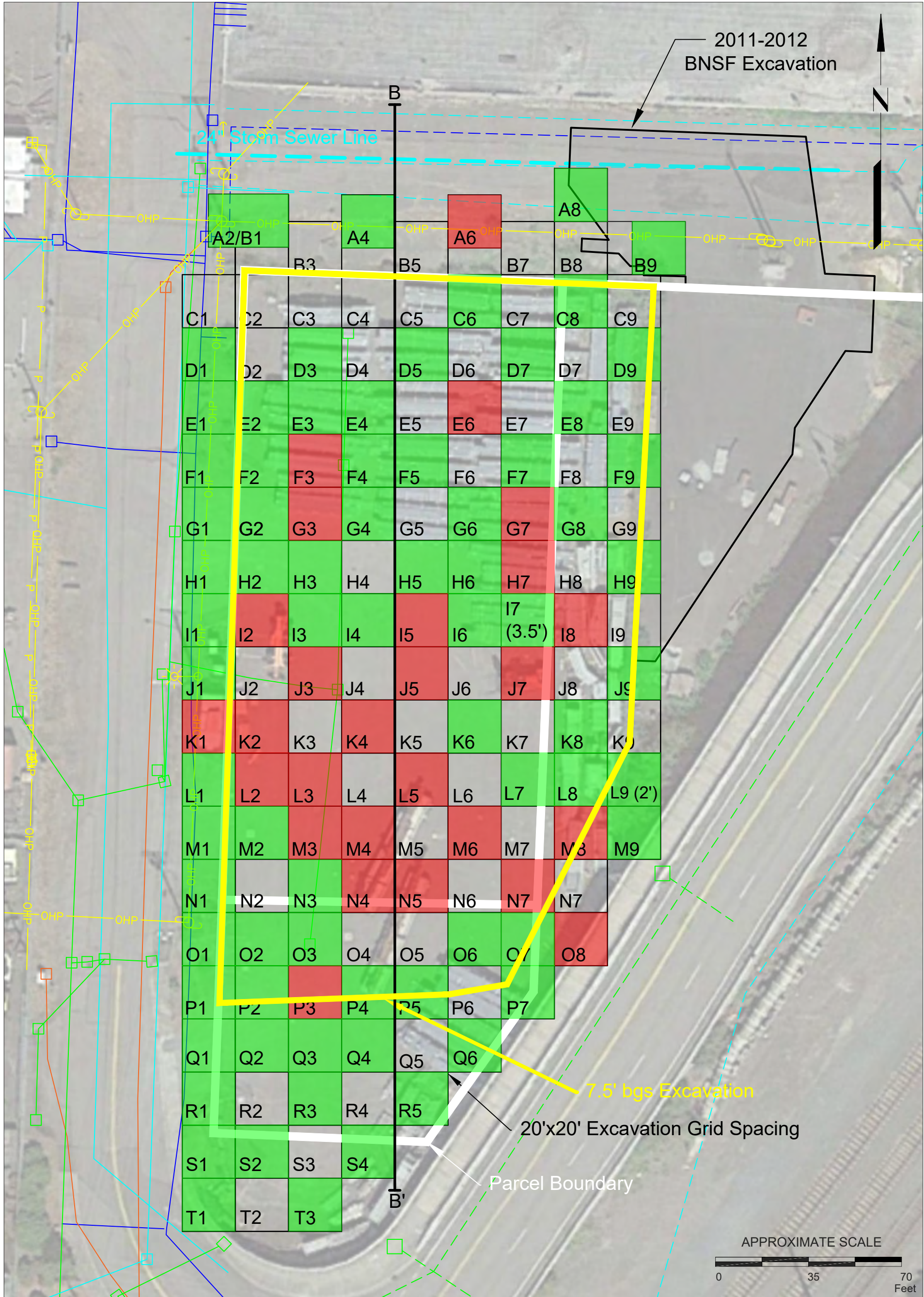
- ▼ Water Level Encountered During Drilling
- Hydrocarbon Concentrations In Soil Less Than Site-Specific Residual Saturation Remediation Levels
- Hydrocarbon Concentrations In Soil Greater Than Site-Specific Residual Saturation Remediation Levels
- LNAPL Observed During Drilling
- Port Interim Action Excavation Extents
- Coarse-grained Gravelly Sediments (GW, GC)
- Coarse-grained Sandy Sediments (SW, SP, SM, SC)
- Fine-grained Sediments (CL, CH, ML)
- Organic Sediments (OH, PT, Wood Debris)
- Concrete Debris

**PROJECT**

238000337

**PLATE**

15  
LEC: 02/27/23



FN 2380003370002

SOURCE: Modified from Images Provided by Google Earth

**EXPLANATION**

- Red Indicates Analyte Concentrations Greater than Residual Saturation Remediation Levels
- Green Indicates Analyte Concentrations Less than Residual Saturation Remediation Levels

BGS Below Ground Surface  
 B B' Cross Section Traverse

**UTILITIES LEGEND**

- TELEPHONE
- ELECTRICAL
- WATER
- STORM DRAIN
- SEWER
- POWER
- POWER, COMMUNICATION, AND/OR SECURITY CAMERA POLE

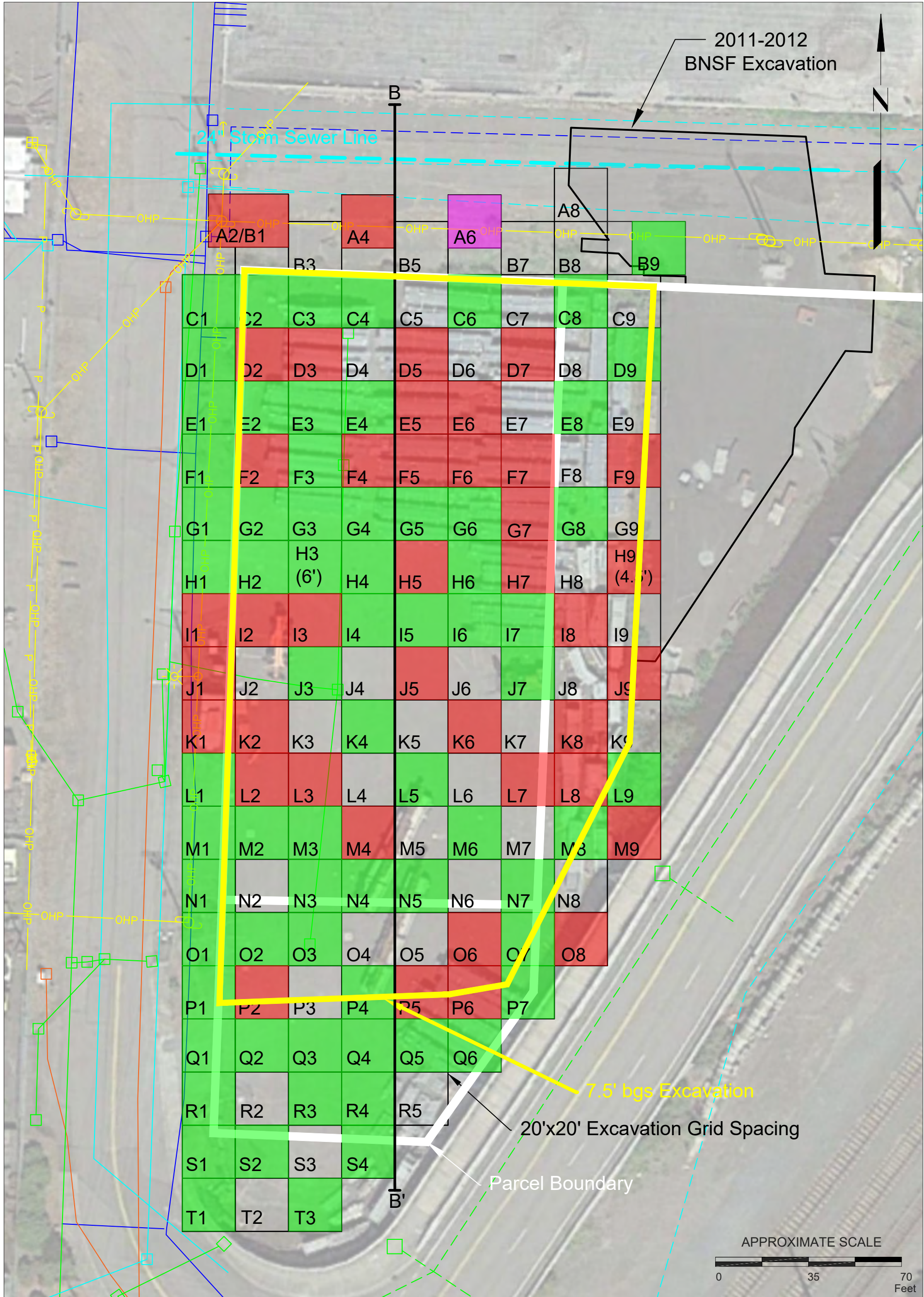


**EXXONMOBIL ADC EXCAVATION DELINEATION MAP - 2.5 FEET BGS**

EXXONMOBIL ADC  
 2717/2731 Federal Avenue  
 Everett, Washington

**PROJECT NO.**  
 238000337

**PLATE**  
 16  
 RRT: 02/28/23



FN 2380003370002

SOURCE: Modified from Images Provided by Google Earth

**EXPLANATION**

- Red Indicates Analyte Concentrations Greater than Residual Saturation Remediation Levels
- Green Indicates Analyte Concentrations Less than Residual Saturation Remediation Levels

Magenta Indicates Light Non-Aqueous Phase Liquid (LNAPL) Observed; Analyte Concentrations Less than Residual Saturation Remediation Levels

B B' Cross Section Traverse

BGS Below Ground Surface

**UTILITIES LEGEND**

- TELEPHONE
- ELECTRICAL
- WATER
- STORM DRAIN
- SEWER
- POWER
- POWER, COMMUNICATION, AND/OR SECURITY CAMERA POLE

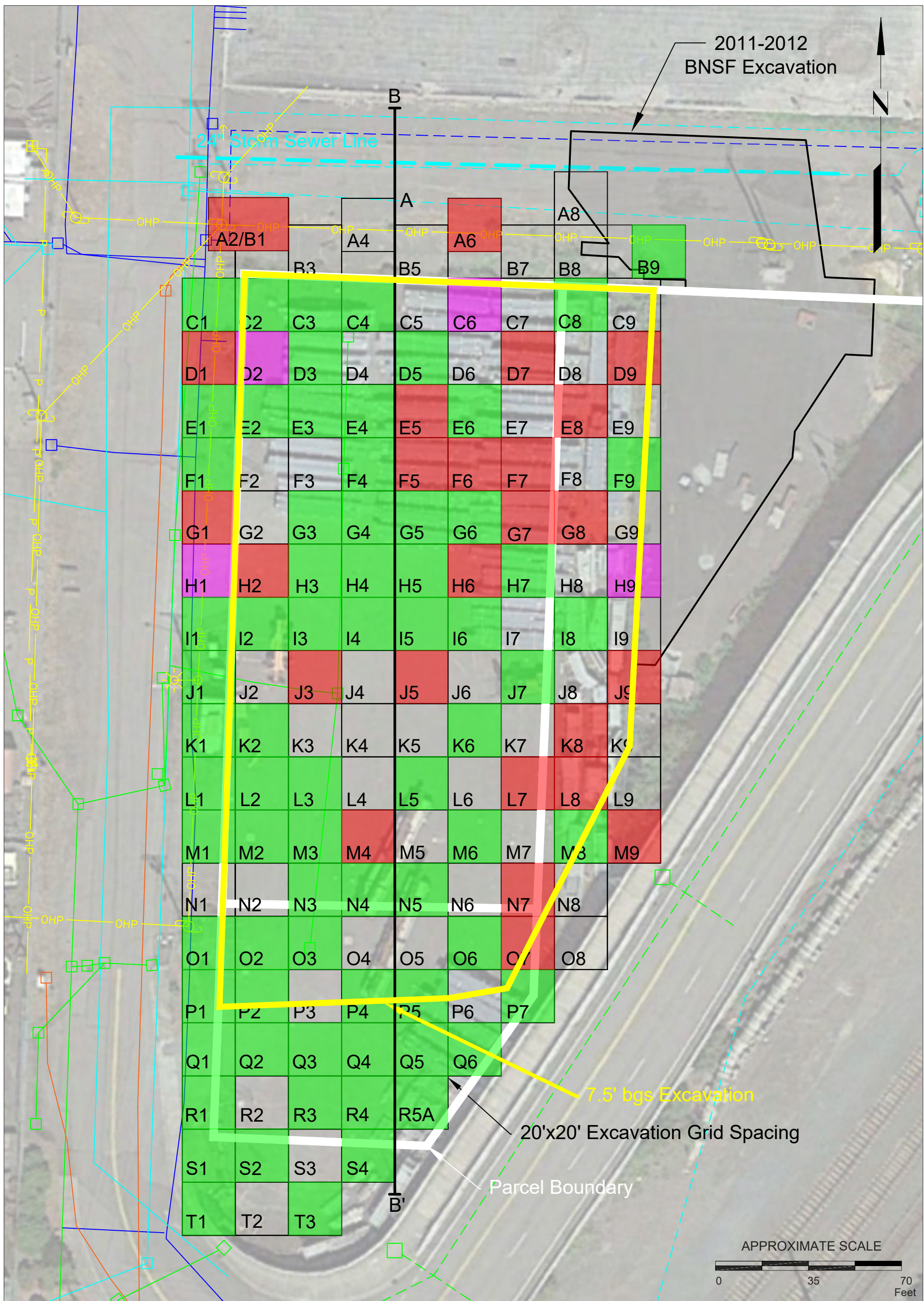


**EXXONMOBIL ADC EXCAVATION DELINEATION MAP - 5 FEET BGS**

EXXONMOBIL ADC  
2717/2731 Federal Avenue  
Everett, Washington

**PROJECT NO.**  
238000337

**PLATE**  
17  
RRT: 02/28/23



FN 2380003370002

SOURCE: Modified from Images Provided by Google Earth

**EXPLANATION**

- Red Indicates Analyte Concentrations Greater than Residual Saturation Remediation Levels
- Green Indicates Analyte Concentrations Less than Residual Saturation Remediation Levels

■ Magenta Indicates Light Non-Aqueous Phase Liquid (LNAPL) Observed; Analyte Concentrations Less than Residual Saturation Remediation Levels

B B' Cross Section Traverse

BGS Below Ground Surface

**UTILITIES LEGEND**

- TELEPHONE
- ELECTRICAL
- WATER
- STORM DRAIN
- SEWER
- POWER
- POWER, COMMUNICATION, AND/OR SECURITY CAMERA POLE



**EXXONMOBIL ADC EXCAVATION DELINEATION MAP - 7.5 FEET BGS**

EXXONMOBIL ADC  
2717/2731 Federal Avenue  
Everett, Washington

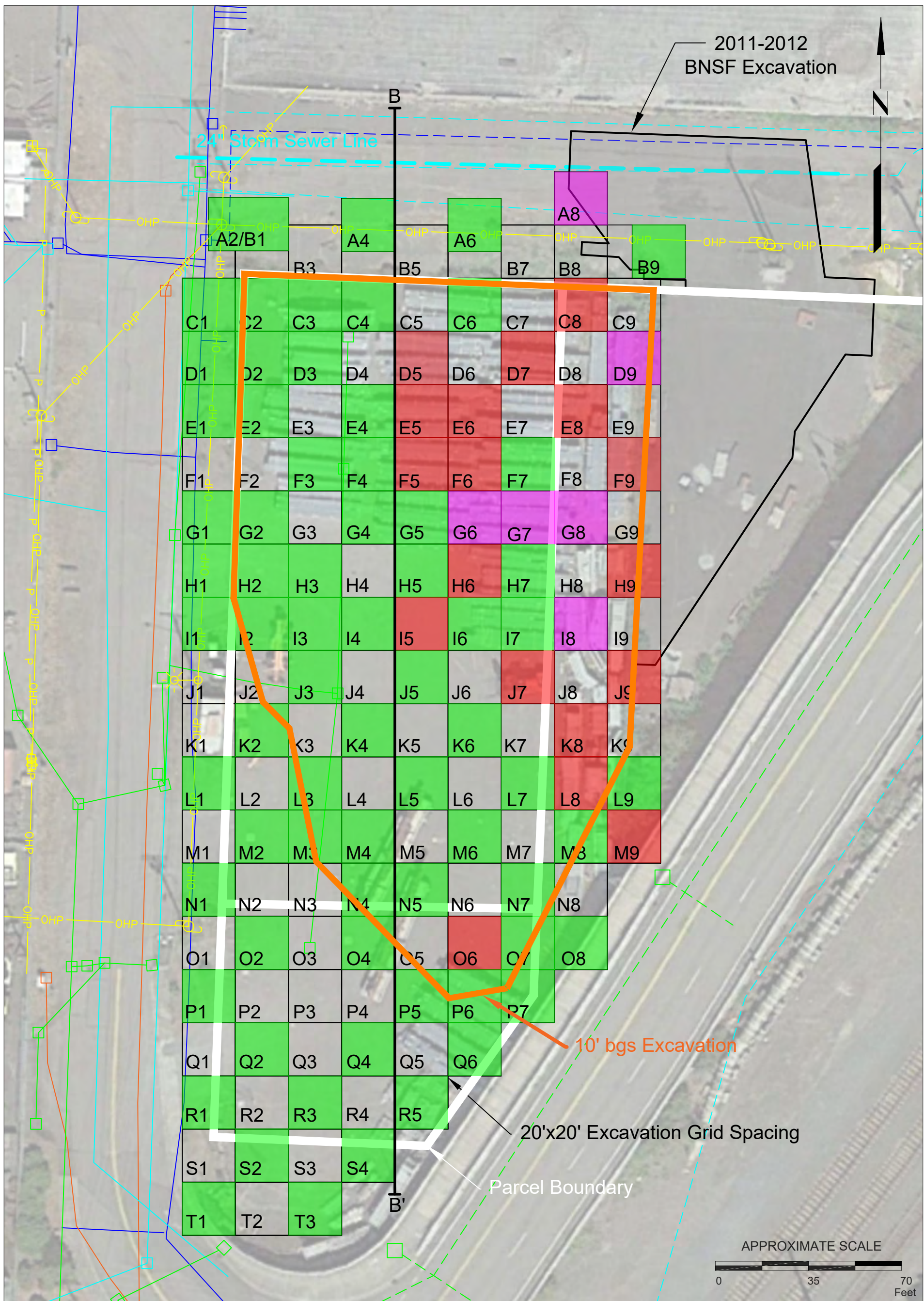
**PROJECT NO.**

238000337

**PLATE**

18

RRT: 02/28/23



FN 2380003370002

SOURCE: Modified from Images Provided by Google Earth

**EXPLANATION**

- Red Indicates Analyte Concentrations Greater than Residual Saturation Remediation Levels
- Green Indicates Analyte Concentrations Less than Residual Saturation Remediation Levels

■ Magenta Indicates Light Non-Aqueous Phase Liquid (LNAPL) Observed; Analyte Concentrations Less than Residual Saturation Remediation Levels

B B' Cross Section Traverse

BGS Below Ground Surface

**UTILITIES LEGEND**

- TELEPHONE
- ELECTRICAL
- WATER
- STORM DRAIN
- SEWER
- POWER
- POWER, COMMUNICATION, AND/OR SECURITY CAMERA POLE

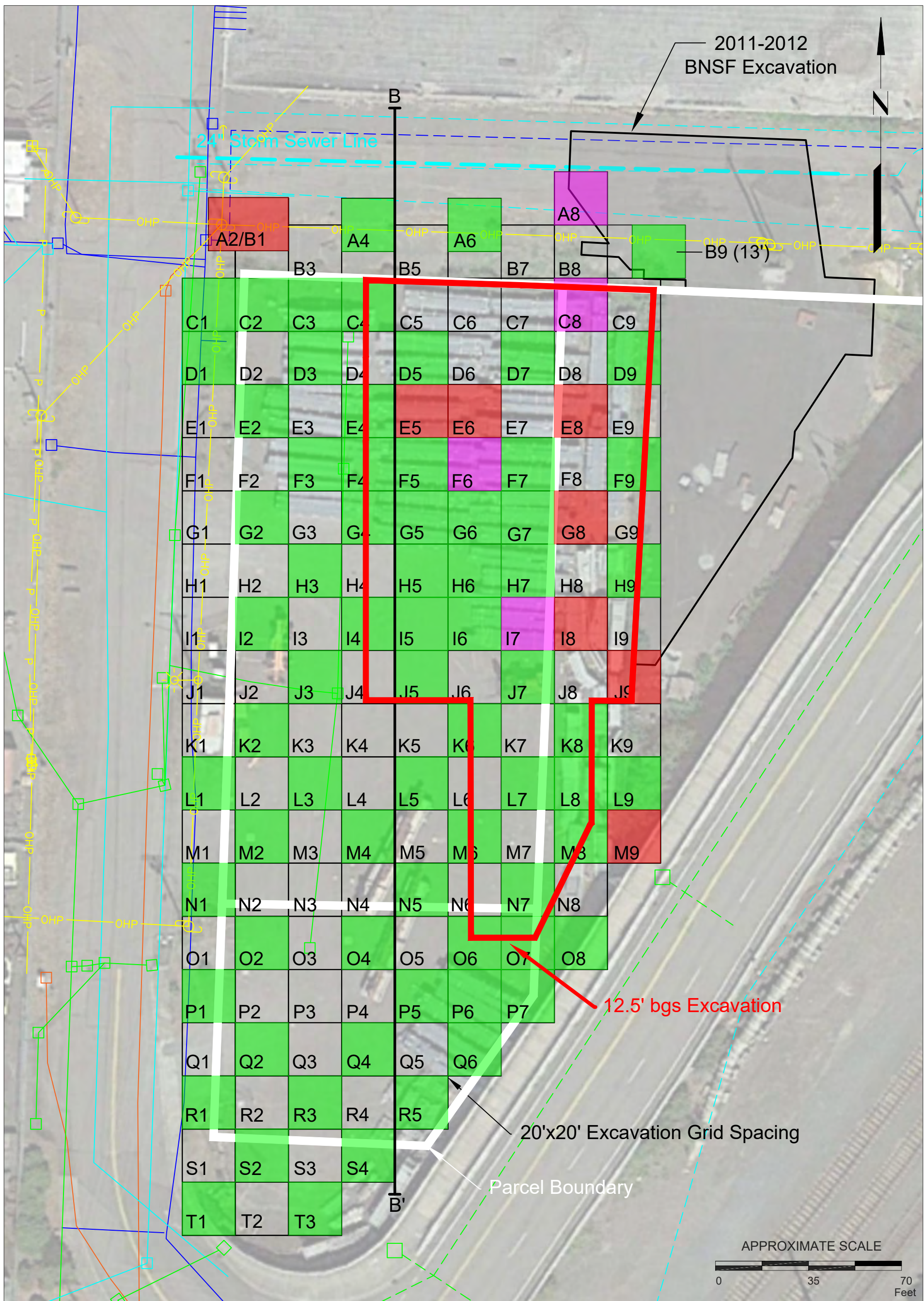


**EXXONMOBIL ADC EXCAVATION DELINEATION MAP - 10 FEET BGS**

EXXONMOBIL ADC  
2717/2731 Federal Avenue  
Everett, Washington

**PROJECT NO.**  
238000337

**PLATE**  
19  
RRT: 02/28/23



FN 2380003370002

SOURCE: Modified from Images Provided by Google Earth

**EXPLANATION**

- Red Indicates Analyte Concentrations Greater than Residual Saturation Remediation Levels
- Green Indicates Analyte Concentrations Less than Residual Saturation Remediation Levels

■ Magenta Indicates Light Non-Aqueous Phase Liquid (LNAPL) Observed; Analyte Concentrations Less than Residual Saturation Remediation Levels

B B' Cross Section Traverse

BGS Below Ground Surface

**UTILITIES LEGEND**

- ELECTRICAL
- WATER
- STORM DRAIN
- SEWER
- POWER
- POWER, COMMUNICATION, AND/OR SECURITY CAMERA POLE

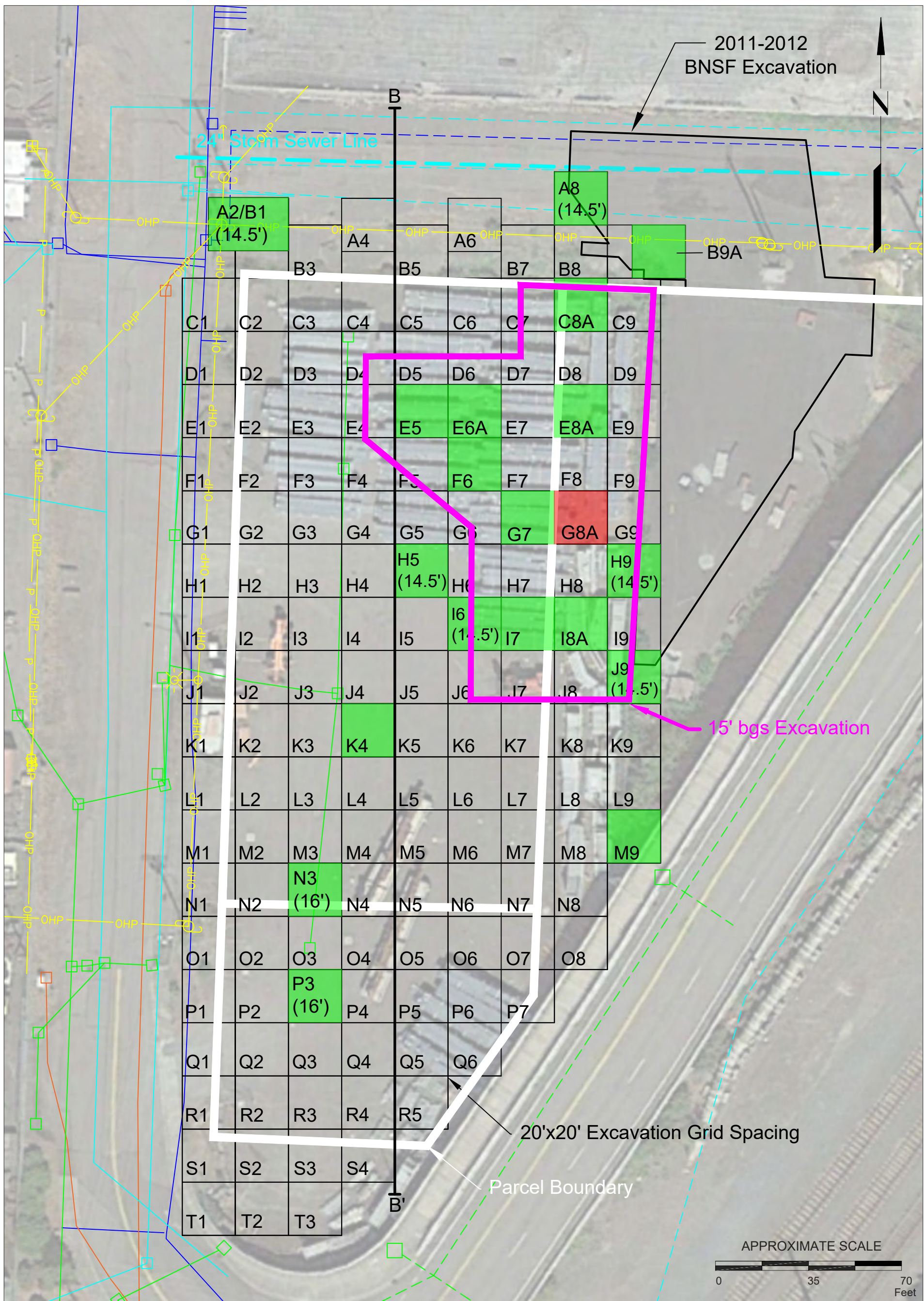


**EXXONMOBIL ADC EXCAVATION DELINEATION MAP - 12.5 FEET BGS**

EXXONMOBIL ADC  
2717/2731 Federal Avenue  
Everett, Washington

**PROJECT NO.**  
238000337

**PLATE**  
20  
RRT: 02/28/23



FN 2380003370002

SOURCE: Modified from Images Provided by Google Earth

**EXPLANATION**

- Red Indicates Analyte Concentrations Greater than Residual Saturation Remediation Levels
- Green Indicates Analyte Concentrations Less than Residual Saturation Remediation Levels



BGS Below Ground Surface

**UTILITIES LEGEND**

- TELEPHONE
- ELECTRICAL
- WATER
- STORM DRAIN
- SEWER
- POWER
- POWER, COMMUNICATION, AND/OR SECURITY CAMERA POLE



**EXXONMOBIL ADC EXCAVATION DELINEATION MAP - 15 FEET BGS**

EXXONMOBIL ADC  
2717/2731 Federal Avenue  
Everett, Washington

**PROJECT NO.**

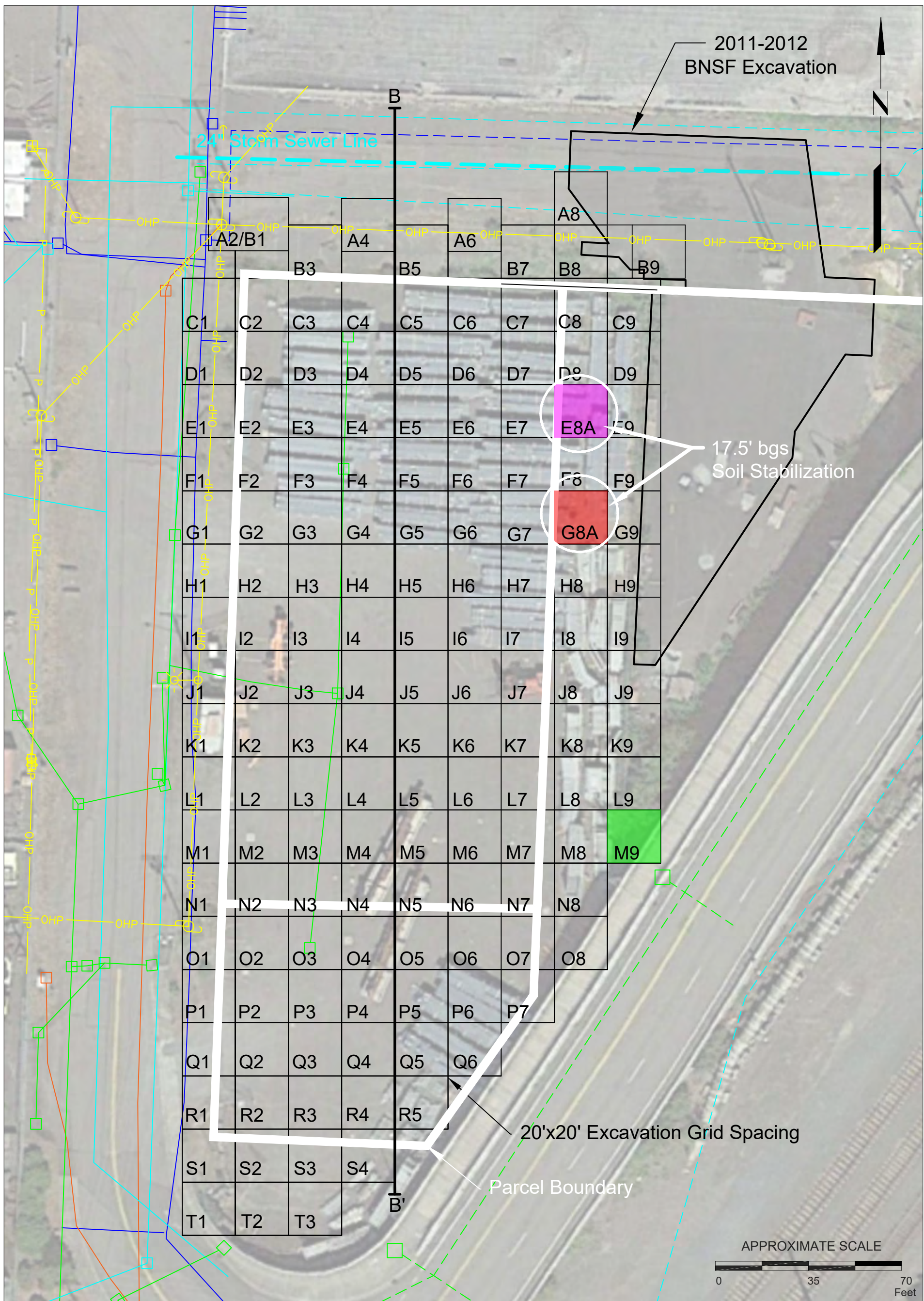
238000337

**PLATE**

21

RRT: 02/28/23





FN 2380003370002

SOURCE: Modified from Images Provided by Google Earth

**EXPLANATION**

- Red Indicates Analyte Concentrations Greater than Residual Saturation Remediation Levels
- Green Indicates Analyte Concentrations Less than Residual Saturation Remediation Levels



BGS Below Ground Surface

**UTILITIES LEGEND**

- TELEPHONE
- ELECTRICAL
- WATER
- STORM DRAIN
- SEWER
- POWER
- POWER, COMMUNICATION, AND/OR SECURITY CAMERA POLE



**EXXONMOBIL ADC EXCAVATION DELINEATION MAP - 17.5 FEET BGS**

EXXONMOBIL ADC  
2717/2731 Federal Avenue  
Everett, Washington

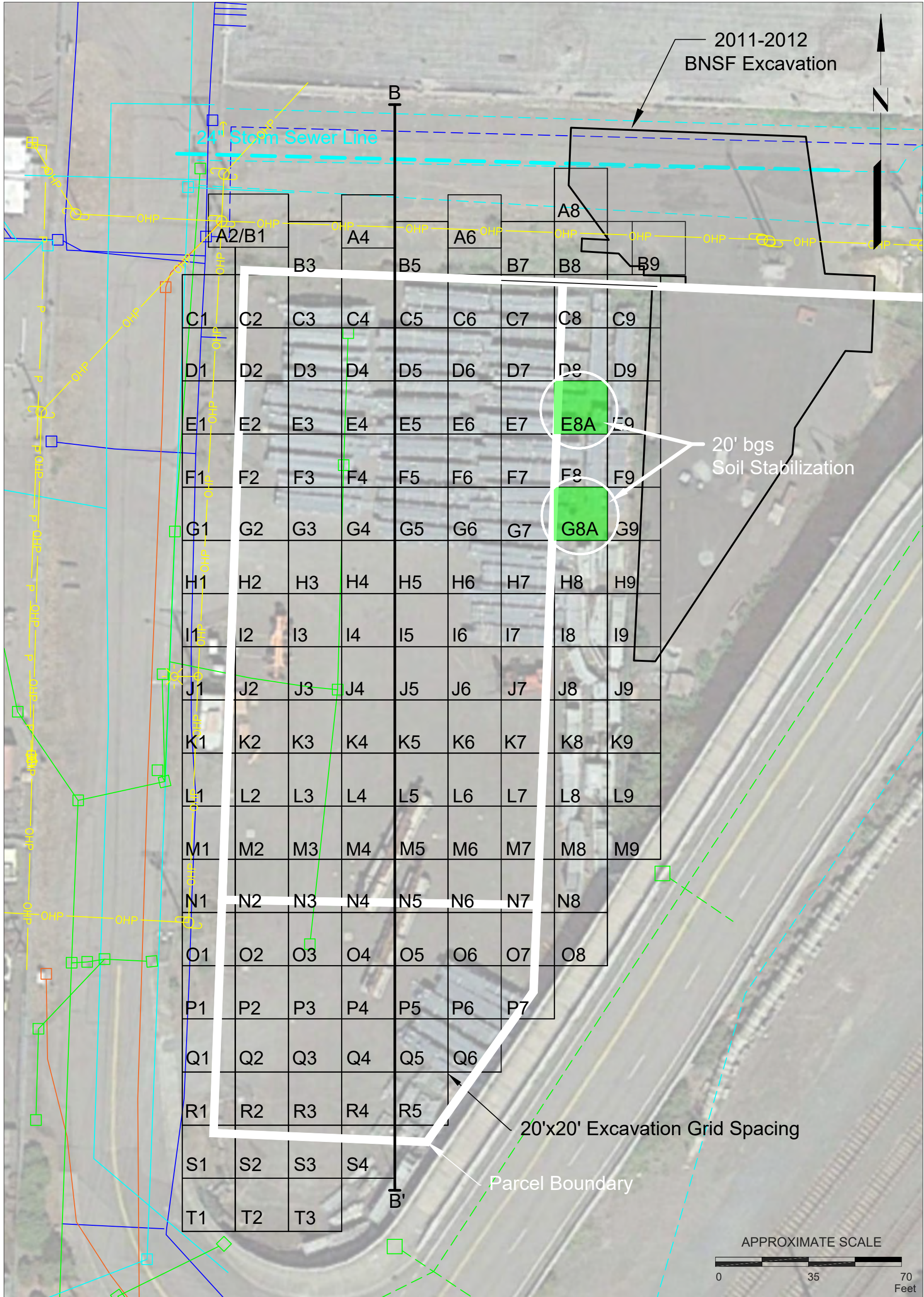
**PROJECT NO.**

238000337

**PLATE**

22

LEC: 06/27/23



FN 2380003370002

SOURCE: Modified from Images Provided by Google Earth

EXPLANATION

- Red Indicates Analyte Concentrations Greater than Residual Saturation Remediation Levels
- Green Indicates Analyte Concentrations Less than Residual Saturation Remediation Levels



BGS Below Ground Surface

UTILITIES LEGEND

- TELEPHONE
- ELECTRICAL
- WATER
- STORM DRAIN
- SEWER
- POWER
- POWER, COMMUNICATION, AND/OR SECURITY CAMERA POLE

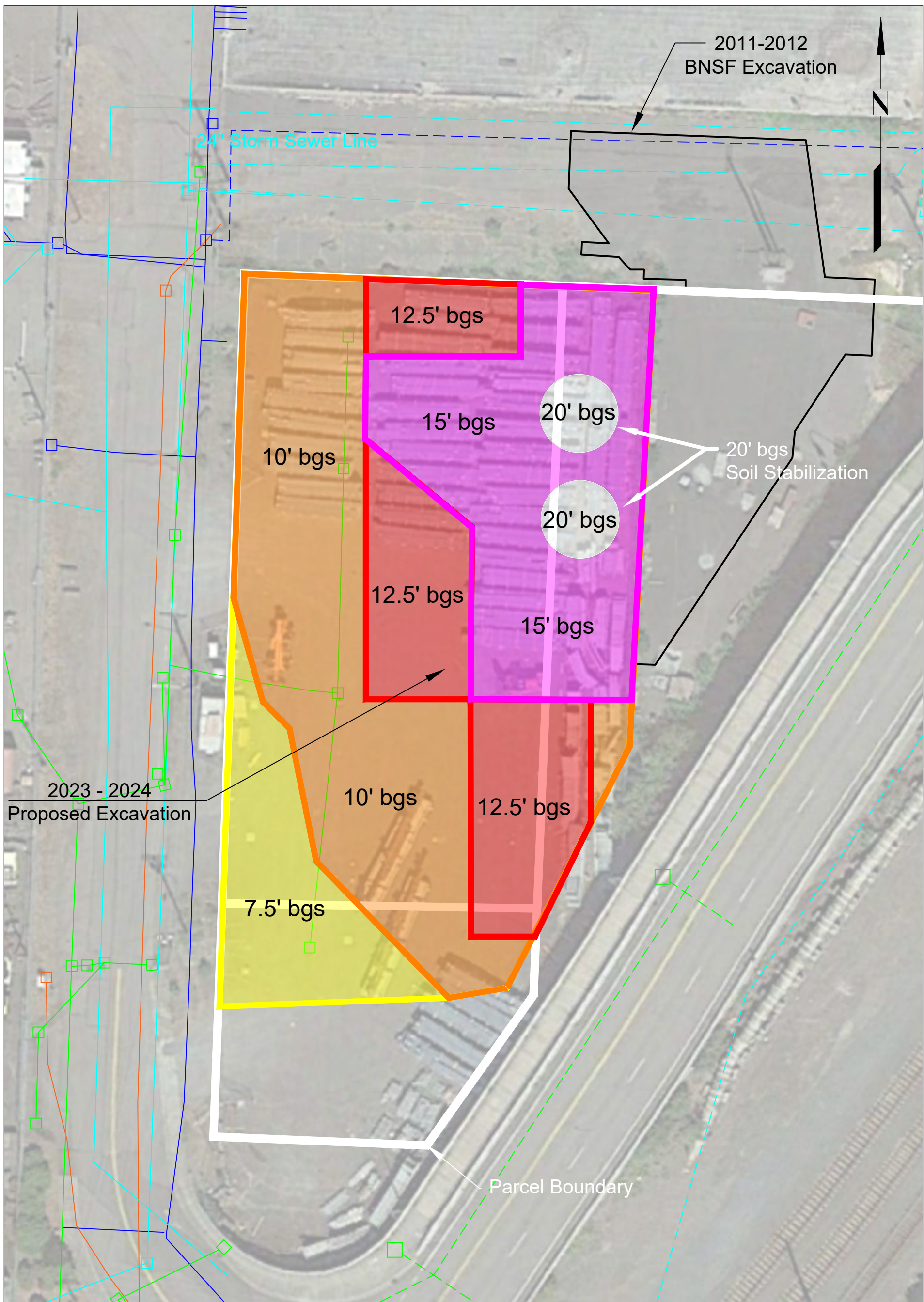


**EXXONMOBIL ADC EXCAVATION DELINEATION MAP - 20 FEET BGS**

EXXONMOBIL ADC  
2717/2731 Federal Avenue  
Everett, Washington

**PROJECT NO.**  
238000337







**PLATE**  
23  
LEC: 06/27/23



FN 2380003370002

SOURCE: Modified from Images Provided by Google Earth

**EXPLANATION**

- |  |  |   |
|--|--|---|
|  7.5' bgs Defined Excavation Extents |  12.5' bgs Defined Excavation Extents |  20' bgs Defined Soil Stabilization Extents |
|  10' bgs Defined Excavation Extents  |  15' bgs Defined Excavation Extents   |  2011-2012 BNSF Excavation                  |

**APPROXIMATE SCALE**



**PROPOSED EXXONMOBIL ADC EXCAVATION EXTENTS BY DEPTH**

EXXONMOBIL ADC  
2717/2731 Federal Avenue  
Everett, Washington

**PROJECT NO.**

238000337

**PLATE**

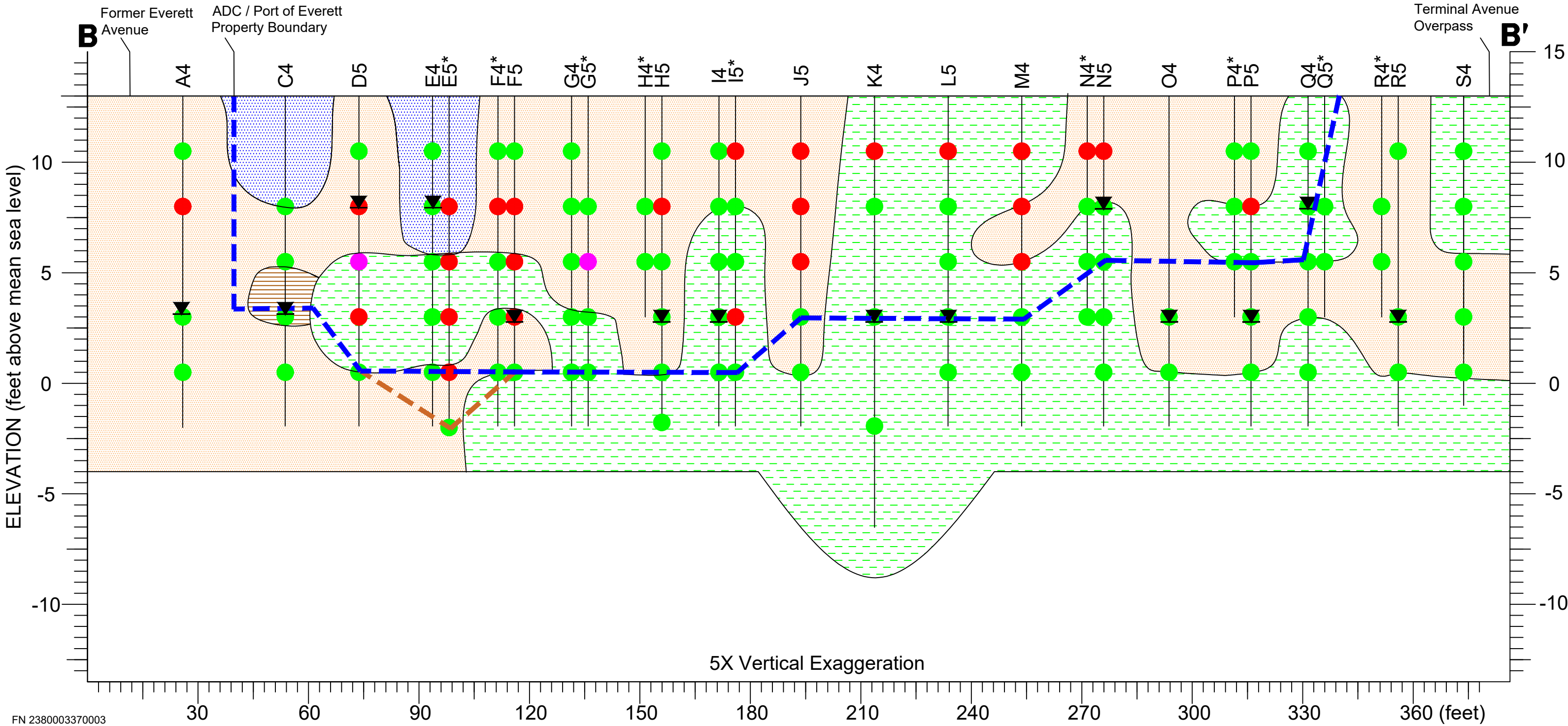
24

LEC: 06/28/23

N

\* = No geologic logging was conducted at borings E5, F4, G5, H4, I5, N4, P4, Q5, and R4

S



FN 2380003370003



**EXXONMOBIL ADC CROSS SECTION N-S**

EXXONMOBIL ADC  
 2717/2731 Federal Avenue  
 Everett, Washington

**EXPLANATION**

- Water Level Encountered During Drilling
- Hydrocarbon Concentrations In Soil Less Than Site-Specific Residual Saturation Remediation Levels
- Hydrocarbon Concentrations In Soil Greater Than Site-Specific Residual Saturation Remediation Levels
- LNAPL Observed During Drilling
- Proposed Excavation Extents
- Proposed In-Situ Soil Stabilization Extents
- Coarse-grained Gravelly Sediments (GW, GP, GC)
- Coarse-grained Sandy Sediments (SW, SP, SM, SC)
- Fine-grained Sediments (CL, ML)
- Organic Sediments (Wood Debris)

**PROJECT**

238000337

**PLATE**

25  
 LEC: 06/29/23

**Primary Sources**  
**Bulk Fueling Operations**  
 Aboveground Storage Tanks  
 Rail Loading Racks  
 Product Piping

**Primary Mechanism**  
 Spills and Releases

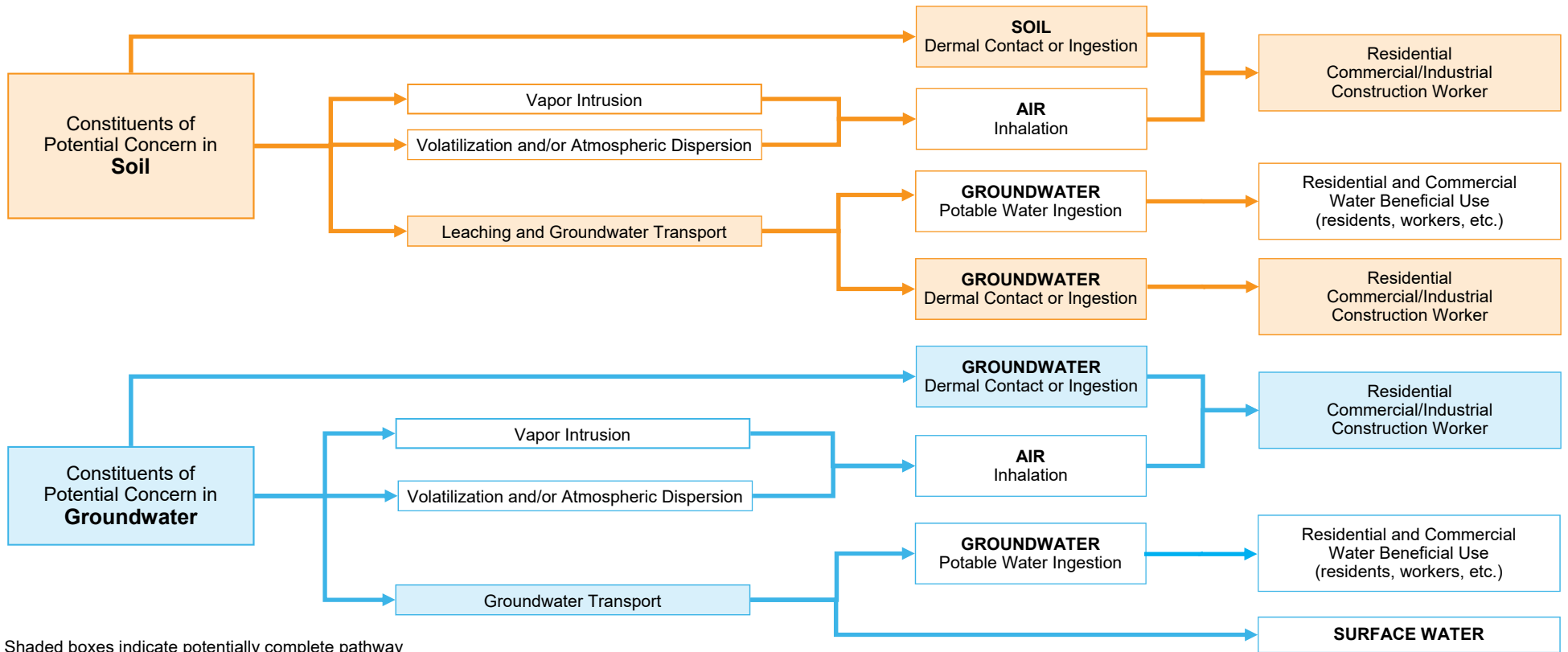


**Secondary Sources**

**Transport Mechanisms**

**Exposure Routes**

**Receptors**



Shaded boxes indicate potentially complete pathway



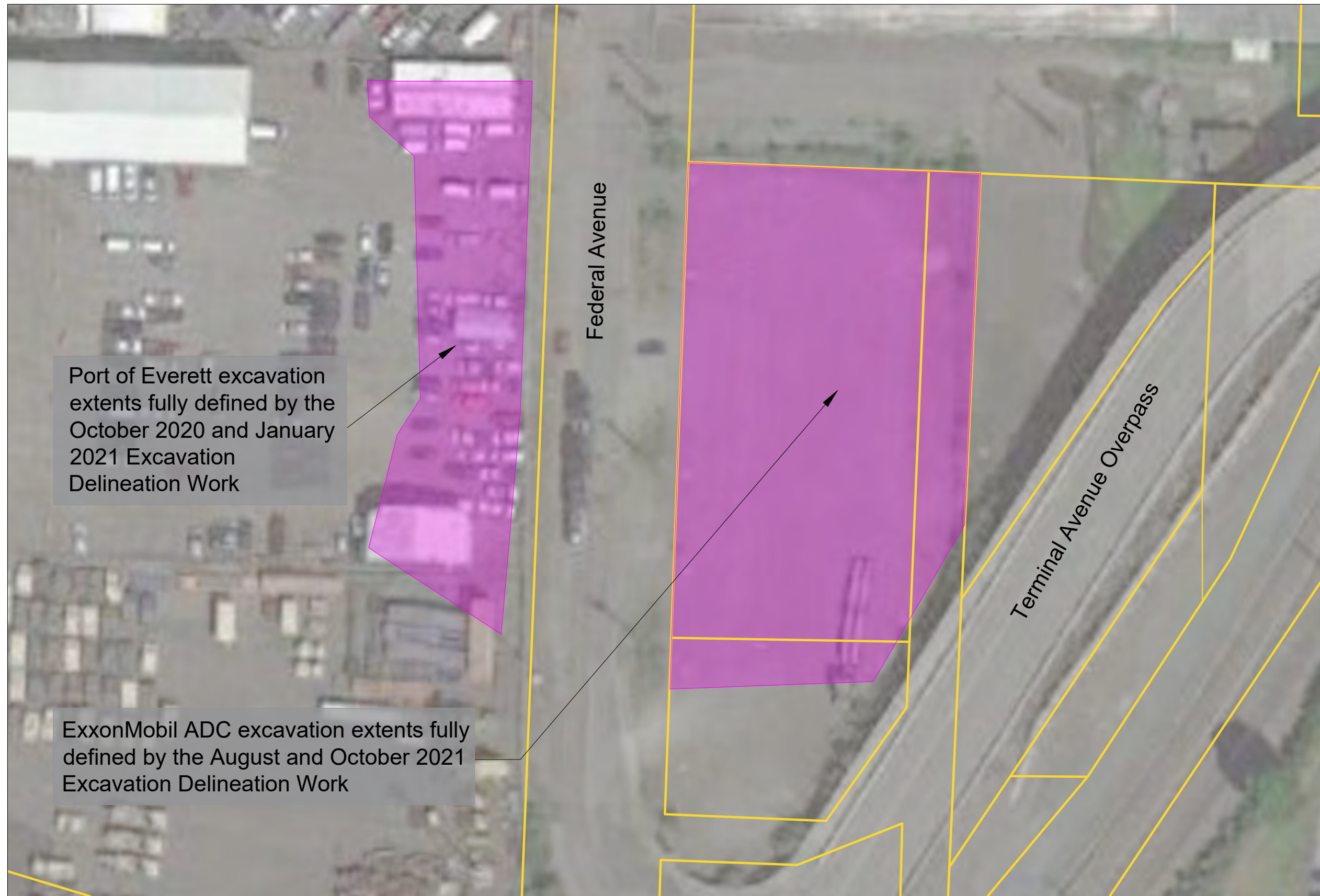
**CONCEPTUAL SITE MODEL**

EXXONMOBIL ADC  
 2717/2731 Federal Avenue  
 Everett, Washington

**PROJECT NO.**  
 238000337

**PLATE**  
 26

LEC: 02/24/23



Port of Everett excavation extends fully defined by the October 2020 and January 2021 Excavation Delineation Work

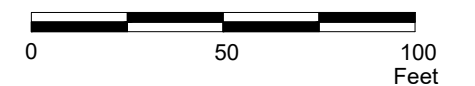
ExxonMobil ADC excavation extends fully defined by the August and October 2021 Excavation Delineation Work

**EXPLANATION**

- Proposed Excavation Boundary
- Tax Parcel Boundary

SOURCE: Modified from maps provided by the Snohomish County Assessor

APPROXIMATE SCALE



FN 2380003370002



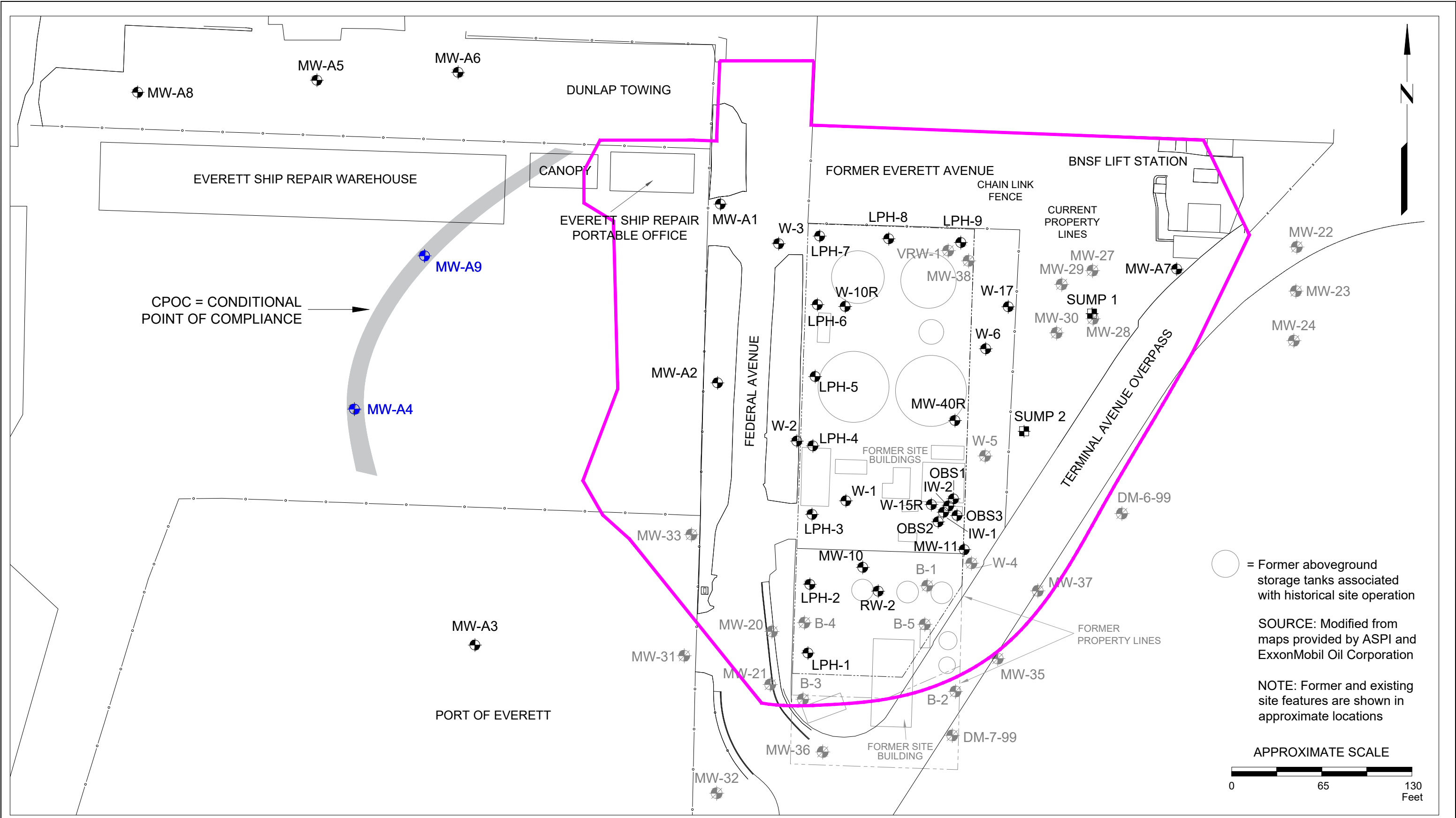
**PROPOSED EXCAVATION BOUNDARY**

ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington

**PROJECT NO.**  
**238000337**

**PLATE**  
**27**

LEC: 06/28/23



FN 2380003370002



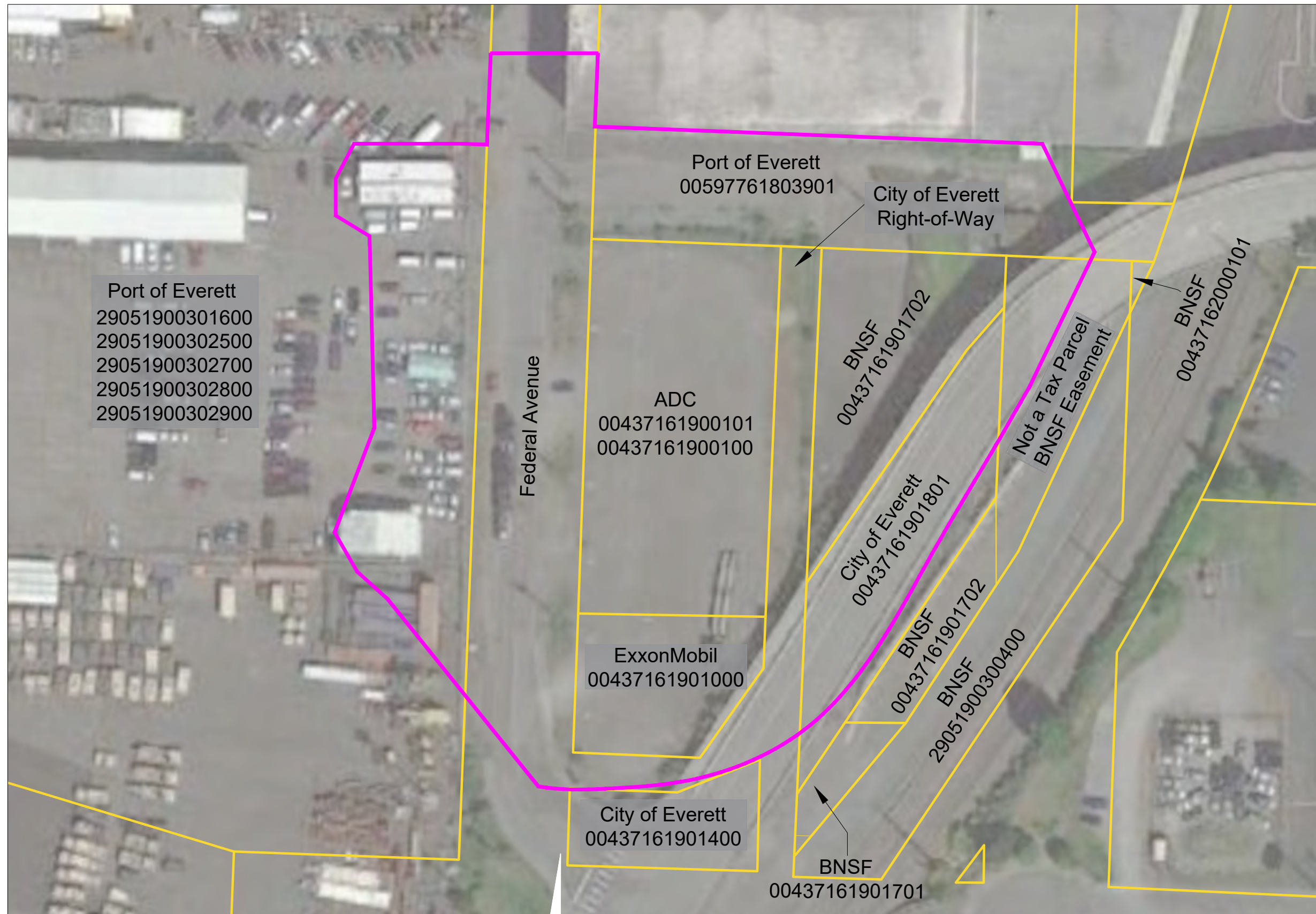
**CONDITIONAL POINT OF COMPLIANCE  
WELL LOCATION MAP  
EXXONMOBIL ADC  
2717/2731 Federal Avenue  
Everett, Washington**

EXPLANATION	
MW-A9	Groundwater Monitoring Well
SUMP 2	Groundwater Sump
MW-38	Destroyed Groundwater Monitoring Well
OBS1	Observation Well
MW-A9	CPOC Well
(Pink line)	MTCA Site Boundary

**PROJECT NO.**  
**238000337**

**PLATE**  
**28**

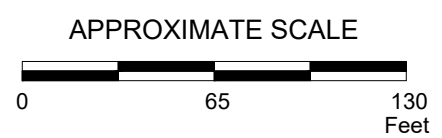
**LEC: 02/24/23**



Port of Everett  
 29051900301600  
 29051900302500  
 29051900302700  
 29051900302800  
 29051900302900

NOTE: Institutional controls in the form of restrictive covenants will be implemented to protect human health and the environment for parcels located within the Restrictive Covenant Boundary. These parcels include inaccessible areas as defined in the Cleanup Action Plan and in areas where soil and/or groundwater concentrations remain exceeding the MTCA Method A Cleanup Levels.

SOURCE: Modified from maps provided by ASPI and ExxonMobil Oil Corporation



FN 2380003370002



**LOCATIONS OF PROPOSED RESTRICTIVE COVENANTS**  
 EXXONMOBIL ADC  
 2717/2731 Federal Avenue  
 Everett, Washington

**EXPLANATION**

- MW-A9 Groundwater Monitoring Well
- SUMP 2 Groundwater Sump
- MW-38 Destroyed Groundwater Monitoring Well
- OBS1 Observation Well
- Restrictive Covenant Boundary
- Parcel Boundary

**PROJECT NO.**  
**238000337**

**PLATE**  
**29**

**LEC: 06/28/23**



**TABLE 1  
EXCAVATION DELINEATION SOIL ANALYTICAL RESULTS - PORT OF EVERETT**

ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington  
Page 1 of 7

Sample Name	Location	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)	
<b>Cardno - Port of Everett - Excavation Delineation Report - April 21, 2021:</b>								
S-2.5-EB1	EB1	10/13/20	2.5	--	<10	<50	<250	
S-5-EB1	EB1	10/13/20	5	--	<10	<50	<250	
S-10-EB1	EB1	10/13/20	10	--	<100	<b>16,000E</b>	<250	
S-12.5-EB1	EB1	10/13/20	12.5	--	<50	3,500	<250	
S-15-EB1	EB1	10/13/20	15	--	<10	<50	<250	
S-2.5-EB2	EB2	10/13/20	2.5	--	<10	<50	<250	
S-5-EB2	EB2	10/13/20	5	--	<10	<50	<250	
S-10-EB2	EB2	10/13/20	10	--	<10	<50	<250	
S-2.5-EB3	EB3	10/12/20	2.5	--	<10	<50	<250	
S-5-EB3	EB3	10/12/20	5	--	<10	<50	<250	
S-7.5-EB3	EB3	10/12/20	7.5	--	<100	<b>43,000</b>	<250	
S-10-EB3	EB3	10/12/20	10	--	<50	<b>15,000</b>	<250	
S-12.5-EB3	EB3	10/12/20	12.5	--	<50	188	<250	
S-15-EB3	EB3	10/12/20	15	--	<10	<50	<250	
S-2.5-EB4	EB4	10/12/20	2.5	--	<10	<50	<250	
S-5-EB4	EB4	10/12/20	5	--	18	4,700	<250	
S-7.5-EB4	EB4	10/12/20	7.5	--	<100	<b>36,000</b>	<250	
S-10-EB4	EB4	10/12/20	10	--	<100	<b>5,500E</b>	<250	
S-12.5-EB4	EB4	10/12/20	12.5	--	<50	4,400	<250	
S-15-EB4	EB4	10/12/20	15	--	<10	<50	<250	
S-2.5-EB5	EB5	10/12/20	2.5	--	<10	<50	<250	
S-5-EB5	EB5	10/12/20	5	--	<10	<50	<250	
S-7.5-EB5	EB5	10/12/20	7.5	--	<10	<50	<250	
S-10-EB5	EB5	10/12/20	10	--	<10	51	<250	
S-2.5-EB6	EB6	10/12/20	2.5	--	<10	<50	<250	
S-5-EB6	EB6	10/12/20	5	--	<10	<50	<250	
S-7.5-EB6	EB6	10/12/20	7.5	--	<10	<50	<250	
S-10-EB6	EB6	10/12/20	10	--	<10	<50	<250	
S-5-EB7	EB7	10/12/20	5	--	<10	<50	<250	
S-7.5-EB7	EB7	10/12/20	7.5	--	<10	74	<250	
S-10-EB7	EB7	10/12/20	10	--	<10	<50	<250	
S-2.5-EB8	EB8	10/14/20	2.5	--	<10	<50	<250	
S-5-EB8	EB8	10/14/20	5	--	<10	2,600	4,300	
S-7.5-EB8	EB8	10/14/20	7.5	--	<10	<b>7,400</b>	<b>13,000</b>	
S-10-EB8	EB8	10/14/20	10	--	<20	1,800	1,300	
S-12.5-EB8	EB8	10/14/20	12.5	--	<10	<50	<250	
S-2.5-EB9	EB9	10/14/20	2.5	--	<10	<50	<250	
S-5-EB9	EB9	10/14/20	5	--	<50	2,700	<b>11,000E</b>	
S-7.5-EB9	EB9	10/14/20	7.5	--	<10	<50	<250	
S-10-EB9	EB9	10/14/20	10	--	<10	<50	<250	
S-2.5-EB10	EB10	10/14/20	2.5	--	<10	<50	<250	
S-5-EB10	EB10	10/14/20	5	--	<10	<50	<250	
Site-Specific Residual Saturation Remediation Levels						2,470	4,800	5,810

**TABLE 1  
EXCAVATION DELINEATION SOIL ANALYTICAL RESULTS - PORT OF EVERETT**

ExxonMobil ADC  
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Sample Name	Location	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)	
<b>Cardno - Port of Everett - Excavation Delineation Report - April 21, 2021 (continued):</b>								
S-7.5-EB10	EB10	10/14/20	7.5	--	<10	<b>12,000</b>	<250	
S-10-EB10	EB10	10/14/20	10	--	<10	4,300	<250	
S-12.5-EB10	EB10	10/14/20	12.5	--	<10	<50	<250	
S-15-EB10	EB10	10/14/20	15	--	<10	<50	<250	
S-2.5-EB11	EB11	10/12/20	2.5	--	<10	<50	550	
S-5-EB11	EB11	10/12/20	5	--	<100	2,400	<250	
S-7.5-EB11	EB11	10/12/20	7.5	<b>Yes</b>	<100	<b>44,000</b>	2,700	
S-10-EB11	EB11	10/12/20	10	<b>Yes</b>	<100	<b>11,000</b>	1,300	
S-12.5-EB11	EB11	10/12/20	12.5	<b>Yes</b>	<10	370	<250	
S-15-EB11	EB11	10/12/20	15	--	<10	<50	<250	
S-2.5-EB12	EB12	10/12/20	2.5	--	<10	<50	<250	
S-5-EB12	EB12	10/12/20	5	--	<10	160	<250	
S-7.5-EB12	EB12	10/12/20	7.5	--	<10	3,600	<250	
S-10-EB12	EB12	10/12/20	10	--	<100	3,000	<250	
S-12.5-EB12	EB12	10/12/20	12.5	<b>Yes</b>	<100	2,000	<250	
S-15-EB12	EB12	10/12/20	15	--	<10	460	<250	
S-2.5-EB13	EB13	10/14/20	2.5	--	<10	<50	<250	
S-5-EB13	EB13	10/14/20	5	--	<50	1,400	1,800	
S-7.5-EB13	EB13	10/14/20	7.5	--	190	<b>11,000</b>	1,800	
S-10-EB13	EB13	10/14/20	10	--	<10	320	<250	
S-12.5-EB13	EB13	10/14/20	12.5	--	<10	<50	<250	
S-15-EB13	EB13	10/14/20	15	--	<10	<50	<250	
S-2.5-EB14	EB14	10/14/20	2.5	--	<10	<50	<250	
S-7.5-EB14	EB14	10/14/20	7.5	--	<10	<b>5,000</b>	<b>6,900</b>	
S-10-EB14	EB14	10/14/20	10	--	<10	4,100	1,500	
S-12.5-EB14	EB14	10/14/20	12.5	--	<10	<50	<250	
S-2.5-EB15	EB15	10/14/20	2.5	--	<10	<50	<250	
S-5-EB15	EB15	10/14/20	5	--	<10	1,100	2,000	
S-7.5-EB15	EB15	10/14/20	7.5	--	19	2,200	260	
S-10-EB15	EB15	10/14/20	10	--	<10	<50	<250	
S-12.5-EB15	EB15	10/14/20	12.5	--	<10	<50	<250	
S-2.5-EB16	EB16	10/13/20	2.5	--	<10	<50	<250	
S-5-EB16	EB16	10/13/20	5	--	<100	<b>4,800</b>	1,100	
S-7.5-EB16	EB16	10/13/20	7.5	--	<100	<b>9,700</b>	3,900	
S-10-EB16	EB16	10/13/20	10	--	<10	170	<250	
S-12.5-EB16	EB16	10/13/20	12.5	--	<10	<50	<250	
S-2.5-EB17	EB17	10/13/20	2.5	--	<10	<50	<250	
S-5-EB17	EB17	10/13/20	5	--	<10	<50	<250	
S-7.5-EB17	EB17	10/13/20	7.5	--	11	<b>33,000</b>	<250	
S-10-EB17	EB17	10/13/20	10	--	<50	2,600	<250	
S-12.5-EB17	EB17	10/13/20	12.5	--	<10	<50	<250	
S-15-EB17	EB17	10/13/20	15	--	<10	<50	<250	
Site-Specific Residual Saturation Remediation Levels						2,470	4,800	5,810

**TABLE 1  
EXCAVATION DELINEATION SOIL ANALYTICAL RESULTS - PORT OF EVERETT**

ExxonMobil ADC  
2717/2731 Federal Avenue  
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Sample Name	Location	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)
<b>Cardno - Port of Everett - Excavation Delineation Report - April 21, 2021 (continued):</b>							
S-5-EB18	EB18	10/13/20	5	--	<10	450	210J
S-2.5-EB19	EB19	10/13/20	2.5	--	<10	<50	<250
S-5-EB19	EB19	10/13/20	5	--	<50	1,900	360
S-7.5-EB19	EB19	10/13/20	7.5	--	<50	4,500	760
S-10-EB19	EB19	10/13/20	10	--	<10	<50	<250
S-12.5-EB19	EB19	10/13/20	12.5	--	<10	<50	<250
S-15-EB19	EB19	10/13/20	15	--	<10	<50	<250
S-2.5-EB20	EB20	10/13/20	2.5	--	<10	170	<250
S-5-EB20	EB20	10/13/20	5	--	<10	<b>8,400</b>	2,200
S-7.5-EB20	EB20	10/13/20	7.5	--	<10	180	<250
S-10-EB20	EB20	10/13/20	10	--	<10	<50	<250
S-2.5-EB21	EB21	10/13/20	2.5	--	<10	<50	<250
S-5-EB21	EB21	10/13/20	5	--	<10	<b>8,100</b>	<b>12,000</b>
S-7.5-EB21	EB21	10/13/20	7.5	--	<50	3,700	640
S-10-EB21	EB21	10/13/20	10	--	<10	<50	<250
S-12.5-EB21	EB21	10/13/20	12.5	--	<10	<50	<250
S-15-EB21	EB21	10/13/20	15	--	<10	<50	<250
S-5-EB22	EB22	10/13/20	5	--	<10	<50	<250
S-2.5-EB23	EB23	10/13/20	2.5	--	<10	<50	<250
S-5-EB23	EB23	10/13/20	5	--	<10	<50	<250
S-7.5-EB23	EB23	10/13/20	7.5	--	<10	<50	<250
S-10-EB23	EB23	10/13/20	10	--	<10	4,100	<250
S-12.5-EB23	EB23	10/13/20	12.5	--	<10	62	<250
S-2.5-EB24	EB24	10/13/20	2.5	--	<10	<50	<250
S-5-EB24	EB24	10/13/20	5	--	<50	<50	<b>6,300</b>
S-7.5-EB24	EB24	10/13/20	7.5	--	<10	<b>8,100</b>	1,200
S-10-EB24	EB24	10/13/20	10	--	<10	2,300	<250
S-12.5-EB24	EB24	10/13/20	12.5	--	<10	<50	<250
S-2.5-EB25	EB25	10/13/20	2.5	--	<10	<50	<250
S-5-EB25	EB25	10/13/20	5	--	<10	<50	<250
S-7.5-EB25	EB25	10/13/20	7.5	--	<10	<50	<250
S-10-EB25	EB25	10/13/20	10	--	<10	2,400	860
S-12.5-EB25	EB25	10/13/20	12.5	--	<10	<50	<250
S-15-EB25	EB25	10/13/20	15	--	--	<50	<250
S-2.5-EB26	EB26	10/14/20	2.5	--	<10	<50	<250
S-5-EB26	EB26	10/14/20	5	--	<10	76	<250
S-10-EB26	EB26	10/14/20	10	--	<20	1,600	<250
S-12.5-EB26	EB26	10/14/20	12.5	--	<10	<50	<250
S-2.5-EB27	EB27	10/14/20	2.5	--	<10	<50	<250
S-5-EB27	EB27	10/14/20	5	--	<10	<50	<250
S-7.5-EB27	EB27	10/14/20	7.5	--	<100	<b>10,000</b>	<b>11,000</b>
S-10-EB27	EB27	10/14/20	10	--	<100	<b>9,100E</b>	<250
Site-Specific Residual Saturation Remediation Levels					2,470	4,800	5,810

**TABLE 1  
EXCAVATION DELINEATION SOIL ANALYTICAL RESULTS - PORT OF EVERETT**

ExxonMobil ADC  
2717/2731 Federal Avenue  
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Sample Name	Location	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)	
<b>Cardno - Port of Everett - Excavation Delineation Report - April 21, 2021 (continued):</b>								
S-12.5-EB27	EB27	10/14/20	12.5	--	<10	<50	<250	
S-2.5-EB28	EB28	10/14/20	2.5	--	<10	<50	<250	
S-5-EB28	EB28	10/14/20	5	--	<10	<50	<250	
S-7.5-EB28	EB28	10/14/20	7.5	--	<10	<50	<250	
S-10-EB28	EB28	10/14/20	10	--	<50	<50	<250	
S-2.5-EB29	EB29	10/14/20	2.5	--	<10	<50	<250	
S-5-EB29	EB29	10/14/20	5	--	<10	<50	<250	
S-2.5-EB30	EB30	10/14/20	2.5	--	<10	<50	<250	
S-5-EB30	EB30	10/14/20	5	--	<10	<50	560	
S-10-EB30	EB30	10/14/20	10	--	<100	<b>39,000</b>	<250	
S-12.5-EB30	EB30	10/14/20	12.5	--	<10	<50	<250	
S-5-EB31	EB31	01/25/21	5	--	<10	<50	<250	
S-7.5-EB31	EB31	01/25/21	7.5	--	<10	<50	<250	
S-9.5-EB31	EB31	01/25/21	9.5	--	<100	3,400	<250	
S-15-EB31A	EB31A	01/27/21	15	--	<100	<b>7,000E</b>	<250	
S-17.5-EB31B	EB31B	01/27/21	17.5	--	<10	<50	<250	
S-20-EB31B	EB31B	01/27/21	20	--	<10	<50	<250	
S-10-EB32	EB32	01/25/21	10	--	<10	<b>6,200</b>	<250	
S-10-EB32 <sup>b</sup>	EB32	01/25/21	10	--	--	<b>4,700</b>	<250	
S-12.5-EB32	EB32	01/25/21	12.5	--	<10	410	<250	
S-12.5-EB32 <sup>b</sup>	EB32	01/25/21	12.5	--	--	340	<250	
S-5-EB32A	EB32A	01/27/21	5	--	<10	56	<250	
S-7.5-EB32A	EB32A	01/27/21	7.5	--	<25	2,040	290	
S-10-EB32A	EB32A	01/27/21	10	--	<10	<b>6,100</b>	<250	
S-15-EB32A	EB32A	01/27/21	15	--	<10	<50	<250	
S-17.5-EB32A	EB32A	01/27/21	17.5	--	<10	<50	<250	
S-20-EB32A	EB32A	01/27/21	20	--	<10	<50	<250	
S-5-EB33	EB33	01/25/21	5	--	<10	<50	<250	
S-7.5-EB33	EB33	01/25/21	7.5	--	<10	<50	<250	
S-10-EB33	EB33	01/25/21	10	<b>Yes</b>	<40	<b>28,000</b>	1,580	
S-12.5-EB33	EB33	01/25/21	12.5	<b>Yes</b>	<10	<b>21,000E</b>	<250	
S-15-EB33	EB33	01/25/21	15	<b>Yes</b>	<1,000	150	<250	
S-17.5-EB33	EB33	01/25/21	17.5	<b>Yes</b>	<10	63	<250	
S-20-EB33	EB33	01/25/21	20	--	<10	<50	310	
S-7.5-EB34	EB34	01/25/21	7.5	--	<10	<50	<250	
S-10-EB34	EB34	01/25/21	10	--	<10	2,100	<250	
S-12.5-EB34	EB34	01/25/21	12.5	--	<50	1,600	760	
S-15-EB34	EB34	01/25/21	15	--	<10	<50	<250	
S-17.5-EB34	EB34	01/25/21	17.5	--	<10	<50	<250	
S-20-EB34	EB34	01/25/21	20	--	<10	<50	<250	
S-5-EB35	EB35	01/25/21	5	--	<10	<50	<250	
S-7.5-EB35	EB35	01/25/21	7.5	--	<10	<50	<250	
Site-Specific Residual Saturation Remediation Levels						2,470	4,800	5,810

**TABLE 1  
EXCAVATION DELINEATION SOIL ANALYTICAL RESULTS - PORT OF EVERETT**

ExxonMobil ADC  
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Sample Name	Location	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)
<b>Cardno - Port of Everett - Excavation Delineation Report - April 21, 2021 (continued):</b>							
S-10-EB35	EB35	01/25/21	10	--	<10	<50	<250
S-12.5-EB35	EB35	01/25/21	12.5	--	<15	520	430
S-15-EB35	EB35	01/25/21	15	--	<10	<50	<250
S-5-EB36	EB36	01/26/21	5	--	<10	<50	<250
S-7.5-EB36	EB36	01/26/21	7.5	--	<10	<50	<250
S-10-EB36	EB36	01/26/21	10	--	<10	<50	<250
S-12.5-EB36	EB36	01/26/21	12.5	--	<10	<50	<250
S-5-EB37	EB37	01/27/21	5	--	<10	<50	<250
S-7.5-EB37	EB37	01/27/21	7.5	--	<10	<50	<250
S-10-EB37	EB37	01/27/21	10	--	<10	<50	<250
S-12.5-EB37	EB37	01/27/21	12.5	--	<10	<50	<250
S-2.5-EB38	EB38	01/27/21	2.5	--	<10	<50	490
S-5-EB38	EB38	01/27/21	5	--	<10	<50	<250
S-7.5-EB38	EB38	01/27/21	7.5	--	<10	<50	<250
S-10-EB38	EB38	01/27/21	10	--	<10	<50	<250
S-12.5-EB38	EB38	01/27/21	12.5	--	<10	<50	<250
S-15-EB38	EB38	01/27/21	15	--	<10	<50	<250
S-2.5-EB39	EB39	01/27/21	2.5	--	<10	2,200	<250
S-2.5-EB39	EB39	01/27/21	2.5	--	<10	2,200	<250
S-5-EB39	EB39	01/27/21	5	--	<10	<b>5,600</b>	<250
S-5-EB39 <sup>b</sup>	EB39	01/27/21	5	--	--	4,500	<250
S-7.5-EB39	EB39	01/27/21	7.5	--	<50	2,200	<250
S-10-EB39	EB39	01/27/21	10	--	<10	<50	<250
S-12.5-EB39	EB39	01/27/21	12.5	--	<10	<50	<250
S-15-EB39	EB39	01/27/21	15	--	<10	<50	<250
S-20-EB39	EB39	01/27/21	20	--	<10	<50	<250
S-5-EB40	EB40	01/26/21	5	--	<10	490a	<250
S-7.5-EB40	EB40	01/26/21	7.5	--	<10	<50	<250
S-10-EB40	EB40	01/26/21	10	--	<10	<50	<250
S-12.5-EB40	EB40	01/26/21	12.5	--	<10	<50	<250
S-5-EB41	EB41	01/27/21	5	--	<15	<b>9,300</b>	<b>6,700</b>
S-7.5-EB41	EB41	01/27/21	7.5	--	<10	630	310
S-10-EB41	EB41	01/27/21	10	--	<10	<50	<250
S-12.5-EB41	EB41	01/27/21	12.5	--	<10	<50	<250
S-5-SB1	SB1	01/26/21	5	--	<10	<50	<250
S-7.5-SB1	SB1	01/26/21	7.5	--	<10	110	660
S-10-SB1	SB1	01/26/21	10	--	<10	<50	<250
S-12.5-SB1	SB1	01/26/21	12.5	--	<10	<50	<250
S-15-SB1	SB1	01/26/21	15	--	<10	<50	<250
S-5-SB2	SB2	01/26/21	5	--	<10	<50	790
S-7.5-SB2	SB2	01/26/21	7.5	--	<10	<50	<250
S-10-SB2	SB2	01/26/21	10	--	<10	<50	<250
<b>Site-Specific Residual Saturation Remediation Levels</b>					<b>2,470</b>	<b>4,800</b>	<b>5,810</b>

**TABLE 1  
EXCAVATION DELINEATION SOIL ANALYTICAL RESULTS - PORT OF EVERETT**

ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington  
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Sample Name	Location	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)
<b>Cardno - Port of Everett - Excavation Delineation Report - April 21, 2021 (continued):</b>							
S-12.5-SB2	SB2	01/26/21	12.5	--	<10	<50	<250
S-15-SB2	SB2	01/26/21	15	--	<10	<50	<250
S-5-SB3	SB3	01/26/21	5	--	<10	440	2,200
S-7.5-SB3	SB3	01/26/21	7.5	--	<10	<50	<250
S-10-SB3	SB3	01/26/21	10	--	<10	130	680
S-12.5-SB3	SB3	01/26/21	12.5	--	<10	<50	<250
S-15-SB3	SB3	01/26/21	15	--	<10	<50	<250
S-20-SB3	SB3	01/26/21	20	--	<10	<50	<250
S-5-SB4	SB4	01/25/21	5	--	<10	<50	<250
S-7.5-SB4	SB4	01/25/21	7.5	--	<10	<50	<250
S-10-SB4	SB4	01/25/21	10	--	<10	3,900	<250
S-12.5-SB4	SB4	01/25/21	12.5	--	<50	1,700	<250
S-15-SB4	SB4	01/25/21	15	--	<10	56	<250
S-17.5-SB4	SB4	01/25/21	17.5	--	<10	<50	<250
S-20-SB4	SB4	01/25/21	20	--	<20	610	<250
S-5-SB5	SB5	01/26/21	5	--	<10	<50	1,630
S-7.5-SB5	SB5	01/26/21	7.5	--	<10	<50	<250
S-10-SB5	SB5	01/26/21	10	--	<10	<50	760
S-12.5-SB5	SB5	01/26/21	12.5	--	<10	<50	<250
S-15-SB5	SB5	01/26/21	15	--	<10	82	580
S-17.5-SB5	SB5	01/26/21	17.5	--	<10	<50	<250
S-20-SB5	SB5	01/26/21	20	--	<10	<50	<250
S-2.5-SB6	SB6	02/05/21	2.5	--	<10	2,800	<250
S-5-SB6	SB6	02/05/21	5	--	<10	57	<250
S-7.5-SB6	SB6	02/05/21	7.5	--	<10	<50	<250
S-10-SB6	SB6	02/05/21	10	--	<10	<50	<250
S-12.5-SB6	SB6	02/05/21	12.5	--	<10	<50	<250
S-15-SB6	SB6	02/05/21	15	--	<10	<50	<250
S-5-SB7	SB7	02/05/21	5	--	<10	<50	<250
S-7.5-SB7	SB7	02/05/21	7.5	--	<10	<50	<250
S-10-SB7	SB7	02/05/21	10	--	<10	<50	<250
S-12.5-SB7	SB7	02/05/21	12.5	--	<10	<50	<250
S-15-SB7	SB7	02/05/21	15	--	<10	<50	<250

Site-Specific Residual Saturation Remediation Levels	2,470	4,800	5,810
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**TABLE 1**  
**EXCAVATION DELINEATION SOIL ANALYTICAL RESULTS - PORT OF EVERETT**

ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington  
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Sample Name	Location	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)
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**EXPLANATION:**

feet bgs = Feet below ground surface

mg/kg = Milligrams per kilogram

LNAPL = Light Non-aqueous Phase Liquid

TPHg = Total Petroleum Hydrocarbons as Gasoline in accordance with Ecology Method NWTPH-Gx

TPHd, TPHmo = Total Petroleum Hydrocarbons as Diesel and as Oil, respectively, in accordance with Ecology Method NWTPH-Dx

All TPHd and TPHmo samples analyzed with silica gel cleanup

N/A = Not applicable

< = Less than the stated laboratory reporting limit

-- = Not Observed; Not Analyzed

Shaded values equal or exceed Site-Specific Residual Saturation Remediation Level

a = Indicates light diesel range

b = Sample reanalyzed by laboratory

E = Reported result exceeds the calibration range and is an estimate

J = Indicates analyte was positively identified. Reported result is an estimate.

**TABLE 2  
EXCAVATION DELINEATION SOIL ANALYTICAL RESULTS - EXXONMOBIL ADC**

ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington  
Page 1 of 14

Sample Name	Location	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)
<b>Stantec - Site Characterization/Focused Feasibility Study Addendum - May 25, 2023:</b>							
S-2.5-A2	A2	08/11/21	2.5	--	<0.26	<5.5	<5.5
S-5-A2	A2	08/11/21	5	--	250	340	45
S-7.5-A2	A2	08/11/21	7.5	--	520	<b>7,400</b>	650
S-10-A2	A2	08/11/21	10	--	76	260	44
S-12.5-A2	A2	08/11/21	12.5	<b>Yes</b>	570	<b>11,000</b>	2,200
S-14.5-A2	A2	08/11/21	14.5	--	<0.13	<6.3	11
S-2.5-A4	A4	08/11/21	2.5	--	<0.24	<5.5	110
S-5-A4	A4	08/11/21	5	--	300	<b>8,700</b>	1,500
S-10-A4	A4	08/11/21	10	--	72	270	74
S-12.5-A4	A4	08/11/21	12.5	--	0.42	<7.8	<7.8
S-2.5-A6	A6	08/12/21	2.5	<b>Yes</b>	520	<b>7,300</b>	1,600
S-5-A6	A6	08/12/21	5	<b>Yes</b>	220	1,700	410
S-7.5-A6	A6	08/12/21	7.5	<b>Yes</b>	450	<b>6,700</b>	3,500
S-10-A6	A6	08/12/21	10	--	5.2	8.1	11
S-12.5-A6	A6	08/12/21	12.5	--	0.40	83	55
S-2.5-A8	A8	08/16/21	2.5	--	20	69	29
S-10-A8	A8	08/16/21	10	<b>Yes</b>	160	580	260
S-12.5-A8	A8	08/16/21	12.5	<b>Yes</b>	100	630	330
S-14.5-A8	A8	08/16/21	14.5	--	1.6	85	48
S-2.5-B1	B1	08/11/21	2.5	--	<0.25	<5.4	6.0
S-5-B1	B1	08/11/21	5	--	56	<b>6,300</b>	1,600
S-7.5-B1	B1	08/11/21	7.5	--	5.4	20	17
S-10-B1	B1	08/11/21	10	--	0.42	<7.2	<7.2
S-12.5-B1	B1	08/11/21	12.5	--	0.28	<6.1	<6.1
S-2.5-B9	B9	08/12/21	2.5	--	0.60	23	44
S-5-B9	B9	08/12/21	5	--	8.0	110	150
S-7.5-B9	B9	08/12/21	7.5	--	6.9	89	60
S-10-B9	B9	08/12/21	10	--	35	160	110
S-12.5-B9	B9	08/12/21	12.5	<b>Yes</b>	43	150	120
S-13-B9	B9	08/12/21	13	--	89	440	270
S-15-B9A	B9A	10/14/21	15	--	<1.7	<54	<54
S-5-C1	C1	10/15/21	5	--	260	4,400	1,100
S-5-C1 DUP	C1	10/15/21	5	--	160	1,500	350
S-7.5-C1	C1	10/15/21	7.5	--	8.0	47	<11
S-10-C1	C1	10/15/21	10	--	0.54	<7.3	<7.3
S-12.5-C1	C1	10/15/21	12.5	--	<0.28	<6.8	<6.8
S-5-C2	C2	08/09/21	5	--	0.57	<29	500
S-7.5-C2	C2	08/09/21	7.5	--	<1.3	1,700	660
S-10-C2	C2	08/09/21	10	--	1.3	27	20
S-12.5-C2	C2	08/09/21	12.5	--	85	98	42
S-5-C3	C3	10/12/21	5	--	2.1	290	410
S-7.5-C3	C3	10/12/21	7.5	--	120	1,200	1,200
Site-Specific Residual Saturation Remediation Levels					2,470	4,800	5,810



**TABLE 2  
EXCAVATION DELINEATION SOIL ANALYTICAL RESULTS - EXXONMOBIL ADC**

ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington  
Page 2 of 14

Sample Name	Location	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)
<b>Stantec - Site Characterization/Focused Feasibility Study Addendum - May 25, 2023 (continued):</b>							
S-10-C3	C3	10/12/21	10	--	<0.30	<6.0	6.6
S-12.5-C3	C3	10/12/21	12.5	--	0.96	<6.6	<6.6
S-5-C4	C4	08/09/21	5	--	760	140	38
S-7.5-C4	C4	08/09/21	7.5	--	22	1,900	410
S-10-C4	C4	08/09/21	10	--	170	740	240
S-12.5-C4	C4	08/09/21	12.5	--	0.56	<6.7	7.4
S-2.5-C6	C6	08/09/21	2.5	--	3.7	1,800	1,300
S-5-C6	C6	08/09/21	5	--	0.21	290	1,100
S-7.5-C6	C6	08/09/21	7.5	Yes	94	2,800	1,300
S-10-C6	C6	08/09/21	10	--	29	1,200	520
S-2.5-C8	C8	08/09/21	2.5	--	1.0	540	160
S-5-C8	C8	08/09/21	5	--	0.50	<7.3	<7.3
S-7.5-C8	C8	08/09/21	7.5	--	2.6	53	29
S-10-C8	C8	08/09/21	10	Yes	840	13,000	4,600
S-12.5-C8	C8	08/09/21	12.5	Yes	290	4,000	1,400
S-15-C8A	C8A	10/12/21	15	--	<0.97	<24	<24
S-2.5-D1	D1	08/09/21	2.5	--	190	390	440
S-5-D1	D1	08/09/21	5	--	26	410	94
S-7.5-D1	D1	08/09/21	7.5	--	25	5,700	1,700
S-10-D1	D1	08/09/21	10	--	160	400	220
S-10-D1 DUP	D1	08/09/21	10	--	190	170	72
S-12.5-D1	D1	08/09/21	12.5	--	0.60	<6.3	<6.3
S-7.5-D1A	D1A	10/15/21	7.5	--	22	930	360
S-10-D1A	D1A	10/15/21	10	--	0.62	<6.2	<6.2
S-5-D2	D2	10/12/21	5	--	200	5,200	3,600
S-7.5-D2	D2	10/12/21	7.5	Yes	540	4,600	2,200
S-10-D2	D2	10/12/21	10	--	<0.23	<6.3	<6.3
S-2.5-D3	D3	08/09/21	2.5	--	260	4,100	1,400
S-5-D3	D3	08/09/21	5	--	1,600	22,000	3,900
S-7.5-D3	D3	08/09/21	7.5	--	68	560	2,200
S-10-D3	D3	08/09/21	10	--	86	390	110
S-12.5-D3	D3	08/09/21	12.5	--	0.38	<6.4	<6.4
S-2.5-D5	D5	08/09/21	2.5	--	370	1,600	580
S-5-D5	D5	08/09/21	5	Yes	470	18,000	4,600
S-5-D5 DUP	D5	08/09/21	5	Yes	300	4,000	1,400
S-7.5-D5	D5	08/09/21	7.5	--	81	3,600	930
S-10-D5	D5	08/09/21	10	Yes	800	11,000	2,400
S-12.5-D5	D5	08/09/21	12.5	--	2.1	<6.6	<6.6
S-2.5-D7	D7	08/09/21	2.5	--	63	4,300	1,900
S-5-D7	D7	08/09/21	5	--	810	29,000	6,900
S-7.5-D7	D7	08/09/21	7.5	--	350	9,200	3,500
S-10-D7	D7	08/09/21	10	Yes	650	40,000	7,000
Site-Specific Residual Saturation Remediation Levels					2,470	4,800	5,810

**TABLE 2  
EXCAVATION DELINEATION SOIL ANALYTICAL RESULTS - EXXONMOBIL ADC**

ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington  
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Sample Name	Location	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)	
<b>Stantec - Site Characterization/Focused Feasibility Study Addendum - May 25, 2023 (continued):</b>								
S-12.5-D7	D7	08/09/21	12.5	--	13	420	160	
S-2.5-D9	D9	08/09/21	2.5	--	0.32	290	120	
S-5-D9	D9	08/09/21	5	--	1.3	180	620	
S-7.5-D9	D9	08/09/21	7.5	--	1,200	<b>19,000</b>	<b>5,900</b>	
S-10-D9	D9	08/09/21	10	<b>Yes</b>	550	2,700	1,300	
S-12.5-D9	D9	08/09/21	12.5	--	36	290	190	
S-2.5-E1	E1	10/15/21	2.5	--	<0.27	<33	48	
S-5-E1	E1	10/15/21	5	--	<0.26	<6.4	<6.4	
S-7.5-E1	E1	10/15/21	7.5	--	<0.34	<7.1	<7.1	
S-10-E1	E1	10/15/21	10	--	<1.4	<12	<12	
S-2.5-E2	E2	08/09/21	2.5	--	64	430	240	
S-5-E2	E2	08/09/21	5	--	280	1,000	200	
S-7.5-E2	E2	08/09/21	7.5	--	280	1,500	95	
S-10-E2	E2	08/09/21	10	--	160	250	22	
S-12.5-E2	E2	08/09/21	12.5	--	0.36	<7.4	<7.4	
S-2.5-E3	E3	10/12/21	2.5	--	0.37	110	220	
S-5-E3	E3	10/12/21	5	--	18	2,900	2,100	
S-7.5-E3	E3	10/12/21	7.5	--	<0.21	<5.6	9.0	
S-2.5-E4	E4	08/09/21	2.5	--	270	4,100	1,300	
S-5-E4	E4	08/09/21	5	--	25	1,500	320	
S-7.5-E4	E4	08/09/21	7.5	--	22	13	<6.9	
S-10-E4	E4	08/09/21	10	--	38	320	96	
S-10-E4 DUP	E4	08/09/21	10	--	140	42	34	
S-12.5-E4	E4	08/09/21	12.5	--	0.48	<6.3	<6.3	
S-5-E5	E5	10/12/21	5	--	650	<b>89,000</b>	<b>9,200</b>	
S-7.5-E5	E5	10/12/21	7.5	<b>Yes</b>	770	<b>36,000</b>	3,100	
S-10-E5	E5	10/12/21	10	<b>Yes</b>	740	<b>22,000</b>	1,700	
S-12.5-E5	E5	10/12/21	12.5	<b>Yes</b>	140	<b>27,000</b>	2,500	
S-15-E5	E5	10/12/21	15	--	0.27	<6.5	<6.5	
S-2.5-E6	E6	08/09/21	2.5	--	<43	<b>15,000</b>	2,200	
S-5-E6	E6	08/09/21	5	--	710	<b>96,000</b>	<b>8,700</b>	
S-7.5-E6	E6	08/09/21	7.5	--	620	3,900	380	
S-10-E6	E6	08/09/21	10	<b>Yes</b>	570	<b>13,000</b>	1,300	
S-12.5-E6	E6	08/09/21	12.5	--	250	<b>5,100</b>	550	
S-15-E6A	E6A	10/12/21	15	--	<0.22	<6.0	<6.0	
S-2.5-E8	E8	08/09/21	2.5	--	0.38	390	130	
S-5-E8	E8	08/09/21	5	--	210	940	890	
S-7.5-E8	E8	08/09/21	7.5	<b>Yes</b>	170	<b>14,000</b>	3,200	
S-10-E8	E8	08/09/21	10	<b>Yes</b>	1,300	<b>28,000</b>	<b>7,900</b>	
S-12.5-E8	E8	08/09/21	12.5	<b>Yes</b>	280	<b>6,000</b>	1,900	
S-15-E8A	E8A	10/12/21	15	--	1.4	<6.1	<6.1	
S-17.5-E8A	E8A	10/12/21	17.5	<b>Yes</b>	23	72	25	
Site-Specific Residual Saturation Remediation Levels						2,470	4,800	5,810

**TABLE 2  
EXCAVATION DELINEATION SOIL ANALYTICAL RESULTS - EXXONMOBIL ADC**

ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington  
Page 4 of 14

Sample Name	Location	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)	
<b>Stantec - Site Characterization/Focused Feasibility Study Addendum - May 25, 2023 (continued):</b>								
S-20-E8A	E8A	10/12/21	20	--	<2.3	<56	83	
S-20-E8A DUP	E8A	10/12/21	20	--	<1.9	<530	570	
S-2.5-F1	F1	10/13/21	2.5	--	<0.28	<30	120	
S-5-F1	F1	10/13/21	5	--	0.19	71	130	
S-7.5-F1	F1	10/13/21	7.5	--	51	20	<6.7	
S-2.5-F2	F2	10/13/21	2.5	--	170	1,900	280	
S-5-F2	F2	10/13/21	5	--	180	<b>7,200</b>	2,600	
S-2.5-F3	F3	08/10/21	2.5	--	300	<b>6,500</b>	2,500	
S-5-F3	F3	08/10/21	5	--	360	1,400	560	
S-10-F3	F3	08/10/21	10	--	<0.21	<6.2	19	
S-12.5-F3	F3	08/10/21	12.5	--	<0.28	<6.8	7.8	
S-2.5-F4	F4	10/13/21	2.5	--	180	570	200	
S-5-F4	F4	10/13/21	5	--	560	<b>11,000</b>	800	
S-7.5-F4	F4	10/13/21	7.5	--	0.25	<6.0	<6.0	
S-10-F4	F4	10/13/21	10	--	<0.25	<6.0	<6.0	
S-12.5-F4	F4	10/13/21	12.5	--	<1.7	<40	55	
S-2.5-F5	F5	08/10/21	2.5	--	310	500	270	
S-5-F5	F5	08/10/21	5	<b>Yes</b>	1,300	<b>76,000</b>	<b>6,200</b>	
S-7.5-F5	F5	08/10/21	7.5	--	1,400	<b>20,000</b>	2,000	
S-10-F5	F5	08/10/21	10	--	870	<b>21,000</b>	2,100	
S-12.5-F5	F5	08/10/21	12.5	--	1.8	<16	46	
S-5-F6	F6	10/13/21	5	--	150	<b>9,600</b>	2,400	
S-7.5-F6	F6	10/13/21	7.5	--	520	<b>22,000</b>	3,100	
S-10-F6	F6	10/13/21	10	<b>Yes</b>	560	<b>62,000</b>	<b>6,200</b>	
S-12.5-F6	F6	10/13/21	12.5	<b>Yes</b>	92	3,200	760	
S-15-F6	F6	10/13/21	15	--	<0.73	<24	53	
S-2.5-F7	F7	08/10/21	2.5	--	66	160	110	
S-5-F7	F7	08/10/21	5	--	540	<b>32,000</b>	5,800	
S-7.5-F7	F7	08/10/21	7.5	--	340	<b>65,000</b>	<b>15,000</b>	
S-10-F7	F7	08/10/21	10	--	330	1,400	320	
S-12.5-F7	F7	08/10/21	12.5	--	12	480	170	
S-2.5-F9	F9	08/10/21	2.5	--	28	140	7.9	
S-2.5-F9 DUP <sup>c</sup>	F9	08/10/21	2.5	--	27	120	<5.6	
S-5-F9	F9	08/10/21	5	--	510	<b>12,000</b>	<b>7,000</b>	
S-7.5-F9	F9	08/10/21	7.5	--	200	630	190	
S-10-F9	F9	08/10/21	10	--	260	<b>16,000</b>	5,400	
S-10-F9 DUP	F9	08/10/21	10	--	470	<b>13,000</b>	5,300	
S-12.5-F9	F9	08/10/21	12.5	--	4.4	270	210	
S-2.5-G1	G1	10/13/21	2.5	--	<0.22	100	330	
S-5-G1	G1	10/13/21	5	--	<0.19	6.8	13	
S-7.5-G1	G1	10/13/21	7.5	<b>Yes</b>	610	<b>7,800</b>	3,700	
S-10-G1	G1	10/13/21	10	--	<0.28	<11	<11	
Site-Specific Residual Saturation Remediation Levels						2,470	4,800	5,810

**TABLE 2  
EXCAVATION DELINEATION SOIL ANALYTICAL RESULTS - EXXONMOBIL ADC**

ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington  
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Sample Name	Location	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TP Hd (mg/kg)	TPHmo (mg/kg)
<b>Stantec - Site Characterization/Focused Feasibility Study Addendum - May 25, 2023 (continued):</b>							
S-2.5-G2	G2	08/10/21	2.5	--	240	2,200	1,100
S-5-G2	G2	08/10/21	5	--	50	190	150
S-10-G2	G2	08/10/21	10	--	3.6	240	120
S-12.5-G2	G2	08/10/21	12.5	--	<1.0	<16	33
S-2.5-G3	G3	10/13/21	2.5	--	170	<b>5,600</b>	1,600
S-5-G3	G3	10/13/21	5	--	7.5	2,400	680
S-7.5-G3	G3	10/13/21	7.5	--	<0.28	<5.4	<5.4
S-2.5-G4	G4	08/10/21	2.5	--	110	2,800	1,400
S-5-G4	G4	08/10/21	5	--	250	250	130
S-7.5-G4	G4	08/10/21	7.5	--	12	12	77
S-10-G4	G4	08/10/21	10	--	96	68	150
S-12.5-G4	G4	08/10/21	12.5	--	<1.3	<20	100
S-5-G5	G5	10/13/21	5	--	190	4,400	1,100
S-7.5-G5	G5	10/13/21	7.5	<b>Yes</b>	110	1,600	810
S-10-G5	G5	10/13/21	10	--	280	210	150
S-12.5-G5	G5	10/13/21	12.5	--	3.3	760	480
S-2.5-G6	G6	08/10/21	2.5	--	280	1,700	530
S-5-G6	G6	08/10/21	5	--	260	1,100	350
S-7.5-G6	G6	08/10/21	7.5	--	170	1,800	610
S-10-G6	G6	08/10/21	10	<b>Yes</b>	240	670	150
S-12.5-G6	G6	08/10/21	12.5	--	170	590	120
S-2.5-G7	G7	10/13/21	2.5	--	6.9	<b>6,800</b>	2,500
S-5-G7	G7	10/13/21	5	--	95	<b>6,500</b>	2,000
S-7.5-G7	G7	10/13/21	7.5	--	240	<b>8,200</b>	1,800
S-10-G7	G7	10/13/21	10	<b>Yes</b>	190	4,300	1,500
S-12.5-G7	G7	10/13/21	12.5	--	9.5	85	<41
S-15-G7	G7	10/13/21	15	--	<1.0a	56	120
S-2.5-G8	G8	08/10/21	2.5	--	120	380	27
S-5-G8	G8	08/10/21	5	--	230	350	30
S-7.5-G8	G8	08/10/21	7.5	<b>Yes</b>	1,400	<b>5,000</b>	960
S-10-G8	G8	08/10/21	10	<b>Yes</b>	1,400	2,700	550
S-12.5-G8	G8	08/10/21	12.5	--	2,400	<b>12,000</b>	2,900
S-15-G8A	G8A	10/12/21	15	<b>Yes</b>	2,200	<b>12,000</b>	3,000
S-17.5-G8A	G8A	10/12/21	17.5	<b>Yes</b>	<b>2,900</b>	<b>29,000</b>	<b>7,100</b>
S-20-G8A	G8A	10/12/21	20	--	<1.6	<110	730
S-2.5-H1	H1	10/13/21	2.5	--	<0.28	<25	160
S-5-H1	H1	10/13/21	5	--	<0.24	900	1,300
S-7.5-H1	H1	10/13/21	7.5	<b>Yes</b>	140	4,000	360
S-10-H1	H1	10/13/21	10	--	<0.77	<20	35
S-2.5-H2	H2	10/13/21	2.5	--	76	2,200	780
S-5-H2	H2	10/13/21	5	--	270	1,700	680
S-7.5-H2	H2	10/13/21	7.5	--	870	<b>6,200</b>	920
<b>Site-Specific Residual Saturation Remediation Levels</b>					<b>2,470</b>	<b>4,800</b>	<b>5,810</b>

**TABLE 2  
EXCAVATION DELINEATION SOIL ANALYTICAL RESULTS - EXXONMOBIL ADC**

ExxonMobil ADC  
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Sample Name	Location	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)	
<b>Stantec - Site Characterization/Focused Feasibility Study Addendum - May 25, 2023 (continued):</b>								
S-10-H2	H2	10/13/21	10	--	<0.57	<79	170	
S-2.5-H3	H3	08/11/21	2.5	--	230	2,300	1,000	
S-6-H3	H3	08/11/21	6	--	230	93	26	
S-7.5-H3	H3	08/11/21	7.5	--	1.1	13	11	
S-10-H3	H3	08/11/21	10	--	76	370	100	
S-12.5-H3	H3	08/11/21	12.5	--	<0.58	46	53	
S-5-H4	H4	10/13/21	5	--	110	2,100	320	
S-7.5-H4	H4	10/13/21	7.5	--	0.64	6.3	<5.6	
S-2.5-H5	H5	08/10/21	2.5	--	480	1,400	780	
S-5-H5	H5	08/10/21	5	--	650	<b>4,900</b>	1,300	
S-5-H5 DUP	H5	08/10/21	5	--	530	1,400	350	
S-7.5-H5	H5	08/10/21	7.5	--	320	380	120	
S-10-H5	H5	08/10/21	10	--	140	1,300	410	
S-12.5-H5	H5	08/10/21	12.5	--	9.2	<7.6	36	
S-14.5-H5	H5	08/10/21	14.5	--	63	200	62	
S-2.5-H6	H6	10/13/21	2.5	--	7.4	1,800	650	
S-5-H6	H6	10/13/21	5	--	7.7	3,900	3,400	
S-7.5-H6	H6	10/13/21	7.5	--	430	<b>8,300</b>	2,200	
S-10-H6	H6	10/13/21	10	--	810	<b>5,400</b>	1,500	
S-12.5-H6	H6	10/13/21	12.5	--	11	110	74	
S-2.5-H7	H7	08/10/21	2.5	--	170	<b>6,500</b>	3,100	
S-5-H7	H7	08/10/21	5	--	370	<b>15,000</b>	3,900	
S-7.5-H7	H7	08/10/21	7.5	--	290	1,200	500	
S-7.5-H7 DUP	H7	08/10/21	7.5	--	330	140	82	
S-10-H7	H7	08/10/21	10	--	130	770	360	
S-12.5-H7	H7	08/10/21	12.5	--	38	230	110	
S-2.5-H9	H9	08/11/21	2.5	--	4.2	1,000	70	
S-4.5-H9	H9	08/11/21	4.5	--	1,600	<b>36,000</b>	4,300	
S-10-H9	H9	08/11/21	10	--	2,400	<b>28,000</b>	4,700	
S-12.5-H9	H9	08/11/21	12.5	--	53	2,000	1,200	
S-14.5-H9	H9	08/11/21	14.5	--	<1.8	200	160	
S-2.5-I1	I1	10/13/21	2.5	--	<0.20	<5.5	20	
S-5-I1	I1	10/13/21	5	--	95	<b>5,700</b>	440	
S-7.5-I1	I1	10/13/21	7.5	--	13	360	<22	
S-10-I1	I1	10/13/21	10	--	<0.74	<14	36	
S-2.5-I2	I2	08/11/21	2.5	--	170	<b>6,800</b>	2,600	
S-5-I2	I2	08/11/21	5	--	310	<b>7,600</b>	1,800	
S-7.5-I2	I2	08/11/21	7.5	--	4.3	220	170	
S-10-I2	I2	08/11/21	10	--	53	1,300	560	
S-12.5-I2	I2	08/11/21	12.5	--	13	150	83	
S-2.5-I3	I3	10/13/21	2.5	--	3.1	660	670	
S-5-I3	I3	10/13/21	5	--	220	<b>5,000</b>	2,000	
Site-Specific Residual Saturation Remediation Levels						2,470	4,800	5,810

**TABLE 2  
EXCAVATION DELINEATION SOIL ANALYTICAL RESULTS - EXXONMOBIL ADC**

ExxonMobil ADC  
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Sample Name	Location	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)	
<b>Stantec - Site Characterization/Focused Feasibility Study Addendum - May 25, 2023 (continued):</b>								
S-7.5-I3	I3	10/13/21	7.5	--	0.30	110	63	
S-10-I3	I3	10/13/21	10	--	<0.20	<5.8	<5.8	
S-2.5-I4	I4	08/11/21	2.5	--	4.9	1,300	450	
S-5-I4	I4	08/11/21	5	--	<0.22	14	<5.9	
S-7.5-I4	I4	08/11/21	7.5	--	<0.19	<5.6	6.9	
S-10-I4	I4	08/11/21	10	--	<0.091	36	12	
S-12.5-I4	I4	08/11/21	12.5	--	<1.2	130	140	
S-2.5-I5	I5	10/13/21	2.5	--	330	<b>7,400</b>	1,600	
S-5-I5	I5	10/13/21	5	--	98	1,900	370	
S-7.5-I5	I5	10/13/21	7.5	--	980	4,500	970	
S-10-I5	I5	10/13/21	10	--	870	<b>7,800</b>	<120	
S-12.5-I5	I5	10/13/21	12.5	--	3.1	23	45	
S-12.5-I5-DUP	I5	10/13/21	12.5	--	1.3	34	55	
S-2.5-I6	I6	08/10/21	2.5	--	140	780	450	
S-5-I6	I6	08/10/21	5	--	380	3,500	800	
S-7.5-I6	I6	08/10/21	7.5	--	470	1,100	450	
S-10-I6	I6	08/10/21	10	--	300	1,000	320	
S-12.5-I6	I6	08/10/21	12.5	--	69	<6.5	14	
S-14.5-I6	I6	08/10/21	14.5	--	4.5	<24	50	
S-3.5-I7	I7	10/13/21	3.5	--	380	4,400	1,400	
S-5-I7	I7	10/13/21	5	--	5.0	53	23	
S-10-I7	I7	10/13/21	10	--	280	730	160	
S-12.5-I7	I7	10/13/21	12.5	<b>Yes</b>	99	130	68	
S-15-I7	I7	10/13/21	15	--	<1.3	<38	100	
S-2.5-I8	I8	08/10/21	2.5	--	710	<b>6,900</b>	1,700	
S-5-I8	I8	08/10/21	5	--	2,100	<b>8,300</b>	1,500	
S-7.5-I8	I8	08/10/21	7.5	--	57	1,100	280	
S-10-I8	I8	08/10/21	10	<b>Yes</b>	1,400	4,300	1,800	
S-12.5-I8	I8	08/10/21	12.5	--	1,000	<b>10,000</b>	5,600	
S-15-I8A	I8A	10/13/21	15	--	<1.9	<34	<34	
S-2.5-J1	J1	10/13/21	2.5	--	<0.30	2,100	5,700	
S-5-J1	J1	10/13/21	5	--	580	<b>6,200</b>	490	
S-7.5-J1	J1	10/13/21	7.5	--	8.0	15	<6.3	
S-2.5-J3	J3	08/11/21	2.5	--	4.0	<b>7,600</b>	3,800	
S-5-J3	J3	08/11/21	5	--	130	3,600	810	
S-7.5-J3	J3	08/11/21	7.5	--	210	<b>7,900</b>	750	
S-10-J3	J3	08/11/21	10	--	160	380	140	
S-12.5-J3	J3	08/11/21	12.5	--	<0.84	93	73	
S-2.5-J5	J5	08/10/21	2.5	--	390	<b>7,800</b>	2,800	
S-5-J5	J5	08/10/21	5	--	2,100	<b>55,000</b>	<b>8,200</b>	
S-5-J5 DUP	J5	08/10/21	5	--	1,600	<b>59,000</b>	<b>8,200</b>	
S-7.5-J5	J5	08/10/21	7.5	--	1,200	<b>7,800</b>	1,400	
Site-Specific Residual Saturation Remediation Levels						2,470	4,800	5,810

**TABLE 2  
EXCAVATION DELINEATION SOIL ANALYTICAL RESULTS - EXXONMOBIL ADC**

ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington  
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Sample Name	Location	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)
<b>Stantec - Site Characterization/Focused Feasibility Study Addendum - May 25, 2023 (continued):</b>							
S-10-J5	J5	08/10/21	10	--	97	13	12
S-12.5-J5	J5	08/10/21	12.5	--	63	120	51
S-2.5-J7	J7	08/10/21	2.5	--	60	<b>6,700</b>	<b>5,900</b>
S-5-J7	J7	08/10/21	5	--	480	470	170
S-7.5-J7	J7	08/10/21	7.5	--	700	830	160
S-10-J7	J7	08/10/21	10	<b>Yes</b>	2,200	<b>10,000</b>	1,400
S-12.5-J7	J7	08/10/21	12.5	--	910	730	180
S-2.5-J9	J9	08/11/21	2.5	--	480	760	210
S-5-J9	J9	08/11/21	5	<b>Yes</b>	<b>3,100</b>	4,000	410
S-7.5-J9	J9	08/11/21	7.5	<b>Yes</b>	<b>3,300</b>	<b>11,000</b>	730
S-10-J9	J9	08/11/21	10	<b>Yes</b>	590	<b>13,000</b>	2,700
S-12.5-J9	J9	08/11/21	12.5	--	1,700	<b>18,000</b>	4,400
S-14.5-J9	J9	08/11/21	14.5	--	1.5	140	450
S-2.5-K1	K1	10/13/21	2.5	--	970	<b>15,000</b>	3,600
S-5-K1	K1	10/13/21	5	--	620	<b>6,200</b>	110
S-7.5-K1	K1	10/13/21	7.5	--	1.2	<8.2	<8.2
S-2.5-K2	K2	08/17/21	2.5	--	460	<b>5,100</b>	400
S-5-K2	K2	08/17/21	5	--	1,100	<b>14,000</b>	490
S-7.5-K2	K2	08/17/21	7.5	--	1.3	19	15
S-10-K2	K2	08/17/21	10	--	4.2	34	17
S-12.5-K2	K2	08/17/21	12.5	--	580	<8.5	12
S-2.5-K4	K4	08/18/21	2.5	--	570	<b>5,800</b>	140
S-5-K4	K4	08/18/21	5	--	0.99	<5.9	9.1
S-10-K4	K4	08/18/21	10	--	0.67	9.5	14
S-15-K4	K4	08/18/21	15	--	22	65	56
S-2.5-K6	K6	08/18/21	2.5	--	1,200	3,100	320
S-5-K6	K6	08/18/21	5	--	560	<b>14,000</b>	920
S-7.5-K6	K6	08/18/21	7.5	--	320	1,100	47
S-10-K6	K6	08/18/21	10	--	120	38	33
S-12.5-K6	K6	08/18/21	12.5	--	<0.24	<6.0	6.2
S-2.5-K8	K8	08/18/21	2.5	--	4.5	2,800	530
S-5-K8	K8	08/18/21	5	--	<b>3,200</b>	<b>19,000</b>	2,300
S-7.5-K8	K8	08/18/21	7.5	<b>Yes</b>	<b>3,400</b>	<b>59,000</b>	4,500
S-10-K8	K8	08/18/21	10	--	1,500	<b>4,900</b>	270
S-12.5-K8	K8	08/18/21	12.5	--	10	44	240
S-2.5-L1	L1	08/17/21	2.5	--	0.42	16	86
S-5-L1	L1	08/17/21	5	--	210	660	380
S-7.5-L1	L1	08/17/21	7.5	--	1.3	35	59
S-10-L1	L1	08/17/21	10	--	4.9	84	51
S-12.5-L1	L1	08/17/21	12.5	--	0.50	12	8.5
S-2.5-L2	L2	10/13/21	2.5	--	98	<b>5,400</b>	1,400
S-5-L2	L2	10/13/21	5	--	920	<b>8,200</b>	<b>8,200</b>
Site-Specific Residual Saturation Remediation Levels					2,470	4,800	5,810

**TABLE 2  
EXCAVATION DELINEATION SOIL ANALYTICAL RESULTS - EXXONMOBIL ADC**

ExxonMobil ADC  
2717/2731 Federal Avenue  
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Sample Name	Location	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)	
<b>Stantec - Site Characterization/Focused Feasibility Study Addendum - May 25, 2023 (continued):</b>								
S-7.5-L2	L2	10/13/21	7.5	--	<0.21	<6.2	12	
S-2.5-L3	L3	08/17/21	2.5	--	1.4	<b>8,600</b>	2,500	
S-5-L3	L3	08/17/21	5	--	<0.45	<b>7,000</b>	2,600	
S-7.5-L3	L3	08/17/21	7.5	--	0.34	170	360	
S-10-L3	L3	08/17/21	10	--	210	12	110	
S-12.5-L3	L3	08/17/21	12.5	--	<0.58	<13	140	
S-2.5-L5	L5	08/18/21	2.5	--	1,300	<b>8,700</b>	500	
S-5-L5	L5	08/18/21	5	--	840	4,600	280	
S-7.5-L5	L5	08/18/21	7.5	--	0.90	160	160	
S-10-L5	L5	08/18/21	10	--	89	1,700	600	
S-12.5-L5	L5	08/18/21	12.5	--	<1.3	<20	23	
S-2.5-L7	L7	08/18/21	2.5	--	410	4,700	2,000	
S-5-L7	L7	08/18/21	5	--	820	<b>45,000</b>	310	
S-7.5-L7	L7	08/18/21	7.5	--	290	<b>11,000</b>	5,100	
S-10-L7	L7	08/18/21	10	--	410	1,400	800	
S-12.5-L7	L7	08/18/21	12.5	--	<2.0	<28	73	
S-2.5-L8	L8	10/14/21	2.5	--	1.0	340b	200	
S-5-L8	L8	10/14/21	5	--	3,900	<b>22,000b</b>	1,300	
S-7.5-L8	L8	10/14/21	7.5	--	1,900	<b>21,000b</b>	890	
S-10-L8	L8	10/14/21	10	<b>Yes</b>	320	<b>13,000b</b>	920	
S-12.5-L8	L8	10/14/21	12.5	--	12	<49b	72	
S-2-L9	L9	08/18/21	2	--	96	2,000	2,100	
S-5-L9	L9	08/18/21	5	--	6.7	370	280	
S-10-L9	L9	08/18/21	10	--	1,400	310	32	
S-12.5-L9	L9	08/18/21	12.5	--	<2.0	<29	33	
S-2.5-M1	M1	10/13/21	2.5	--	4.0	460	320	
S-5-M1	M1	10/13/21	5	--	2,000	4,200	910	
S-7.5-M1	M1	10/13/21	7.5	--	25	<6.7	<6.7	
S-2.5-M2	M2	08/17/21	2.5	--	0.96	160	23	
S-5-M2	M2	08/17/21	5	--	190	1,600	650	
S-7.5-M2	M2	08/17/21	7.5	--	5.1	270	450	
S-10-M2	M2	08/17/21	10	--	89	970	420	
S-12.5-M2	M2	08/17/21	12.5	--	0.48	17	18	
S-2.5-M3	M3	10/14/21	2.5	--	<b>2,700</b>	<b>16,000</b>	830	
S-5-M3	M3	10/14/21	5	--	390	2,600	330	
S-7.5-M3	M3	10/14/21	7.5	--	16	240	280	
S-10-M3	M3	10/14/21	10	--	20	930	1,100	
S-2.5-M4	M4	08/17/21	2.5	--	<0.29	<b>13,000</b>	2,200	
S-5-M4	M4	08/17/21	5	--	1,100	<b>7,900</b>	1,400	
S-7.5-M4	M4	08/17/21	7.5	--	<0.55	<b>5,500</b>	<b>7,300</b>	
S-10-M4	M4	08/17/21	10	--	620	<6.9	13	
S-12.5-M4	M4	08/17/21	12.5	--	1.0	<15	58	
Site-Specific Residual Saturation Remediation Levels						2,470	4,800	5,810



**TABLE 2  
EXCAVATION DELINEATION SOIL ANALYTICAL RESULTS - EXXONMOBIL ADC**

ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington  
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Sample Name	Location	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)
<b>Stantec - Site Characterization/Focused Feasibility Study Addendum - May 25, 2023 (continued):</b>							
S-2.5-M6	M6	08/18/21	2.5	--	1,500	<b>10,000</b>	1,100
S-5-M6	M6	08/18/21	5	--	1,200	4,400	620
S-7.5-M6	M6	08/18/21	7.5	--	67	60	240
S-10-M6	M6	08/18/21	10	--	8.5	690	930
S-12.5-M6	M6	08/18/21	12.5	--	<1.2	120	280
S-2.5-M8	M8	08/18/21	2.5	--	<b>3,400</b>	<b>27,000</b>	1,300
S-5-M8	M8	08/18/21	5	--	1,200	250	14
S-7.5-M8	M8	08/18/21	7.5	--	490	1,300	340
S-10-M8	M8	08/18/21	10	--	740	100	11
S-12.5-M8	M8	08/18/21	12.5	--	6.0	<31	37
S-2.5-M9	M9	10/14/21	2.5	--	0.77	300b	460
S-5-M9	M9	10/14/21	5	--	4,600	<b>5,700b</b>	180
S-7.5-M9	M9	10/14/21	7.5	--	<b>3,500</b>	<b>21,000b</b>	1,100
S-10-M9	M9	10/14/21	10	--	<b>2,900</b>	<b>35,000b</b>	1,400
S-12.5-M9	M9	10/14/21	12.5	--	530	<b>11,000b</b>	1,700
S-15-M9	M9	10/14/21	15	--	46	26b	<17
S-17.5-M9	M9	10/14/21	17.5	--	0.97	<5.8b	<5.8
S-2.5-N1	N1	08/17/21	2.5	--	0.86	13	<5.7
S-5-N1	N1	08/17/21	5	--	730	160	140
S-10-N1	N1	08/17/21	10	--	1.8	14	13
S-12.5-N1	N1	08/17/21	12.5	--	<0.28	15	11
S-2.5-N3	N3	08/17/21	2.5	--	1,700H	930	9.5
S-5-N3	N3	08/17/21	5	--	880H	780	190
S-7.5-N3	N3	08/17/21	7.5	--	1.8	<6.2	<6.2
S-16-N3	N3	08/17/21	16	--	<0.28	<11	15
S-2.5-N4	N4	10/14/21	2.5	--	2,200	<b>7,700</b>	410
S-5-N4	N4	10/14/21	5	--	1,600	4,400	51
S-7.5-N4	N4	10/14/21	7.5	--	20	360	190
S-10-N4	N4	10/14/21	10	--	1.3	460	980
S-2.5-N5	N5	08/17/21	2.5	--	2,000	<b>110,000</b>	<b>6,300</b>
S-5-N5	N5	08/17/21	5	--	1,100H	820	51
S-7.5-N5	N5	08/17/21	7.5	--	0.87	<6.0	<6.0
S-10-N5	N5	08/17/21	10	--	9.4	32	<6.0
S-12.5-N5	N5	08/17/21	12.5	--	<0.98	<29	<29
S-2.5-N7	N7	08/17/21	2.5	--	36	<b>6,100</b>	2,300
S-5-N7	N7	08/17/21	5	--	1,200	1,600	37
S-7.5-N7	N7	08/17/21	7.5	--	<b>9,500</b>	<b>24,000</b>	1,000
S-10-N7	N7	08/17/21	10	--	1,400	4,400	1,800
S-12.5-N7	N7	08/17/21	12.5	--	4.4	320	190
S-2.5-O1	O1	10/14/21	2.5	--	<0.27	<51b	170
S-5-O1	O1	10/14/21	5	--	<0.25	<30b	77
S-7.5-O1	O1	10/14/21	7.5	--	3.7	14b	13
<b>Site-Specific Residual Saturation Remediation Levels</b>					<b>2,470</b>	<b>4,800</b>	<b>5,810</b>

**TABLE 2  
EXCAVATION DELINEATION SOIL ANALYTICAL RESULTS - EXXONMOBIL ADC**

ExxonMobil ADC  
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Sample Name	Location	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)
<b>Stantec - Site Characterization/Focused Feasibility Study Addendum - May 25, 2023 (continued):</b>							
S-2.5-O2	O2	08/17/21	2.5	--	0.25	45	47
S-5-O2	O2	08/17/21	5	--	<0.18	<12	67
S-7.5-O2	O2	08/17/21	7.5	--	5.4	240	1,400
S-10-O2	O2	08/17/21	10	--	1.3	<19	<19
S-12.5-O2	O2	08/17/21	12.5	--	<0.25H	<6.3	14
S-2.5-O3	O3	10/14/21	2.5	--	3.6	99	110
S-5-O3	O3	10/14/21	5	--	1,500	3,200	130
S-7.5-O3	O3	10/14/21	7.5	--	1.1	6.1	13
S-10-O4	O4	08/17/21	10	--	66H	230	75
S-12.5-O4	O4	08/17/21	12.5	--	1.2	<20	62
S-2.5-O6	O6	08/17/21	2.5	--	170	1,000	1,700
S-5-O6	O6	08/17/21	5	--	<b>2,800</b>	2,000	320
S-7.5-O6	O6	08/17/21	7.5	--	200	220	<5.7
S-7.5-O6 DUP	O6	08/17/21	7.5	--	55	1,100	26
S-10-O6	O6	08/17/21	10	--	<b>2,900</b>	600	27
S-12.5-O6	O6	08/17/21	12.5	--	210	260	210
S-2.5-O7	O7	10/14/21	2.5	--	520	3,800b	1,600
S-5-O7	O7	10/14/21	5	--	240	870b	3,300
S-7.5-O7	O7	10/14/21	7.5	--	2,100	<b>20,000b</b>	790
S-10-O7	O7	10/14/21	10	--	110	200b	660
S-12.5-O7	O7	10/14/21	12.5	--	10	<53b	100
S-2.5-O8	O8	08/16/21	2.5	--	<b>4,100</b>	<b>15,000</b>	290
S-5-O8	O8	08/16/21	5	--	820	<b>45,000</b>	1,500
S-10-O8	O8	08/16/21	10	--	1,500	2,900	180
S-12.5-O8	O8	08/16/21	12.5	--	8.3	20	150
S-2.5-P1	P1	08/16/21	2.5	--	22	290	960
S-5-P1	P1	08/16/21	5	--	140	280	780
S-7.5-P1	P1	08/16/21	7.5	--	<0.56	<11	14
S-10-P1	P1	08/16/21	10	--	<0.76	460	840
S-12.5-P1	P1	08/16/21	12.5	--	<0.71	<12	12
S-2.5-P2	P2	10/14/21	2.5	--	0.23	310b	630
S-5-P2	P2	10/14/21	5	--	1,500	<b>4,900b</b>	1,600
S-7.5-P2	P2	10/14/21	7.5	--	2.9	120b	430
S-2.5-P3	P3	08/16/21	2.5	--	800	<b>6,100</b>	2,400
S-16-P3	P3	08/16/21	16	--	5.3	<17	29
S-2.5-P4	P4	10/14/21	2.5	--	250	320b	580
S-5-P4	P4	10/14/21	5	--	810	830b	58
S-7.5-P4	P4	10/14/21	7.5	--	45	43b	240
S-2.5-P5	P5	08/16/21	2.5	--	63	200	360
S-5-P5	P5	08/16/21	5	--	<b>2,500</b>	3,700	250
S-7.5-P5	P5	08/16/21	7.5	--	230	29	240
S-10-P5	P5	08/16/21	10	--	790	190	260
<b>Site-Specific Residual Saturation Remediation Levels</b>					<b>2,470</b>	<b>4,800</b>	<b>5,810</b>

**TABLE 2**  
**EXCAVATION DELINEATION SOIL ANALYTICAL RESULTS - EXXONMOBIL ADC**  
 ExxonMobil ADC  
 2717/2731 Federal Avenue  
 Everett, Washington  
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Sample Name	Location	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)
<b>Stantec - Site Characterization/Focused Feasibility Study Addendum - May 25, 2023 (continued):</b>							
S-12.5-P5	P5	08/16/21	12.5	--	1.0	10	130
S-5-P6	P6	10/14/21	5	--	2,200	1,400b	990
S-10-P6	P6	10/14/21	10	--	2.0	<6.8b	12
S-12.5-P6	P6	10/14/21	12.5	--	6.0	<59b	100
S-2.5-P7	P7	08/16/21	2.5	--	110	2,800	1,500
S-5-P7	P7	08/16/21	5	--	870	4,300	460
S-7.5-P7	P7	08/16/21	7.5	--	1,000	3,700	200
S-10-P7	P7	08/16/21	10	--	260	830	310
S-12.5-P7	P7	08/16/21	12.5	--	3.0	1,700	4,000
S-2.5-Q1	Q1	10/14/21	2.5	--	<0.36	<5.3	<5.3
S-5-Q1	Q1	10/14/21	5	--	2.5	<6.1	<6.1
S-7.5-Q1	Q1	10/14/21	7.5	--	0.33	<5.9	38
S-2.5-Q2	Q2	08/16/21	2.5	--	53	150	240
S-5-Q2	Q2	08/16/21	5	--	1.3	<5.9	76
S-7.5-Q2	Q2	08/16/21	7.5	--	0.58	<6.1	11
S-10-Q2	Q2	08/16/21	10	--	<0.20	<6.2	6.8
S-12.5-Q2	Q2	08/16/21	12.5	--	<0.21	<6.1	7.5
S-2.5-Q3	Q3	10/14/21	2.5	--	9.3	<6.6	9.8
S-5-Q3	Q3	10/14/21	5	--	530	810	190
S-7.5-Q3	Q3	10/14/21	7.5	--	110	340	61
S-2.5-Q4	Q4	08/16/21	2.5	--	2.1	20	17
S-5-Q4	Q4	08/16/21	5	--	7.3	100	210
S-7.5-Q4	Q4	08/16/21	7.5	--	0.34	22	100
S-10-Q4	Q4	08/16/21	10	--	0.27	<6.0	<6.0
S-12.5-Q4	Q4	08/16/21	12.5	--	<0.47	28	56
S-5-Q5	Q5	10/15/21	5	--	1.5	<31	68
S-7.5-Q5	Q5	10/15/21	7.5	--	0.45	<6.3	<6.3
S-7.5-Q5 DUP	Q5	10/15/21	7.5	--	0.44	<5.6	<5.6
S-2.5-Q6	Q6	08/12/21	2.5	--	2,100	6,000	170
S-5-Q6	Q6	08/12/21	5	--	590	3,400	140
S-7.5-Q6	Q6	08/12/21	7.5	--	0.80	<6.1	<6.1
S-10-Q6	Q6	08/12/21	10	--	130	6.3	<6.1
S-12.5-Q6	Q6	08/12/21	12.5	--	33	9.5	8.1
S-2.5-R1	R1	08/12/21	2.5	--	190	1,300	640
S-5-R1	R1	08/12/21	5	--	0.51	<6.0	<6.0
S-7.5-R1	R1	08/12/21	7.5	--	1.2	66	220
S-10-R1	R1	08/12/21	10	--	0.36	63	200
S-12.5-R1	R1	08/12/21	12.5	--	<0.58	<25	300
S-2.5-R3	R3	08/12/21	2.5	--	0.55	<6.5	<6.5
S-5-R3	R3	08/12/21	5	--	0.74	32	480
S-7.5-R3	R3	08/12/21	7.5	--	<0.14	<5.9	<5.9
S-10-R3	R3	08/12/21	10	--	<0.11	<5.9	<5.9
Site-Specific Residual Saturation Remediation Levels					2,470	4,800	5,810

**TABLE 2  
EXCAVATION DELINEATION SOIL ANALYTICAL RESULTS - EXXONMOBIL ADC**

ExxonMobil ADC  
2717/2731 Federal Avenue  
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Sample Name	Location	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)
<b>Stantec - Site Characterization/Focused Feasibility Study Addendum - May 25, 2023 (continued):</b>							
S-12.5-R3	R3	08/12/21	12.5	--	<1.3	<19	110
S-5-R4	R4	10/15/21	5	--	4.7	<6.3	40
S-7.5-R4	R4	10/15/21	7.5	--	1.7	<29	260
S-2.5-R5	R5	08/12/21	2.5	--	1.0	7.5	17
S-10-R5	R5	08/12/21	10	--	38	140	130
S-10-R5 DUP	R5	08/12/21	10	--	450	140	130
S-12.5-R5	R5	08/12/21	12.5	--	15	<6.3	7.7
S-7.5-R5A	R5A	10/15/21	7.5	--	2.1	<6.0	<6.0
S-2.5-S1	S1	10/14/21	2.5	--	<0.24	<13	62
S-5-S1	S1	10/14/21	5	--	<0.20	<5.7	<5.7
S-7.5-S1	S1	10/14/21	7.5	--	0.24	<5.8	<5.8
S-2.5-S2	S2	08/12/21	2.5	--	0.39	21	120
S-5-S2	S2	08/12/21	5	--	0.25	15	140
S-7.5-S2	S2	08/12/21	7.5	--	<0.20	<5.8	<5.8
S-10-S2	S2	08/12/21	10	--	0.21	20	49
S-12.5-S2	S2	08/12/21	12.5	--	<0.50	<14	74
S-2.5-S4	S4	08/12/21	2.5	--	0.60	<6.2	<6.2
S-5-S4	S4	08/12/21	5	--	0.25	<5.9	23
S-7.5-S4	S4	08/12/21	7.5	--	<0.23	<6.2	<6.2
S-10-S4	S4	08/12/21	10	--	0.12	10	180
S-12.5-S4	S4	08/12/21	12.5	--	<0.97	<18	220
S-2.5-T1	T1	08/16/21	2.5	--	0.29	20	59
S-5-T1	T1	08/16/21	5	--	<0.21	19	18
S-7.5-T1	T1	08/16/21	7.5	--	<0.11	13	12
S-10-T1	T1	08/16/21	10	--	<0.77	17	33
S-12.5-T1	T1	08/16/21	12.5	--	<0.88	<23	25
S-2.5-T3	T3	08/16/21	2.5	--	<0.20	6.3	8.3
S-5-T3	T3	08/16/21	5	--	<0.19	<5.6	6.0
S-7.5-T3	T3	08/16/21	7.5	--	<0.11	16	13
S-10-T3	T3	08/16/21	10	--	<0.23	220	1,400
S-12.5-T3	T3	08/16/21	12.5	--	<0.73	<20	49

Site-Specific Residual Saturation Remediation Levels	2,470	4,800	5,810
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**TABLE 2**  
**EXCAVATION DELINEATION SOIL ANALYTICAL RESULTS - EXXONMOBIL ADC**

ExxonMobil ADC  
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Sample Name	Location	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)
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**EXPLANATION:**

feet bgs = Feet below ground surface

mg/kg = Milligrams per kilogram

LNAPL = Light Non-aqueous Phase Liquid

TPHg = Total Petroleum Hydrocarbons as Gasoline in accordance with Ecology Method NWTPH-Gx

TPHd, TPHmo = Total Petroleum Hydrocarbons as Diesel and as Oil, respectively, in accordance with Ecology Method NWTPH-Dx

All TPHd and TPHmo samples analyzed with silica gel cleanup

< = Less than the stated laboratory reporting limit

-- = Not Observed; Not Analyzed

Shaded values equal or exceed Site-Specific Residual Saturation Remediation Level

a = Sample aliquot taken from unpreserved jar; analytical method specifies methanol or sodium bisulfate preservation

b = TPHd detected in equipment blank sample

H = Sample was prepped or analyzed beyond the specified holding time

**TABLE 3**  
**TRENCHING SOIL ANALYTICAL RESULTS - TPH / BTEX / cPAHs**

ExxonMobil ADC  
 2717/2731 Federal Avenue  
 Everett, Washington  
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Sample ID	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	TEF-Adjusted Total cPAHs <sup>a</sup> (mg/kg)
<b>Cardno - Federal Avenue Trenching - Sampling and Analysis Report - August 22, 2022:</b>											
TP1-6	01/20/22	6	--	<0.24	6.8	<6.6	<0.0010	<0.0010	<0.0010	<0.0020	0.0049
TP2-6.5	01/20/22	6.5	--	<b>450</b>	<b>3,100</b>	430	<0.061	<0.061	<0.061	<0.12	<b>0.182</b>
TP3-7	01/20/22	7	--	<b>300</b>	<b>5,100</b>	470	<0.049	<0.049	<0.049	<0.097	0.061
TS1	02/26/22	6	--	<0.24	<5.3	<5.3	<0.0010	<0.0010	<0.0010	<0.0020	0.0040
TS2	02/26/22	6	--	<0.41	<6.7	<6.7	<0.0012	<0.0012	<0.0012	<0.0025	0.0050
TS3	02/26/22	6	--	<0.22	8.6	170	<0.00093	<0.00093	<0.00093	<0.0019	0.0176
TS4	02/26/22	6	--	<0.24	<6.3	7.9	<0.00054	<0.00054	<0.00054	0.0025	0.0048
TS5	02/26/22	6	--	1.7	<6.1	<6.1	<0.00099	<0.00099	<0.00099	<0.0020	0.0047
TS6	02/27/22	6	--	<b>960</b>	<b>3,500</b>	240	<0.0010	<0.0010	<0.0010	<0.0021	0.0278
TS7	02/27/22	6	--	<b>970</b>	<b>5,400</b>	530	<0.063	0.070	<0.063	<0.13	<b>0.181</b>
TS8	02/27/22	6	--	<0.27	<5.0	11	<0.0011	0.0012	<0.0011	<0.0022	0.0223
TS9	02/27/22	6	--	<0.25	<5.1	<5.1	<0.0010	<0.0010	<0.0010	<0.0020	0.0039
TS10	02/27/22	6	--	<0.21	<5.4	<5.4	<0.00086	<0.00086	<0.00086	<0.0017	0.0042
TS11	03/07/22	4	--	<0.24	12	36	<0.0011	<0.0011	<0.0011	<0.0023	0.0544
TS12	03/07/22	4	--	<0.24	17	88	<0.00096	<0.00096	<0.00096	<0.0019	0.0041
TS13	03/09/22	10	--	8.2	14	24	<0.0012	<0.0012	<0.0012	<0.0023	0.0048
TS14	03/15/22	4	--	<0.21	14	24	<0.00085	<0.00085	<0.00085	<0.0017	0.0045
TS15	03/15/22	4	--	0.83	14	21	<0.00099	<0.00099	<0.00099	<0.0020	0.0048
TS16	03/16/22	4	--	<0.27	6.6	15	<0.0012	<0.0012	<0.0012	<0.0024	0.0046
TS17	03/25/22	8	--	<b>860</b>	<b>3,600</b>	220	<0.54	<0.54	<0.54	<1.1	0.024
TS18	04/25/22	3	--	<0.19	6.9	14	<0.00082	<0.00082	<0.00082	<0.0016	<b>0.136</b>
TS19	04/26/22	3.5	--	<0.22	<6.1	<6.1	<0.0012	<0.0012	<0.0012	<0.0023	0.0080
TS20	04/26/22	3.5	--	<0.34	<6.3	77	<0.0012	<0.0012	<0.0012	<0.0025	0.0147
TS21	04/27/22	3.5	--	<0.30	<6.7	11	<0.0013	<0.0013	<0.0013	<0.0026	0.0150
Site-Specific Residual Saturation Remediation Levels				2,470	4,800	5,810	N/A	N/A	N/A	N/A	N/A
MTCA Method A Cleanup Levels				30/100 <sup>p</sup>	2,000	2,000	0.03	7	6	9	0.1

**TABLE 3  
TRENCHING SOIL ANALYTICAL RESULTS - TPH / BTEX / cPAHs**

ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington  
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Sample ID	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	TEF-Adjusted Total cPAHs <sup>a</sup> (mg/kg)
<b>Cardno - Federal Avenue Trenching - Sampling and Analysis Report - August 22, 2022 (continued):</b>											
TS22	04/27/22	3.5	--	<0.29	<5.9	9.3	<0.00093	<0.00093	<0.00093	<0.0019	0.0044
TS23	06/02/22	5	--	0.36	59	17	<0.0010	<0.0010	<0.0010	<0.0020	0.0059
Site-Specific Residual Saturation Remediation Levels				2,470	4,800	5,810	N/A	N/A	N/A	N/A	N/A
MTCA Method A Cleanup Levels				30/100 <sup>b</sup>	2,000	2,000	0.03	7	6	9	0.1

**EXPLANATION:**

feet bgs = Feet below ground surface

mg/kg = Milligrams per kilogram

LNAPL = Light Non-aqueous Phase Liquid

TPH = Total Petroleum Hydrocarbons

TPHg = Total Petroleum Hydrocarbons as Gasoline in accordance with Ecology Method NWTPH-Gx

TPHd, TPHmo = Total Petroleum Hydrocarbons as Diesel and as Oil, respectively, in accordance with Ecology Method NWTPH-Dx with silica gel cleanup

B = Benzene; T = Toluene; E = Ethylbenzene; X = Total Xylenes

BTEX = Aromatic compounds analyzed in accordance with EPA Method 8260C

TEF-Adjusted Total cPAHs = Carcinogenic Polycyclic Aromatic Hydrocarbons analyzed in accordance with EPA Method 8270C SIM

N/A = Not applicable

< = Less than the stated laboratory reporting limit; -- = Not Observed

**Bolded values equal or exceed MTCA Method A Cleanup Levels**

**Shaded values equal or exceed Site-Specific Residual Saturation Remediation Levels**

a = Toxicity Equivalency Factors (TEF) in accordance with Table 708-2 under WAC 173-340-708(e)

b = TPHg soil cleanup level is 30 mg/kg, unless benzene is not detected in the sample, or if toluene, ethylbenzene, and total xylenes constitute less than 1% of the TPHg present in the sample. If these conditions are met, the cleanup level for TPHg may be elevated to 100 mg/kg.

**TABLE 4**  
**TRENCHING SOIL ANALYTICAL RESULTS - cPAH TEF CALCULATIONS**

ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington  
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Sample ID	Sample Date	Sample Depth (feet bgs)		B(a)A (mg/kg)	B(a)P (mg/kg)	B(b)F (mg/kg)	B(k)F (mg/kg)	Chrysene (mg/kg)	DB(a,h)A (mg/kg)	IP (mg/kg)	Total cPAHs (mg/kg) <sup>a</sup>
TEF				0.1	1	0.1	0.1	0.01	0.1	0.1	--
MTCA Method A Cleanup Level				--	0.1	--	--	--	--	--	0.1
TP1-6	01/20/22	6	Lab value	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0033	--
			TEQ*value	0.0003	0.0033	0.0003	0.0003	0.0000	0.0003	0.0003	0.0003
TP2-6.5	01/20/22	6.5	Lab value	0.14	0.13	0.11	0.078	0.22	0.079	0.091	--
			TEQ*value	0.01	0.13	0.01	0.008	0.00	0.008	0.009	<b>0.182</b>
TP3-7	01/20/22	7	Lab value	0.048	0.044	0.043	0.036	0.082	< 0.017	< 0.017	--
			TEQ*value	0.005	0.044	0.004	0.004	0.001	0.002	0.002	0.061
TS1	02/26/22	6	Lab value	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027	--
			TEQ*value	0.0003	0.0027	0.0003	0.0003	0.0000	0.0003	0.0003	0.0040
TS2	02/26/22	6	Lab value	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0033	--
			TEQ*value	0.0003	0.0033	0.0003	0.0003	0.0000	0.0003	0.0003	0.0050
TS3	02/26/22	6	Lab value	0.012	0.013	0.011	0.0083	0.013	< 0.0031	0.0099	--
			TEQ*value	0.001	0.013	0.001	0.0008	0.000	0.0003	0.0010	0.0176
TS4	02/26/22	6	Lab value	< 0.0032	< 0.0032	< 0.0032	< 0.0032	< 0.0032	< 0.0032	< 0.0032	--
			TEQ*value	0.0003	0.0032	0.0003	0.0003	0.0000	0.0003	0.0003	0.0048
TS5	02/26/22	6	Lab value	< 0.0031	< 0.0031	< 0.0031	< 0.0031	< 0.0031	< 0.0031	< 0.0031	--
			TEQ*value	0.0003	0.0031	0.0003	0.0003	0.0000	0.0003	0.0003	0.0047
TS6	02/27/22	6	Lab value	0.035	0.020	0.014	0.011	0.063	< 0.0029	0.0087	--
			TEQ*value	0.004	0.020	0.001	0.001	0.001	0.0003	0.0009	0.0278
TS7	02/27/22	6	Lab value	0.13	0.14	0.088	0.078	0.20	0.017	0.073	--
			TEQ*value	0.01	0.14	0.009	0.008	0.00	0.002	0.007	<b>0.181</b>
TS8	02/27/22	6	Lab value	0.012	0.017	0.013	0.011	0.013	< 0.0026	0.013	--
			TEQ*value	0.001	0.017	0.001	0.001	0.000	0.0003	0.001	0.0223
TS9	02/27/22	6	Lab value	< 0.0026	< 0.0026	< 0.0026	< 0.0026	< 0.0026	< 0.0026	< 0.0026	--
			TEQ*value	0.0003	0.0026	0.0003	0.0003	0.0000	0.0003	0.0003	0.0039
TS10	02/27/22	6	Lab value	< 0.0028	< 0.0028	< 0.0028	< 0.0028	< 0.0028	< 0.0028	< 0.0028	--
			TEQ*value	0.0003	0.0028	0.0003	0.0003	0.0000	0.0003	0.0003	0.0042
TS11	03/07/22	4	Lab value	0.034	0.041	0.031	0.031	0.040	0.0057	0.028	--
			TEQ*value	0.003	0.041	0.003	0.003	0.000	0.0006	0.003	0.0544
TS12	03/07/22	4	Lab value	< 0.0027	< 0.0027	< 0.0027	< 0.0027	0.0054	< 0.0027	< 0.0027	--
			TEQ*value	0.0003	0.0027	0.0003	0.0003	0.0001	0.0003	0.0003	0.0041
TS13	03/09/22	10	Lab value	< 0.0032	< 0.0032	< 0.0032	< 0.0032	< 0.0032	< 0.0032	< 0.0032	--
			TEQ*value	0.0003	0.0032	0.0003	0.0003	0.0000	0.0003	0.0003	0.0048
TS14	03/15/22	4	Lab value	< 0.0030	< 0.0030	< 0.0030	< 0.0030	< 0.0030	< 0.0030	< 0.0030	--
			TEQ*value	0.0003	0.0030	0.0003	0.0003	0.0000	0.0003	0.0003	0.0045



**TABLE 4  
TRENCHING SOIL ANALYTICAL RESULTS - cPAH TEF CALCULATIONS**

ExxonMobil ADC  
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Sample ID	Sample Date	Sample Depth (feet bgs)		B(a)A (mg/kg)	B(a)P (mg/kg)	B(b)F (mg/kg)	B(k)F (mg/kg)	Chrysene (mg/kg)	DB(a,h)A (mg/kg)	IP (mg/kg)	Total cPAHs (mg/kg) <sup>a</sup>
TEF				0.1	1	0.1	0.1	0.01	0.1	0.1	--
MTCA Method A Cleanup Level				--	0.1	--	--	--	--	--	0.1
TS15	03/15/22	4	Lab value	< 0.0032	< 0.0032	< 0.0032	< 0.0032	< 0.0032	< 0.0032	< 0.0032	--
			TEQ*value	0.0003	0.0032	0.0003	0.0003	0.0000	0.0003	0.0003	0.0003
TS16	03/16/22	4	Lab value	< 0.0031	< 0.0031	< 0.0031	< 0.0031	< 0.0031	< 0.0031	< 0.0031	--
			TEQ*value	0.0003	0.0031	0.0003	0.0003	0.0000	0.0003	0.0003	0.0003
TS17	03/25/22	8	Lab value	0.049	< 0.013	< 0.013	< 0.013	0.084	< 0.013	< 0.013	--
			TEQ*value	0.005	0.013	0.001	0.001	0.001	0.001	0.001	0.001
TS18	04/25/22	3	Lab value	0.063	0.10	0.11	0.077	0.088	0.017	0.082	--
			TEQ*value	0.006	0.10	0.01	0.008	0.001	0.002	0.008	<b>0.136</b>
TS19	04/26/22	3.5	Lab value	< 0.0030	0.0064	< 0.0030	< 0.0030	0.0064	< 0.0030	< 0.0030	--
			TEQ*value	0.0003	0.0064	0.0003	0.0003	0.0001	0.0003	0.0003	0.0003
TS20	04/26/22	3.5	Lab value	0.0087	0.010	0.015	0.0087	0.014	< 0.0033	0.0098	--
			TEQ*value	0.0009	0.010	0.002	0.0009	0.000	0.0003	0.0010	0.0147
TS21	04/27/22	3.5	Lab value	0.0084	0.011	0.0087	0.0077	0.010	< 0.0032	0.011	--
			TEQ*value	0.0008	0.011	0.0009	0.0008	0.000	0.0003	0.001	0.0150
TS22	04/27/22	3.5	Lab value	< 0.0029	< 0.0029	< 0.0029	< 0.0029	< 0.0029	< 0.0029	< 0.0029	--
			TEQ*value	0.0003	0.0029	0.0003	0.0003	0.0000	0.0003	0.0003	0.0003
TS23	06/02/22	5	Lab value	< 0.0031	< 0.0031	0.015	< 0.0031	< 0.0031	< 0.0031	< 0.0031	--
			TEQ*value	0.0003	0.0031	0.002	0.0003	0.0000	0.0003	0.0003	0.0003

**EXPLANATION:**

mg/kg = Milligrams per kilogram

B(a)A = Benzo(a)anthracene

B(a)P = Benzo(a)pyrene

B(b)F = Benzo(b)fluoranthene

B(k)F = Benzo(k)fluoranthene

DB(a,h)A = Dibenzo(a,h)anthracene

IP = Indeno(1,2,3-cd)pyrene

cPAH = Carcinogenic Polycyclic Aromatic Hydrocarbons analyzed in accordance with EPA Method 8270C SIM

TEF = Toxicity Equivalency Factor

TEQ = Toxic Equivalent Concentration (TEF multiplied by the reported value or 1/2 the reporting limit for non-detect values)

-- = Not applicable

< = Less than the stated laboratory reporting limit

**Bolded** values equal or exceed MTCA Method A Cleanup Level

a = Toxicity Equivalency Factors (TEF) in accordance with Table 708-2 under WAC 173-340-708(e). One-half of the reporting limit was used for non-detected cPAH constituents in calculating TEQ-adjusted total cPAH concentrations.

**TABLE 5**  
**SEMIANNUAL GROUNDWATER ANALYTICAL RESULTS - 2019 THROUGH FIRST HALF 2022**

ExxonMobil ADC  
 2717/2731 Federal Avenue  
 Everett, Washington

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Well ID	Sampling Date	Wellhead Elev (feet)	DTW (ft bgs)	LNAPL (feet)	GW Elev (feet)	TPHg (µg/L)	TPHd (µg/L)	TPHmo (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
MW-A1	02/27/19	14.07	5.42	0.00	8.65	260J	<b>1,300J</b>	<94	<1.0	<1.0	<1.0	<1.0	<1.0
MW-A1	08/15/19	14.07	6.39	0.00	7.68	<100	380	<91	<1.0	<1.0	<1.0	<3.0	<1.0
MW-A1	02/27/20	14.07	5.68	0.00	8.39	240	<b>1,400J</b>	<94	<1.0	<1.0	<1.0	<3.0	<1.0
MW-A1	08/27/20	14.07	6.46	0.00	7.61	200J	<b>1,600J</b>	240J	<0.50	<1.0	<1.0	<3.0	<1.0
MW-A1	02/12/21	14.07	5.44	0.00	8.63	110	<b>2,600</b>	140	<0.50	<1.0	<1.0	<2.0	<1.0
MW-A1	02/12/21 <sup>b</sup>	14.07	5.54	0.00	8.53	130	<b>1,900</b>	120	<0.50	<1.0	<1.0	<2.0	<1.0
MW-A1	08/25/21	14.07	6.14	0.00	7.93	120	<b>1,600</b>	350	<0.50	<1.0	<1.0	<2.0	<1.0
MW-A1	02/10/22	14.07	6.17	0.00	7.90	250J	<b>2,200J</b>	290J	<0.50	<1.0	<1.0	<2.0	<1.0
MW-A1	02/10/22 <sup>b</sup>	14.07	6.17	0.00	7.90	<100UJ	<b>1,200J</b>	<99UJ	<0.50	<1.0	<1.0	<2.0	<1.0
MW-A2	02/27/19	12.56	4.59	0.00	7.97	190J	250J	<91	<1.0	<1.0	<1.0	<1.0	<1.0
MW-A2	02/27/19 <sup>b</sup>	12.56	4.59	0.00	7.97	190J	250J	<100	<1.0	<1.0	<1.0	<1.0	<1.0
MW-A2	08/15/19	12.56	5.61	0.00	6.95	110J	130	<94	<2.0	<2.0	<2.0	<6.0	<2.0
MW-A2	08/15/19 <sup>b</sup>	12.56	5.61	0.00	6.95	<100	160	<94	<2.0	<2.0	<2.0	<6.0	<2.0
MW-A2	02/27/20	12.56	4.83	0.00	7.73	<100	<100	<100	<1.0	<1.0	<1.0	<3.0	<1.0
MW-A2	02/27/20 <sup>b</sup>	12.56	4.83	0.00	7.73	<100	<100	<100	<1.0	<1.0	<1.0	<3.0	<1.0
MW-A2	08/26/20	12.56	5.42	0.00	7.14	<100	200J	<98	<0.50	<1.0	<1.0	<3.0	<1.0
MW-A2	02/11/21	12.56	4.59	0.00	7.97	<100	<98	<98	<0.50	<1.0	<1.0	<2.0	<1.0
MW-A2	08/24/21	12.56	5.14	0.00	7.42	<100	<91	<91	<0.50	<1.0	<1.0	<2.0	<1.0
MW-A2	02/09/22	12.56	5.27	0.00	7.29	<100	<96	<96	<0.50	<1.0	<1.0	<2.0	<1.0
MW-A3	02/27/19	13.79	6.82	0.00	6.97	<100	<94	<94	<1.0	<1.0	<1.0	<1.0	<1.0
MW-A3	08/15/19	13.79	8.30	0.00	5.49	<100	<100	<100	<2.0	<2.0	<2.0	<6.0	<2.0
MW-A3	02/26/20	13.79	7.16	0.00	6.63	<100	<100	<100	<1.0	<1.0	<1.0	<3.0	<1.0
MW-A3	08/26/20	13.79	7.83	0.00	5.96	<100	<97	<97	<1.0	<2.0	<2.0	<6.0	<2.0
MW-A3	02/10/21	13.79	6.70	0.00	7.09	<100	<61	<61	<2.0	<4.0	<4.0	<8.0	<4.0
MW-A3	08/23/21	13.79	7.51	0.00	6.28	<100UJ	<93	<93	<0.50	<1.0	<1.0	<2.0	<1.0
MW-A3	02/09/22	13.79	7.10	0.00	6.69	<100	130	170	<2.0	<4.0	<4.0	<8.0	<4.0
MW-A4	02/27/19	16.33	10.20	0.00	6.13	<100	<94	<94	<1.0	<1.0	<1.0	<1.0	<1.0
MW-A4	08/15/19	16.33	10.56	0.00	5.77	<100	<98	<98	<4.0	<4.0	<4.0	<12	<4.0
MTCA Method A Cleanup Levels						800/1,000 <sup>a</sup>	500	500	5	1,000	700	1,000	20

**TABLE 5**  
**SEMIANNUAL GROUNDWATER ANALYTICAL RESULTS - 2019 THROUGH FIRST HALF 2022**

ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington  
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Well ID	Sampling Date	Wellhead Elev (feet)	DTW (ft bgs)	LNAPL (feet)	GW Elev (feet)	TPHg (µg/L)	TPHd (µg/L)	TPHmo (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
MW-A4	02/26/20	16.33	10.70	0.00	5.63	<100	<98	<98	<4.0	<4.0	<4.0	<12	<4.0
MW-A4	08/25/20	16.33	10.53	0.00	5.80	<100	<94UJ	<94UJ	<1.0	<2.0	<2.0	<6.0	<2.0
MW-A4	02/10/21	16.33	10.16	0.00	6.17	<100	<92	<92	<0.50	<1.0	<1.0	<2.0	<1.0
MW-A4	08/23/21	16.33	10.45	0.00	5.88	<100	<96	<96	<2.0	<4.0	<4.0	<8.0	<4.0
MW-A4	02/09/22	16.33	10.50	0.00	5.83	<100	<97	<97	<2.0	<4.0	<4.0	<8.0	<4.0
MW-A5	02/27/19	17.74	11.55	0.00	6.19	<100	370J	<91	<1.0	<1.0	<1.0	<1.0	<1.0
MW-A5	08/15/19	17.74	12.03	0.00	5.71	<100	190	<100	<4.0	<4.0	<4.0	<12	<4.0
MW-A5	02/26/20	17.74	12.00	0.00	5.74	<100	98J	<98	<1.0	<1.0	<1.0	<3.0	<1.0
MW-A5	08/25/20	17.74	11.94	0.00	5.80	<100	190J	<100UJ	<1.0	<2.0	<2.0	<6.0	<2.0
MW-A5	02/11/21	17.74	11.38	0.00	6.36	<100	160	<98	<0.50	<1.0	<1.0	<2.0	<1.0
MW-A5	08/24/21	17.74	11.55	0.00	6.19	<100	320	<92	<0.50	<1.0	<1.0	<2.0	<1.0
MW-A5	02/08/22	17.74	11.85	0.00	5.89	<100	290	<94	<1.0	<2.0	<2.0	<4.0	<2.0
MW-A6	02/27/19	16.94	10.43	0.00	6.51	<100	150J	<94	<1.0	<1.0	<1.0	<1.0	<1.0
MW-A6	08/15/19	16.94	10.82	0.00	6.12	<100	<93	<93	<4.0	<4.0	<4.0	<12	<4.0
MW-A6	02/26/20	16.94	10.80	0.00	6.14	<100	<91	<91	<1.0	<1.0	<1.0	<3.0	<1.0
MW-A6	08/26/20	16.94	10.86	0.00	6.08	<100	100J	<94	<0.50	<1.0	<1.0	<3.0	<1.0
MW-A6	02/11/21	16.94	10.35	0.00	6.59	<100	<99	<99	<0.50	<1.0	<1.0	<2.0	<1.0
MW-A6	08/24/21	16.94	10.61	0.00	6.33	<100	130	<93	<0.50	<1.0	<1.0	<2.0	<1.0
MW-A6	02/08/22	16.94	10.76	0.00	6.18	<100	160	<97	<0.50	<1.0	<1.0	<2.0	<1.0
MW-A7	02/27/19	14.20	0.00	0.00	14.20	<100	<100	<100	<1.0	<1.0	<1.0	<1.0	<1.0
MW-A7	08/15/19	14.20	0.00	0.00	14.20	<100	<93	<93	<1.0	<1.0	<1.0	<3.0	<1.0
MW-A7	02/27/20	14.20	0.00	0.00	14.20	<100	<93	<93	<1.0	<1.0	<1.0	<3.0	<1.0
MW-A7	08/26/20	14.20	0.00	0.00	14.20	<100	<96	<96	<0.50	<1.0	<1.0	<3.0	<1.0
MW-A7	08/26/20 <sup>b</sup>	14.20	0.00	0.00	14.20	<100	<97	<97	<0.50	<1.0	<1.0	<3.0	<1.0
MW-A7	02/11/21	14.20	0.00	0.00	14.20	<100	<100	<100	<0.50	<1.0	<1.0	<2.0	<1.0
MW-A7	08/24/21	14.20	0.00	0.00	14.20	<100	<94	150	<0.50	<1.0	<1.0	<2.0	<1.0
MW-A7	02/08/22	14.20	0.00	0.00	14.20	<100	<95	<95	<0.50	<1.0	<1.0	<2.0	<1.0
MTCA Method A Cleanup Levels						800/1,000 <sup>a</sup>	500	500	5	1,000	700	1,000	20

**TABLE 5**  
**SEMIANNUAL GROUNDWATER ANALYTICAL RESULTS - 2019 THROUGH FIRST HALF 2022**

ExxonMobil ADC  
 2717/2731 Federal Avenue  
 Everett, Washington  
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Well ID	Sampling Date	Wellhead Elev (feet)	DTW (ft bgs)	LNAPL (feet)	GW Elev (feet)	TPHg (µg/L)	TPHd (µg/L)	TPHmo (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
MW-A8	02/27/19	16.81	10.82	0.00	5.99	<100	<91	<91	<1.0	<1.0	<1.0	<1.0	<1.0
MW-A8	08/15/19	16.81	11.08	0.00	5.73	<100	<91	<91	<1.0	<1.0	<1.0	<3.0	<1.0
MW-A8	02/26/20	16.81	11.95	0.00	4.86	<100	<93	<93	<1.0	<1.0	<1.0	<3.0	<1.0
MW-A8	08/25/20	16.81	11.91	0.00	4.90	<100	<99UJ	<99UJ	<0.50	<1.0	<1.0	<3.0	<1.0
MW-A8	02/11/21	16.81	11.09	0.00	5.72	<100	<100	<100	<0.50	<1.0	<1.0	<2.0	<1.0
MW-A8	08/24/21	16.81	10.93	0.00	5.88	<100	<92	<92	<0.50	<1.0	<1.0	<2.0	<1.0
MW-A8	02/08/22	16.81	11.70	0.00	5.11	<100	<94	<94	<0.50	<1.0	<1.0	<2.0	<1.0
MW-A9	02/10/22	NE	9.51	0.00	--	710	260	<94	<2.0	<4.0	<4.0	<8.0	<4.0
MW-11	02/27/19	16.50	NM	--	--	<100	<91	<91	<1.0	<1.0	<1.0	<1.0	<1.0
MW-11	08/15/19	16.50	NM	--	--	<100	<100	<100	<1.0	<1.0	<1.0	<3.0	<1.0
MW-11	02/27/20	16.50	1.42	0.00	15.08	<100	<100	<100	<1.0	<1.0	<1.0	<3.0	<1.0
MW-11	08/26/20	16.50	1.93	0.00	14.57	<100	<99	<99	<0.50	<1.0	<1.0	<3.0	<1.0
MW-11	02/10/21	16.50	1.39	0.00	15.11	<100	<100	<100	<0.50	<1.0	<1.0	<2.0	<1.0
MW-11	08/23/21	16.50	1.88	0.00	14.62	<100	<92	<92	<0.50	<1.0	<1.0	<2.0	<1.0
MW-11	02/07/22	16.50	1.54	0.00	14.96	<100	<95	<95	<0.50	<1.0	<1.0	<2.0	<1.0
MW-19	02/27/19	12.75	NM	--	--	390J	140J	<91	<1.0	<1.0	<1.0	<1.0	<1.0
MW-19	08/17/19	12.75	NM	--	--	110J	150	<94	<2.0	<2.0	<2.0	<6.0	<2.0
MW-19	02/27/20	12.75	3.20	0.00	9.55	230	160J	<100	<1.0	<1.0	<1.0	<3.0	<1.0
MW-19	08/26/20	12.75	2.98	0.00	9.77	130J	140J	<98	<0.50	<1.0	<1.0	<3.0	<1.0
MW-19	02/11/21	12.75	2.75	0.00	10.00	220	220	<91	<0.50	<1.0	<1.0	<2.0	<1.0
MW-19	08/24/21	12.75	2.98	0.00	9.77	<100	<96	<96	<0.50	<1.0	<1.0	<2.0	<1.0
MW-19	02/09/22	12.75	2.92	0.00	9.83	140	<100	<100	<0.50	<1.0	<1.0	<2.0	<1.0
MW-40R	02/27/19	15.53	3.14	0.00	12.39	570J	520J	<91	<1.0	<1.0	<1.0	<1.0	<1.0
MW-40R	08/15/19	15.53	4.71	0.00	10.82	510J	270	<96	<8.0	<8.0	<8.0	<24	<8.0
MW-40R	02/27/20	15.53	3.30	0.00	12.23	420	250J	<100	1.3	<1.0	<1.0	<3.0	<1.0
MW-40R	08/27/20	15.53	4.37	0.00	11.16	230J	<100UJ	<100UJ	2.6	<4.0	<4.0	<12.0	<4.0
MW-40R	02/12/21	15.53	3.22	0.00	12.31	330	400	<100	0.99	<1.0	<1.0	<2.0	<1.0
MW-40R	08/25/21	15.53	4.38	0.00	11.15	200J	480	99	<10	<20	<20	<40	<20
MTCA Method A Cleanup Levels						800/1,000 <sup>a</sup>	500	500	5	1,000	700	1,000	20

**TABLE 5**  
**SEMIANNUAL GROUNDWATER ANALYTICAL RESULTS - 2019 THROUGH FIRST HALF 2022**

ExxonMobil ADC  
 2717/2731 Federal Avenue  
 Everett, Washington  
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Well ID	Sampling Date	Wellhead Elev (feet)	DTW (ft bgs)	LNAPL (feet)	GW Elev (feet)	TPHg (µg/L)	TPHd (µg/L)	TPHmo (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
MW-40R	08/25/21 <sup>b</sup>	15.53	4.38	0.00	11.15	350J	480	<93	<10	<20	<20	<40	<20
MW-40R	02/09/22	15.53	4.32	0.00	11.21	470	190	<93	<2.0	<4.0	<4.0	<8.0	<4.0

**EXPLANATION:**

µg/L = Micrograms per Liter

ft bgs = Feet below ground surface

DTW = Depth to water in feet below top of casing

LNAPL = Light Non-aqueous Phase Liquid thickness in feet

GW Elev = Groundwater elevation relative to top of casing elevation

NM = Not Measured; NE = Not Established; N/A = Not Applicable; -- = Not analyzed or Sampled

Data collected prior to 02/26/20 was taken from prior consultants' reports

TPHg = Total Petroleum Hydrocarbons as Gasoline in accordance with Ecology Method NWTPH-Gx

TPHd and TPHmo = Total Petroleum Hydrocarbons as Diesel and Motor Oil, respectively, analyzed in accordance with Ecology Method NWTPH-Dx

B = Benzene; T = Toluene; E = Ethylbenzene; X = Total Xylenes

BTEX = Aromatic compounds analyzed in accordance with EPA Method 8260B

MTBE = Methyl tert-butyl ether analyzed in accordance with EPA Method 8260B

< = Less than stated laboratory reporting limit

Shaded values equal or exceed Model Toxics Control Act (MTCA) Method A Cleanup Levels

**FOOTNOTES:**

a = TPHg cleanup level for groundwater is 800 µg/L if benzene is present, or 1,000 µg/L if benzene is not present

b = Duplicate field sample collected and submitted blindly to the laboratory

J = The result is an estimated quantity. The associated numerical value is the approximate concentration of analyte in the sample.

UJ = The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

**TABLE 6**  
**SEMIANNUAL GROUNDWATER ANALYTICAL RESULTS**  
**cPAHs - 2019 THROUGH FIRST HALF 2022**

ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington

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Well ID	Sample Date		B(a)A (µg/L)	B(a)P (µg/L)	B(b)F (µg/L)	B(k)F (µg/L)	Chrysene (µg/L)	DB(a,h)A (µg/L)	IP (µg/L)	Total cPAHs (µg/L) <sup>3</sup>	
		TEF	0.1	1	0.1	0.1	0.01	0.1	0.1	--	
MTC Method A Cleanup Level			--	0.1	--	--	--	--	--	0.1	
MW-A1	02/27/19	1/2 Reporting Limit	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	--	
		TEQ*value	0.005	0.047	0.005	0.005	0.000	0.005	0.005	< 0.071	
	08/15/19	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	
	02/27/20	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	
	08/27/20	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	
	02/12/21	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	
	02/12/21 <sup>c</sup>	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	
	08/25/21	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	
	02/10/22	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	
02/10/22 <sup>c</sup>	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--	
	TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072		
MW-A2	02/27/19	1/2 Reporting Limit	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	--	
		TEQ*value	0.005	0.047	0.005	0.005	0.000	0.005	0.005	< 0.071	
	02/27/19 <sup>c</sup>	1/2 Reporting Limit	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	--	
		TEQ*value	0.005	0.047	0.005	0.005	0.000	0.005	0.005	< 0.071	
	08/15/19	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	
	08/15/19 <sup>c</sup>	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	
	02/27/20	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	
	02/27/20 <sup>c</sup>	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	
	08/26/20	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	

**TABLE 6**  
**SEMIANNUAL GROUNDWATER ANALYTICAL RESULTS**  
**cPAHs - 2019 THROUGH FIRST HALF 2022**

ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington  
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Well ID	Sample Date		B(a)A (µg/L)	B(a)P (µg/L)	B(b)F (µg/L)	B(k)F (µg/L)	Chrysene (µg/L)	DB(a,h)A (µg/L)	IP (µg/L)	Total cPAHs (µg/L) <sup>3</sup>
		TEF	0.1	1	0.1	0.1	0.01	0.1	0.1	--
MTC Method A Cleanup Level			--	0.1	--	--	--	--	--	0.1
MW-A2	02/11/21	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072
	08/24/21	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072
	02/09/22	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072
MW-A3	02/27/19	1/2 Reporting Limit	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	--
		TEQ*value	0.005	0.047	0.005	0.005	0.000	0.005	0.005	< 0.071
	08/15/19	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072
	02/26/20	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072
	08/26/20	1/2 Reporting Limit	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	--
		TEQ*value	0.005	0.049	0.005	0.005	0.000	0.005	0.005	< 0.074
02/10/21	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--	
	TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	
08/23/21	1/2 Reporting Limit	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	--	
	TEQ*value	0.005	0.049	0.005	0.005	0.000	0.005	0.005	< 0.074	
02/09/22	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--	
	TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	
MW-A4	02/27/19	1/2 Reporting Limit	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	--
		TEQ*value	0.005	0.047	0.005	0.005	0.000	0.005	0.005	< 0.071
	08/15/19	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072
	02/26/20	1/2 Reporting Limit	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	--
		TEQ*value	0.005	0.047	0.005	0.005	0.000	0.005	0.005	< 0.071
	08/25/20	1/2 Reporting Limit	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	--
		TEQ*value	0.005	0.049	0.005	0.005	0.000	0.005	0.005	< 0.074
02/10/21	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--	
	TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	

**TABLE 6**  
**SEMIANNUAL GROUNDWATER ANALYTICAL RESULTS**  
**cPAHs - 2019 THROUGH FIRST HALF 2022**

ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington

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Well ID	Sample Date		B(a)A (µg/L)	B(a)P (µg/L)	B(b)F (µg/L)	B(k)F (µg/L)	Chrysene (µg/L)	DB(a,h)A (µg/L)	IP (µg/L)	Total cPAHs (µg/L) <sup>3</sup>
		TEF	0.1	1	0.1	0.1	0.01	0.1	0.1	--
MTCA Method A Cleanup Level			--	0.1	--	--	--	--	--	0.1
MW-A4	08/23/21	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072
	02/09/22	1/2 Reporting Limit	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	--
		TEQ*value	0.005	0.047	0.005	0.005	0.000	0.005	0.005	< 0.071
MW-A5	02/27/19	1/2 Reporting Limit	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	--
		TEQ*value	0.005	0.047	0.005	0.005	0.000	0.005	0.005	< 0.071
	08/15/19	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072
	02/26/20	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072
	08/25/20	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072
	02/11/21	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072
08/24/21	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--	
	TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	
02/08/22	1/2 Reporting Limit	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	
	TEQ*value	0.01	0.05	0.01	0.01	0.00	0.01	0.01	< 0.08	
MW-A6	02/27/19	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072
	08/15/19	1/2 Reporting Limit	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	--
		TEQ*value	0.005	0.050	0.005	0.005	0.000	0.005	0.005	< 0.075
	02/26/20	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072
08/26/20	1/2 Reporting Limit	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	--	
	TEQ*value	0.005	0.050	0.005	0.005	0.000	0.005	0.005	< 0.075	
02/11/21	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--	
	TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	
08/24/21	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--	
	TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	



**TABLE 6**  
**SEMIANNUAL GROUNDWATER ANALYTICAL RESULTS**  
**cPAHs - 2019 THROUGH FIRST HALF 2022**

ExxonMobil ADC  
 2717/2731 Federal Avenue  
 Everett, Washington

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Well ID	Sample Date		B(a)A (µg/L)	B(a)P (µg/L)	B(b)F (µg/L)	B(k)F (µg/L)	Chrysene (µg/L)	DB(a,h)A (µg/L)	IP (µg/L)	Total cPAHs (µg/L) <sup>3</sup>
		TEF	0.1	1	0.1	0.1	0.01	0.1	0.1	--
MTC A Method A Cleanup Level			--	0.1	--	--	--	--	--	0.1
MW-A6	02/08/22	1/2 Reporting Limit	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--
		TEQ*value	0.01	0.05	0.01	0.01	0.00	0.01	0.01	< 0.08
MW-A7	02/27/19	1/2 Reporting Limit	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	--
		TEQ*value	0.005	0.047	0.005	0.005	0.000	0.005	0.005	< 0.071
	08/15/19	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072
	02/27/20	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072
	08/26/20	1/2 Reporting Limit	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	--
		TEQ*value	0.005	0.049	0.005	0.005	0.000	0.005	0.005	< 0.073
	08/26/20 <sup>c</sup>	1/2 Reporting Limit	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	--
		TEQ*value	0.005	0.049	0.005	0.005	0.000	0.005	0.005	< 0.073
	02/11/21	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072
	08/24/21	1/2 Reporting Limit	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	--
		TEQ*value	0.005	0.047	0.005	0.005	0.000	0.005	0.005	< 0.071
02/08/22 UJ	1/2 Reporting Limit	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	--	
	TEQ*value	0.005	0.047	0.005	0.005	0.000	0.005	0.005	< 0.071	
MW-A8	02/27/19	1/2 Reporting Limit	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	--
		TEQ*value	0.005	0.047	0.005	0.005	0.000	0.005	0.005	< 0.071
	08/15/19	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072
	02/26/20	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072
08/25/20	1/2 Reporting Limit	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	--	
	TEQ*value	0.005	0.050	0.005	0.005	0.000	0.005	0.005	< 0.075	
02/11/21	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--	
	TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	
08/24/21	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--	
	TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	

**TABLE 6**  
**SEMIANNUAL GROUNDWATER ANALYTICAL RESULTS**  
**cPAHs - 2019 THROUGH FIRST HALF 2022**

ExxonMobil ADC  
 2717/2731 Federal Avenue  
 Everett, Washington  
 Page 5 of 6

Well ID	Sample Date		B(a)A (µg/L)	B(a)P (µg/L)	B(b)F (µg/L)	B(k)F (µg/L)	Chrysene (µg/L)	DB(a,h)A (µg/L)	IP (µg/L)	Total cPAHs (µg/L) <sup>a</sup>
		TEF	0.1	1	0.1	0.1	0.01	0.1	0.1	--
MTCA Method A Cleanup Level			--	0.1	--	--	--	--	--	0.1
MW-A8	02/08/22	1/2 Reporting Limit	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--
		TEQ*value	0.01	0.05	0.01	0.01	0.00	0.01	0.01	< 0.08
MW-A9	02/10/22	1/2 Reporting Limit	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	--
		TEQ*value	0.048	0.480	0.048	0.048	0.005	0.048	0.048	< 0.72
MW-11	02/27/19	1/2 Reporting Limit	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	--
		TEQ*value	0.005	0.047	0.005	0.005	0.000	0.005	0.005	< 0.071
	08/15/19	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072
	02/27/20	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072
	08/26/20	1/2 Reporting Limit	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--
TEQ*value		0.005	0.050	0.005	0.005	0.001	0.005	0.005	< 0.076	
02/10/21	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--	
	TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	
08/23/21	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--	
	TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	
02/07/22	1/2 Reporting Limit	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	
	TEQ*value	0.01	0.05	0.01	0.01	0.00	0.01	0.01	< 0.08	
MW-19	02/27/19	1/2 Reporting Limit	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	--
		TEQ*value	0.005	0.047	0.005	0.005	0.000	0.005	0.005	< 0.071
	08/15/19	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072
	02/27/20	1/2 Reporting Limit	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	--
		TEQ*value	0.010	0.095	0.010	0.010	0.001	0.010	0.010	< 0.143b
08/26/20	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--	
	TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	
02/11/21	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--	
	TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	
08/24/21	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--	
	TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	< 0.072	

**TABLE 6**  
**SEMIANNUAL GROUNDWATER ANALYTICAL RESULTS**  
**cPAHs - 2019 THROUGH FIRST HALF 2022**

ExxonMobil ADC  
 2717/2731 Federal Avenue  
 Everett, Washington  
 Page 6 of 6

Well ID	Sample Date		B(a)A (µg/L)	B(a)P (µg/L)	B(b)F (µg/L)	B(k)F (µg/L)	Chrysene (µg/L)	DB(a,h)A (µg/L)	IP (µg/L)	Total cPAHs (µg/L) <sup>a</sup>	
		TEF	0.1	1	0.1	0.1	0.01	0.1	0.1	--	
<b>MTCA Method A Cleanup Level</b>			--	0.1	--	--	--	--	--	0.1	
MW-19	02/09/22	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--	
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	0.005	< 0.072
MW-40R	02/27/19	1/2 Reporting Limit	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	--	
		TEQ*value	0.005	0.047	0.005	0.005	0.000	0.005	0.005	0.005	< 0.071
	08/15/19	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	0.005	< 0.072
	02/27/20	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	0.005	< 0.072
	08/27/20	1/2 Reporting Limit	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--
		TEQ*value	0.005	0.050	0.005	0.005	0.001	0.005	0.005	0.005	< 0.076
	02/12/21	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	0.005	< 0.072
	08/25/21	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	0.005	< 0.072
	8/25/2021 <sup>c</sup>	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--
		TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	0.005	< 0.072
02/09/22	1/2 Reporting Limit	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	--	
	TEQ*value	0.005	0.048	0.005	0.005	0.000	0.005	0.005	0.005	< 0.072	

**EXPLANATION:**

µg/L = Micrograms per liter

B(a)A = Benzo(a)anthracene

B(a)P = Benzo(a)pyrene

B(b)F = Benzo(b)fluoranthene

B(k)F = Benzo(k)fluoranthene

DB(a,h)A = Dibenzo(a,h)anthracene

IP = Indeno(1,2,3-cd)pyrene

cPAH = Carcinogenic Polycyclic Aromatic Hydrocarbons analyzed in accordance with EPA Method 8270C SIM

TEF = Toxicity Equivalency Factor

TEQ = Toxic Equivalent Concentration (TEF x 1/2 reporting limit)

-- = Not applicable

< = Less than the stated laboratory reporting limit

**Bolded** values equal or exceed MTCA Method A Cleanup Level

a = Total cPAH concentrations expressed as TEQ-adjusted concentrations; adjusted using Appendix C of Washington Department of Ecology's *Guidance for Remediation of Petroleum Contaminated Sites*. One-half of the reporting limit was used for non-detected cPAH constituents in calculating TEQ-adjusted total cPAH concentrations

b = The summation of TEQ calculations for non-detect results exceeded the Total cPAH MTCA Method A Cleanup Level of 0.1 µg/L due to elevated reporting limits; sample is believed to be less than the MTCA Method A Cleanup Level

c = Duplicate field sample collected and submitted blindly to the laboratory

UJ = The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

# **APPENDIX A**

## **Wood's Chronology of Historical On-Site Environmental Investigations (WSP, 2023)**



**TABLE 3-1: CHRONOLOGY OF HISTORICAL ON-SITE ENVIRONMENTAL INVESTIGATIONS**

ExxonMobil/ADC Property, Ecology Site ID 2728, Everett, Washington

Date	Consultant	Location	Reference	Activities	Tasks Performed	Notes
May-85	RZA	ExxonMobil Parcel	RZA 1985	Borings, monitoring well installation	2-inch-diameter monitoring wells B-1 through B-5 (MW-1 through MW-5 in several reports) installed.	B-1, B-2, B-4, and B-5: Petroleum odor noticed in borings; evidence found of contamination below groundwater table.
Mar-88	RZA	ExxonMobil Parcel	AMEC E&E 2010a	Borings, monitoring well installation	2-inch-diameter monitoring wells MW-6 through MW-18 installed.	Soil and groundwater samples collected. LPH (1.29 feet) measured in MW-14.
Jan-90	ESE	ADC Parcel	AMEC E&E 2010a	Borings	Hand augers AD-01 through AD-19 to depths ranging from 1 to 4.5 feet.	Soil samples collected.
Feb-90	ESE	ADC Parcel	AMEC E&E 2010a	Borings, monitoring well installation	HSA borings W-1 through W-7. 2-inch-diameter monitoring wells W-1 through W-6 installed.	W-7 was backfilled.
Jun-90	ESE	ADC Parcel	AMEC E&E 2010a	Hand-auger borings	Hand-auger borings W-8 through W-17 to depths of 6–10 feet.	No soil data found for W-8 through W-17. Gauging data indicate that free product was observed in 10 of the 17 monitoring wells located at and around the ADC Parcel.
Oct-90	RZA	ExxonMobil Parcel	AMEC E&E 2010a	Shallow grid soil sampling, bio-feasibility study	Hand augers B-1 through B-25. Two soil samples were studied to conduct a slurry flask bio-feasibility study.	0-3 feet bgs. Rapid biodegradation of TPH-G fraction was observed. Biodegradation of TPH (undifferentiated) was not achieved.
Nov-90	Unknown	ExxonMobil Parcel	AMEC E&E 2010a	Monitoring well decommissioning	B-3 (MW-3), B-4 (MW-4), and MW-7 destroyed.	No documentation of well decommissioning.
March–June 1991	RZA	Parcels surrounding ExxonMobil Parcel	AMEC E&E 2010a	Borings, monitoring well installation	Six percussion soil borings to depths ranging from 5 to 5.5 feet bgs, 2-inch diameter monitoring wells MW-19 through MW-24, and 4-inch diameter monitoring wells MW-27 through MW-30 installed. Soil boring B-21-91 advanced to depth of 29 feet bgs.	MW-25 and MW-26 were inaccessible or dry and later renamed as B-25 and B-26. No well decommissioning records were found.
Jun-91	RZA and ESE	The Property	AGRA 1996g	Quarterly groundwater monitoring	Groundwater monitoring event. New 2-inch diameter monitoring wells MW-25 and MW-26 installed. Gauged wells: RW-1, B-1, B-2, B-5, MW-6, MW-8 through MW-13, MW-15 through MW-18, AD-19, W-1 through W-6, and W-8 through W-15.	B-1, MW-8, AD-19, W-1, W-6, W-9, W-11, W-12, W-13, and W-15 contained LPH and were not sampled.
Nov-91	RZA AGRA	ExxonMobil Parcel	AMEC E&E 2010a	Borings, recovery well	8-inch diameter recovery well RW-2 installed. Deep soil borings B-1A, B-8A, and B-15A advanced.	Soil borings advanced in vicinity of existing wells B-1, B-8, and B-15. No analytical data found for this event.

**TABLE 3-1: CHRONOLOGY OF HISTORICAL ON-SITE ENVIRONMENTAL INVESTIGATIONS**

ExxonMobil/ADC Property, Ecology Site ID 2728, Everett, Washington

Date	Consultant	Location	Reference	Activities	Tasks Performed	Notes
Dec-91	RZA AGRA	ExxonMobil Parcel	AGRA 1996g	Quarterly groundwater monitoring, aquifer and tidal study	Quarterly groundwater monitoring. Gauged wells: RW-1, B-1, B-2, B-5, MW-6, MW-8 through MW-13, MW-15 through MW-30, and AD-19. Aquifer study involved 24-hour pumping from MW-10 at a rate of 1 to 2 gpm and measuring response in MW-18, RW-1, and RW-2 for 48 hours.	B-1, MW-8, MW-11, MW-26, MW-27, MW-29, and AD-19 contained LPH and were not sampled. Hydraulic conductivity at the Site was estimated as 4 to 9.5 feet/day. Minimum tidal influence was observed.
1992	RZA AGRA	NA	NA	Discussions with Ecology	Ecology discussed enforcement with Mobil and RZA AGRA. Ecology decided to allow Site to go independent.	
Dec-93	RZA AGRA	West of ExxonMobil Parcel	AMEC E&E 2010a	Off-Property borings, monitoring well installation, GPR survey	2-inch diameter monitoring wells MW-31 through MW-33 and MW-35 through MW-37 were installed; B-34 advanced and backfilled. GPR survey was conducted to assess whether underground product lines had been removed.	Survey did not identify any subsurface linear features.
Dec-93	RZA AGRA	ExxonMobil Parcel and off-Property to the west	AGRA 1996g	Quarterly groundwater monitoring	Groundwater monitoring event. Gauged wells B-1, B-2, MW-6, MW-8 through MW-13, MW-15 through MW-18, MW-27 through MW-33, MW-35 through MW-37.	B-1, MW-27, and MW-29 contained LPH and were not sampled.
Dec-93	RZA AGRA	West of ExxonMobil Parcel	AMEC E&E 2010a	Test pits, recovery trench	Excavated five test pits, TP-1 through TP-5, to depths ranging from 3 to 3.5 feet bgs. Recovery trench installed along the western border of ExxonMobil Parcel.	Monitoring well MW-21 was reportedly decommissioned during the recovery trench installation activities. However, a 2002 decommissioning record was found that stated that MW-21 was decommissioned in 2002.
1995			NA	Agreed Order DE-95TC-N402		Required evaluation of LPH.
Jul-95	RZA AGRA	ADC Parcel	AGRA 1996g	Quarterly groundwater monitoring	Groundwater monitoring event. Gauged wells: W-3, W-5, W-9, W-10, W-12 through W-15.	W-9, W-12, and W-13 contained LPH and were not sampled.
Oct-95	U.S. Coast Guard Puget Sound Marine Safety Office & City of Everett	North of the Property	AMEC E&E 2010a	Investigation of petroleum product discharge into Everett Harbor	Camera surveys of the sewer lines made.	Outfall located approximately 175 yards northwest of the ADC Parcel; LPH seepage observed in section of CSO line.
Nov-95	RZA AGRA	Site	AGRA 1996g	Groundwater monitoring	Groundwater monitoring event. Gauged wells: RW-1, RW-2, B-1, B-2, MW-6, MW-8 to MW-13, MW-15 to MW-18, MW-27 to MW-37, and NRW-1.	B-1, MW-18, MW-29, and MW-30 contained LPH and were not sampled.

**TABLE 3-1: CHRONOLOGY OF HISTORICAL ON-SITE ENVIRONMENTAL INVESTIGATIONS**

ExxonMobil/ADC Property, Ecology Site ID 2728, Everett, Washington

Date	Consultant	Location	Reference	Activities	Tasks Performed	Notes
Dec-95	RZA AGRA	Site	AGRA 1996g	Groundwater monitoring	Groundwater monitoring event. Gauged wells: RW-2, B-2, MW-8, MW-9, MW-18, MW-15 through MW-18, MW-27, and MW-28.	RW-2, MW-9, MW-18, and MW-28 contained LPH and were not sampled.
Mar-96	AGRA	North of the Property	AMEC E&E 2010a	Borings	Direct-push soil borings GP-1 through GP-13. Borings associated with the CSO line repair.	The collected soil sample results indicated that soil surrounding the damaged portion of the CSO had petroleum hydrocarbon impacts. LPH accumulation was noticed in temporary screens installed in soil borings. No groundwater samples were collected from temporary screens.
Apr-96	City of Everett		AMEC E&E 2010a	Meeting	Meeting held to discuss options for repairing the section of CSO line.	Decisions made regarding replacement of the settled portion of the line and slip lining of the remaining portion of the line.
May-96	AGRA	ADC Parcel	AGRA 1996d	Borings	Bobcat borings BB-1 through BB-14.	Soil samples collected.
Jun-96	AGRA	ADC Parcel	AGRA 1996d	Borings, monitoring wells, and test pits	4-inch diameter recovery well VRW-1 and 2-inch diameter monitoring well MW-38 installed. Seven test pits TP-1-96 through TP-7-96 excavated.	Wells were installed on the northeast corner of the property. Test pits were located throughout the ADC Parcel.
Aug-96	AGRA	Site	AMEC E&E 2010a	Monitoring wells	Gauged wells at the property.	LPH found in B-1, VRW-1, MW-27, MW-29, MW-30, MW-38, W-1, W-9, W-15.
Feb-97	PTI	Site	PTI 1997	LPH recovery technical memorandum	Technical memorandum to summarize environmental investigations, LPH recovery activities, and geology.	PTI concluded that long-term, passive (LPH only) recovery may be the most effective method of LPH recovery. PTI also concluded that active LPH and groundwater recovery that had been performed up to that time had been effective for short durations, but recovery structures did not continue to recover LPH for extended periods of time when active recovery was employed.

**TABLE 3-1: CHRONOLOGY OF HISTORICAL ON-SITE ENVIRONMENTAL INVESTIGATIONS**

ExxonMobil/ADC Property, Ecology Site ID 2728, Everett, Washington

Date	Consultant	Location	Reference	Activities	Tasks Performed	Notes
November 1997 through January 1998	Pacific Environmental Group, Inc.	Kimberly-Clark property	Pacific Environmental Group, Inc. 1998	Borings, monitoring wells	Direct-push borings Probe-1 through Probe-15 were advanced, and 2-inch diameter HSA monitoring wells KC-1 and KC-2 were installed inside the KC warehouse.	Groundwater samples were collected from temporary screens installed in each boring. LPH not identified in soil borings or monitoring wells. TPH-D and TPH-O were detected above MTCA Method A cleanup levels in borings advanced in the vicinity of repaired CSO line. Samples not collected in vicinity of former ASTs.
1998			NA	Agreed Order DE98TC-P-N223		Required remedial investigation/focused feasibility study.
Jul-98	Exponent	Site	Exponent 1998a	Remedial Investigation and Focused Feasibility Study	Exponent summarized the history of the Property and evaluated feasible remedial options for the Site.	Exponent recommended the installation of LPH recovery trenches and installation of a low-permeability cap over the property.
Jul-98	Exponent	Site	Exponent 1998b	Final Interim Action Work Plan and Engineering Design Report	Exponent presented design for interim measures at the Property.	Exponent provided specifications for demolition of existing Site structures and installation of LPH recovery trenches, water treatment system, and low-permeability cap over the Property.
Oct-99	Kleinfelder	The Property	Exponent 2000	Monitoring wells installation	Monitoring wells W-10R, W-15R, and MW-40R.	Wells installed to replace wells W-10, W-15, and MW-40.
Dec-99	Dames and Moore/URS	South and southeast of the Property	URS 2000a	Geotechnical drilling and piezometer installation	DM-6, DM-7, and DM-8 were sampled for environmental samples.	Work associated with CSTO Project.
Sep-00	URS	South, east, and southeast of the Property	URS 2000b	Borings	Phase II investigation for the CSTO Project. Push-probe borings UG-1 through UG-12.	Groundwater samples collected from temporary screens installed in UG-2 and UG-8. Estimated 7,600 cubic yards of petroleum-contaminated soil present along the overcrossing alignment.
Jul-01	URS	Johnston Petroleum parcel	URS 2001a and b	Borings	Phase II investigation for Johnson Petroleum parcel. Push-probe borings JP-1 through JP-7.	Soil samples collected. Groundwater samples collected from JP-1, JP-4, and JP-7. No significant contamination found.



**TABLE 3-1: CHRONOLOGY OF HISTORICAL ON-SITE ENVIRONMENTAL INVESTIGATIONS**

ExxonMobil/ADC Property, Ecology Site ID 2728, Everett, Washington

Date	Consultant	Location	Reference	Activities	Tasks Performed	Notes
Feb-02	ERI	Site and vicinity	ERI 2002a	Monitoring well decommissioning and re-installment	Abandonment of monitoring wells (MW-22, MW-23, MW-24, MW-35, and MW-37) and piezometer DM-6 due to proximity to the CSTO Project. Re-installed well W-2 screened from 3 to 23 feet bgs.	No soil samples taken during W-2 installation. The reported abandonment of MW-21 in 2002 contradicts the reported decommissioning of MW-21 due to installation of the recovery trench to the west of the Property in December 1995.
2002	Reid Middleton	CSTO	Reid Middleton 2002	Memorandum to Ecology	Southeast corner of the asphalt cap over the ExxonMobil Parcel removed. Steel piles for concrete foundation were installed.	No information regarding contaminant soil excavation and removal was found.
2002-2007	Kleinfelder, ERI, AMEC	Site	Various	Groundwater monitoring	Monthly LPH gauging and quarterly groundwater monitoring.	LPH greater than 0.02 foot thick is bailed manually and oleophilic socks are replaced.
Jul-02	ERI	West of the ExxonMobil Parcel	ERI 2002b	Well decommissioning	Monitoring wells MW-20, MW-21, and one unidentified well were decommissioned.	The record contradicts the records that indicate that MW-21 was decommissioned during the December 1993 recovery trench installation.
Feb-07	AMEC/Bravo Environmental	Site	AMEC E&E 2007	Video survey of storm drain system	AMEC contracted Bravo to conduct a video survey of the storm drain system installed as part of 1999 interim measure to verify that groundwater from the Property is not infiltrating into the stormwater system through possible cracks and fissures in the piping and catch basins.	No significant cracks or fissures within the stormwater system were observed.
2007-present	AMEC	Site	AMEC E&E 2010a	Groundwater monitoring	AMEC requested to change to semiannual groundwater monitoring in 2007.	Request was accepted by Ecology.
2008	AMEC	West of the Property	AMEC E&E 2008b	Monitoring wells	Off-property monitoring wells MW-A1 and MW-A2 installed on the west side of Federal Avenue.	Monitoring wells MW-A1 and MW-A2 are incorporated into existing groundwater monitoring network.
Feb-08	AMEC	Site	AMEC E&E, 2008a	Tidal study	Measured tidal response in W-3, W-6, MW-11, MW-28, & MW-40R.	Minimal response in each well, except MW-11.
Jun-08	AMEC	Site	2010 updated survey included as Appendix C	Well head elevations survey	True North Land Surveying of Seattle, Washington, surveyed recovery and monitoring wells located on-Site.	Recovery wells LPH-1 to LPH-9 and monitoring wells W-1, W-2, W-3, W-6, W-10R, MW-10, MW-11, W-15R, W-17, RW-2, MW-19, MW-27, MW-28, MW-29, MW-30, MW-40R, MW-A1, and MW-A2.

**TABLE 3-1: CHRONOLOGY OF HISTORICAL ON-SITE ENVIRONMENTAL INVESTIGATIONS**

ExxonMobil/ADC Property, Ecology Site ID 2728, Everett, Washington

Date	Consultant	Location	Reference	Activities	Tasks Performed	Notes
2010	AMEC	Site	AMEC E&E 2010a	Focused Feasibility Study Work Plan	Summarized Site history, previous environmental investigations and interim remedial activities, known environmental conditions, preliminary conceptual site model, and remaining data gaps.	FFS Work Plan included a sampling and analysis plan to guide data gaps investigation and identified applicable remedial technologies to be evaluated in the FFS.
2010	AMEC	Site	AMEC E&E 2010a	Agreed Order DE 6184		Required FFS and Draft CAP.
2010	AMEC	Site	AMEC E&E 2011f	Sampling for City of Everett Force Main	Borings CE-1 to CE-8 advanced on Federal Avenue, former Everett Avenue, and the BNSF property to characterize soils in the alignment of City's planned force main.	Analytical results were provided to City of Everett and used to characterize soil excavated for the force main project for disposal purposes.
2011	AMEC	Site	AMEC E&E 2011b	Data gaps investigation	Seven deep borings (AB-1 to AB-5, AP-6, MW-7ab), six shallow borings (AP-1 through AP-5, AP-7), five new off-Property monitoring wells (MW-A3 through MW-A7), aquifer testing, and tidal influence study.	A plume of groundwater with petroleum hydrocarbon impacts was identified west & northwest of the Property. Groundwater downgradient and upgradient from the Property was not affected by COCs. Geochemical parameters were consistent with an anaerobic environment in which active petroleum biodegradation appears to be occurring. No continuous silt layer was identified beneath the Property. Monitoring wells MW-A3 through MW-A7 incorporated into existing groundwater monitoring network.
2011	AMEC	Site	AMEC E&E 2011a	Tidal influence investigation	A stilling well with transducer was installed on the Everett Pier to automatically record tidal elevations. Pressure transducer/ data loggers were installed in monitoring wells W-3, W-6, MW-11, MW-19, MW-28, MW-40R, and MW-A1 through MW-A7 to record groundwater levels every 6 minutes for 6 days.	Monitoring wells W-3, MW-11, MW-A1, MW-A2, MW-A3, MW-A5, and MW-A6 are tidally influenced, with tidal fluctuations ranging from 0.1 foot to 1.1 feet. MW-19, MW-28, MW-40R, MW-A4, and W-6 exhibited minimal tidal influence, and MW-A7 was unaffected by tidal elevation. A potentiometric surface map showed groundwater flow toward the west.
2011	AMEC	Former Everett Avenue	AMEC E&E 2011g and h	Observations of seeps along former Everett Avenue	AMEC recorded photographs in the field to document observations of petroleum product seeps through the pavement on former Everett Avenue.	

**TABLE 3-1: CHRONOLOGY OF HISTORICAL ON-SITE ENVIRONMENTAL INVESTIGATIONS**

ExxonMobil/ADC Property, Ecology Site ID 2728, Everett, Washington

Date	Consultant	Location	Reference	Activities	Tasks Performed	Notes
2012	AMEC	Federal Avenue and former Everett Avenue	AMEC 2012b	Observations during City of Everett force main replacement	AMEC observed excavation and drilling activities during installation of the City's force main and recorded notable subsurface features when relevant, including the presence of LPH if encountered.	AMEC documented the presence of LPH in borings and/or trenches along much of the alignment on former Everett Avenue, and at selected locations along Federal Avenue.
2013-2014	AMEC	Site	AMEC 2014a	Data gaps investigation	A total of 33 soil borings were drilled on the Property and nearby properties, and soil samples were analyzed to delineate areas of affected soil at the Site. One of the borings was completed as a new monitoring well (MW-A8).	Higher COC concentrations were found primarily on the Property and in the western portion of the former ADC garage. Contamination from the Site extends to the former ADC garage and former Everett Avenue. Contamination on KC property north of former Everett Avenue likely originates from sources on the KC property. Monitoring well MW-A8 incorporated into groundwater monitoring network.
2020-2021	Cardno	Port of Everett	Appendix F	Excavation delineation	A total of 51 soil borings were drilled on the Port of Everett property, and soil samples were analyzed to delineate areas exceeding remediation levels for future excavation. Two geotechnical borings were also advanced. Analytical results will be used so that collection of sidewall and base soil samples during future excavation work is not necessary.	COC concentrations exceeding remediation levels are present as deep as 16 feet bgs.

**Abbreviations**

ADC = American Distributing Company  
 AMEC = AMEC Environment & Infrastructure, Inc.  
 AMEC E&E = AMEC Earth & Environmental, Inc.  
 AST = aboveground storage tank  
 bgs = below ground surface  
 CAP = Cleanup Action Plan  
 COC = constituent of concern  
 CSO = combined sewer outflow  
 CSTO = California Street Overcrossing  
 Ecology = Washington State Department of Ecology  
 ERI = Environmental Resolutions, Inc.  
 ESE = Environmental Science and Engineering, Inc.  
 FFS = Focused Feasibility Study  
 gpm = gallons per minute

GPR = ground penetrating radar  
 HSA = hollow-stem auger  
 KC = Kimberly-Clark  
 Kleinfelder = Kleinfelder, Inc.  
 LPH = liquid petroleum hydrocarbons  
 MTCA = Model Toxics Control Act  
 PTI = PTI Environmental Services  
 RZA = Rittenhouse-Zeman & Associates, Inc.  
 RZA AGRA = RZA AGRA Earth & Environmental, Inc.  
 TPH = total petroleum hydrocarbons  
 TPH-D = total petroleum hydrocarbons-diesel range organics  
 TPH-G = total petroleum hydrocarbons-gasoline range organics  
 TPH-O = total petroleum hydrocarbons-residual range organics

# **APPENDIX B**

## **Wood's Chronology of Historical Interim Remedial Measures (WSP, 2023)**



**TABLE 4-1: CHRONOLOGY OF HISTORICAL INTERIM REMEDIAL MEASURES**  
ExxonMobil/ADC Property, Ecology Site ID 2728, Everett, Washington

Date	Consultant	Location	Reference	Activities	Tasks Performed	Notes
April–May 1988	RZA	ExxonMobil Parcel	PTI 1997	Recovery trench installation, SVE and groundwater treatment system test (oil-water separator and air stripper), infiltration gallery, pumping subsurface fluids	Installation of recovery trench near MW-14, SVE system and groundwater treatment system to evaluate feasibility of extracting LPH. Infiltration gallery installed in the vicinity of MW-14. Subsurface fluids were pumped with a vacuum truck from the sumps.	Decommissioned in 1998 during construction of low-permeability cap at the Property. The gallery was T-shaped and 45 feet long with two 55-gallon drums installed at both ends as sumps. 1,400 gallons of liquid removed, 50 gallons was LPH. As a result, LPH thickness in MW-14 decreased to 0.40 foot by August 1988.
Mar-89	RZA	ExxonMobil Parcel	RZA 1989	Automated groundwater extraction and treatment system	An automated groundwater extraction and treatment system was installed in the location of the infiltration gallery. The system included fluid extraction sump stationed in RW-1 (formerly MW-14), oil-water separator, air stripper, and re-infiltration gallery.	The groundwater extraction and treatment system was shut down in March 1990 due to flooding of the re-infiltration gallery, and has not been restarted.
Nov-91	RZA AGRA	ExxonMobil Parcel	PTI 1997	Borings, recovery well	8-inch diameter recovery well RW-2 installed.	No analytical data found for this event.
Dec-93	RZA AGRA	West of ExxonMobil Parcel	AGRA 1993	Test pits, recovery trench	Recovery trench installation along the western border of ExxonMobil Parcel.	
Jun-96	AGRA	North of the Property	AGRA 1996b and c	CSO line repairs	Excavation of settled portion of pipe replaced. Slip-lining of remaining CSO line. CSO line excavation dewatering.	1,450,800 gallons of groundwater and 23,050 gallons of LPH were removed during CSO line excavation and dewatering.
Jun-96	AGRA	LPH Vacuum Recovery Pilot Test	AGRA 1996a, d,e, and f	LPH vacuum recovery pilot test	14-day test included SVE and groundwater/LPH pumping system.	125 gal of LPH and 28,228 gallons of groundwater removed from VRW-1 during test.
Nov-98	Kleinfelder	ADC Parcel	Exponent 2000	Survey, geotechnical evaluation	Initial survey. Asbestos survey prior to demolition.	Demolition activities included four buildings on the ADC parcel. Asbestos abatement activities were conducted in November 1998, and demolition was completed in January 1999.
Dec-98	Kleinfelder	Water management and treatment system	Exponent 2000	Installation of treatment system	A water management and treatment system consisting of an oil–water separator, a settling tank, and a carbon polishing unit was constructed at the Property.	System treated approximately 2.5 million gallons of water between December 1998 and September 1999. Approximately 19,900 gallons of oily water and 450 gallons of sludge were collected between December 1998 and September 1999.
Dec-98	Kleinfelder	The Property	Exponent 2000	Interim remedial action	Removed TPH-impacted soil, graded the property, removed purge water.	162 tons of contaminated shallow soil and vegetation removed from within the ADC firewall area during demolition and transported to TPS Technologies facility for disposal. 3.5 tons of class 3 PCS taken to CRS Associated. Marine Services, Inc. removed 110 gallons of purge water.
1999	Kleinfelder	The Property	Exponent 2000	Interim remedial action	Monitoring well abandonment. Interceptor trench construction along the western and northern property boundaries. Low-permeability cap construction over the property. Recovery wells LPH-1 through LPH-9 installed in interceptor trench. Stormwater collection system that connects to the City of Everett sewer system was installed.	Monitoring wells MW-6, MW-8, MW-9, MW-12, MW-13, MW-15, MW-16, MW-17, MW-38, WP-1, B-1, B-2, W-4, W-8, W-11, W-12, W-14, AD-11, AD-12, AD-13, AD-15, AD-19, W-10, W-15, and MW-40 abandoned. Completed Site grading, installation of two layers of geotextile fabric, asphalt-treated base material, and paving fabric and asphalt cap.
2002–present	Kleinfelder, ERI, AMEC E&E	Site	Various	Petroleum recovery	Monthly removal of LPH.	LPH greater than 0.02 foot thick is bailed manually, and oleophilic socks are replaced.
Jul-08	Floyd   Snider	North-northeast of the Property	AMEC E&E 2010a	Excavation and disposal of PCS and dewatering the excavation	Soil associated with Puget Sound Outfall 5 Overflow Structure project was excavated and disposed of. In addition, dewatering occurred during excavation.	Soil was field screened. Soil exhibiting obvious signs of contamination was disposed of as Class II soil without sampling. Soil that appeared to be "clean" was sampled and then disposed as Class II soil. Water from the excavation was sampled for the City sewer discharge requirements.
2010	AMEC E&E	Federal Avenue and Port of Everett property	AMEC E&E 2011e	Removal of abandoned pipes and affected soil	AMEC decommissioned pipelines west of the Property to prepare for upgrades to the storm sewer line planned by the City of Everett.	A total of 76.55 tons of construction debris, 243 tons of soil, 487 linear feet of piping, 65,669 gallons of non-regulated liquid, four 55-gallon product/ water drums, and four 55-gallon solid waste drums were removed and disposed of off Site. Samples from base of excavation showed contaminated soil left in place.
2011–2012	AMEC	BNSF and KC properties	AMEC 2012a	Interim removal action	Excavation and off-Site disposal of surface asphalt, affected soil, and recovered LPH and treatment of the recovered groundwater from the secondary source areas on the BNSF and KC properties. Monitoring wells MW-27 through MW-30 abandoned.	Approximately 3,785 tons of material was excavated and disposed of at a permitted landfill, approximately 2,530 gallons of LPH was removed, and 1,489,246 gallons of petroleum-affected groundwater was removed and treated. Affected material was evident and left in place at all side wall areas of the completed excavation on the BNSF property and on the north and east sidewalls on the KC property.

**Abbreviations**

ADC = American Distributing Company  
AMEC = AMEC Environment & Infrastructure, Inc.  
AMEC E&E = AMEC Earth & Environmental, Inc.  
BNSF = BNSF Railway Company  
CSO = combined sewer outflow  
ERI = Environmental Resolutions, Inc.  
KC = Kimberly-Clark  
Kleinfelder = Kleinfelder, Inc.

LPH = liquid petroleum hydrocarbons  
PCS = petroleum-contaminated soil  
PTI = PTI Environmental Services  
RZA = Rittenhouse-Zeman & Associates, Inc.  
RZA AGRA = RZA AGRA Earth & Environmental, Inc.  
SVE = soil vapor extraction  
TPH = total petroleum hydrocarbons

# **APPENDIX C**

## **Terrestrial Ecological Evaluation Form**





# Voluntary Cleanup Program

## Washington State Department of Ecology Toxics Cleanup Program

### TERRESTRIAL ECOLOGICAL EVALUATION FORM

Under the Model Toxics Control Act (MTCA), a terrestrial ecological evaluation is necessary if hazardous substances are released into the soils at a Site. In the event of such a release, you must take one of the following three actions as part of your investigation and cleanup of the Site:

1. Document an exclusion from further evaluation using the criteria in WAC 173-340-7491.
2. Conduct a simplified evaluation as set forth in WAC 173-340-7492.
3. Conduct a site-specific evaluation as set forth in WAC 173-340-7493.

When requesting a written opinion under the Voluntary Cleanup Program (VCP), you must complete this form and submit it to the Department of Ecology (Ecology). The form documents the type and results of your evaluation.

**Completion of this form is not sufficient to document your evaluation. You still need to document your analysis and the basis for your conclusion in your cleanup plan or report.**

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Terrestrial-ecological-evaluation>.

#### Step 1: IDENTIFY HAZARDOUS WASTE SITE

Please identify below the hazardous waste site for which you are documenting an evaluation.

Facility/Site Name: ExxonMobil ADC

Facility/Site Address: 2717/2731 Federal Avenue, Everett, Washington 98201

Facility/Site No: 2728

VCP Project No.: N/A

#### Step 2: IDENTIFY EVALUATOR

Please identify below the person who conducted the evaluation and their contact information.

Name: Bobby Thompson

Title: Project Manager

Organization: Stantec

Mailing address: 720 Third Avenue, Suite 1500

City: Seattle

State: WA

Zip code: 98104

Phone: (208) 761-1557

Fax: N/A

E-mail: robert.thompson@stantec.com

### Step 3: DOCUMENT EVALUATION TYPE AND RESULTS

#### A. Exclusion from further evaluation.

##### 1. Does the Site qualify for an exclusion from further evaluation?

- Yes    *If you answered "YES," then answer **Question 2**.*
- No or Unknown    *If you answered "NO" or "UNKNOWN," then skip to **Step 3B** of this form.*

##### 2. What is the basis for the exclusion? Check all that apply. Then skip to **Step 4** of this form.

Point of Compliance: WAC 173-340-7491(1)(a)

- All soil contamination is, or will be,\* at least 15 feet below the surface.
- All soil contamination is, or will be,\* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.

Barriers to Exposure: WAC 173-340-7491(1)(b)

- All contaminated soil, is or will be,\* covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.

Undeveloped Land: WAC 173-340-7491(1)(c)

- There is less than 0.25 acres of contiguous# undeveloped± land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.
- For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous# undeveloped± land on or within 500 feet of any area of the Site.

Background Concentrations: WAC 173-340-7491(1)(d)

- Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.

\* An exclusion based on future land use must have a completion date for future development that is acceptable to Ecology.

± "Undeveloped land" is land that is not covered by building, roads, paved areas, or other barriers that would prevent wildlife from feeding on plants, earthworms, insects, or other food in or on the soil.

# "Contiguous" undeveloped land is an area of undeveloped land that is not divided into smaller areas of highways, extensive paving, or similar structures that are likely to reduce the potential use of the overall area by wildlife.



## B. Simplified evaluation.

### 1. Does the Site qualify for a simplified evaluation?

- Yes *If you answered "YES," then answer **Question 2** below.*
- No or Unknown *If you answered "NO" or "UNKNOWN," then skip to **Step 3C** of this form.*

### 2. Did you conduct a simplified evaluation?

- Yes *If you answered "YES," then answer **Question 3** below.*
- No *If you answered "NO," then skip to **Step 3C** of this form.*

### 3. Was further evaluation necessary?

- Yes *If you answered "YES," then answer **Question 4** below.*
- No *If you answered "NO," then answer **Question 5** below.*

### 4. If further evaluation was necessary, what did you do?

- Used the concentrations listed in Table 749-2 as cleanup levels. *If so, then skip to **Step 4** of this form.*
- Conducted a site-specific evaluation. *If so, then skip to **Step 3C** of this form.*

### 5. If no further evaluation was necessary, what was the reason? Check all that apply. Then skip to **Step 4** of this form.

#### Exposure Analysis: WAC 173-340-7492(2)(a)

- Area of soil contamination at the Site is not more than 350 square feet.
- Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.

#### Pathway Analysis: WAC 173-340-7492(2)(b)

- No potential exposure pathways from soil contamination to ecological receptors.

#### Contaminant Analysis: WAC 173-340-7492(2)(c)

- No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.
- No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.
- No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.
- No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays, and institutional controls are used to manage remaining contamination.

**C. Site-specific evaluation.** A site-specific evaluation process consists of two parts: (1) formulating the problem, and (2) selecting the methods for addressing the identified problem. Both steps require consultation with and approval by Ecology. See WAC 173-340-7493(1)(c).

**1. Was there a problem?** See WAC 173-340-7493(2).

- Yes    *If you answered “YES,” then answer **Question 2** below.*
- No    *If you answered “NO,” then identify the reason here and then skip to **Question 5** below:*
- No issues were identified during the problem formulation step.
  - While issues were identified, those issues were addressed by the cleanup actions for protecting human health.

**2. What did you do to resolve the problem?** See WAC 173-340-7493(3).

- Used the concentrations listed in Table 749-3 as cleanup levels. *If so, then skip to **Question 5** below.*
- Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. *If so, then answer **Questions 3 and 4** below.*

**3. If you conducted further site-specific evaluations, what methods did you use?**

*Check all that apply. See WAC 173-340-7493(3).*

- Literature surveys.
- Soil bioassays.
- Wildlife exposure model.
- Biomarkers.
- Site-specific field studies.
- Weight of evidence.
- Other methods approved by Ecology. If so, please specify:

**4. What was the result of those evaluations?**

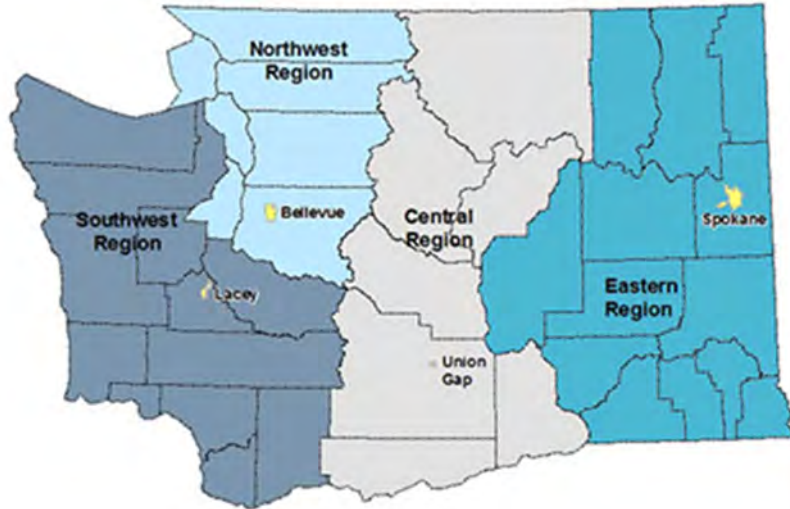
- Confirmed there was no problem.
- Confirmed there was a problem and established site-specific cleanup levels.

**5. Have you already obtained Ecology’s approval of both your problem formulation and problem resolution steps?**

- Yes    If so, please identify the Ecology staff who approved those steps:
- No

## Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.



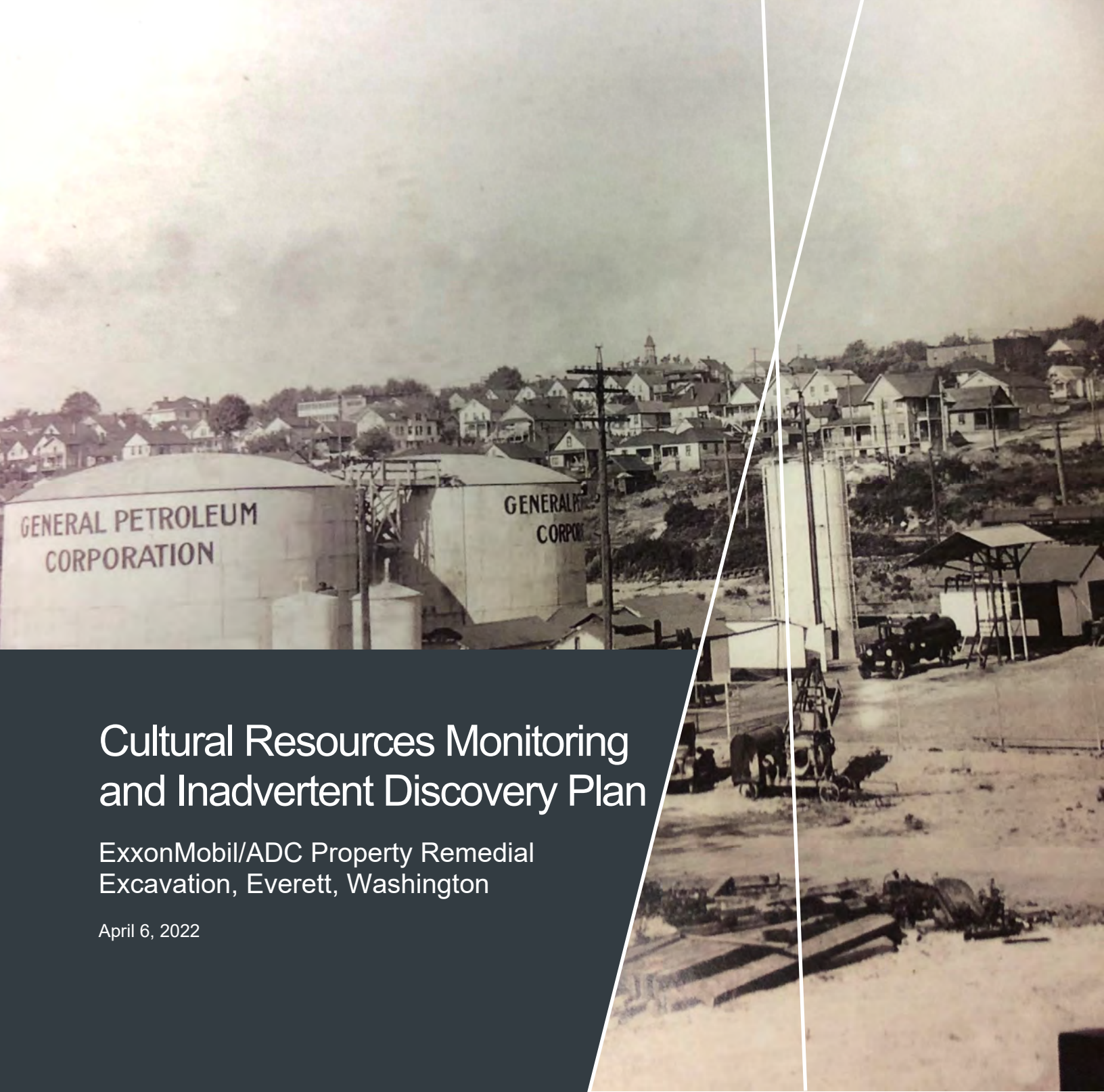
<b>Northwest Region:</b> Attn: VCP Coordinator 3190 160 <sup>th</sup> Ave. SE Bellevue, WA 98008-5452	<b>Central Region:</b> Attn: VCP Coordinator 1250 West Alder St. Union Gap, WA 98903-0009
<b>Southwest Region:</b> Attn: VCP Coordinator P.O. Box 47775 Olympia, WA 98504-7775	<b>Eastern Region:</b> Attn: VCP Coordinator N. 4601 Monroe Spokane WA 99205-1295

If you need this publication in an alternate format, please call the Toxics Cleanup Program at 360-407-7170. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call 877-833-6341.

# **APPENDIX D**

## **Cultural Resources Monitoring and Inadvertent Discovery Plan, dated April 6, 2022**





# Cultural Resources Monitoring and Inadvertent Discovery Plan

ExxonMobil/ADC Property Remedial  
Excavation, Everett, Washington

April 6, 2022

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## Contact Information

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Project Name Cultural Resources Monitoring and  
Inadvertent Discovery Plan  
ExxonMobil/ADC Property Remedial  
Excavation, Everett, Washington

Job Reference 0314476040

Version Number 2.0

Date April 6, 2022

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<https://ecology.wa.gov/DOE/files/02/02f2d202-9008-4049-ac30-63bc8c63f32d.pdf>

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# Introduction

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The proposed cleanup project by the ExxonMobil/ American Distributing Company (ADC) in Everett, Washington, is listed by the Washington State Department of Ecology (Ecology) as Cleanup Site 5182. Historical releases of petroleum products have been documented within the project area due to former operations of bulk petroleum storage, transfer, and distribution facilities and operations of other similar companies on nearby parcels. The purpose of the project is to cleanup soil and groundwater impacted by light non-aqueous phase liquid (LNAPL) and/or residual LNAPL saturation. Proposed cleanup activities include installation of shoring walls, and excavation of impacted soils. Following excavation of contaminated soils, the project area will be backfilled, re-graded to preexisting contours, removal of shoring walls, and repaved.

Cardno, Inc. (Cardno) previously prepared a cultural resources assessment in support of the project (Scott et al. 2021). The assessment consisted of a literature review and records search within 1.0 mile (1.6 kilometer [km]) of the project area that included cultural resource records for previously recorded historic, ethnohistoric, and precontact archaeological and built environment resources; a review of any local, state, and national register nomination forms; a review of previously conducted cultural resources investigations; and a review of any known or potential Traditional Cultural Properties (TCPs). This monitoring and inadvertent discovery plan (MIDP) was developed to use during cleanup operations.

## Project Location and Description

The project is in Section 19 of Township 29 North, Range 5 East, Willamette Meridian (Figure 1). The ExxonMobil/ADC property consists of 3.48 acres. The acres are comprised of several tax parcels and portions of the City of Everett's (City) Right-of-Way (ROW). Parcel information is provided below (Table 1; Figure 2). Currently, the project area consists of a paved parking lot with no extant structures or buildings.

## Regulatory Setting

The Washington State Environmental Policy Act (SEPA; RCW 43.21C) and its implementing rules contained in Washington Administrative Code (WAC) 197-11 require applicants to identify and document cultural and historical places and objects if national, state, or local significance that may be affected by project activities. The regulation requires proposed methods to reduce or control impacts to identified cultural resources during project activities. The SEPA review process provides notice to all affected tribal, state, and private entities.

Precontact and historic archaeological sites are protected by several Washington state regulations on both public and private lands. Revised Code of Washington (RCW) 27.44 and RCW 27.53.060 require that a person obtain a permit from the Washington Department of Archaeology and Historic Preservation (DAHP) before excavating, removing, or altering Native American human remains or archaeological resources in Washington. A failure to obtain a permit is punishable by civil fines and penalties under RCW 27.53.095 and criminal prosecution under RCW 27.53.090. The complete requirements for filing an archaeological excavation permit can be found in WAC 25-48-060. In the state of Washington, permits are required for alterations (e.g., excavation, removal, and collection of archaeological materials) at all precontact archaeological sites and at historic archaeological sites that are eligible for or listed in the National Register of Historic Places (NRHP).

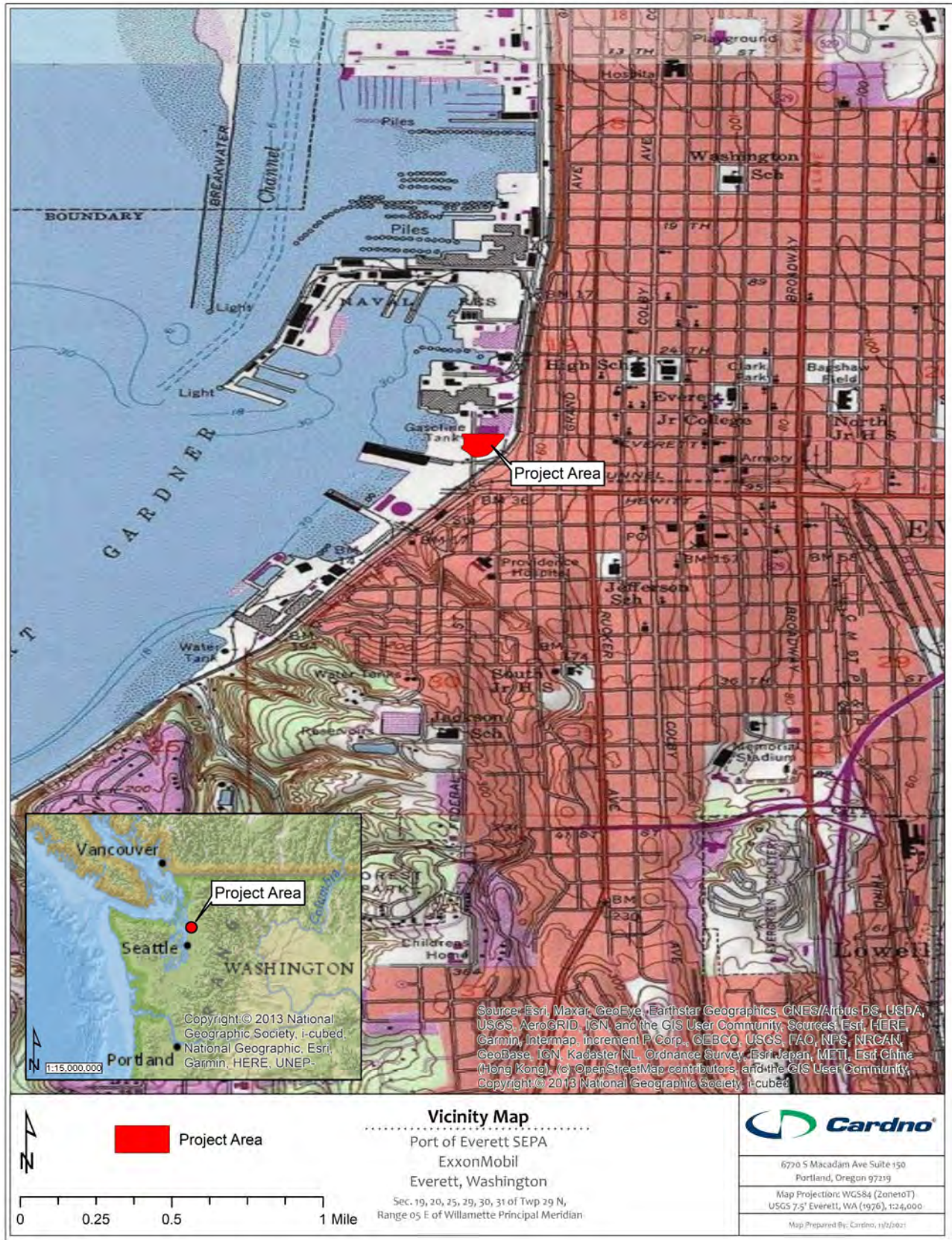


Figure 1. Project area and vicinity.

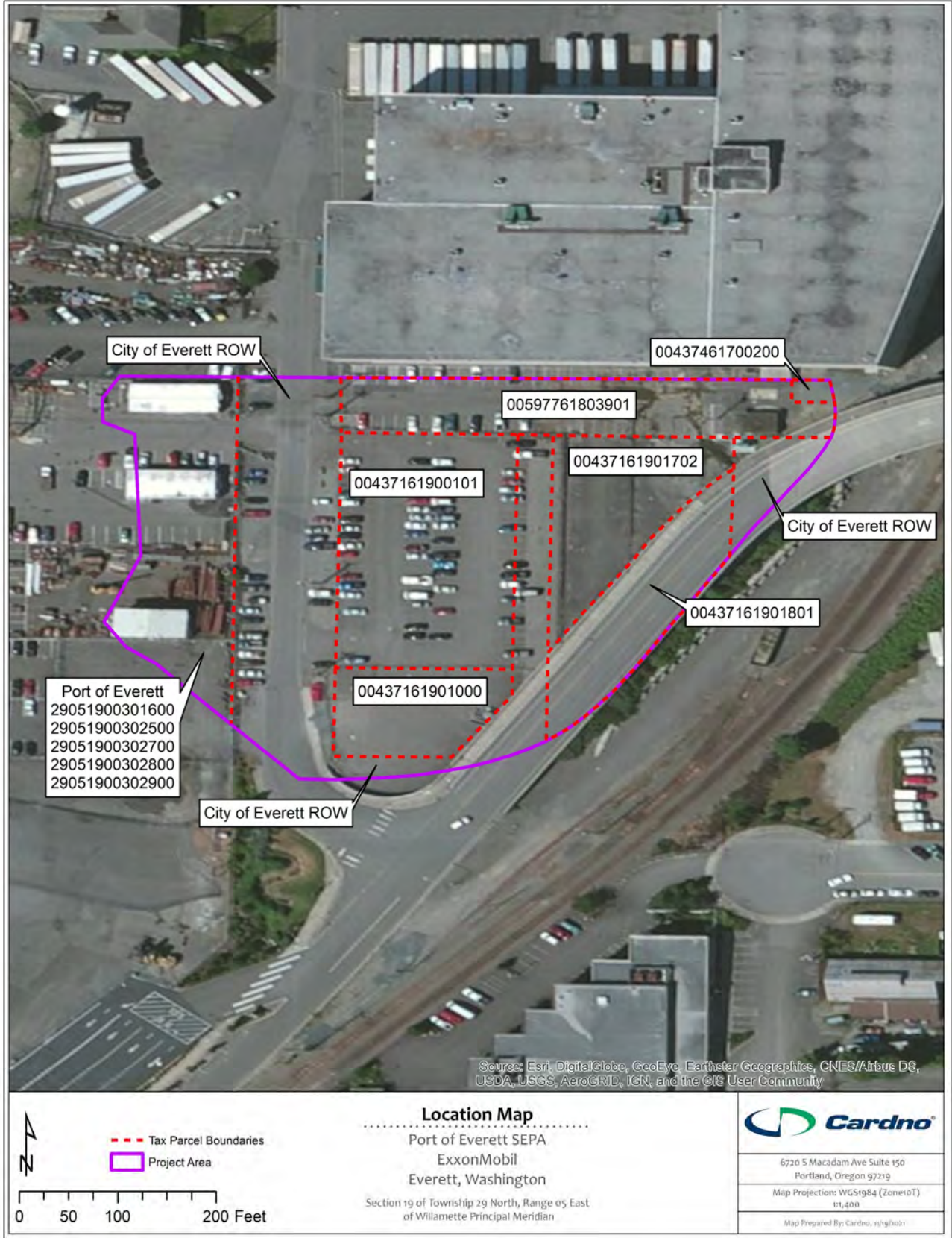


Figure 2. The project area denoting impacted Snohomish County tax parcels and City ROW.

**Table 1. Snohomish County Tax Parcel Information.**

Owners	Parcel Number(s)
Burlington Northern Railroad	00437161901702
City of Everett	00437161901801
Miller Trust (Cecilia Beverly Miller, beneficiary)	00437161900101
Mobil Oil Corporation	00437161901000
Port of Everett	00437461700200, 00597761803901, 29051900301600, 29051900302500, 29051900302700, 29051900302800, 29051900302900

If a person(s) violates this statute and knowingly disturbs or alters an archaeological site, the DAHP is allowed to issue civil penalties of up to \$5,000, in addition to site restoration costs and investigative costs per RCW 27.53.095. Restorative and monetary remedies do not prevent concerned Indian tribes from undertaking civil action in state or federal court or law enforcement agencies from undertaking criminal investigation or prosecution. If human remains and/or burials are disturbed, RCW 27.44.050 allows an affected Indian Tribe to undertake civil action. Additionally, the excavation of human remains without a permit is a felony. RCW 68.60 requires “expeditious” notification of local law enforcement and the coroner if skeletal human remains are discovered. Failure to notify is considered a misdemeanor.

Snohomish County Code (SCC) 30.67.340 requires developers and property owners to immediately stop work and notify the county, DAHP, and affected Indian tribes if archaeological resources are uncovered during excavation. It further stipulates that county permits issued in areas documented as containing archaeological resources require a site inspection or evaluation by a professional archaeologist in coordination with affected Indian tribes. SCC 20.32D.070-100 outlines the process for obtaining and working under a certificate of appropriateness, and zoning. SCC 20.32D.200 requires recordation of archaeological sites. Additionally, completion of an archaeological report or relocation of a project is required for any construction, earth movement, clearing, or other site disturbance of a known archaeological site or any development application proposed on non-tribally owned, fee-simple properties designated Reservation Commercial on the Snohomish County Future Land Use Map. SCC 20.32D.220 outlines the process to follow if human remains or archaeological resources are found during construction, earth movement, clearing, or other site disturbance.

Everett Municipal Code (EMC) 19.28 outlines the process for identifying, listing, and protecting resources on the Everett Register of Historic Places and within historic overlay zones. Properties within historic overlay zones are governed by EMC 19.28.020 through 19.28.120. Criteria for placement on the Everett Register of Historic Places are described in EMC 19.28.130. Proposed changes to properties on the Everett Register are reviewed by the Everett historical commission per 19.28.140.

### Potential for Discovery of Cultural Resources

Archival research indicates a high level of human activity took place adjacent to the project area during precontact and historic times (Scott et al. 2021). Given the history of the project area and its immediate vicinity, Cardno concludes that the potential for encountering subsurface archaeological deposits beneath the historic fill layers is moderate to high. Historical land modification, including the introduction of artificial fill and development, reduces the likelihood of encountering in situ precontact artifacts. Ethnographic-

period archaeological deposits within and adjacent to the project area may include disturbed or redeposited midden deposits, burials, evidence of a village, or debris associated with short-term occupations and resource-processing locations. Historic-period deposits may include debris from agricultural and historic homestead structures and other early-twentieth-century structure (i.e., “squatters shacks”), or from manufacturing or commercial development.

Cardno archaeologists conducted a background search and literature review of existing cultural resource records; local, state, and national register nomination forms; previous cultural resources investigations; and any known or potential TCPs in and within 1.0 mile (1.6 km) of the project area. According to the DAHP’s predictive model available on the WISAARD online database, there is a very high risk of encountering buried precontact archaeological deposits in the project area. Previous archaeological construction monitoring conducted between 2013 and 2020 suggest a high potential for buried intact cultural deposits.

In 2013, SWCA Environmental Consultants (SWCA) conducted an extensive study and background review for the Kimberly-Clark Worldwide Site Upland Area SEPA process (Rinck et al. 2013). This project area is immediately adjacent to the current project area. Previously, this area was utilized as for industrial purposes which has contaminated the area. During the background review, SWCA identified the project area as containing a high potential for precontact and historical cultural materials within the natural Port Gardner shoreline. In response to the potential for buried archaeological materials, SWCA developed a site-specific Monitoring and Discovery Plan (MDP) (Rinck 2013). SWCA performed archaeological monitoring for cleanup excavations at the Kimberly-Clark Worldwide Site Upland Area (Undem et al. 2014). Within one cleanup area, excavations intersected natural sediments underlying historic-period fill. Within Location 11, archaeologists observed miscellaneous historic debris and architectural remnants located between 2 and 6 feet below ground surface. One precontact artifact was documented during monitoring—45SN00629, an edge-altered basalt cobble (Undem 2014). Archaeological monitoring continued at the Kimberly-Clark Worldwide Site Upland Area in 2020 (Johnson 2020). Archaeologists observed architectural and structural debris within the historic fill layer, likely associated with historical mill operations. No precontact materials or intact sediment layers were observed.

No documented historic properties listed in the NRHP, Washington Heritage Register (WHR), and/or Everett Register of Historic Places (ERHP) are within or adjacent to the project area. There are three historic properties within 0.5 mile (0.8 km) of the project area have been recommended and determined eligible for listing in the NRHP and/or WHR including the Kimberly-Clark Everett Mill Main Office (Property ID 667716), the Daulph Delicatessen (Property ID 18268), and the Everett Main Post Office (Property ID 270916). All other listed and eligible properties are separated from the project area by the BNSF Railway Company train tracks.

## Monitoring Measures

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Cardno recommends that this MIDP be implemented to minimize potential impacts to any currently unknown intact archaeological resources. Monitoring should not be necessary in glacial deposits and sediments, nor in existing areas where disturbance has already occurred. The following outlines procedures to follow and the responsibilities of Cardno, ExxonMobil/ADC, and the contractor during construction.

### Preconstruction Meeting

Prior to construction activities, an archaeologist familiar with the project will meet with the construction supervisors and project personnel. The objective is to review the area to be monitored, and to go over the procedures for coordination and notification of discoveries. Communication is critical to the success of the

MIDP and ensures that a monitor is present when needed. The roles and responsibilities of the monitor and other project personnel need to be outlined prior to construction. These include:

1. Review of all communication protocols. A list of contacts is at the end of this MIDP. When additions or changes in contacts are made, a revised contact list will be prepared at that time.
2. The responsibilities of each party will be reviewed, and each party identified including the contractor, ExxonMobil/ADC, Cardno, agencies, and Tribes.
3. Scheduling procedures for archaeological monitors will be outlined. The individual who will be responsible for making the initial request, and the period of advance notice to be given, will be agreed upon by ExxonMobil/ADC, Cardno, and the contractor.
4. On-site safety procedures will be reviewed.

## Monitoring During Construction

An archaeologist will perform on-site monitoring of initial ground-disturbing activities to a depth of approximately 7 ft (2.13 m) below ground surface (bgs) because historic debris and architectural remnants were located between 2 and 6 ft bgs in an adjacent property in 2014 (Undem et al. 2014).

- Ground disturbance occurs when the surface is traversed or cut and may consist of excavation, trenching, potholing, grading, blading, grubbing, leveling, vehicular traffic that treads into the surface (as during wet weather), and hand-digging with a shovel. This list is not considered exhaustive, and essentially anytime possible native soil may be displaced it will be considered to be ground disturbance.
- If formed tools, concentrations, or features are observed during monitoring, construction work will be briefly halted so that the artifacts can be documented, photographed, and mapped in-place, if possible, using a Global Positioning System (GPS) unit. It is anticipated that the archaeological monitor will not collect artifacts or samples unless it is determined that they represent evidence of significant archaeological deposits or a feature, or the artifact is a formed tool.
- If burial features, artifacts, or human bone are encountered within the work area, Cardno has the authority to stop work and notify the construction manager, Exxon Mobile/ADC, and DAHP. The procedures to be followed in the event of an inadvertent discovery that may need additional excavation or protection are outlined in a section below.

## Report of Monitoring Activities

A technical memo report of the archaeological monitoring will be prepared following the completion of the project. The report will include information about the monitoring activities and documentation of artifacts or new archaeological resources, if found during construction, and will include maps and photographs. In addition, inadvertent discoveries will be described in the report, if encountered. If artifacts are collected, a catalog will be provided, and a summary prepared as part of the report. Within 90 days of the conclusion of fieldwork, the report will be submitted to Exxon Mobile/ADC, DAHP, and the Tribes.

## Summary of Monitoring Measures

ExxonMobil/ADC will ensure that the outlined procedures are followed during construction:

1. An on-site meeting prior to construction will take place between Cardno, the construction inspectors and supervisors, and the developer's representatives, to review specific archaeological resource monitoring procedures and responsibilities. All site safety will be reviewed at this time.



2. On-site archaeological monitoring of initial ground-disturbing activities to a depth of approximately 7 ft (2.13 m) bgs will occur across the project area.
3. Construction activities will be halted if the activity encounters, or may impact, artifact concentrations, features, human remains (or potential human remains), funerary items, or sacred objects. Construction work would not resume until the consulting parties agree on a course of action based on the inadvertent discovery protocol as described in the following section.
4. Cardno will prepare a report summarizing the activities that were monitored, and noting inadvertent discoveries and steps taken in response to a discovery, as outlined in this MIDP. The report will be submitted to Exxon Mobile/ADC, DAHP, and the Tribes.

## **Inadvertent Discovery Protocol**

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The following outlines procedures to follow, in accordance with state laws, if certain archaeological materials and human remains are discovered in the project area, during construction. In the event of an inadvertent discovery such as intact archaeological features or human remains, the following steps will be taken.

### **Archaeological Resources Prompting Inadvertent Discovery Protocol**

Archaeological resources, such as pre-contact (Native American) or historic-period artifacts or features, could be inadvertently discovered during construction. Work must stop when the following types of artifacts and/or features are encountered (the list is not exhaustive):

- Flaked stone tools (e.g., arrowheads, knives, scrapers) and debitage.
- Groundstone tools (e.g., mortars, pestles).
- Layers (strata) of discolored earth resulting from fire hearths or other features. May be black, red, or mottled brown and may contain discolored cracked rocks, charcoal, or dark soil.
- An area of charcoal or very dark stained soil with artifacts.
- An accumulation of shell, burned rocks, or other food-related materials.
- Animal bones, including small pieces of bone.
- Personal items, funerary materials, and mortuary objects.
- Structural remains (e.g., wooden beams, post holes).

When in doubt, assume the material is a cultural resource. Even what looks to be old garbage could be an archaeological resource.

### **On-site Responsibilities**

If an inadvertent discovery is encountered during construction the following steps must be followed:

1. **STOP WORK:** If any Exxon Mobil/ADC employee, contractor, or subcontractor believes that he or she has uncovered an archaeological resource or evidence of a burial at any point in the project, all work adjacent to the discovery must stop. The discovery location should not be left unsecured at any time.
2. **NOTIFY CARDNO:** Notify the on-site archaeological monitor and the primary Cardno contact and follow the provisions in the MIDP to verify the discovery (contact list below).

3. NOTIFY EXXONMOBILE/ADC: Notify the Exxon Mobile/ADC project manager immediately (contact list below).
4. CARDNO WILL NOTIFY DAHP AND THE TRIBES, ON BEHALF OF EXXONMOBILE/ADC.

#### **Responsibilities of Exxon Mobile/ADC:**

1. PROTECT: Exxon Mobile/ADC is responsible for taking appropriate steps to protect the discovery site.
  - a. All work will stop in an area adequate to provide for the total security, protection, and integrity of the resource, typically within 30 meters (100 feet). Vehicles, equipment, and unauthorized personnel will not be permitted to traverse the discovery vicinity. Work in the immediate area will not resume until treatment of the discovery has been completed following provisions for treating archaeological materials as set forth in this document.
  - b. Exxon Mobile/ADC may allow construction away from archaeological resources, in other areas, prior to contacting the concerned parties.
  - c. Until assessed by Cardno, treat all bone and bone fragments as possible human remains. If human remains, bone, or bone fragments are encountered, treat them with dignity and respect at all times. Cover the remains with a tarp or other materials (not soil or rocks) for temporary protection in place and to shield them from being photographed. Do not call 911 or speak with the media.
2. CONTACT: If Cardno has not been contacted, Exxon Mobile/ADC will be responsible for doing so (contact list below).

#### **Responsibilities of Archaeologist:**

1. MONITOR: An archaeological monitor is required to be on-site ground-disturbing activities to a depth of approximately 7 ft (2.13 m) bgs.
2. IDENTIFY: The archaeologist will examine the inadvertent discovery to determine if it is archaeological or to verify remains are human.
  - a. If the find is determined not archaeological, work may proceed with no further delay.
  - b. If the find is determined to be archaeological, the archaeologist will continue with notification (see archaeological procedure below).
  - c. If the find may be human remains or funerary objects, the archaeologist will ensure that a qualified individual examines the find.
  - d. If it is determined that the remains are human, the procedure described in the following section will be followed.
3. NOTIFY: Notify DAHP (contact list below).
  - a. If the discovery may relate to Native American interests, Cardno will also contact the Tribal representatives (contact list below).

#### **Archaeological Procedures:**

Pre-contact or historic-period archaeological material discovered inadvertently during project construction will be recorded, and Cardno will complete the documentation and assessment. Discovered features and formed tools will be photographed; stratigraphic profiles and soil/sediment descriptions of the newly discovered subsurface features will be prepared. Discovery locations will be documented on scaled site plans and site location maps.

Archaeological features and artifacts inadvertently discovered in buried sediments may require further excavation. After coordination on the appropriate procedures with DAHP and Tribes, a unit(s) or small trench(s) may be excavated to determine if an intact occupation surface is present. The controlled excavation of units may assist in gathering information on the nature, extent, and integrity of the subsurface deposits. Archaeological excavation units would be dug by hand in a controlled fashion to expose the feature, collect samples from undisturbed contexts, or assist in interpreting complex stratigraphy. Spatial information, depth of excavation levels, natural and cultural stratigraphy, presence or absence of archaeological material, and depth to sterile soil, or bedrock will be recorded for each excavation unit on a standard form. Unit-level forms will be used, which include plan maps for each excavated level, and material type, number, and vertical provenience (depth below surface and stratum association where applicable) for all subsurface artifacts and discovered features. All of the sediments from archaeological excavation units, for the purposes of additional investigations of newly discovered archaeological deposits or features, will be screened through 6.4-mm (¼-in) mesh.

All pre-contact formed tools collected from the subsurface excavation units will be analyzed, cataloged, and temporarily curated. Archaeological materials (with the exception of human remains, funerary items, and sacred objects) and copies of records will be curated at the Burke Museum in Seattle, Washington.

If assessment activity exposes human remains (e.g., burials, isolated teeth, or bones), the process described in the previous sections will be followed. The discovery will then be under the authority of DAHP.

### **Special Procedures for the Discovery of Human Remains**

Any human remains or funerary objects will be treated with dignity and respect at all times. If an inadvertent discovery of human remains or funerary objects occurs during construction the following steps must be followed:

1. Notify the Snohomish County Medical Examiner's Office and Snohomish County Sheriff's Office (contact list below).
  - a. The Medical Examiner has the responsibility to determine if the remains are "forensic" and under the medical examiner's jurisdiction or are "non-forensic."
  - b. If the remains are determined to be "non-forensic," the Medical Examiner will notify DAHP. DAHP's physical anthropologist will examine the remains and notify affected Native American Indian Tribes of the results of the examination. The final disposition of the remains will be determined after consulting with the appropriate Tribal representatives, and others.
2. Participate in Consultation: Per RCW 27.44.055, RCW 68.50, and RCW 68.60, DAHP will have jurisdiction over non-forensic human remains. Exxon Mobile/ADC personnel will participate in consultation.
3. Project construction outside the discovery location may continue while documentation and assessment of the feature proceeds. After Cardno verifies the boundaries of the discovery location, Cardno will determine the appropriate level of documentation and treatment of the resource, in consultation with Exxon Mobile/ADC, DAHP, and the affected Tribes. Construction may continue at the discovery location only after the process outlined in this MIDP is followed and the DAHP determines that compliance with state and county laws is complete.

### **Summary of Inadvertent Discovery Protocol**

If an inadvertent discovery is encountered during construction the following steps must be followed:

1. All construction activities that may affect possible human remains, a feature, or potentially significant archaeological deposits should be halted, and the remains, archaeological materials, and surrounding soil should not be disturbed. The site will be kept secure from further impacts

and trespass. Construction personnel will notify the archaeological monitor if the monitor is not present at the time of the discovery.

2. If the inadvertent discovery includes human remains, bones, or materials possibly representing human remains or a burial, all work in that area must stop and Cardno will contact the Snohomish County Medical Examiner's Office and Snohomish County Sheriff's Office (do not call 911). Treat the finds with dignity and shield them from view of personnel. Additional information on procedures for handling discoveries of possible human remains is detailed above.
3. If the medical examiner determines that the remains are "non-forensic," the medical examiner will officially contact DAHP. The DAHP physical anthropologist will confirm whether the remains are Native American or Non-Native American under the law, and will conduct consultation with the Tribes, Exxon Mobile/ADC, and others deemed appropriate. Disposition of the remains will be made by DAHP, in consultation with Tribes and others, as appropriate.
4. Cardno will contact DAHP, as well as Exxon Mobil/ADC, if they have not yet been contacted, if there is a discovery that is not related to human remains. The nature of the discovery will be determined and consulting parties (i.e., the Tribes) will be contacted. Security measures will be taken to prevent illicit activities such as looting or vandalism.
5. If evidence of an important deposit or feature is encountered during construction, and no human remains are encountered, a plan to address the impacts will be determined among the consulting parties.

## Contact Information

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### **Cardno, Inc. (Cardno)**

Shawn Fackler, MA, RPA, Principal Archaeologist  
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Seattle, WA 98108  
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### **ExxonMobil Environmental and Property Solutions Company (ExxonMobil)**

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### **American Distributing Co. (ADC)**

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### **Department of Archaeology and Historic Preservation (DAHP)**

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### **Snohomish County**

Medical Examiner  
9509 29<sup>th</sup> Ave. West  
Everett, WA 98204  
Phone: (425)438-6200

Adam Fortney, Sheriff  
3000 Rockefeller Ave  
Everett, WA 98201  
Phone:(425)388-3393

## **DAHP Tribal Areas of Interest**

### Muckleshoot Indian Tribe

Jaison Elkins, Tribal Chair  
39015 172<sup>nd</sup> Ave. SE  
Auburn, WA 98092  
Phone: (253)939-3311  
Email: jaison.elkins@muckleshoot.nsn.us

### Sauk-Suiattle Indian Tribe

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Darrington, WA 98241  
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### Snoqualmie Indian Tribe

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### Stillaguamish Tribe of Indians

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### Swinomish Indian Tribal Community

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La Corner, WA 98257  
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### Tulalip Tribes

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Tulalip, WA 98271  
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## **DAHP Human Remains Consultation – Inadvertent Discovery Tribal Contacts**

### Samish Indian Nation

Tom Wooten, Tribal Chair  
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Anacortes, WA 98221  
Phone: (360)293-0790  
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### Sauk-Suiattle Indian Tribe

Nino Maltos, Tribal Chair  
5318 Chief Brown Lane  
Darrington, WA 98241  
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### Swinomish Indian Tribal Community

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La Corner, WA 98257  
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Email: sedwards@swinomish.nsn.us

### Upper Skagit Indian Tribe

Jennifer Washington, Tribal Chair  
25944 Community Plaza  
Sedro-Woolley, WA 98284  
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### Confederated Tribes and Bands of the Yakama Nation

Delano Saluskin, Tribal Chair  
P.O. Box 51  
Toppenish, WA 98948  
Phone: (509)865-5121  
Email: Delano\_saluskin@yakima.com

## References Cited

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Johnson, Jack

- 2020 *FINAL Results of Archaeological Monitoring for the Kimberly-Clark Everett Interim Action*. Prepared by Perteet, Seattle. On file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

Rinck, Brandy

- 2013 *Cultural Resources Monitoring and Discovery Plan for the Kimberly-Clark Worldwide Site Upland Area, Everett, Snohomish County, Washington*. Prepared by SWCA Environmental Consultants/Northwest Archaeological Associates, Seattle. On file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

Rinck, Brandy, Sharon Boswell, and Johonna Shea

- 2013 *Archaeological Resources Assessment for the Kimberly-Clark Worldwide Site Upland Area, Everett, Snohomish County, Washington*. Prepared by SWCA Environmental Consultants/Northwest Archaeological Associates, Seattle. On file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

Scott, Emily, Alana Vidmar, and Shawn Fackler

- 2021 *Cultural Resources Assessment Report: ExxonMobil/ADC Property Proposed Remedial Excavation, Everett, Washington*. On file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

Udem, Cyrena

- 2014 *State of Washington Archaeological Isolate Inventory Form: 45SN00629*. Prepared by SWCA Environmental Consultants/Northwest Archaeological Associates, Seattle. On file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

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## About Cardno

Cardno is an ASX-200 professional infrastructure and environmental services company, with expertise in the development and improvement of physical and social infrastructure for communities around the world. Cardno's team includes leading professionals who plan, design, manage, and deliver sustainable projects and community programs. Cardno is an international company listed on the Australian Securities Exchange [ASX:CDD].

## Cardno Zero Harm

*Cardno*  
**ZERO  
HARM**  
EVERY JOB. EVERY DAY.

At Cardno, our primary concern is to develop and maintain safe and healthy conditions for anyone involved at our project worksites. We require full compliance with our Health and Safety Policy Manual and established work procedures and expect the same protocol from our subcontractors. We are committed to achieving our Zero Harm goal by continually improving our safety systems, education, and vigilance at the workplace and in the field.

Safety is a Cardno core value and through strong leadership and active employee participation, we seek to implement and reinforce these leading actions on every job, every day.

# **APPENDIX E**

## **Revised SEPA Checklist, dated May 30, 2023**





**Revised Proposed Remedial  
Excavation – SEPA Checklist**

ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington

May 30, 2023

Prepared for:

ExxonMobil Environmental and  
Property Solutions Company and  
American Distributing Company

Prepared by:

Stantec Consulting Services Inc  
720 Third Avenue, Suite 1500  
Seattle, Washington 98104  
USA  
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Project: 238000337

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## ABBREVIATIONS

ADC	American Distributing Company
bgs	below ground surface
BMPs	Best Management Practices
BNSF	BNSF Railway Company
CAP	Cleanup Action Plan
CFR	Code of Federal Regulations
COCs	contaminants of concerns
CSO	combined sewer outflow
CSTO	California Street Overcrossing
Ecology Site	Ecology recognized ExxonMobil ADC Site
Ecology	Washington State Department of Ecology
ESA	Endangered Species Act
Everett	City of Everett
ExxonMobil	ExxonMobil Environmental and Property Solutions
GPR	ground penetrating radar
Kimberly-Clark	Kimberly-Clark Corporation
LNAPL	light non-aqueous phase liquid
MIDP	Monitoring and Inadvertent Discovery Plan
MTCA	Model Toxics Control Act
N/A	Not applicable
Port Property	Port of Everett
Project	ExxonMobil ADC Cleanup Action Plan
RCW	Revised Code of Washington
SOI	Secretary of the Interior
Stantec	Stantec Consulting Services Inc.
SWMMWW	Stormwater Management Manual for Western Washington
UDWP	Urban Deepwater Port
WAC	Washington Administrative Code



A Background

## A. Background

**1. Name of proposed project, if applicable:**

ExxonMobil ADC Cleanup Action Plan (Project)

**2. Name of applicant:**

ExxonMobil Environmental and Property Solutions (ExxonMobil), American Distributing Company (ADC)

**3. Address and phone number of applicant and contact person:**

Jeff Johnson  
ExxonMobil Environmental and Property Solutions Company  
25915 South Frontage Road  
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(815) 860-7290

Steve Miller  
American Distributing Company  
13618 45th Avenue Northeast  
Marysville, Washington 98271  
(360) 658-375

**4. Date checklist prepared:**

May 30, 2023

**5. Agency requesting checklist:**

Washington State Department of Ecology (Ecology)

**6. Proposed timing or schedule (including phasing, if applicable):**

Phase 1 excavation west of Federal Avenue: August 2022 to March 2023 (completed as part of Interim Action Plan).

Phase 2 excavation east of Federal Avenue: September 2023 to September 2024.

Soil and Groundwater monitoring: ongoing, until cleanup levels are achieved.

**7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.**

No.



A Background

**8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.**

Since 1985, various consultants have conducted environmental investigations to characterize the nature and extent of contaminants of concerns (COCs) in soil and groundwater at the Ecology recognized ExxonMobil ADC Site (Ecology Site). The Ecology Site is defined as the ExxonMobil and ADC-owned properties (ExxonMobil ADC Property), located at 2717 and 2731 Federal Avenue, Everett, Washington (Figure 1), and the surrounding rights-of-way and properties, including the Port of Everett (Port Property), located at 2730 Federal Avenue, Everett, Washington. The investigations and reports related to the remedial excavation activities proposed in the draft Cleanup Action Plan (CAP) (submitted to Ecology in July 2023) are provided in Appendix A.

**9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.**

The remedial excavation and associated cleanup activities are exempt from the procedural requirements of local, state, and federal permits and approvals because they will be performed under a Washington State Model Toxics Control Act (MTCA) Agreed Order.

**10. List any government approvals or permits that will be needed for your proposal, if known.**

The remedial excavation and associated cleanup activities actions will be conducted under the Agreed Order. Pursuant to Washington Administrative Code (WAC) 173-340-710(9), the Project will comply with the substantive requirements of the following state laws, however it is exempt from their procedural requirements:

- Washington State Clean Air Act (70.94 Revised Code of Washington [RCW])
- Solid Waste Management Act (70.95 RCW)
- Hazardous Waste Management Act (70.105 RCW)
- Construction Projects in State Waters (75.20 RCW)
- Shoreline Management Act (90.58 RCW)
- City of Everett (Everett) laws regarding excavation, shoring, dewatering, and erosion control

The procedural exemption is not applicable if Ecology determines the exemption would result in loss of approval from a federal agency for the agency to administer federal laws.

**11. Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)**

The Ecology Site boundary is 3.37 acres, encompassing private property to the east of Federal Avenue, and Port Property to the west of Federal Avenue (Figure 2). The Ecology Site consists of a paved parking lot; portions of Federal Avenue, the Terminal Avenue Overpass, and the former Everett Avenue; and portions of Everett Ship Repair and Dunlap Towing. Historical releases of petroleum products have been documented at the Ecology Site



## A Background

due to former operation of bulk petroleum storage, transfer, and distribution facilities on the Ecology Site and operations of other companies on nearby parcels. The proposed Project is to cleanup soil and groundwater at the Ecology Site that is impacted by light non-aqueous phase liquid (LNAPL) and/or residual LNAPL saturation.

Proposed cleanup activities include excavation of impacted soils in two areas; on the west side of Federal Avenue on Port Property (completed March 2023), and on the east side of Federal Avenue on ADC, ExxonMobil, and BNSF Railway Company (BNSF) property (the Project Areas, see Figure 3 and Figure 4). Groundwater monitoring of the Ecology Site will also occur. Due to the shallow water table in the Project Area, water management during the excavation, including limited dewatering, may be necessary. Soil will be removed using dredging methodology with a bucket, which will facilitate excavation below the water table and minimize the need for dewatering. Any wastewater generated during dewatering will be treated and discharged to a City of Everett-approved discharge point. Impacted soil will be transported offsite by truck to a permitted landfill facility for final disposal. The soils beneath Federal Avenue will not be excavated, and the street will remain open during cleanup activities.

A low permeability barrier wall will be constructed along the excavation sidewall on the western side of Federal Avenue. The barrier wall will limit LNAPL migration following the remedial excavation on the Port Property. After excavation has been completed, a shoring will be removed, and the area will be backfilled, regraded to preexisting contours, repaved, and restored to existing uses. A groundwater monitoring program will be conducted to monitor natural degradation of groundwater COCs by natural processes in the areas below Federal Avenue, and otherwise inaccessible to excavation.

- 12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the Site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.**

The Ecology Site is located at 2717/2731 Federal Avenue in Everett, Washington (Township 29 North, Range 5 East, Section 19). The Ecology Site location boundaries are shown in Figures 1 and 2.

The Ecology Site is defined as the ExxonMobil and ADC properties, and the surrounding rights-of-way and properties that were affected by the migration of hydrocarbons in soil and groundwater.





## B. Environmental Elements

### 1. EARTH

**a. General description of the Site:**

The Ecology Site is graded, generally flat, and paved; with the exception of smaller graveled areas, and some ruderal vegetation growing along a fence-line.

**b. What is the steepest slope on the Site (approximate percent slope)?**

The area is flat. Prior to development it sloped gently to the west toward Port Gardner Bay.

**c. What general types of soils are found on the Site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.**

According to historical aerial photography most of the proposed remedial excavation area was infilled during shoreline expansion efforts between 1914 and 1947. Based on previous subsurface investigations conducted at the Ecology Site and surrounding vicinity, the near-surface soils consist of a heterogeneous mixture of fill materials. The fill materials consist of very loose to medium dense, brown, brownish gray, and gray silty sand and sand with areas of wood and concrete debris extending to depths of approximately 5 to 10 feet below ground surface (bgs). Gray silty sand and silt and dark-brown to black peat mixed with wood debris are encountered beneath the shallow fill and extend up to 20 to 27 feet bgs (Wood, 2019; Cardno, 2020a; 2020b).

**d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.**

The area immediately east of the Ecology Site, across Terminal Ave, is classified as a landslide hazard, and the Terminal Ave Overpass on the southeast corner of the Ecology Site is classified as an erosion hazard. See Section 8(h) for additional detail.

**e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.**

The total remedial excavation footprint of both areas is 1.40 acres. On the west side of Federal Avenue, 0.46 acre was already excavated, and the proposed footprint of the area that is left to be excavated on the east side of Federal Avenue is 0.94 acre. The Project Area is entirely within the Ecology Site boundary and will exclude the Federal Avenue right-of-way (Figures 3 and 4). Approximately 25,000 cubic yards (41,250 tons) of impacted soil will be excavated from the Project Area in total. Excavation of the west side had 7,500 cubic yards (12,375 tons) of soil removed, and it is proposed that 17,500 cubic yards (28,875 tons) will be excavated from the east side. Impacted soils will be disposed of offsite at a permitted location. Once excavation is complete, the excavated areas will be backfilled with clean granular fill material suitable for compaction and repaved. Areas



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within Port Property will be backfilled and restored according to specifications in an agreement with the Port of Everett.

**f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.**

Erosion may occur within the footprint of the excavation and soil stockpiles could erode.

**g. About what percent of the Site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?**

100 percent

**h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:**

Best Management Practices (BMPs) will be implemented to reduce erosion associated with the remediation activities. BMPs that will be implemented include silt fencing, erosion control straw wattles, sediment traps, sloping, shoring, covering stockpiles, maintaining construction entrances with coarse gravel, and preventing vehicles from driving across non-maintained surfaces. These BMPs will be implemented throughout the duration of the remedial activities, and work will be conducted in compliance with City of Everett erosion control requirements.

**2. AIR**

**a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.**

Onsite emissions would be associated with operation of personnel vehicles and diesel-fueled construction equipment during shoring installation/removal, soil removal, backfill, paving, and ongoing monitoring efforts. Equipment will include excavators, cranes, dump trucks with trailers, a shoring pile drill rig, paving equipment, and various mechanical tools. Offsite emissions would be associated with transportation of impacted soils by truck and rail to an approved disposal facility and import of clean backfill material.

**b. Are there any offsite sources of emissions or odor that may affect your proposal? If so, generally describe.**

No.

**c. Proposed measures to reduce or control emissions or other impacts to air, if any:**

None.



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**3. WATER**

**a. Surface Water**

1. *Is there any surface water body on or in the immediate vicinity of the Site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.*

The shoreline of Port Gardner Bay is approximately 300 feet northwest of the Ecology Site.

2. *Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.*

No.

3. *Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the Ecology Site that would be affected. Indicate the source of fill material.*

None.

4. *Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.*

No.

5. *Does the proposal lie within a 100-year floodplain? If so, note location on the Ecology Site plan.*

No.

6. *Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.*

No.

**b. Ground Water**

1. *Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.*

Impacted soils to be excavated are located below the water table. During previous Ecology Site investigations, groundwater was observed at depths in the 5-foot bgs range to the south, and 15-foot bgs range to the north (Cardno 2020a, 2020b). During remedial excavation some dewatering may be required; the approximate dewatering requirements are unknown. Wastewater disposal is addressed in Section 3(c). No groundwater will be withdrawn for drinking water purposes.



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2. *Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.*

None.

**c. Water Runoff (Including Stormwater)**

1. *Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.*

Surface water drainage is controlled largely by surface topography and engineered drainage structures. Stormwater generally flows to the west and northwest, following the surface slope, toward catch basins located on the Ecology Site and on Federal Avenue directly west of the Ecology Site. Storm sewers serving the vicinity discharge to Port Gardner Bay via the storm sewer discharge located near the northwest corner of the Port Property leased by Dunlap Towing. Some surface water may flow north toward the former Kimberly-Clark Corporation (Kimberly-Clark) property, which is now owned by the Port of Everett, and south from the Ecology Site to the City of Everett parcel (Wood, 2019).

2. *Could waste materials enter ground or surface waters? If so, generally describe.*

Impacted soils will be placed directly into dump trucks and hauled offsite. Temporary stockpiling of soil may be necessary prior to removal offsite. Stockpiles would be placed on plastic sheeting, stabilized, and covered to avoid any potential impacts to groundwater or surface water.

3. *Does the proposal alter or otherwise affect drainage patterns in the vicinity of the Site? If so, describe.*

No. The Project Area will be regraded and repaved to existing conditions.

4. *Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:*

Erosion and sediment control BMPs consistent with Ecology's current Stormwater Management Manual for Western Washington (SWMMWW) will be used during the excavation to prevent impacts to stormwater. A temporary erosion and sediment control plan will be prepared to prevent sediment, debris, and sediment-laden water from leaving the Project Area, entering adjacent surface streets, storm drains, and the Puget Sound. Proposed temporary erosion and sediment control elements will include the following:

- Use of silt/filter fabric fences, straw bales, straw wattles, storm drain inlet protection, catch basin silt barriers and/or similar BMPs.
- Diversion BMPs to prevent offsite stormwater from entering the excavation area.



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- Implementation of BMPs at the construction entrance/exit and internal haul routes to minimize the tracking of soil onto the adjacent surface streets.
- Street sweeping and/or street cleaning, as necessary, to remove soil tracked onto the adjacent surface streets.
- Implementation of stockpile BMPs.

Any wastewater generated during dewatering activities will be properly managed under a City of Everett-approved permit, and in compliance with the City's Industrial Pretreatment Ordinance #3070-08, as amended. Wastewater will be discharged at an approved flow rate to the permit-specified discharge point. Routine samples will be collected of the wastewater to confirm that it is compliant with the applicable discharge levels for contaminants. All wastewater discharge data from the Project (e.g., sample data, discharge events, and total volume discharged) will be recorded.

A low permeability barrier wall will be constructed in a north to south trending direction against the excavation wall along the western side of Federal Avenue. The barrier wall will be designed limit migration onto Port Property following the remedial excavation.

## 4. PLANTS

### a. Check the types of vegetation found on the Site:

- deciduous tree: alder, maple, aspen, other
- evergreen tree: fir, cedar, pine, other
- shrubs
- grass
- pasture
- crop or grain
- orchards, vineyards or other permanent crops.
- wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
- water plants: water lily, eelgrass, milfoil, other
- other types of vegetation



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**b. What kind and amount of vegetation will be removed or altered?**

None. The small area with perennial grasses and noxious weeds will not be excavated or otherwise disturbed.

**c. List threatened and endangered species known to be on or near the Site.**

None. The entire Ecology Site is graded and developed. No functional native plant habitat occurs on the Ecology Site.

**d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the Site, if any:**

None.

**e. List all noxious weeds and invasive species known to be on or near the Site.**

- Class B: butterfly bush (*Buddleja davidii*)
- Class C: Himalayan blackberry (*Rubus bifrons*)

**5. ANIMALS**

**a. List any birds and other animals which have been observed on or near the Site or are known to be on or near the Site.**

The Port Property is located near the marine shoreline in the Snohomish River basin, in an area zoned for heavy industrial use. No wetlands, streams, shorelines, floodplains, or functional wildlife habitat occur on the Ecology Site. Nearby environmentally sensitive areas include Port Gardner Bay and the Snohomish River. The shoreline nearest the Ecology Site is deepwater that has been heavily modified by dredging, filling, and shoreline development; there is limited subtidal and intertidal habitat (Wood, 2019). Common wildlife species known to occur in urban/heavily industrial areas may be present onsite.

**b. List any threatened and endangered species known to be on or near the Site.**

No threatened and endangered animal species would occur at the Ecology Site. Species listed under the Endangered Species Act (ESA) and Washington State Priority Species that may be present in Port Gardner Bay are detailed in Wood's *Site characterization/focused feasibility study report*, dated August 23, 2019, for the Ecology Site (Wood, 2019).

**c. Is the Site part of a migration route? If so, explain.**

No.

**d. Proposed measures to preserve or enhance wildlife, if any:**

Not applicable (N/A).

**e. List any invasive animal species known to be on or near the Site.**

None.



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## 6. ENERGY AND NATURAL RESOURCES

- a. **What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.**

N/A.

- b. **Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.**

No.

- c. **What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:**

N/A

## 7. ENVIRONMENTAL HEALTH

- a. **Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.**

1. *Describe any known or possible contamination at the Site from present or past uses.*

The Ecology Site historically operated as a bulk petroleum storage, transfer, and distribution facility. Additional potential sources of contaminants of concern includes releases from the former rail loading racks located east of the ExxonMobil ADC Property, underneath the current Terminal Avenue Overpass (Stantec, 2023) investigations have been conducted to characterize the Ecology Site soil and groundwater contamination. The COCs known to occur at the Ecology Site include:

- TPHg (total petroleum hydrocarbons as gasoline)
- TPHd (total petroleum hydrocarbons as diesel)
- TPHmo (total petroleum hydrocarbons as motor oil)
- Benzene
- Ethylbenzene
- Total Xylenes
- Total cPAHs (carcinogenic polycyclic aromatic hydrocarbons)
- 1-Methylnaphthalene (Wood, 2019)

2. *Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the Project Area and in the vicinity.*

No underground hazardous liquid and gas transmission pipelines are located on or below the Ecology Site.



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3. *Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.*

Vehicles and equipment used and stored onsite could have minor leaks (e.g., fuel, oil, hydraulic fluids, etc.).

4. *Describe special emergency services that might be required.*

None.

5. *Proposed measures to reduce or control environmental health hazards, if any:*

The purpose of the proposed Project is to cleanup and monitor environmental health hazards. Spill kits/absorbent cleanup materials will be available onsite and if used, disposed of properly.

### b. Noise

1. *What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?*

The Project is located within and adjacent to the Port of Everett, a heavy industrial use area. Noise from Port of Everett operations including heavy machinery use and noise associated with truck, ship, and rail traffic are present.

2. *What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the Site.*

Noise generated by vehicles and equipment during remedial excavation are compatible with the surrounding baseline noise levels that exist. Noise will be short-term: only lasting the duration of the shoring install and excavation. Larger equipment and vehicles will only operate in daylight hours, generally between 7 AM and 5 PM.

3. *Proposed measures to reduce or control noise impacts, if any:*

N/A.

## 8. LAND AND SHORELINE USE

- a. **What is the current use of the Site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.**

The Ecology Site includes an asphalt-paved parking lot and portions of former Everett Avenue, Federal Avenue, and Port properties just west of Federal Avenue. It also includes portions of the City of Everett rights-of-way east and south of the ExxonMobil ADC Property, a BNSF parcel, a BNSF railway corridor right-of-way east of the ExxonMobil ADC Property, and the land under the Terminal Avenue Overpass. The Ecology Site is adjoined by the following properties:





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- The former Kimberly-Clark property, now owned by the Port of Everett, is located immediately north at 2600 Federal Avenue. The Kimberly-Clark property was used for several decades for wood and paper products manufacturing. It housed former bulk petroleum storage tanks and currently includes a warehouse near the southern end adjacent to the ExxonMobil ADC Property. Most of the former paper manufacturing facility was demolished in 2012 (Wood, 2019).
- A City of Everett right-of-way is located immediately east of the Ecology Site. The City of Everett right-of-way is currently paved with asphalt and is otherwise unoccupied.
- Another City of Everett right-of-way is located immediately south of the Ecology Site. This right-of-way was formerly part of the ExxonMobil parcel but was transferred to the City of Everett as part of the Terminal Avenue Overpass project (Wood, 2019). This right-of-way is currently paved with asphalt and is otherwise unoccupied.
- Federal Avenue is located immediately east of the Port Property. Federal Avenue is a public street and a City of Everett utility corridor.

**b. Has the project site been used as working farmlands or working forest lands? If so, describe how much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?**

No.

1. *Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:*

No.

**c. Describe any structures on the Site.**

A wheeled-trailer used by Everett Ship Repair as an administrative office is currently located on the northwest corner of the Ecology Site. It was temporarily relocated during remedial excavation activities.

**d. Will any structures be demolished? If so, what?**

No.

**e. What is the current zoning classification of the Site?**

The Ecology Site is zoned M-2 Heavy Manufacturing land use by the City of Everett.

**f. What is the current comprehensive plan designation of the Site?**

The City's comprehensive plan shows the Ecology Site as E.5.1 Heavy Industrial land use.



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**g. If applicable, what is the current shoreline master program designation of the Site?**

The northwest corner of the Ecology Site is located within or immediately adjacent to an area designated as Urban Deepwater Port (UDWP) in the City of Everett's Shoreline Master Program (City of Everett, 2019).

**h. Has any part of the Site been classified as a critical area by the City or County? If so, specify.**

The portion of the Ecology Site with the Terminal Ave Overpass is classified as a Critical Area Erosion Hazard with Very High/Severe Slopes of greater than 40% in Qva and Qal geologic units (City of Everett, 2006a).

The area immediately east of the Ecology Site across Terminal Ave is classified as a Critical Area Landslide Hazard, with Medium Slopes <15% for Qtb, Qw, and Qls geologic units and uncontrolled fill Slopes of 25% to 40% in "other" geologic units (City of Everett, 2006b).

**i. Approximately how many people would reside or work in the completed project?**

Upon completion of the Port Property portion of the Project, the wheeled trailer used by Everett Ship Repair as an administrative office was returned to the Ecology Site for use.

**j. Approximately how many people would the completed project displace?**

None.

**k. Proposed measures to avoid or reduce displacement impacts, if any:**

N/A.

**l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:**

The Project is compatible with existing and future land uses and plans. The Ecology Site will likely continue as heavy industrial or commercial use for the foreseeable future. The City of Everett M-2 zoning allows for a mix of commercial and industrial uses at the Ecology Site, and specifically prohibits residential use and daycare facilities. Use of the Ecology Site for parks is allowed. The Ecology Site owners anticipate that institutional controls will be established, limiting use of the Ecology Site to industrial/commercial purposes. If future redevelopment requires installation of utilities or new structures, this may require implementation of passive or active vapor intrusion protection measures (Wood, 2019).

**m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:**

N/A.



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**9. HOUSING**

- a. **Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.**  
None.
- b. **Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.**  
None.
- c. **Proposed measures to reduce or control housing impacts, if any:**  
None.

**10. AESTHETICS**

- a. **What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?**  
No structures are proposed as part of the Project.
- b. **What views in the immediate vicinity would be altered or obstructed?**  
None.
- c. **Proposed measures to reduce or control aesthetic impacts, if any:**  
N/A

**11. LIGHT AND GLARE**

- a. **What type of light or glare will the proposal produce? What time of day would it mainly occur?**  
Work outside of daylight hours will require overhead lighting. Light and glare from vehicles and equipment during the excavation and groundwater monitoring activities are consistent with existing sources of light and glare in the area.
- b. **Could light or glare from the finished project be a safety hazard or interfere with views?**  
No.
- c. **What existing offsite sources of light or glare may affect your proposal?**  
None.
- d. **Proposed measures to reduce or control light and glare impacts, if any:**  
None.



## 12. RECREATION

**a. What designated and informal recreational opportunities are in the immediate vicinity?**

The parking area along Terminal Avenue for the Pigeon Creek Beach Trailhead is located approximately 300 feet south of the Ecology Site.

**b. Would the proposed project displace any existing recreational uses? If so, describe.**

No.

**c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:**

N/A.

## 13. HISTORIC AND CULTURAL PRESERVATION

**a. Are there any buildings, structures, or sites, located on or near the Site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.**

No permanent buildings, structures, or sites are within or immediately adjacent to the Project Area (defined as the boundaries of the Ecology Site). One archaeological resource (inventory ID: 45SN00629) was previously recorded approximately 0.07 mile north of the Project Area. The archaeological resource is a precontact isolated find identified within historic dredge material encountered beneath an asphalt-paved parking lot (Udem, 2014; Udem et al., 2014). Historically, the properties were the location of a mill situated at 2600 Federal Avenue (Boswell and Sharley, 2012). The single lithic artifact was recorded as an edge-altered basalt cobble with 13 multidirectional flake scars on one end.

The Kimberly-Clark Everett Mill Main Office located 0.09 mile north of the Project Area, was originally constructed in 1929 and consisted of a two-story Neoclassical rectangular structure with red brick cladding and low-pitched hipped roof. The building is recommended as eligible for listing in the National Register of Historic Places under Criterion A and listing in the Washington Heritage Register based on its historical association with the industrial development of the City of Everett (Sharley, 2012).

**b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the Site? Please list any professional studies conducted at the Site to identify such resources.**

The current Project Area contains no historic or precontact landmarks, features, or other evidence. Ethnographic place names within Everett list several near the mouth of the Snohomish River and for water resources near Everett; however, none of these



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ethnographic place names are located within or immediately adjacent to the Project Area (Watermann, 1922; Watermann et al., 2001):

- *ʔusʔusič* (Watermann orthography: *Os3a/s1tc*) translates to “chasing a fish here and there” near an estuary between Steamboat and Union Sloughs.
- *bəluʔəb* (Watermann orthography: *PE'ls1b*) translates to “boiling” for an area at the mouth of the main Snohomish River channel.
- *čik'wucid* (Watermann orthography: *Ctcqo'tsid*) translates to “that which chokes up the mouth of something” for a small island located on the north side of the Snohomish River mouth.
- *sexwčulalqw* (Watermann orthography: *SExwčulalkw*) is noted for a sharp point of land running toward the Ctcqo'tsid island.
- *hibu'əb* (Watermann orthography: *Hibu'ʔub*) translates to “place where water boils out of the ground” for a former village site south of the Snohomish River mouth.
- Watermann orthography: *SEqwsu'3ub* is noted for a small promontory with a slough that runs parallel to the shore.
- *sluluw#* (Watermann orthography: *SLu'luw1L*) translates to “little perforation for a canoe” for a narrow channel passing behind an island.
- *ʔuxwaʔ* (Watermann orthography: *tL'o'hwaL*) translates to “a cold spring” for a spot on the riverbank opposite Everett.

Historically, most of the Project Area consisted of tidelands and the waters of Port Gardner Bay (Sanborn, 1902). The Ecology Site resides within the land claim of Dennis Brigham, who began the homestead process at this location in 1861 (General Land Office, 1869; Oakley, 2005). “Squatters Shacks” populated the Ecology Site area east of the railroad. Between 1914 and 1950, extensive fill material expanded the usable ground surface west (Sanborn, 1914; 1950).

- c. **Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the Department of Archaeology and Historic Preservation, archaeological surveys, historic maps, GIS data, etc.**

The Archaeological Assessment which describes the methods used to assess the potential impacts to cultural and historic resources on or near the Project Area is appended to this checklist (Appendix B).

- d. **Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.**

A Monitoring and Inadvertent Discovery Plan (MIDP) will be utilized to minimize potential impacts to any currently unknown intact archaeological resources and that all Project-related ground-disturbing activities in native sediment be monitored. Monitoring is not recommended in glacial deposits and sediments, nor in existing areas where disturbance has already occurred. Monitoring will be conducted by a professional archaeologist who meets the Secretary of the Interior's (SOI's) professional qualifications standards (36



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Code of Federal Regulations [CFR] Part 61) for archaeology or by a qualified archaeologist supervised by a professional archaeologist who meets the SOI standards.

## 14. TRANSPORTATION

- a. Identify public streets and highways serving the Site or affected geographic area and describe proposed access to the existing street system. Show onsite plans, if any.**

The Ecology Site is accessible from Federal Avenue, via Terminal Avenue. Federal Avenue is a public 2-way paved street that crosses the Ecology Site and provides access to private and Port Property.

- b. Is the Site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?**

No. The nearest transit stop is located approximately 0.1 mile east of the Ecology Site at West Marine View Drive and California Street.

- c. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).**

No.

- d. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.**

The BNSF railroad right-of-way is located approximately 80 feet east of the Ecology Site, and the Hewitt Terminal and the Norton Terminal, with deepwater vessel access, is located approximately 300 feet west and 130 feet east of the Ecology Site, respectively.

- e. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?**

Excavation of both areas requires removal of approximately 42,900 tons of soil, and a single truck/trailer combo can haul approximately 15 tons per load. Excavation of the west side required the removal of 7,500 cubic yards (12,375 tons) of soil with approximately 830 truck trips, whereas excavation of the west side will require removal of 18,500 cubic yards (30,525 tons) of soil with approximately 2,050 truck trips.

Assuming the current schedule, an average of 75 vehicular trips per day would be generated by the Project, with a peak of 200 vehicle trips per day during the excavation and backfill activities during the Project. Peak volumes would occur during daytime hours, and 75 percent would be from commercial/nonpassenger vehicles hauling soil to and from the Ecology Site. This data is based on knowledge of similar projects, and approximate calculation of truck capacity. Loaded trucks will be covered to prevent dust and soils from escaping during transit.



B Environmental Elements

- f. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.**

No.

- g. Proposed measures to reduce or control transportation impacts, if any:**

No excavation within the Federal Avenue right-of-way will occur, and no significant impacts to transportation are anticipated. Federal Avenue currently serves Dunlap Towing, Everett Ship Repair, and the Port of Everett Norton Terminal. Prior to closure of the Kimberly-Clark mill just north of the Ecology Site, Federal Avenue experienced an average of 220 daily truck trips and 500 employee trips per day (Kimberly-Clark, 2012). The Project is being undertaken in collaboration with the Port, and access will be maintained for all Port tenants serviced by Federal Avenue. City of Everett traffic control requirements will be followed.

## 15. PUBLIC SERVICES

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.**

No.

- b. Proposed measures to reduce or control direct impacts on public services, if any.**

N/A.

## 16. UTILITIES

- a. Circle utilities currently available at the Site:**

Stormwater drainage lines are present beneath the Ecology Site. Underground stormwater, sanitary sewer, water, and telephone lines run beneath Federal Avenue and the adjoining former Kimberly-Clark property. The City of Everett's new 24-inch underground force main also runs beneath Federal Avenue and the former Kimberly-Clark property. An overhead power line runs along Federal Avenue and the former Kimberly-Clark property (Wood, 2019).

- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the Site or in the immediate vicinity which might be needed.**

N/A.



ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington

C Signature

## C. Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.



Signature: \_\_\_\_\_

Name of signee: Adele Pozzuto

Position and Agency/Organization: Senior Environmental Scientist, Stantec

Date Submitted: May 30, 2023





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ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington

#### D References

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Figures

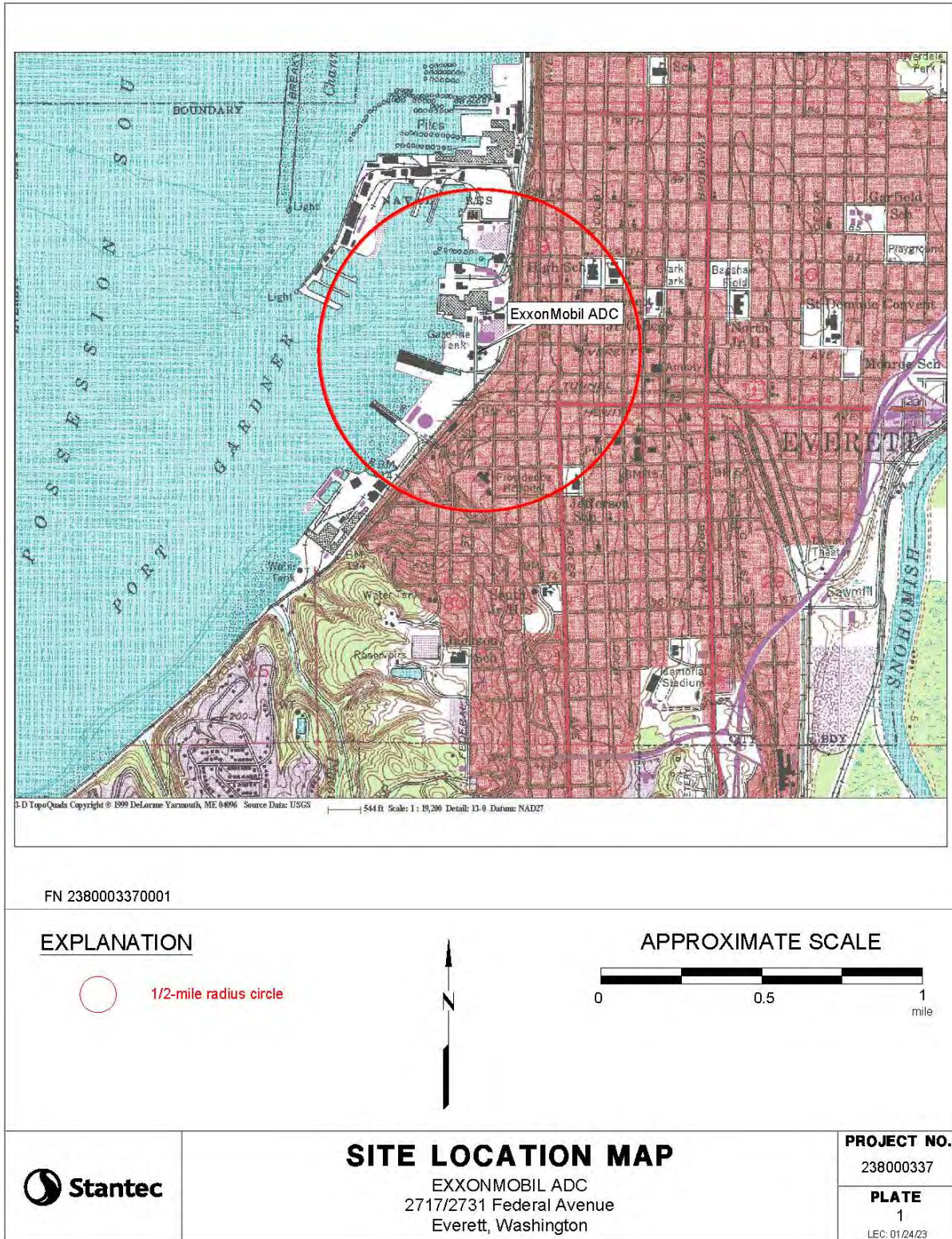


Figure 1 Site Location



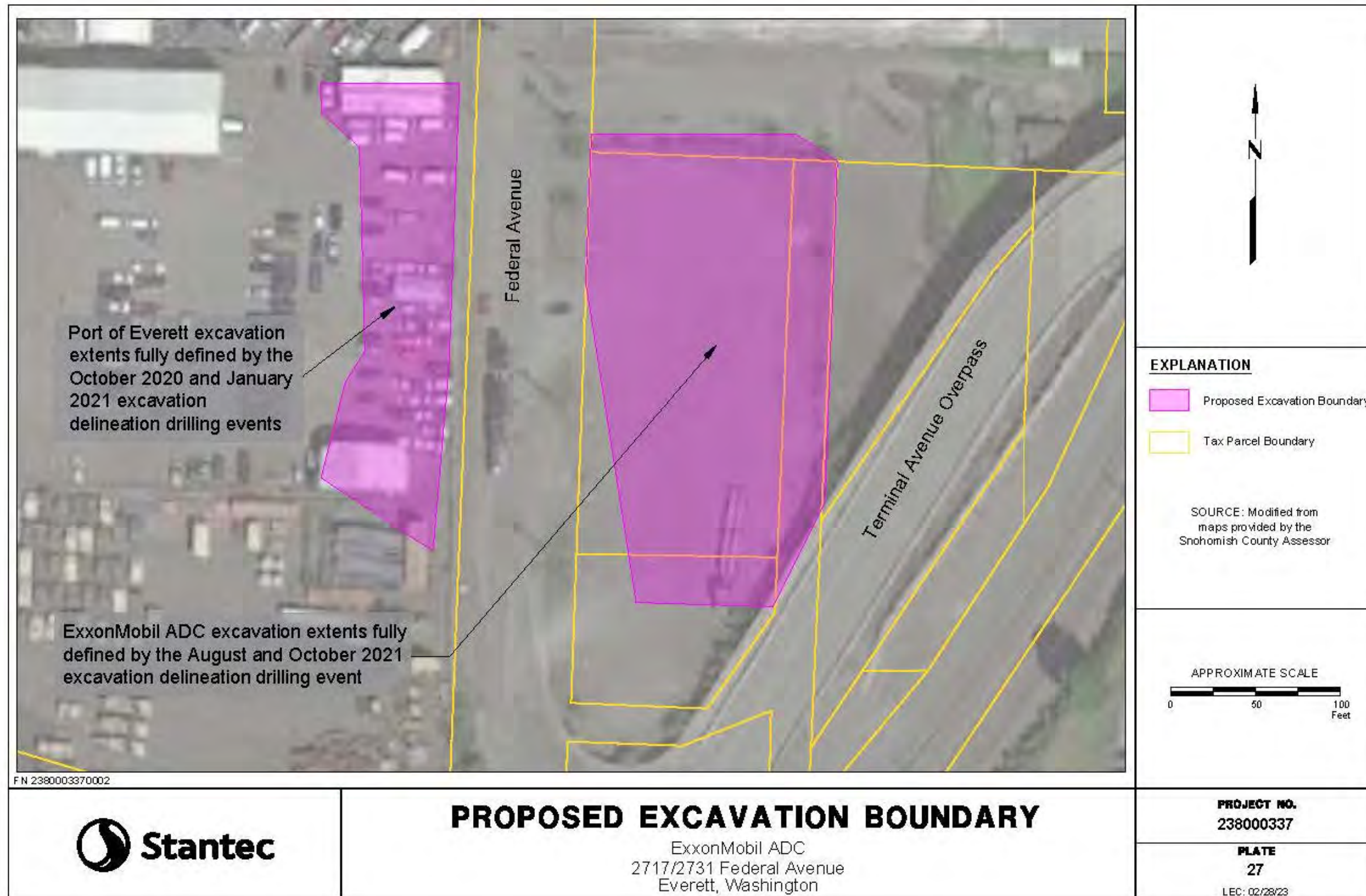


Figure 2 Site Boundary



Figures

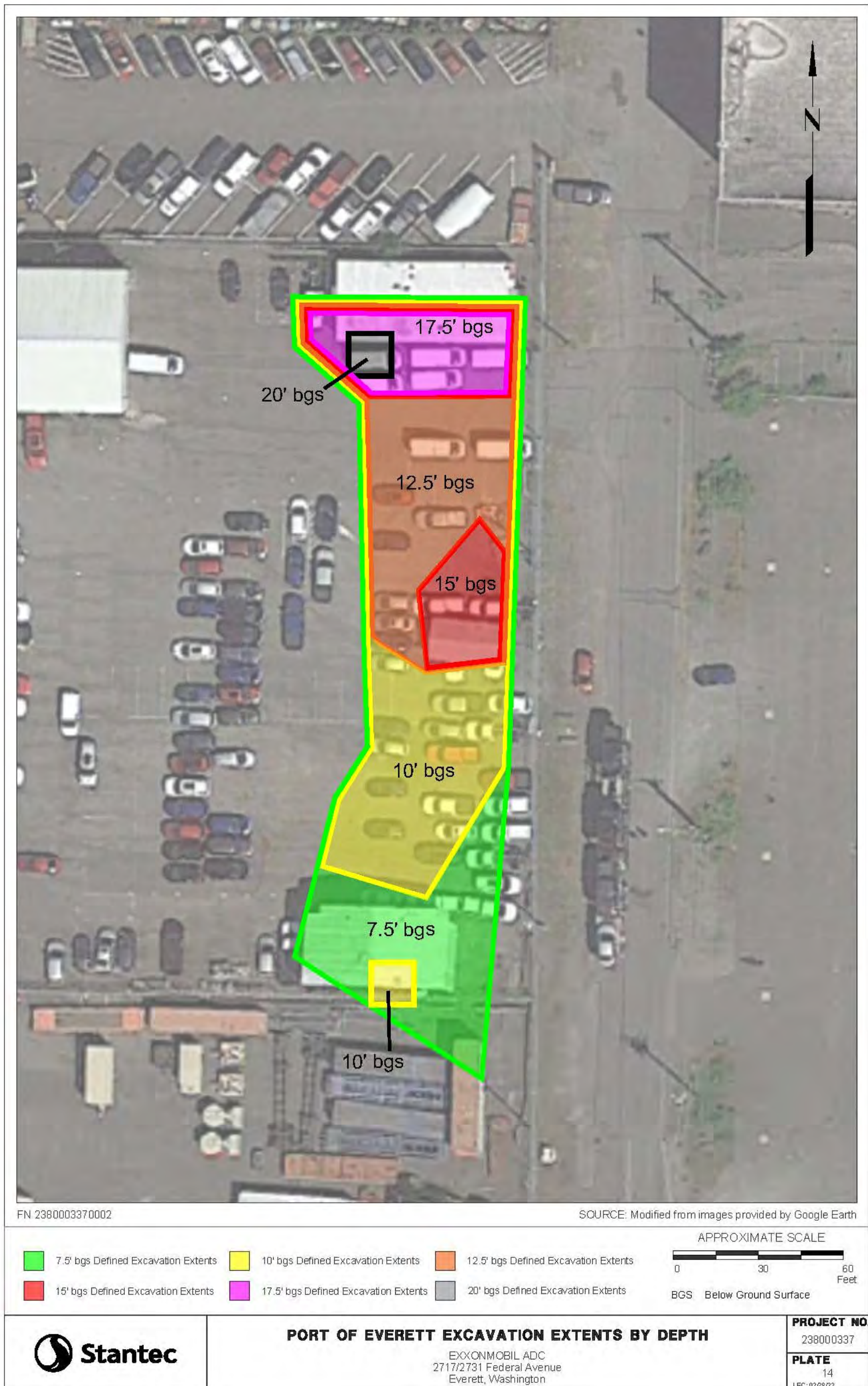


Figure 3 Proposed Excavation Extent on West Side of Federal Avenue



Figures

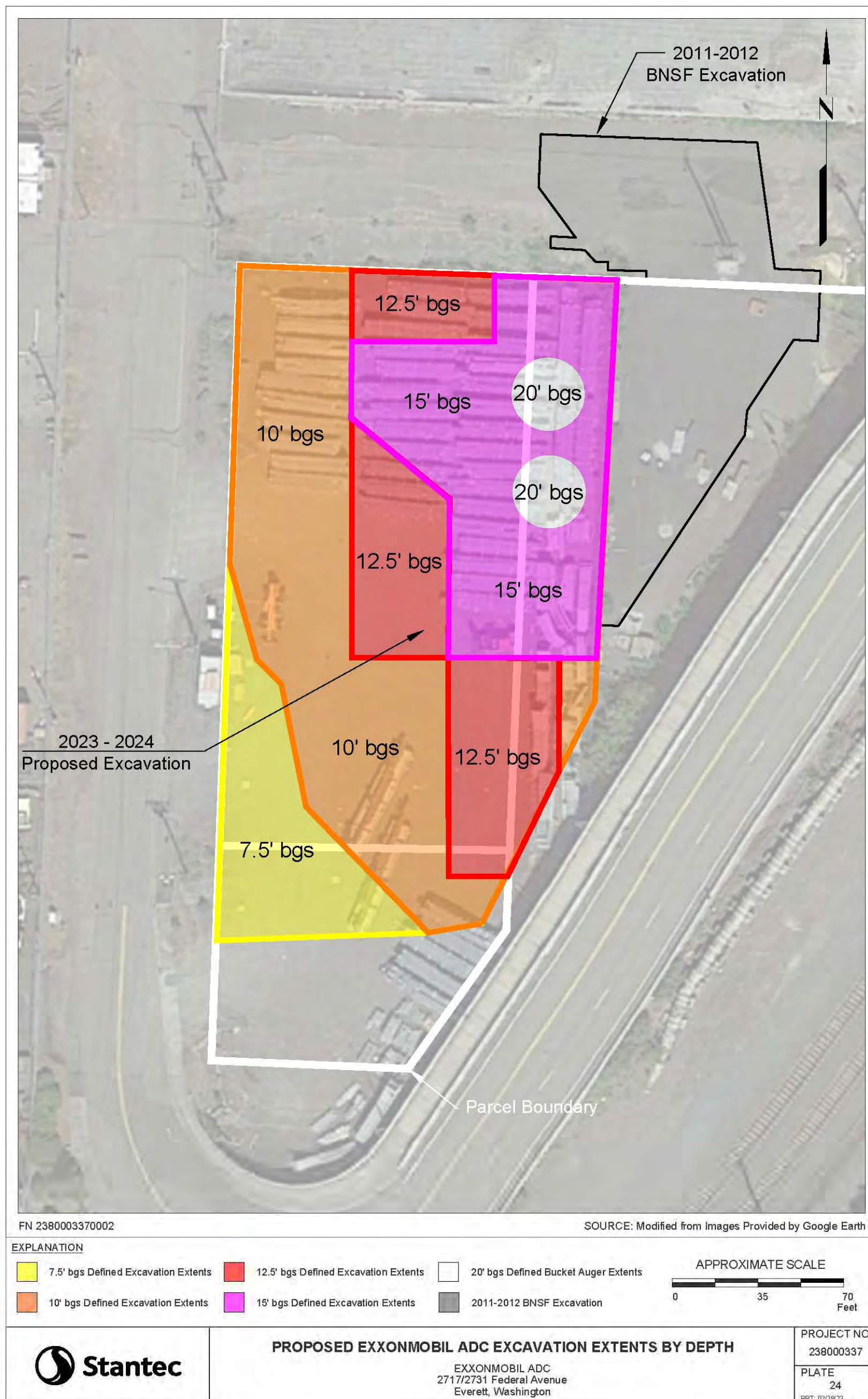


Figure 4 Proposed Excavation Extent on East Side of Federal Avenue



ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington

Appendix A

# **APPENDIX A**

## **List of Environmental Investigations and Reports**



Appendix A

**List of Environmental Investigations and Reports**

<b>Date</b>	<b>Consultant</b>	<b>Location</b>	<b>Report/Activities</b>	<b>Summary</b>
Jul-23 (estimated)	Stantec	Ecology Site	Agreed Order	A new Agreed Order will be negotiated with Ecology prior to remedial activities.
Jul-23 (estimated)	Stantec	Ecology Site	Draft Cleanup Action Plan (CAP)	The draft CAP describes the cleanup standards for the Ecology Site, the cleanup methods selected to achieve the cleanup standards, and the rationale for these decisions. Stantec submitted the draft CAP to Ecology in July 2023. The CAP will be finalized after public comment.
Jun-22 – Mar 23	Cardno and Stantec	Ecology Site	Port of Everett Excavation	Completed Port of Everett excavation located west of the ExxonMobil ADC property in accordance with the interim action work plan.
Jul-22	Cardno	Port of Everett	Engineering Design Report for Port of Everett Excavation	The Engineering Design Report documented technical specifications, plan sets, and engineering design drawings used to manage and implement the selected environmental remedy described in the Port of Everett interim action work Plan.
Jun-22	Cardno	Port of Everett	Interim Action Work Plan	Interim action plan submitted to Ecology to excavate the Site west of Federal Avenue (Port of Everett) pursuant to WAC 173-340-430.
Apr-22	Cardno	Ecology Site	Monitoring and Inadvertent Discovery Plan (MIDP)	Developed MIDP to minimize potential impacts to any currently unknown intact archaeological resources and ensure that all project-related ground-disturbing activities in native sediment be monitored.
Jan-22 – Jun-22	Strider	Federal Avenue	Federal Avenue Trenching	Soil samples collected during utility trenching and test pits conducted by the Port of Everett to characterize soil that will remain in place beneath the City of Everett right-of-way beneath and adjacent to Federal Avenue.
Dec-21	Cardno	Port of Everett	Conditional point of compliance well installation and well decommissioning	Conditional point of compliance well MW-A9 was installed and surveyed. Monitoring well MW-33 was decommissioned due to its location within the proposed Port of Everett excavation footprint.





Appendix A

Date	Consultant	Location	Report/Activities	Summary
Nov-21	Cardno	Ecology Site	Archaeological Assessment	The Archaeological Assessment was prepared to determine the probability for encountering archaeological resources during remedial excavation.
Aug-21 and Oct-21	Cardno	ExxonMobil ADC Property	Excavation delineation	A total of 74 soil borings were drilled on the ExxonMobil ADC Property and soil samples were analyzed to delineate areas exceeding remediation levels for future excavation. Two geotechnical borings were also advanced. Analytical results were used so that collection of sidewall and base soil samples during future excavation work is not necessary.
Oct-2020, Jan-2021, and Feb-2021	Cardno	Port of Everett	Excavation delineation	A total of 51 soil borings were drilled on the Port of Everett property and soil samples were analyzed to delineate areas exceeding remediation levels for future excavation. Two geotechnical borings were also advanced. Analytical results were used so that collection of sidewall and base soil samples during future excavation work is not necessary.
2019	Wood	Ecology Site	Site Characterization/ Focused Feasibility Study (SC/FFS)	SC/FFS identifies the recommended cleanup alternative for the Site. The study will be finalized after public comment.
2013 – 2014	AMEC	Ecology Site	Data gaps investigation	A total of 33 soil borings were drilled on the Property and nearby properties, and soil samples were analyzed to delineate areas of affected soil at the Ecology Site. One of the borings was completed as a monitoring well (MW-A8).
2012	AMEC	Federal Avenue and former Everett Avenue	Observations during City of Everett force main replacement	Observed excavation and drilling activities during installation of the City of Everett's force main and recorded notable subsurface features when relevant, including the presence of LNAPL if encountered.
2011	AMEC	Former Everett Avenue	Observations of seeps along former Everett Avenue	Photographs to document observations of petroleum product seeps through the pavement on former Everett Avenue.



Appendix A

Date	Consultant	Location	Report/Activities	Summary
2011	AMEC	Ecology Site	Tidal influence investigation	A stilling well with transducer was installed on the Everett Pier to automatically record tidal elevations. Pressure transducers/data loggers were installed in monitoring wells W-3, W-6, MW-11, MW-19, MW-28, MW-40R, and MW-A1 through MW-A7 to record groundwater levels every 6 minutes for 6 days.
2011	AMEC	Ecology Site	Data gaps investigation	Seven deep borings (AB-1 to AB-5, AP-6, MW-7ab), six shallow borings (AP-1 through AP-5, AP-7), five new monitoring wells (MW-A3 through MW-A7) located off of the ExxonMobil ADC Property, aquifer testing, and tidal influence study.
2010	AMEC	Ecology Site	Sampling for City of Everett Force Main	Borings CE-1 to CE-8 advanced on Federal Avenue, former Everett Avenue, and the BNSF property to characterize soils in the alignment of City of Everett's planned force main.
2010	Ecology	Ecology Site	Agreed Order DE 6184	Agreed Order requiring a FFS and development of a draft CAP to identify the nature and extent of hydrocarbons in soil and groundwater and select a preferred final interim action to remediate the Ecology Site
2010	AMEC	Ecology Site	Focused Feasibility Study Work Plan	Summarized the Ecology Site history, previous environmental investigations, and interim remedial activities, known environmental conditions, preliminary conceptual site model, and remaining data gaps.
Jun-08	AMEC	Ecology Site	Wellhead elevation survey	Surveyed recovery and monitoring wells located on the Ecology Site.
Feb-08	AMEC	Ecology Site	Tidal study	Measured tidal response in W-3, W-6, MW-11, MW-28, & MW-40R.
2008	AMEC	West of the ExxonMobil ADC Property	Monitoring well installation	Off-property monitoring wells MW-A1 and MW-A2 installed on the west side of Federal Avenue.
2007 – present	AMEC, Wood, Cardno, and Stantec	Ecology Site	Groundwater monitoring	AMEC requested to change to semiannual groundwater monitoring in 2007.



Appendix A

Date	Consultant	Location	Report/Activities	Summary
Feb-07	AMEC	Ecology Site	Video survey of storm drain system	Conducted a video survey of the storm drain system installed as part of 1999 interim measure to verify that groundwater from the ExxonMobil ADC Property was not infiltrating into the stormwater system through possible cracks and fissures in the piping and catch basins.
Jul-02	ERI	West of the ExxonMobil Parcel	Well decommissioning	Monitoring wells MW-20, MW-21, and one unidentified well were decommissioned.
2002 – 2007	Kleinfelder, ERI, and AMEC	Ecology Site	Groundwater monitoring	Monthly LNAPL gauging and quarterly groundwater monitoring.
2002	Reid Middleton	CSTO	Memorandum to Ecology	Southeast corner of the asphalt cap over the ExxonMobil Parcel removed. Steel piles for concrete foundation were installed.
Feb-02	ERI	Ecology Site and vicinity	Monitoring well decommissioning and reinstallation	Decommissioning of monitoring wells (MW-22, MW-23, MW-24, MW-35, and MW-37) and piezometer DM-6 due to proximity to the CSTO Project. Reinstalled well W-2 screened from 3 to 23 feet bgs.
Jul-01	URS	Johnston Petroleum parcel	Borings	Phase II investigation for Johnson Petroleum parcel. Push-probe borings JP-1 through JP-7.
Sep-00	URS	South, east, and southeast of the ExxonMobil ADC Property	Borings	Phase II investigation for the CSTO Project. Push-probe borings UG-1 through UG-12.
Dec-99	Dames and Moore and URS	South and southeast of the ExxonMobil ADC Property	Geotechnical drilling and piezometer installation	DM-6, DM-7, and DM-8 were sampled for environmental samples.
Oct-99	Kleinfelder	ExxonMobil ADC Property	Monitoring wells installation	Monitoring wells W-10R, W-15R, and MW-40R installed.
Jul-98	Exponent	Ecology Site	Final Interim Action Work Plan and Engineering Design Report	Exponent presented design for interim measures at the ExxonMobil ADC Property.



Appendix A

Date	Consultant	Location	Report/Activities	Summary
Jul-98	Exponent	Ecology Site	Remedial Investigation and Focused Feasibility Study	Exponent summarized the history of the ExxonMobil ADC Property and evaluated feasible remedial options for the Ecology Site.
Oct-98	Ecology	Ecology Site	Agreed Order DE98TC-P-N223	Agreed Order requiring the preparation of a Remedial Investigation/Focused Feasibility Study Report, Interim Action Work Plan, and the subsequent completion of the work described in the Interim Action Work Plan.
Nov-97 – Jan-98	Pacific Environmental Group, Inc.	Former Kimberly-Clark property	Borings, monitoring wells	Direct-push borings Probe-1 through Probe-15 were advanced, and 2-inch diameter monitoring wells KC-1 and KC-2 were installed inside the KC warehouse.
Feb-97	PTI	Ecology Site	LNAPL recovery technical memorandum	Technical memorandum to summarize environmental investigations, LNAPL recovery activities, and geology.
Aug-96	AGRA	Ecology Site	Monitoring wells	Gauged wells at the property.
Jun-96	AGRA	ADC Parcel	Borings, monitoring wells, and test pits	4-inch diameter recovery well VRW-1 and 2-inch diameter monitoring well MW-38 installed. Seven test pits TP-1-96 through TP-7-96 excavated.
May-96	AGRA	ADC Parcel	Borings	Bobcat borings BB-1 through BB-14.
Apr-96	City of Everett	North of the ExxonMobil ADC Property	Meeting	Meeting held to discuss options for repairing the section of CSO line.
Mar-96	AGRA	North of the ExxonMobil ADC Property	Borings	Direct-push soil borings GP-1 through GP-13. Borings associated with the CSO line repair.
Dec-95	RZA AGRA	Ecology Site	Groundwater monitoring	Groundwater monitoring event. Gauged wells: RW-2, B-2, MW-8, MW-9, MW-18, MW-15 through MW-18, MW-27, and MW-28.
Nov-95	RZA AGRA	Ecology Site	Groundwater monitoring	Groundwater monitoring event. Gauged wells: RW-1, RW-2, B-1, B-2, MW-6, MW-8 to MW-13, MW-15 to MW-18, MW-27 to MW-37, and NRW-1.
Oct-95	U.S. Coast Guard Puget Sound Marine Safety Office and City of Everett	North of the ExxonMobil ADC Property	Investigation of petroleum product discharge into Everett Harbor	Camera surveys of the sewer lines.



Appendix A

Date	Consultant	Location	Report/Activities	Summary
Jul-95	RZA AGRA	ADC Parcel	Quarterly groundwater monitoring	Groundwater monitoring event. Gauged wells: W-3, W-5, W-9, W-10, W-12 through W-15.
Apr-96	Ecology	Ecology Site	Agreed Order DE-95TC-N402	Agreed Order requiring cleanup, elimination, and/or containment of petroleum releases at and near the City of Everett's CSO.
Dec-93	RZA AGRA	West of ExxonMobil Parcel	Test pits, recovery trench	Excavated five test pits, TP-1 through TP-5, to depths ranging from 3 to 3.5 feet bgs. Recovery trench installed along the western border of ExxonMobil Parcel.
Dec-93	RZA AGRA	ExxonMobil Parcel and off-Property to the west	Quarterly groundwater monitoring	Groundwater monitoring event. Gauged wells B-1, B-2, MW-6, MW-8 through MW-13, MW-15 through MW-18, MW-27 through MW-33, MW-35 through MW-37.
Dec-93	RZA AGRA	West of ExxonMobil Parcel	Off-Property borings, monitoring well installation, GPR survey	2-inch diameter monitoring wells MW-31 through MW-33 and MW-35 through MW-37 were installed; B-34 advanced and backfilled. GPR survey was conducted to assess whether underground product lines had been removed.
1992	RZA AGRA	Ecology Site	Discussions with Ecology	Ecology discussed enforcement with Mobil and RZA AGRA. Ecology decided to allow Site to go independent.
Dec-91	RZA AGRA	ExxonMobil Parcel	Quarterly groundwater monitoring, aquifer, and tidal study	Quarterly groundwater monitoring. Gauged wells: RW-1, B-1, B-2, B-5, MW-6, MW-8 through MW-13, MW-15 through MW-30, and AD-19. Aquifer study involved 24-hour pumping from MW-10 at a rate of 1 to 2 gpm and measuring response in MW-18, RW-1, and RW-2 for 48 hours.
Nov-91	RZA AGRA	ExxonMobil Parcel	Borings, recovery well	8-inch diameter recovery well RW-2 installed. Deep soil borings B-1A, B-8A, and B-15A advanced.
Jun-91	RZA and ESE	ExxonMobil ADC Property	Quarterly groundwater monitoring	Groundwater monitoring event. 2-inch diameter monitoring wells MW-25 and MW-26 installed. Gauged wells: RW-1, B-1, B-2, B-5, MW-6, MW-8 through MW-13, MW-15 through MW-18, AD-19, W-1 through W-6, and W-8 through W-15.



Appendix A

Date	Consultant	Location	Report/Activities	Summary
Mar – Jun-91	RZA	Parcels surrounding ExxonMobil Parcel	Borings, monitoring well installation	Six percussion soil borings to depths ranging from 5 to 5.5 feet bgs. 2-inch diameter monitoring wells MW-19 through MW-24, and 4-inch diameter monitoring wells MW-27 through MW-30 installed. Soil boring B-21-91 advanced to depth of 29 feet bgs.
Nov-90	Unknown	ExxonMobil Parcel	Monitoring well decommissioning	B-3 (MW-3), B-4 (MW-4), and MW-7 decommissioned.
Oct-90	RZA	ExxonMobil Parcel	Shallow grid soil sampling, bio-feasibility study	Hand augers B-1 through B-25. Two soil samples were studied to conduct a slurry flask bio-feasibility study.
Jun-90	ESE	ADC Parcel	Hand-auger borings	Hand-auger borings W-8 through W-17 to depths of 6–10 feet.
Feb-90	ESE	ADC Parcel	Borings, monitoring well installation	Borings W-1 through W-7. 2-inch diameter monitoring wells W-1 through W-6 installed.
Jan-90	ESE	ADC Parcel	Borings	Hand augers AD-01 through AD-19 to depths ranging from 1 to 4.5 feet bgs.
Mar-88	RZA	ExxonMobil Parcel	Borings, monitoring well installation	2-inch diameter monitoring wells MW-6 through MW-18 installed.
May-85	RZA	ExxonMobil Parcel	Borings, monitoring well installation	2-inch diameter monitoring wells B-1 through B-5 (MW-1 through MW-5 in several reports) installed.

Source: Wood, 2019

Abbreviations:

ADC = American Distributing Company  
 AGRA = AGRA Earth & Environmental, Inc.  
 AMEC = AMEC Environment & Infrastructure, Inc.  
 bgs = below ground surface  
 BNSF = BNSF Railway Company  
 CAP = Cleanup Action Plan  
 CSO = combined sewer outflow  
 CSTO = California Street Overcrossing  
 Ecology = Washington State Department of Ecology  
 Ecology Site = Ecology recognized ExxonMobil ADC Site  
 ERI = Environmental Resolutions, Inc.  
 ESE = Environmental Science and Engineering, Inc.

FFS = Focused Feasibility Study  
 gpm = gallons per minute  
 GPR = ground penetrating radar  
 KC = Kimberly-Clark Corporation  
 Kleinfelder = Kleinfelder, Inc.  
 LNAPL = light non-aqueous phase liquid  
 MIDP = Monitoring and Inadvertent Discovery Plan  
 Mobil = ExxonMobil Oil Corporation  
 PTI = PTI Environmental Services  
 RZA = Rittenhouse-Zeman & Associates, Inc.  
 RZA AGRA = RZA AGRA Earth & Environmental, Inc.  
 SC/FFS = Site Characterization/ Focused Feasibility Study



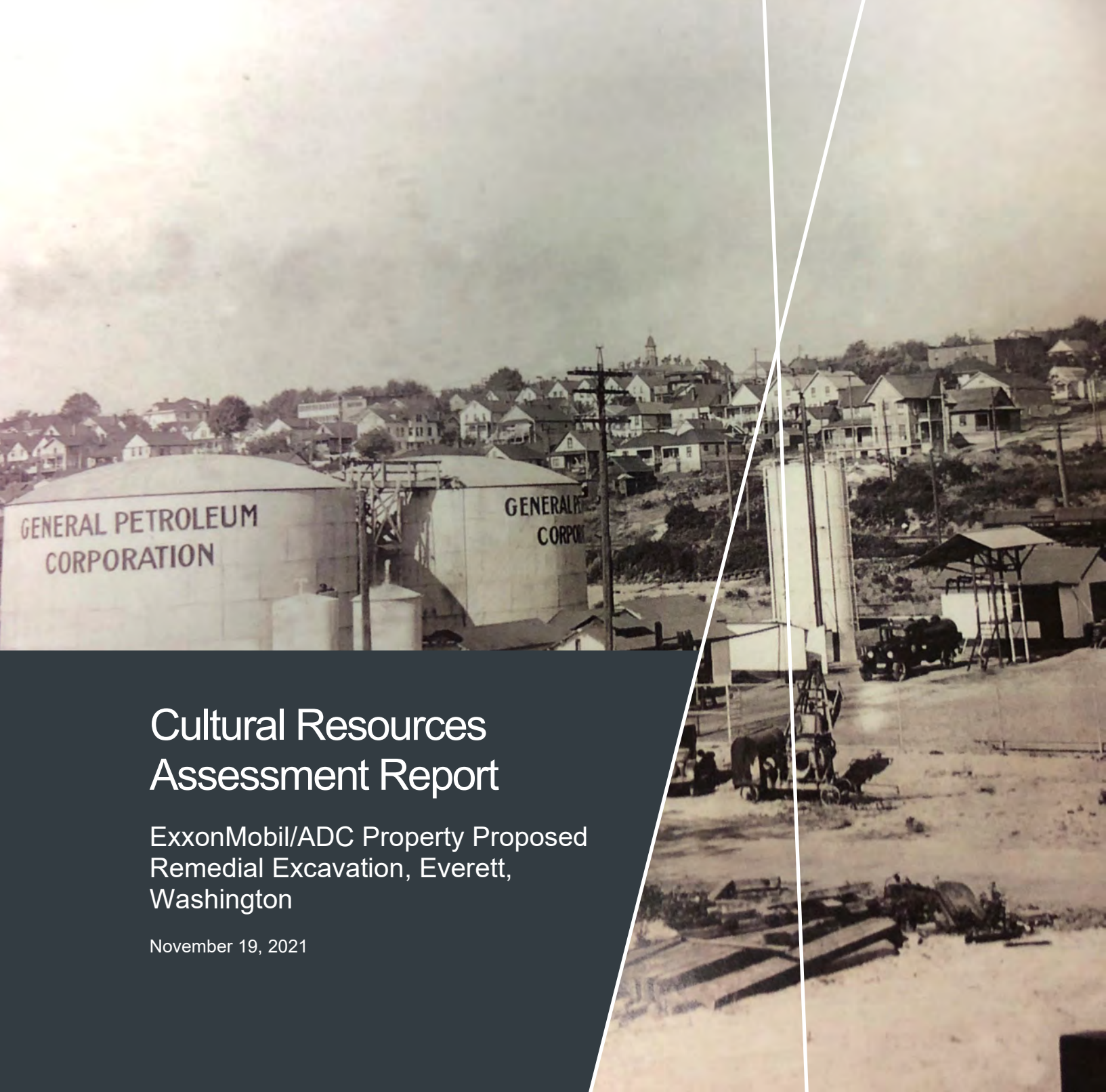
ExxonMobil ADC  
2717/2731 Federal Avenue  
Everett, Washington  
ExxonMobil Environmental and Property Solutions Company and American Distributing Company

Appendix B

# **APPENDIX B**

## **Archaeological Assessment**





# Cultural Resources Assessment Report

ExxonMobil/ADC Property Proposed  
Remedial Excavation, Everett,  
Washington

November 19, 2021



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and

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Project Name Cultural Resources Assessment  
Report  
ExxonMobil/ADC Property  
Proposed Remedial Excavation,  
Everett, Washington  
Job Reference 0314476040  
Version Number 1.0  
Date November 19, 2021

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# Executive Summary

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Cardno, Inc. (Cardno) conducted a cultural resources assessment for the proposed ExxonMobil/American Distributing Company (ADC) project in Everett, Washington. The project proposed to cleanup soil and groundwater impacted by light non-aqueous phase liquid (LNAPL) and/or residual LNAPL saturation. Historical releases of petroleum products have been documented within the project area due to former operations of bulk petroleum storage, transfer, and distribution facilities and operations of other similar companies on nearby parcels. The project area is currently developed with a paved parking lot.

Results of the cultural resources assessment for the project area indicate a high level of human activity took place adjacent to the project area during precontact and historic times. Given the history of the project area and its immediate vicinity, Cardno concludes that the potential for encountering subsurface archaeological deposits beneath the historic fill layers is moderate to high. Cardno recommends that a monitoring and inadvertent discovery plan (MIDP) be implemented to minimize potential impacts to any currently unknown intact archaeological resources.

## 1.0 Introduction

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Cardno, Inc. (Cardno) conducted a cultural resources assessment for the proposed ExxonMobil/American Distributing Company (ADC) project in Everett, Washington (Figure 1). This project is listed by the Washington State Department of Ecology (Ecology) as Cleanup Site 5182. Historical releases of petroleum products have been documented within the project area due to former operations of bulk petroleum storage, transfer, and distribution facilities and operations of other similar companies on nearby parcels. The purpose of the project is to cleanup soil and groundwater impacted by light non-aqueous phase liquid (LNAPL) and/or residual LNAPL saturation. Proposed cleanup activities include installation of shoring walls, and excavation of impacted soils. Following excavation of contaminated soils, the project area will be backfilled, re-graded to preexisting contours, removal of shoring walls, and repaved.

The project area consists of 3.48 acres that are comprised of several tax parcels and portions of the City of Everett's (City) Right-of-Way (ROW). Parcel information is provided below (Table 1; Figure 2). Currently, the project area consists of a paved parking lot with no extant structures or buildings (Figure 3).

The cultural resources assessment consisted of a literature review of existing cultural resource records for previously recorded historic, ethnohistoric, and precontact archaeological and built environment resources; a review of any local, state, and national register nomination forms; a review of previously conducted cultural resources investigations; and a review of any known or potential Traditional Cultural Properties (TCPs) located within 1.0 mile (1.6 kilometer [km]) of the project area. This research included a records search at the Department of Archaeology and Historic Preservation's (DAHP's) Washington Information System for Architectural and Archaeological Records Data (WISAARD) database. Additional resources that were consulted include historic-era aerial photographs, U.S. Geological Survey (USGS) maps, General Land Office (GLO) maps, Snohomish County atlases, and Sanborn Fire Insurance Maps.

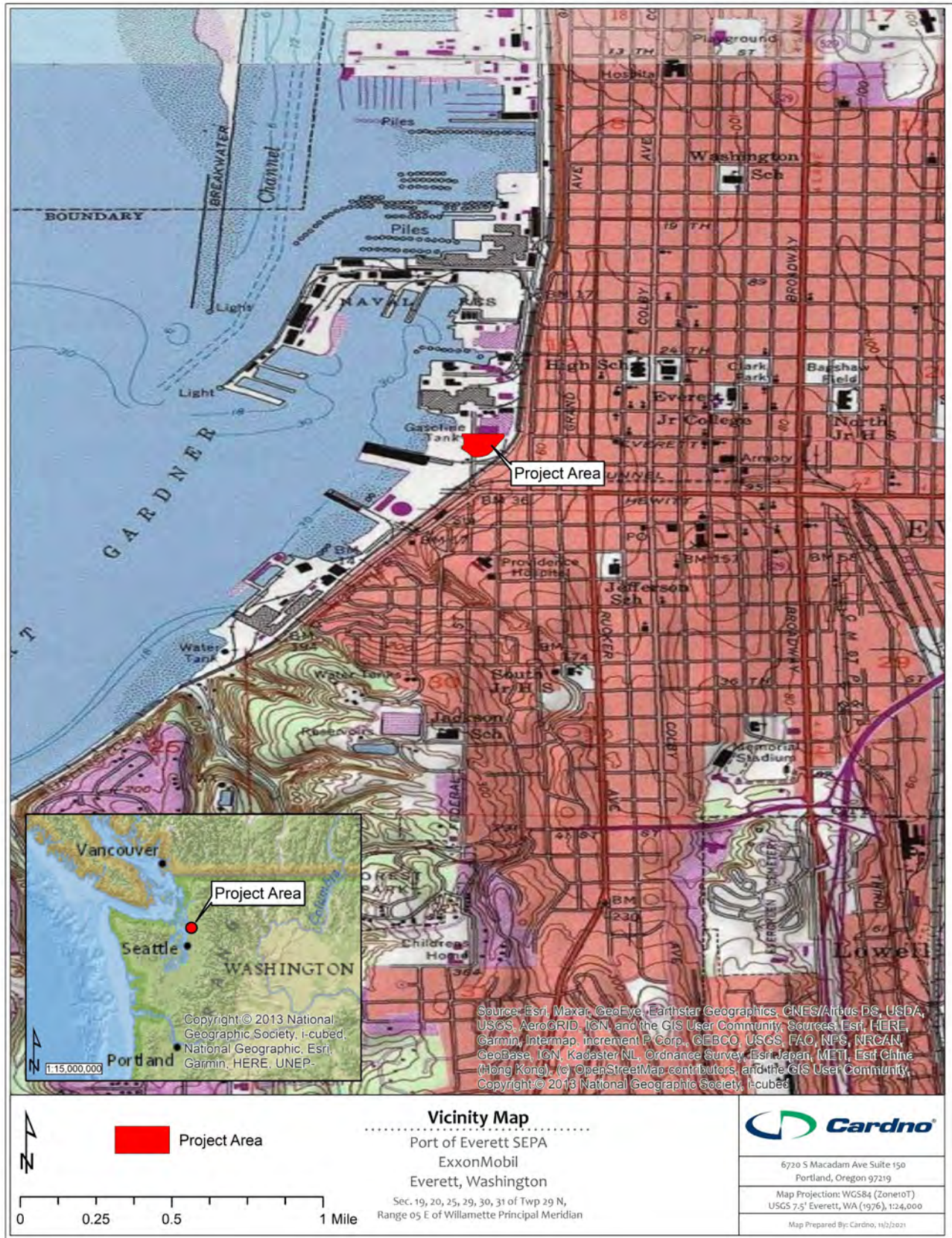


Figure 1. Project area and vicinity.

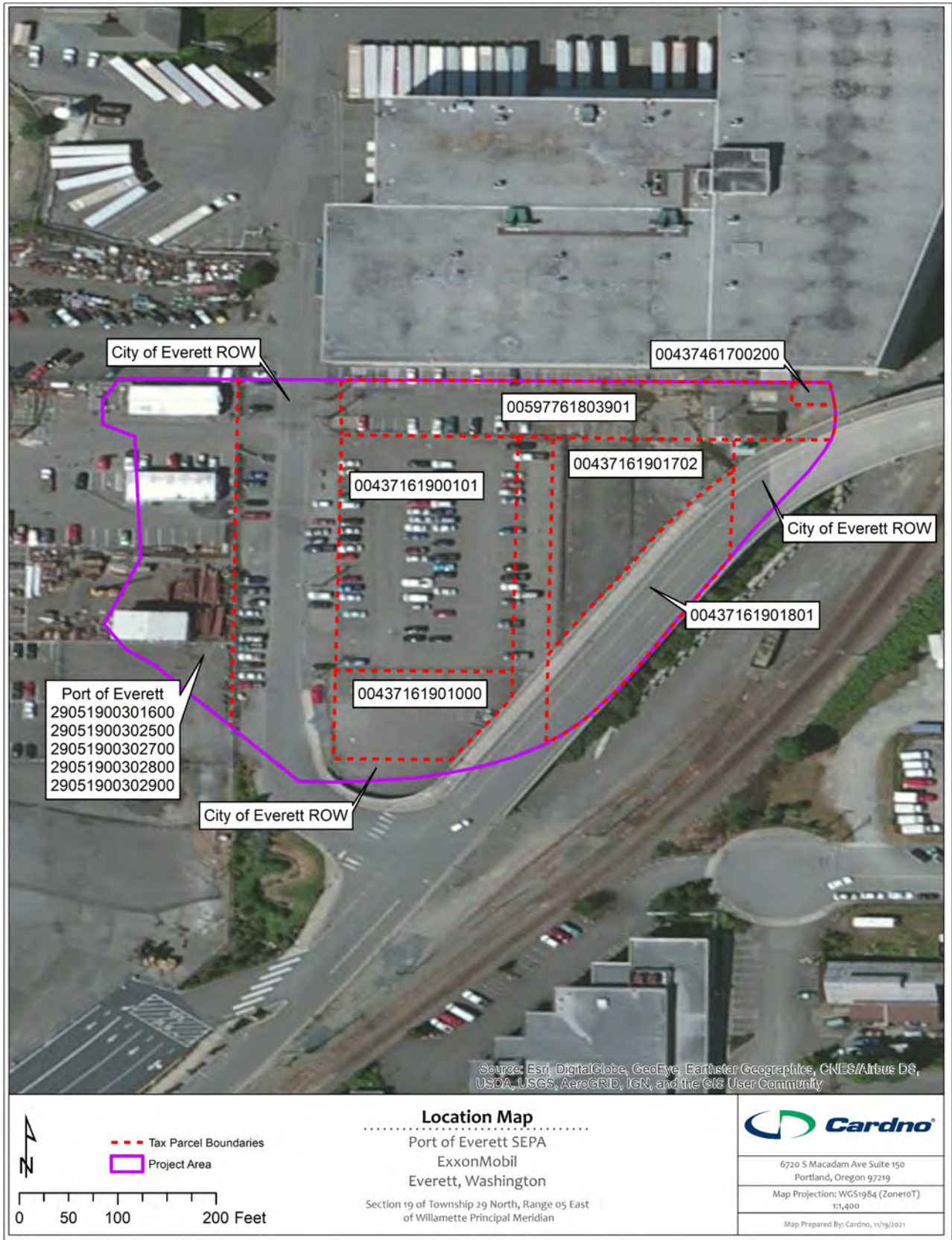


Figure 2. The project area denoting impacted Snohomish County tax parcels and City ROW.

**Table 1. Snohomish County Tax Parcel Information.**

<b>Owners</b>	<b>Parcel Number(s)</b>
Burlington Northern Railroad	00437161901702
City of Everett	00437161901801
Miller Trust (Cecilia Beverly Miller, beneficiary)	00437161900101
Mobil Oil Corporation	00437161901000
Port of Everett	00437461700200, 00597761803901, 29051900301600, 29051900302500, 29051900302700, 29051900302800, 29051900302900



**Figure 3. Overview of project area, facing northeast.**

## **2.0 Regulations**

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Cardno's cultural resources assessment was completed in compliance with Everett Municipal Code (EMC), Snohomish County Code (SCC), the State Environmental Policy Act (SEPA), and Revised Code of Washington (RCW). These regulations are discussed below. Additionally, information regarding other local, state, and federal regulations applicable to cultural resources is also provided.



## 2.1 Everett Municipal Code

EMC 19.28 outlines the process for identifying, listing, and protecting resources on the Everett Register of Historic Places and within historic overlay zones. Properties within historic overlay zones are governed by EMC 19.28.020 through 19.28.120. Criteria for placement on the Everett Register of Historic Places are described in EMC 19.28.130. Proposed changes to properties on the Everett Register are reviewed by the Everett historical commission per 19.28.140.

## 2.2 Snohomish County Code

SCC 30.67.340 requires developers and property owners to immediately stop work and notify the county, DAHP, and affected Indian tribes if archaeological resources are uncovered during excavation. It further stipulates that county permits issued in areas documented as containing archaeological resources require a site inspection or evaluation by a professional archaeologist in coordination with affected Indian tribes.

SCC 20.32D outlines the identification, evaluation, and protection of archaeological and historic resources within Snohomish County that are listed on the Washington State Archaeological Site Inventory. Additionally, it directs the preservation and rehabilitation of eligible historic properties for future generations. SCC 30.32D.020 established the Snohomish County Register of Historic Places, which includes historic buildings, sites, structures, objects, and districts within the county. SCC 30.32D.030-060 directs property designation to and removal from the Snohomish County Register of Historic Places, as well as alterations of properties on the register.

SCC 20.32D.070-100 outlines the process for obtaining and working under a certificate of appropriateness, and zoning. SCC 20.32D.200 requires recordation of archaeological sites. Additionally, completion of an archaeological report or relocation of a project is required for any construction, earth movement, clearing, or other site disturbance of a known archaeological site or any development application proposed on non-tribally owned, fee-simple properties designated Reservation Commercial on the Snohomish County Future Land Use Map. SCC 20.32D.220 outlines the process to follow if human remains or archaeological resources are found during construction, earth movement, clearing, or other site disturbance.

Lastly, SCC 30.32D.300 allows for an appeal process for any building permit issued with conditions imposed pursuant to this chapter. An appeal may occur as a Type 1 decision pursuant to SCC 30.71.

## 2.3 State Environmental Policy Act

The SEPA (RCW 43.21C) and its implementing rules contained in Washington Administrative Code (WAC) 197-11 require applicants to document cultural and historical significance that may be affected by project activities. The SEPA review process provides notice to all affected tribal, state, and private entities.

Per WAC 197-11-960, the SEPA checklist submitted to the local planning authority with an application for development review includes the following questions, which must be satisfactorily addressed to demonstrate that a project will not have a significant adverse impact on cultural and historic resources:

- a. *Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.*
- b. *Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.*

c. *Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archaeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.*

d. *Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.*

## **2.4 Revised Code of Washington 27.44 and 27.53**

Precontact and historic archaeological sites are protected by several Washington state regulations on both public and private lands. RCW 27.44 and RCW 27.53.060 require that a person obtain a permit from the DAHP before excavating, removing, or altering Native American human remains or archaeological resources in Washington. A failure to obtain a permit is punishable by civil fines and penalties under RCW 27.53.095 and criminal prosecution under RCW 27.53.090.

If a person(s) violates this statute and knowingly disturbs or alters an archaeological site, the DAHP is allowed to issue civil penalties of up to \$5,000, in addition to site restoration costs and investigative costs per RCW 27.53.095. Restorative and monetary remedies do not prevent concerned Indian tribes from undertaking civil action in state or federal court or law enforcement agencies from undertaking criminal investigation or prosecution. If human remains and/or burials are disturbed, RCW 27.44.050 allows an affected Indian tribe to undertake civil action. Additionally, the excavation of human remains without a permit is a felony.

## **2.5 Revised Code of Washington 68.60**

RCW 68.60 requires “expeditious” notification of local law enforcement and the coroner if skeletal human remains are discovered. Failure to notify is considered a misdemeanor.

## **2.6 Washington Administrative Code 25-48-060**

The complete requirements for filing an archaeological excavation permit can be found in WAC 25-48-060. In the state of Washington, permits are required for alterations (e.g., excavation, removal, and collection of archaeological materials) at all precontact archaeological sites and at historic archaeological sites that are eligible for or listed in the National Register of Historic Places (NRHP).

## **2.7 Governor’s Executive Order 21-02**

In 2021, Washington Governor Jay Inslee signed executive order 21-02, which supersedes the previous GEO 05-05. GEO 21-02 requires the preservation and protection of Washington’s cultural resources, which are defined as archaeological and historical sites, Native American sacred places and landscapes, and sites, buildings and places that hold special cultural historical, and spiritual significance. The GEO requires state agencies to review their capital construction projects and land acquisitions made for the purpose of a capital construction project that are not undergoing review under Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA) with the Washington State Department of Archaeology and Historic Preservation (DAHP) and affected Indian tribes to determine potential impacts to cultural resources. GEO 21-02 outlines the steps of review and consultation that should be undertaken as early in the project planning process as possible. In the event a culturally significant site will be impacted by a capital project, the state agency must work with the DAHP and affected Indian tribes on appropriate archaeological survey and mitigation strategies consistent with state and federal laws. Additionally, the state agency must take reasonable action to avoid, minimize, or mitigate adverse effects to the resource.

## 2.8 Washington Heritage Register

The Washington Heritage Register (WHR) is an official listing of historically significant sites and properties found throughout the state and includes districts, sites, buildings, structures, and objects that have been identified and documented as being significant in local or state history, architecture, archaeology, engineering, or culture. The WHR is governed by several state laws, including Senate Bill 363, RCW 27.34.200, and WAC 25-12.

Any subdivision of state government or recipient of state funds must comply with the SEPA and Executive Order 21-02. These programs require that significant properties, specifically those listed in or eligible for the WHR, be considered when state undertakings (e.g., permits, grants, construction) affect historic and cultural values. If significant resources are identified, the DAHP considers the effects of a proposed project on such resources and makes a professional recommendation for appropriate treatments or actions. The DAHP does not regulate the treatment of properties that are found to be significant, and the local governing authority may choose to uphold the DAHP's recommendation and may require mitigation of adverse effects to significant properties.

## 2.9 National Register of Historic Places

The NRHP (16 U.S. Code 470a), created under the National Historic Preservation Act of 1966, as amended (16 U.S. Code 470 et seq.), is the federal list of historical, archaeological, and cultural resources worthy of preservation. Resources listed in the NRHP include districts, sites, buildings, structures, and objects that are significant in American history, prehistory, architecture, archaeology, engineering, and culture and that possess integrity of location, design, setting, material, workmanship, feeling, and association. The NRHP is maintained by the National Park Service (NPS) on behalf of the Secretary of the Interior (SOI). The DAHP administers the statewide NRHP program under the direction of the State Historic Preservation Officer, located in Olympia, Washington. The NPS has developed NRHP Criteria for Evaluation (36 Code of Federal Regulations [CFR] § 60.4) to guide the evaluation of cultural resources that may be either listed in or eligible for the NRHP. The NRHP Criteria of Evaluation are:

Criterion A: Are associated with events that have made a significant contribution to the broad patterns of our history; or

Criterion B: Are associated with the lives of persons significant in our past; or

Criterion C: Embody the distinctive characteristics of a type, period, or method of construction or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or

Criterion D: Have yielded, or may be likely to yield, information important in prehistory or history.

NPS Bulletin No.15, "How to Apply the National Register Criteria for Evaluation," provides guidance on evaluating resources for listing in the NRHP. Archaeological sites are primarily assessed under Criterion D. While cultural resources may be present within the project area, if they do not meet the requirements for listing in the NRHP, they are not considered historic properties. Cultural resources less than 50 years old do not meet the NRHP criteria unless they are of exceptional importance, as described in Criteria Consideration G (36 CFR Part 60) and NPS Bulletin No. 22, "How to Evaluate and Nominate Potential National Register Properties That Have Achieved Significance Within the Last 50 Years."

## 3.0 Environmental Setting

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The project area lies within the greater Puget Lowland physiographic province, which is a low-lying area between the Cascade Range to the east and the Olympic Mountains to the west. Puget Sound was

shaped by widespread continental glaciation that extended south from British Columbia to the northern Puget Lowland and along the western flanks of the Cascade Mountains (Miss 2008). This area is also known as the Puget Sound Trough physiographic province, which extends to the Cowlitz and Chehalis Rivers (Franklin and Dyrness 1988). The Vashon Stade of the Fraser Glaciation was the last glacial maximum in the region and is dated between 18,000 and 14,000 years before present (BP) (Easterbrook 2003). Rapid deglaciation, which saw the occurrence of meltwater channels and temporary ice marginal lakes, occurred after this glaciation. The land experienced isostatic rebound between 13,000 and 7000 years BP as global sea levels rose and deltas formed at the head of the Duwamish Valley, shaping the Puget Sound shoreline (Dragovich et al. 1994; Miss 2008). By 5000 years BP, the Puget Sound sea level was within 6.6 to 9.8 feet (2 to 3 meters [m]) of its current level (Kelsey et al. 2004; Sherrod et al. 2000).

The project area lies within the *Tsuga heterophylla* (western hemlock) vegetation zone in the Puget Lowland, which provides a highly productive ecological system with a complex mosaic of microenvironments (Franklin and Dyrness 1988). This vegetation zone is characterized by forests of western hemlock, western red cedar, and Douglas-fir. Shrub cover consists of sword fern, salal, Oregon grape, ocean spray, huckleberry, and red elderberry. The diversity of floral and faunal species in the area has decreased due to human settlement, which has led to a significant loss of faunal habitat. Additionally, historical and modern contaminants within Port Gardner Bay have significantly impacted mudflats, estuaries, tidal marshes, and shrub wetlands. The National Oceanic and Atmospheric Administration's Damage Assessment, Remediation, and Restoration Program (2021) notes that:

*Releases of hazardous substances into Port Gardner Bay have resulted from industrial and municipal processes since the early 1900s, including factories, spills during cargo transfer and refueling, storm water runoff through contaminated soils at upland facilities, discharge of contaminated groundwater, and lumber operations, such as sawmills, and pulp and paper mills.*

Prior to historical and modern impacts, the *Tsuga heterophylla* vegetation zone could support large terrestrial animals like elk, deer, black bear, and coyote and smaller mammals like rabbit, squirrel, racoon, beaver, and river otter. Currently, the project area is located within modified industrial landscape with paved ground surface. Recent subsurface investigations note that the near-surface soils consist of a heterogeneous mixture of fill materials. The fill materials consist of very loose to medium dense, brown, brownish gray, and gray silty sand and sand with areas of wood and brick debris extending to depths of approximately 5 to 10 feet below ground surface (bgs). Gray silty sand and silt and dark-brown to black peat mixed with wood debris are encountered beneath the shallow fill and extend up to 20 to 27 feet bgs (Wood 2019, Cardno 2020a, 2020b).

### 3.1 Archaeology

The earliest known occupations in western Washington, termed Paleo-Indian, are evidenced by the appearance of large, fluted projectile points dating to approximately 12,800 years BP (Ames and Maschner 1999; Carlson 1990). Paleo-Indians were primarily hunter-gatherers with low populations and high levels of mobility. Some researchers have argued that these early people were maritime oriented (Carlson 2003; Dixon 1993; Fedje and Christensen 1999; Fladmark 1979). In western Washington, sites from this period are rare. Much of the late Pleistocene terrain was uninhabitable due to glaciers, and the lands that were occupied by Paleo-Indians were predominately coastal reaches. During the glaciation period, ocean levels fell almost 400 feet globally (Kirk and Daugherty 2007), but with the onset of the warming Holocene, ocean levels rose and submerged many of these coastal sites. However, some sites are not submerged and instead are located above the present shoreline due to eustatic, tectonic, and isostatic effects that vary throughout the region (Fedje and Christensen 1999).

The Archaic period dates from approximately 12,500 to 6,400 years BP (Ames and Maschner 1999; Carlson 1990). Archaic-period sites, similar to Paleo-Indian sites, are poorly represented. Changes in sea level and vegetation have obscured many Archaic-period sites along the coast (Ames and Maschner

1999). However, as the glaciers receded, people were able to occupy larger expanses in the interior of the Puget Sound. Archaic-period peoples likely maintained small populations and high levels of mobility, and focused on a combination of maritime, littoral, and terrestrial economies. Archaic-period occupations are largely characterized by stone tool assemblages that are typically composed of large, stemmed lanceolate projectile points and bifaces. In addition, the Pacific Northwest Archaic period saw an introduction of microblades, which are sometimes present in stone tool assemblages (Ames and Maschner 1999).

Pacific-period sites date from approximately 6,400 to 250 years BP. The period ends at the introduction of smallpox to the region (Ames and Maschner 1999). The Early Pacific period (6,400 to 3,800 years BP) was marked by the increased use of marine resources, the appearance of human burials in middens and cemeteries, a diversification in subsistence activities, the disappearance of microblade technology, and the increased use of bone, antler, and ground stone tools. Major developments also included the appearance of ground stone celts (adze blades) and a proliferation in chipped-stone tool forms and styles, and decorative/ornamental pieces that likely represent contact and trade with groups in neighboring cultural areas (Kirk and Daugherty 2007). The Middle Pacific period (3,800 to 1,800/1,500 years BP) displays major developments including the appearance of long-term settlements (plank houses), intensification of salmon capture (appearance of wooden fish weirs and girdled/drilled net sinkers), and a diversification in tool form and style. Late Pacific period (1,800/1,500 to 250 years BP) developments are represented by the appearance of heavy-duty woodworking tools, an overall decline in the use of chipped-stone tools, and an increase in funerary ritual/burial activities. Sea levels became stable by the start of the Middle Pacific period, and sites representing the Middle and Late Pacific periods are located across the Northwest Coast region (Ames and Maschner 1999).

## 3.2 Ethnography

The project area lies within the traditional territory of the Snohomish. Since time immemorial, the Snohomish people lived in various locations along the Snohomish River from present-day Monroe to the mouth of the river near Everett, on Camano Island, and on Whidbey Island (Ruby and Brown 1992:212; Tweddell 1974). The region was utilized for resource gathering, hunting, and villages/seasonal habitations. However, there are no known ethnographic sites within the immediate project area (Waterman et al. 2001).

The Snohomish spoke the southern dialects of Lushootseed—a Salish language (Suttles and Lane 1990:486). The Snohomish people followed a seasonal settlement pattern. Winter villages, composed of one or more cedar plank houses where families gathered in the late fall, were typically located along waterways, such as at the mouth of the Snohomish River, river confluences, or protected shorelines (Haeberlin and Gunther 1930; Lane and Lane 1977). During the winter months, they relied on stored foods supplemented by local hunting and fishing (Suttles and Lane 1990).

Coast Salish peoples developed a complex social and religious system in part due to the abundance of food and raw materials (e.g., wood, plants, stone) (Haeberlin and Gunther 1930). Potlatches and spirit quests were important activities in the pursuit of spiritual power, in addition to asserting control over resources and neighboring groups (Elmendorf 1971). Social stratification existed among Coast Salish groups, where villages consisted of elite, commoner, and slave classes (Ames 2001; Grier 2003; Tollefson 1987).

Winter housing consisted of large, multifamily longhouses constructed of cedar planks. Sleeping platforms lined the walls, and storage shelves for winter supplies were typically located on the walls above these sleeping platforms. Fires were located near the sides, and the central area was used as a passageway. Shed-roof houses were a common design among the Coast Salish in the Puget Sound region (Suttles 1991). This house type easily allowed for the addition of rooms when populations increased, such as during winter months, and for the reduction in house size when occupants left for summer food collection

rounds (Suttles 1991). Often, the different placements of sleeping platforms and individual fires portrayed status, where those with the highest status lived in the back of the house and commoners and slaves lived closer to the entryways (Suttles 1991).

During the spring, summer, and fall, people would journey from central villages to temporary camps. Camps were located along streams during salmon runs while smaller groups would hunt, fish, and gather plant resources. Gathering was most intensive during spring and summer. Plants such as cattail (*Typhaceae* spp.), cranberry (*Oxycoccus* spp.), wapato (*Sagittaria latifolia*), and salmonberry (*Rubus spectabilis*) shoots were collected from wetlands, such as those found along Lake Stickney (located directly west of the project area), and prairies were visited for gathering camas (*Liliaceae* spp.) bulbs (Haeberlin and Gunther 1930; Turner 1976).

A typical summer house was constructed for short-term occupation, and they were typically tipi or square-shaped. Mats were placed horizontally over a frame of poles to create the tipi, while square houses were a lean-to type form, with mats placed over a wooden structure with a gabled or single pitch roof. Short-term occupation mountain camps were made using a similar square form, but covered with boughs of various tree species. Another style of summer house consisted of four corner poles with horizontal poles placed on top to create a gable. Cedar twigs held the framework together, while mats covered the roof and three sides (Haeberlin and Gunther 1930).

The Tulalip Reservation was authorized under the Treaty of Point Elliot in 1855, and enlarged in 1873, as the home for several indigenous groups including the Snohomish, Stillaguamish, Snoqualmie, Skykomish, and other allied bands living in the region (Ruby and Brown 1992; Tulalip Tribes 2014). Some among these groups moved to the reservation, while others remained living on their traditional lands. The combined tribes became known as the Tulalip Tribes.

Cardno is not aware of any known ethnographic place names within the project area or immediately adjacent. However, there are several ethnographic place names recorded in the general vicinity of the project area and near the mouth of the Snohomish River (Waterman 1922; Waterman et al. 2001:336-342). Non-English names are Lushootseed when available.

16  $\text{ʔusʔusič}$  (Watermann orthography: *Os<sup>3</sup>a/s1tc*) translates to “chasing a fish here and there” near an estuary between Steamboat and Union Sloughs.

16a *bəluʔəb* (Watermann orthography: *PE'ls1b*) translates to “boiling,” for an area at the mouth of the main Snohomish River channel.

17 *čik<sup>w</sup>ucid* (Watermann orthography: *Ctcqo'tsid*) translates to “that which chokes up the mouth of something,” for a small island located on the north side of the Snohomish River mouth.

18 *sex<sup>w</sup>čulalq<sup>w</sup>* (Watermann orthography: *SExwtculalkw*) is noted for a sharp point of land running toward the Ctcqo'tsid island.

19 *hibu'əb* (Watermann orthography: *Hibu'βub*) translates to “place where water boils out of the ground,” for a former village site south of the Snohomish River mouth.

20 Watermann orthography: *SEq<sup>w</sup>su<sup>3</sup>ub* is noted for a small promontory with a slough that runs parallel to the shore.

21 *sluluw#* (Watermann orthography: *SLu'luw1L*) translates to “little perforation for a canoe,” for a narrow channel passing behind an island.

22 *λ'ux<sup>w</sup>at* (Watermann orthography: *tL'o'hwaL*) translates to “a cold spring” for a spot on the river bank opposite Everett.

### 3.3 Historical Context

Cardno referenced GLO land patents and cadastral maps for Township 29 North, Range 5 East as well as Snohomish County atlases and USGS topographic survey maps to determine changes in built environment features (e.g., piers, docks, railroads, buildings, and/or roads) in or near the project area (Table 2). According to the results of a land patent search through the Bureau of Land Management (BLM), in 1876 Dennis Brigham was granted a total of 160.15 acres for Lot/Tract 2, Lot/Tract 3, and Lot/Tract 4 within Section 19 of Township 29 North, Range 5 East. Brigham, a carpenter from Massachusetts, arrived in the Everett area in 1861 to begin the homesteading process. Considered the first permanent settler in the area, Brigham constructed a cabin on his acres near Port Gardner Bay and lived a solitary life (Oakley 2005). During the early 1860s, a lone telegraph operator "...and Brigham were the only settlers between Mukilteo and the mouth of the Snohomish River for many years" (Whitfield 1908: 285). Later, John Auson King claimed Lot/Tract 1, immediately north of Brigham within Section 19 (BLM 1874). These lands grants were authorized under the Land Act of 1820 and the Homestead Act of 1862. These acts reduced the price of federal lands and gave citizens up to 160 acres each of public land for improvement.

**Table 2. Results of Cartographic Analysis.**

Year	Author/Company	Description of project area
1869	BLM	The project area is located within Section 19, which is partially submerged in Port Gardner Bay. A trail extends along the east bank and connects to a telegraph office and through property homesteaded by "Brigam."
1902	Sanborn Map Co.	Federal Ave extends north through the railroad and ends at the west extent of Everett Ave. Lot/Tract 618 and 619 are labeled, but show no company or ownership. Block 619 contains 30 structures consisting of dwellings with associated outbuildings. Block 618 depicts 11 more structures labelled "Squatters Shacks." Area noted as "marsh."
1910	Anderson Map Co.	Several rail spurs extend west to docks and piers owned by G.N. Ry. Co., N.P. Ry. Co., and Everett Imp. Co. project area is situated west of Everett Ave terminus with railroad and tideland additions (labeled 618 and 619).
1914	Sanborn Map Co.	"Squatters shacks" have been removed from Blocks 618 and 619. Shoreline cuts northeast from intersection of Federal Ave and Everett Ave. Two structures are depicted in the southwest area of Block 618 near the waterline. Area noted as "marsh."
1927	Chas. F. Metsker	Project area is depicted west of main roadways within railroad and dock area of Port Gardner Bay. Sections 20 and 19 are not labeled.
1934	Kroll Map Co.	Project area is noted within an undetailed area heavily utilized by railroad and docks.
1936	Chas. F. Metsker	G.N. Rwy. Depicted east of project area with spurs to "City Dock" and other businesses. North of project area is Clark Nickerson Lbr. Co., and docks to west noted as 13, 14, and 21.
1943	Kroll Map Co.	Same as Kroll (1934).
1950	Sanborn Map Co.	Significant development of Blocks 618 and 619. General Petroleum Corporation, Gilmore Oil Co., and the Associated Oil Company have all constructed warehouses and fuel oil tanks. Within Port Gardner Bay there is a pier (Standard Oil Co.) and an outfitting basin.
1960	Thos. C. Metsker	Federal Street depicted within its current alignment. The project area is noted within property owned by Standard Oil. The block (619 and 618) contains storage tanks.
1960	Kroll Map Co.	Same as previous.

Year	Author/Company	Description of project area
1975	Chas. F. Metsker	Scott Paper Co. is north of the project area. Standard Oil property with storage tanks is located within the project area.
198x	Chas. F. Metsker	Same as previous.
1992	Metsker Maps	Same as previous.

The 1869 survey plat image for Township 26 North, Range 5 East, depicts a telegraph line aligned north-south along the east side of Port Gardner Bay. A “Telegraph Office” is noted south of Section 19. This telegraph line “followed along the beach from Seattle to Whatcom” (Whitfield 1908: 285). In the southeast quarter of Section 19, a small cabin is noted along with the misspelled label of “Brigam” (BLM 1869). In 1890, the Brigham homestead property was purchased by Wyatt and Bethel Rucker with plans to create a townsite called “Port Gardner” (Oakley 2005). During the next year, the Ruckers became associated with Henry Hewitt Jr., Charles L. Colby, and other optimistic landowners and incorporated the Everett Land Company. By 1891, the main thoroughfare called Hewitt Ave was cut east to west and 100 feet wide.

Development of the townsite, now called Everett after Charles Colby’s son, continued with stump removals, street grading, and the sale of Everett Land Company lots (Oakley 2005; Port of Everett 2021). The Everett Land Company won ownership of the waterfront in 1892. In April of 1893, Everett was incorporated and boasted more than 5,600 citizens supported by streetlights, streetcars, sawmills, railroads, and residential and commercial expansion. However, the Panic of 1893 led to a withdrawal of investments and money in the Everett Land Company. The holdings of the Everett Land Company were transferred to the Everett Improvement Company in 1899 (Oakley 2005).

Evidence of development revitalization is visible in a 1902 map in the numerous land lots divided and numbered to the East Waterway shoreline of Port Gardner Bay (Figure 4; Sanborn Map Co. 1902). Federal Ave extended north through the Great Northern Coast Line and terminated at the westerly extent of Everett Ave. At this time, no company or business name was noted on the Sanborn Fire Insurance Map within the project area. Within properties directly north of the project area, large structures are depicted for the Everett Flour Mill Co. and the Clark Nickerson Lumber Co.

The color-coded key indicates that within Block 619 within the project area, structures consisted of “frame building” (Sanborn Map Co. 1902). The detailed map page for Block 619 contains 30 frame structures, all dwellings and associated outbuildings, situated around a marshland at the center of the block (Figure 5). Within each dwelling, the maps include a notation of “S.P.,” which is specially called out on the key map introduction: “NOTE Practically all dwellings with a “S.P.” (Stove pipe) are cheap, unpainted shacks” (Sanborn Map Co. 1902: Key Map). Eleven additional “S.P.” buildings consisting of dwellings, outbuildings, bath house, and boat house, are depicted within Block 618 to the north of the project area, and noted as “Squatters Shacks” (Sanborn Map Co. 1902).



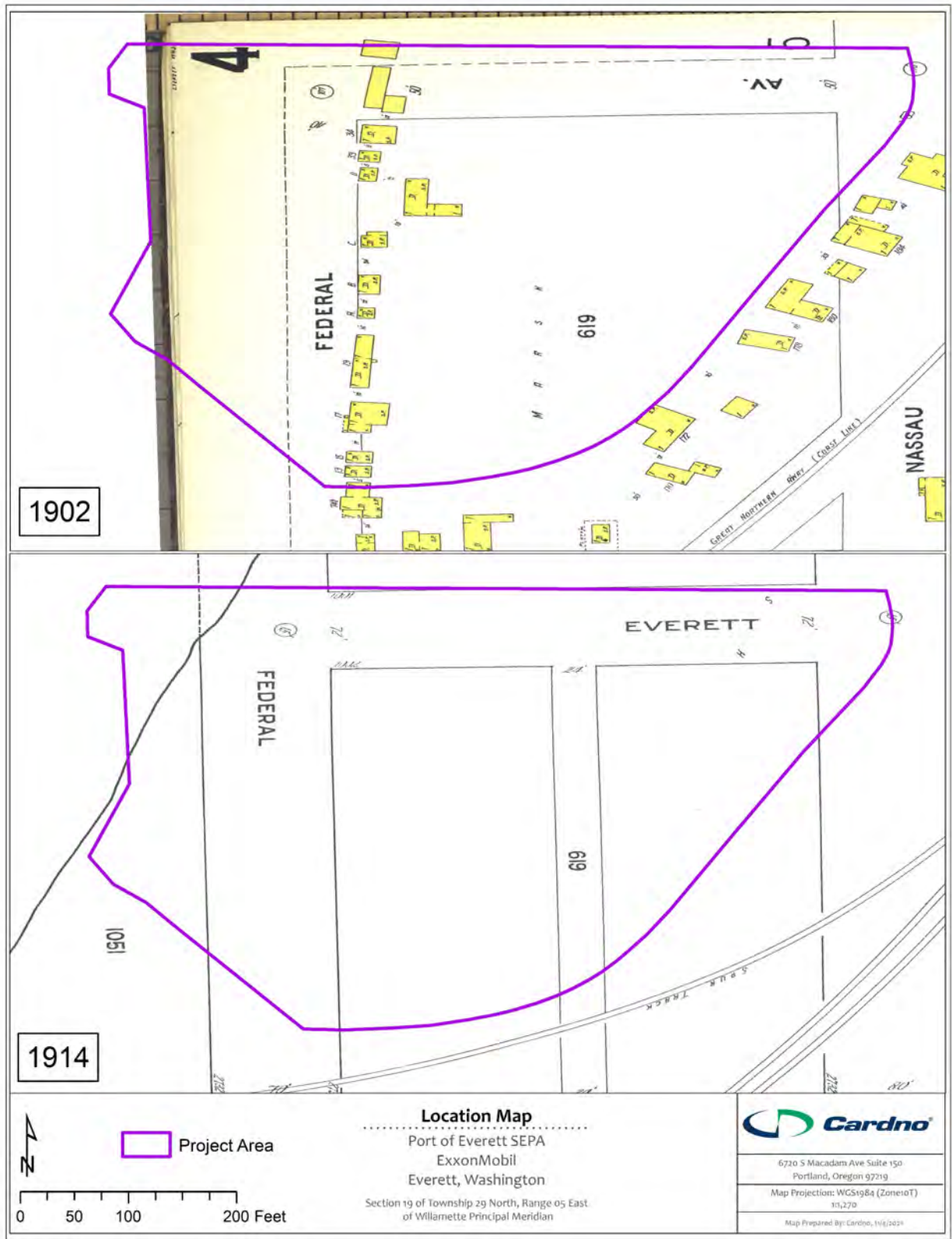


Figure 4. Details from 1902 and 1914 Sanborn Fire Insurance Maps (Sanborn Map Co. 1902, 1914).

Historical maps illustrate a changed landscape. In 1910, railway spurs extended west from the mainline to docks and piers owned by “G.N.Ry.Co.,” “N.P.Ry.Co.,” and “Everett Imp. Co.”:

“G.N.Ry.Co.” – Great Northern Railway

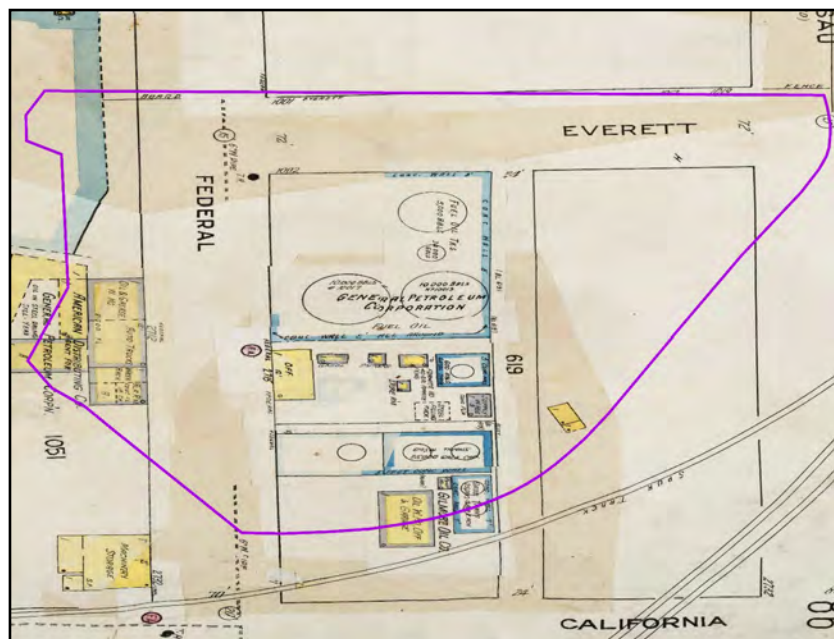
“N.P.RY.Co.” – Northern Pacific Railway

“Everett Imp. Co.” – Everett Improvement Company

By 1914 the “squatters shacks” north of the project area had been removed, and increasing development of piers and docks is evident (see Figure 4; Anderson Map Co. 1910; Sanborn Map Co. 1914). The position of the site between the railroad and waterfront was highly conducive to industrial uses. Between 1914 and 1950, the east shoreline of Port Gardner Bay was significantly filled and artificially extended into the East Waterway. Additionally, docks and piers expanded the industrial and commercial landscape west of the historical extent of Federal Ave (Sanborn Map Co. 1950).

By 1925, the northern part of the project area contained at least two large “General Petroleum Corporation” tanks, three smaller unlabeled tanks, and three gable-roof outbuildings just south of Everett Avenue. The project area spans Federal Avenue, across which was one large “General Petroleum Corporation” warehouse complex near the shoreline. Predecessors of ExxonMobil, owned the project area site beginning in 1927 (Washington Department of Ecology 2021).

The warehouse complex contained automobile truck storage, an oil and grease warehouse, a wash rack room, a boiler room, and an oil in steel drum staging yard adjacent to a wooden bulkhead (Figure 5; Sanborn Map Co. 1939 [Revised through June 1955]). By 1947 development within the project area had been expanded significantly to the south (Figure 6). Additional infrastructure constructed included several cylindrical petroleum tanks each containing 25,000 gallons of gasoline, eight outbuildings including a wooden office building, pump room, and warehouses, and a steel filling rack (Figures 5, 7, and 8; Sanborn Map Co. 1939 [Revised through June 1955]). The shoreline has not been modified with fill since approximately 1950 (Figure 9). An Everett USGS map from 1953 shows the area developed with gasoline tanks and a pier directly adjacent to the company warehouse complex (Figure 10). It does not appear the eastern portion of the project area was ever significantly developed.



**Figure 5. Project area displayed on 1939 Sanborn Fire Insurance Map. (Sanborn Map Co. 1939 [Revised through June 1955])**

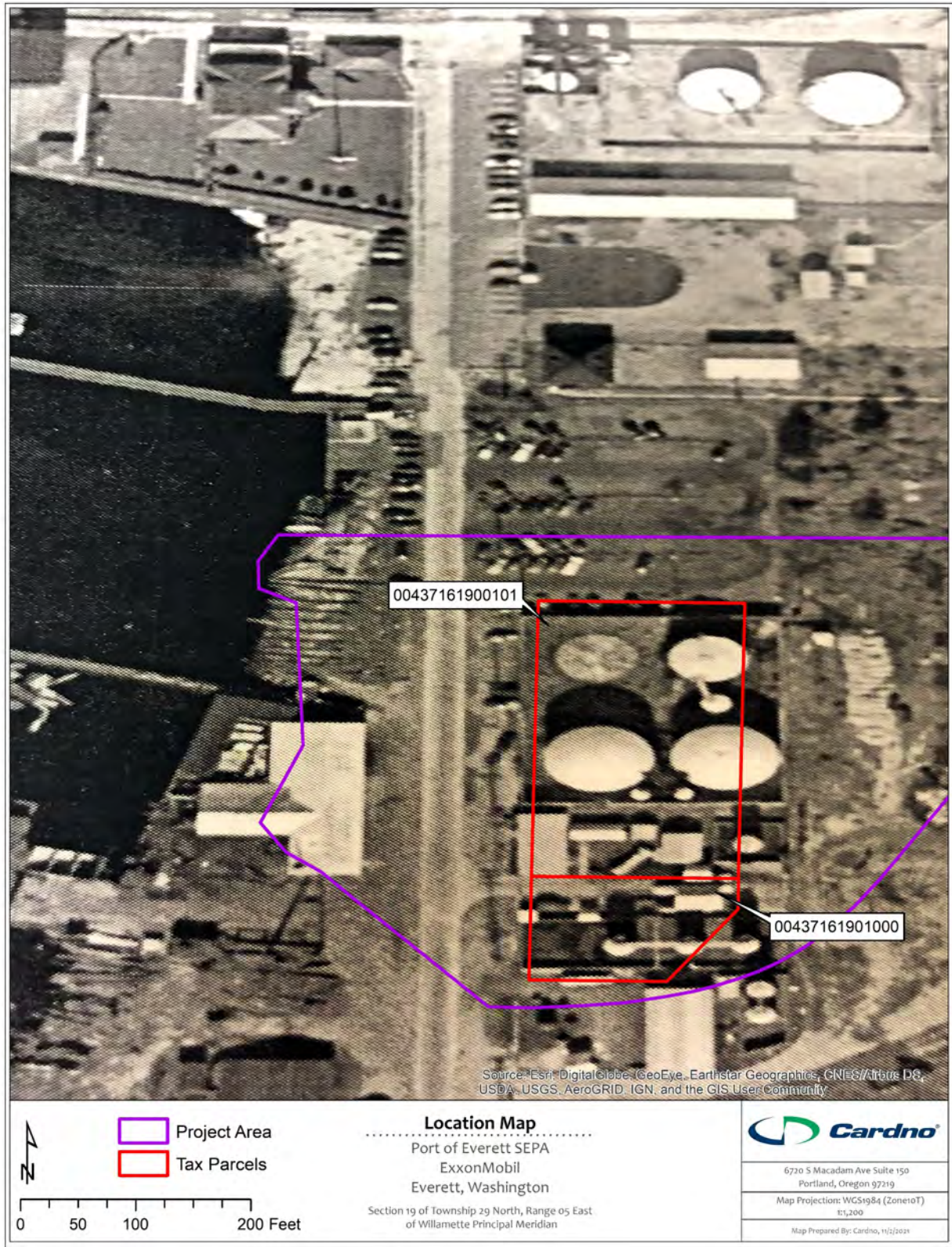


Figure 6. Project Area depicted on aerial imagery from 1947 (Image courtesy of ExxonMobil 2021).



**Figure 7. Photograph of project area viewed facing north, taken from south end of site (Washington Department of Ecology 2021).**



**Figure 8. Undated photograph showing gasoline infrastructure after General Petroleum Corporation was rebranded to Mobilgas. The office building on the site is at the right. (Washington Department of Ecology 2014:65)**

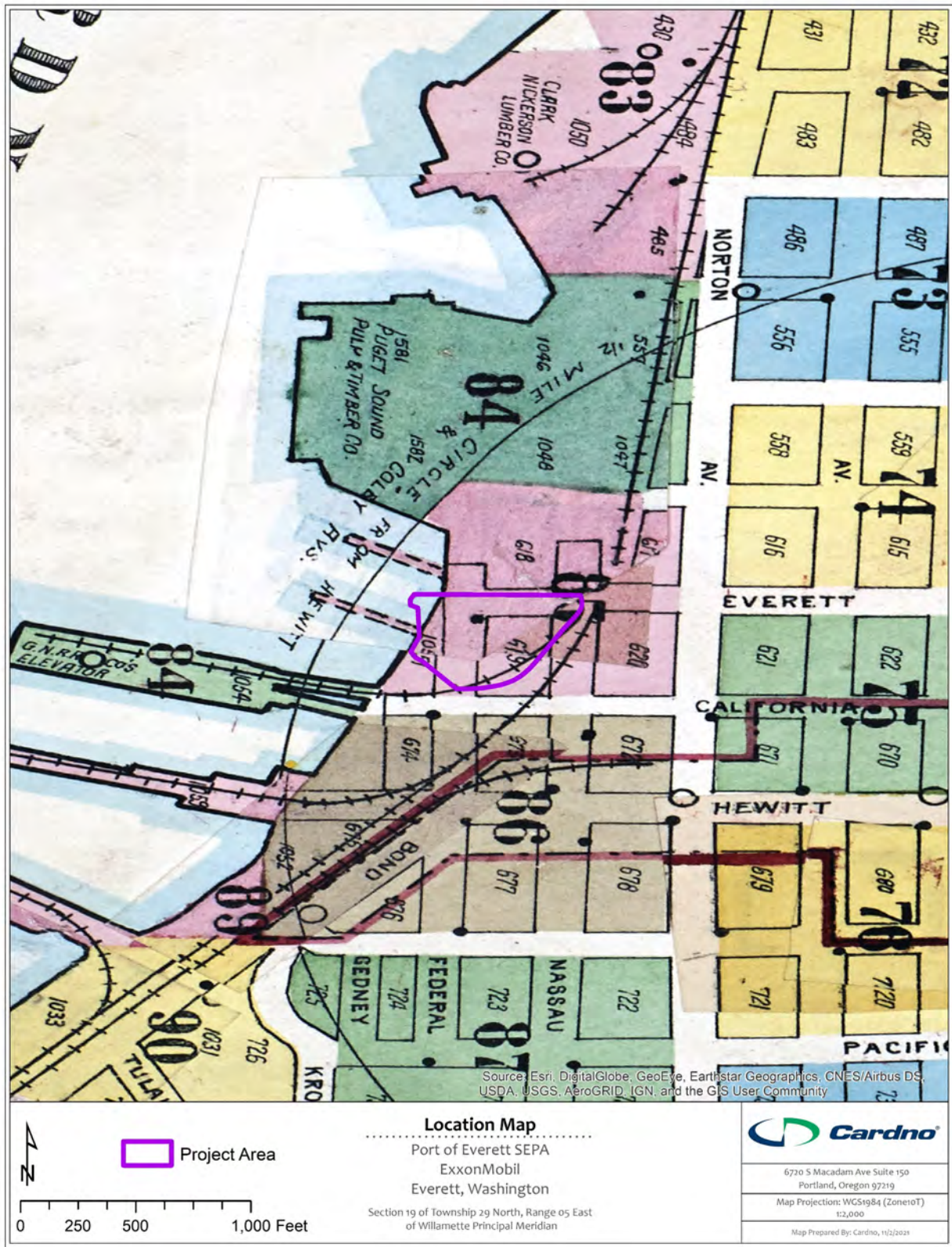


Figure 9. Project Area depicted on 1950 Sanborn Insurance Map (Sanborn Map Co. 1950).

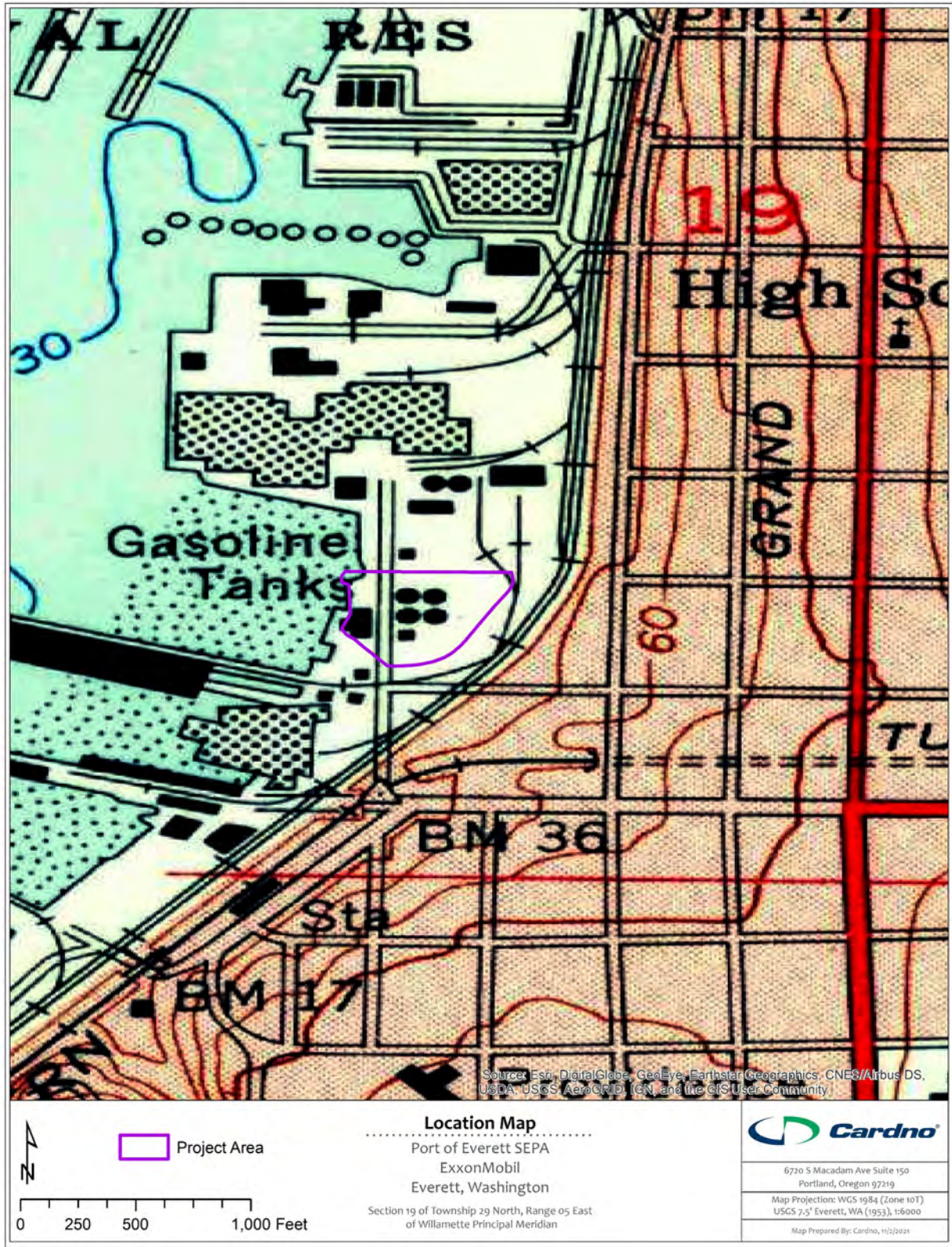


Figure 10. Project area depicted on the 1953 Everett USGS 7.5-minute quadrangle (USGS 1953).

In 1974, Mobil Oil sold the northern part of the project area to A.P. Miller for use by the American Distributing Company (ADC) who continued petroleum operations until 1990 (Washington Department of Ecology 2021). By 1977 the warehouse complex across Federal Avenue and the office building had been demolished (Figure 11). Mobil Oil ceased petroleum operations on the project area in 1987. All remaining infrastructure at the site was demolished between 1998 and 2002, and the project area was used as a parking lot (Washington Department of Ecology 2021). In late 2003 Terminal Avenue was developed adjacent to the site. The project area experienced continued development and change over several years precluding the identification of a particular year or period of importance of the petroleum infrastructure which was once extant.



**Figure 11. A 1977 aerial photograph of the project area (Washington Department of Ecology 2021).**

### **3.1 Literature Review**

Cardno archaeologists conducted a background search and literature review of existing cultural resource records; local, state, and national register nomination forms; previous cultural resources investigations; and any known or potential TCPs in and within 1.0 mile (1.6 km) of the project area. According to the DAHP's predictive model available on the WISAARD online database, there is a very high risk of encountering buried precontact archaeological deposits in the project area.

### 3.1.1 Previous Investigations

The background search identified 15 cultural resources investigations that have been previously conducted within 1.0 mile (1.6 km) of the current project between 1975 and 2020 (Table 3). Seven investigations were surveys, two involved construction monitoring, two were historic structures surveys, three provided larger prehistoric and historic context for the area, and one was a monitoring and discovery plan. Recently, four cultural resources investigations fall within or immediately adjacent to the project area, as plotted by WISAARD (see Table 3): Johnson 2000; Rinck et al. 2013; Udem et al. 2014; Johnson 2020.

**Table 3. Cultural Resources Investigations within 1.0 Mile of the project area (n = 15).**

Year	Author	Report Title	NADB Number	Report Type	Location Relative to project area
1975	Dunell and Fuller	An Archaeological Survey of Everett Harbor and the Lower Snohomish Estuary-Delta	1332098	Survey Report	project area within Study Area
1987	Blukis Onat	Resource Protection Planning Process Identification of Prehistoric Archaeological Resources in the Northern Puget Sound Study-Unit	1349367	Overview	Overview of Area
1988	Evans-Hamilton, Inc.	The Location, Identification and Evaluation of Potential Submerged Cultural Resources in Three Puget Sound Dredged Material Disposal Sites	1340504	Survey Report	0.84 mile west
1991	Miss and Campbell	Prehistoric Cultural Resources of Snohomish County, Washington	1334282	Overview	Overview of Area
1998	Demuth	Technical Report: Historic, Cultural, and Archaeological Resources Assessment for Everett-to-Seattle Commuter Rail Project Environmental Impact Statement	1340269	Overview	Overview of Area
2000	Johnson	Letter to Molly Adolfson Regarding Proposed California Street Overpass, Everett	1344193	Survey Report	Within project area
2006	Juell	Archaeological Site Assessment of Sound Transit's Sounder: Everett to Seattle Commuter Rail System, King and Snohomish Counties	1348189	Survey Report	0.38 mile south
2008	Hartmann	Cultural Resources Assessment for the Swift Bus Rapid Transit Project	1351380	Survey Report	0.54 mile southeast
2011	Lenz et al.	Cultural Resources Assessment for the Broadway Bridge Replacement Project, Everett	1682948	Survey Report	0.68 mile west
2013	Pinyerd	Downtown Everett #SE03XC527 1602 Hewitt Ave., Everett	1683379	Historic Structures Survey Report	0.37 mile southeast
2013	Rinck	Cultural Resources Monitoring and Discovery Plan for the Kimberly-Clark Worldwide Site Upland Area, Everett	NA	Monitoring and Discovery Plan	0.11 mile north
2013	Rinck et al.	Archaeological Resources Assessment for the Kimberly-Clark Worldwide Site Upland Area, Everett	NA	Survey Report	0.06 mile north



**Table 3. Cultural Resources Investigations within 1.0 Mile of the project area (n = 15).**

Year	Author	Report Title	NADB Number	Report Type	Location Relative to project area
2014	Udem et al.	Letter to Steve Germiot RE: Results of Cultural Resources Monitoring at the Kimberly-Clark Worldwide Site Upland Area, Everett	1685767	Monitoring Report	0.11 mile north
2014	Sackett	Architectural Survey and Evaluation: Naval Station Everett	1685545	Historic Structures Survey Report	0.47 mile west
2020	Johnson	FINAL Results of Archaeological Monitoring for the Kimberly-Clark Everett Interim Action	1694736	Monitoring Report	0.07 mile north

In 2000, Paragon Research Associates conducted a survey for roadway connector alternatives between Everett Ave that would impact “Maggie’s Park” (Johnson 2000). Maggie’s Park, located approximately 400 feet east of the project area, is located within the Brigham land claim and possibly near the location of the original cabin. However, no archaeological materials have been identified to confirm this claim. Johnson conducted a pedestrian survey and identified no cultural materials.

In 2013, SWCA Environmental Consultants (SWCA) conducted an extensive study and background review for the Kimberly-Clark Worldwide Site Upland Area SEPA process (Rinck et al. 2013). This project area is located within 56 acres of upland lands and 12 acres of tidelands within the north parcel immediately adjacent to the current project area. Previously, this area was utilized as for industrial purposes which has contaminated the area. The first mill within this project area was the Robinson and Company Mill, which began operations in the early 1890s. By 1901, this area contained an extensive sawmill and planning facility for the Clark-Nickerson Lumber Company. During the background review, SWCA identified the project area as containing a high potential for precontact and historical cultural materials within the natural Port Gardner shoreline. In response to the potential for buried archaeological materials, SWCA developed a site-specific Monitoring and Discovery Plan (MDP) (Rinck 2013).

SWCA performed archaeological monitoring for cleanup excavations at the Kimberly-Clark Worldwide Site Upland Area (Udem et al. 2014). Within one area, excavations intersected natural sediments underlying historic-period fill. Within Location 11, archaeologists observed miscellaneous historic debris and architectural remnants located between 2 and 6 feet below ground surface. One precontact artifact was documented during monitoring—45SN00629, an edge-altered basalt cobble (Udem 2014).

Archaeological monitoring continued at the Kimberly-Clark Worldwide Site Upland Area in 2020 (Johnson 2020). Archaeologists observed architectural and structural debris within the historic fill layer, likely associated with historical mill operations. No precontact materials or intact sediment layers were observed.

### 3.1.2 Archaeological Resources

One archaeological resource is recorded within a 1.0-mile (1.6-km) radius of the project area. The archaeological resource (45SN00629) is a precontact isolated find identified within historic dredge material underneath a parking lot (Udem 2014; Udem et al. 2014). Historically, the property was the location of a mill situated at 2600 Federal Avenue (Boswell and Sharley 2012). The single lithic artifact was recorded as an edge-altered basalt cobble with 13 multidirectional flake scars on one end. The artifact was donated to the Hibulb Cultural Center (Johnson 2020).

### 3.1.3 Built Environment

No historic properties listed in the NRHP, WHR, and/or ERHP are located within or immediately adjacent to the project area. Twelve properties listed in the NRHP are located within 1.0 mile (1.6 km) of the project area (Table 4). Additionally, two historic districts are located within 0.5 mile (0.8 km) of the project area: Hewitt Ave Historic District (45DT00231) and Rucker Hill Historic District (45DT00155). Four properties are listed in the WHR. Twenty-seven properties are listed on the ERHP, and all three Everett historic overlay districts begin within one mile of the site. Several properties are listed on more than one register. The dates of significance for the historic properties range from 1892 to 1967. There are no properties listed on the Snohomish County Register of Historic Places within one mile of the project area.

**Table 4. NRHP/WHR/ERHP-Listed Properties Located within 1.0 Mile of the project area (n = 33).**

Property Name	Address	Date Built	Property/Inventory No./Resource ID	Author	Year	Location Relative to project area
Roland & Nina Hartley House/Hartley Mansion (45SN00337)	2320 Rucker Ave	1910	Listing No. 86000958; Resource ID 676163 WHR, NRHP	Lambert	1986	0.37 mile northeast
Everett High School (45SN00351)	2400 Colby Ave	1910	Listing No. 97000493; Resource ID 676177 WHR, NRHP	Ravetz	1996	0.35 mile northeast
Everett Public Library (45SN00341)	2702 Hoyt Ave	1934	Resource ID 676167 WHR	Dilgard	1989a	0.27 mile east
Knights of Columbus Community Center and War Memorial Building (45SN00132)	1611 Everett Ave	1921	Listing No. 79002554; Resource ID 676151 WHR, NRHP	Potter	1975c	0.40 mile east
Pioneer Block – Everett (45SN00127)	2814-2816 Rucker	1892	Resource ID 676145 WHR	Lambert	1979	0.23 mile southeast
Marion Building, Hotel Marion, Tontine Saloon (45SN00128)	1401 Hewitt Ave	1895	Resource ID 676146 WHR	Dilgard	1979	0.27 mile southeast
Everett Theatre (45SN00115)	2911 Colby Ave	1901; 1924	Resource ID 676133 WHR	Potter	1975a	0.41 mile southeast
Monte Cristo Hotel (45SN00117)	1507 Wall Street	1925	Listing No. 76001907; Resource ID 676135 WHR, NRHP	Potter	1975b	0.39 mile southeast

**Table 4. NRHP/WHR/ERHP-Listed Properties Located within 1.0 Mile of the project area (n = 33).**

Property Name	Address	Date Built	Property/Inventory No./Resource ID	Author	Year	Location Relative to project area
U.S. Post Office and Customs House (45SN00135)	3006 Colby Ave	1917	Listing No. 76001909; Resource ID 676154 WHR, NRHP	Potter	1975d	0.43 mile southeast
Everett City Hall (45SN00344)	3002 Wetmore Ave	1929	Listing No. 90000674; Resource ID 676170 WHR, NRHP	Dilgard	1989b	0.48 mile southeast
Snohomish County Courthouse (45SN00116)	3000 Rockefeller Ave	1910; 1967	Listing No. 75001870; Resource ID 676134 WHR, NRHP	Potter	1975e	0.56 mile southeast
Everett Carnegie Library/Cassidy Funeral Home (45SN00133)	3001 Oakes Ave	1904; 1905	Listing No. 75001868; Resource ID 676152 WHR, NRHP	Potter	1975f	0.62 mile southeast
Commerce Building (45SN00345)	1801 Hewitt Ave	1910	Listing No. 92001290; Resource ID 676171 ERHP, WHR, NRHP	Sullivan	1992	0.52 mile east
Everett Fire Station No. 2 (45SN00342)	2801 Oakes Ave	1925	Listing No. 90000673; Resource ID 676168 WHR, NRHP	Dilgard	1989c	0.57 mile east
Rucker House (45SN00134)	412 Laurel Dr	1901	Listing No. 75001869; Resource ID 676153 WHR, NRHP	Potter	1975g	0.62 mile southwest
Hewitt Avenue Historic District (45DT00231)	1620 - 1915 Hewitt Avenue and portions of Wetmore, Rockefeller, Oakes, and Lombard Avenues	1894–1959	Listing No. 10001020; Resource ID 674762 WHR, NRHP	Fürész	2010	0.44 mile east
Rucker Hill Historic District (45DT00155)	Laurel, Snohomish, Niles, Warren, Bell, Tulalip, 33rd and 34th	1905–1930	Listing No. 89000399; Resource ID 674698 WHR, NRHP	Ravetz	1988	0.45 mile southwest

**Table 4. NRHP/WHR/ERHP-Listed Properties Located within 1.0 Mile of the project area (n = 33).**

Property Name	Address	Date Built	Property/Inventory No./Resource ID	Author	Year	Location Relative to project area
Rucker-Grand Historic Overlay Zone	Rucker and Grand Avenues between 10th and 24th Streets		N/A ERHP			0.37 mile northeast
Norton-Grand Historic Overlay District	Norton and Grand Avenues between Pacific Avenue and 3612 Norton Avenue		N/A ERHP			0.34 mile south
Riverside Historic Overlay District	N/A	Established 2008	N/A ERHP			0.88 mile east
Fratt Mansion (45SN00680)	1725 Grand Ave	1904	Listing No. 100000991 Resource ID 678273 ERHP, WHR, NRHP	Cope & Gillette	2017	0.91 mile northeast
Sittig House	1927 Rucker Ave	1893	N/A ERHP	O'Donnell	2018	0.75 mile northeast
Cleaver Clough House	2031 Grand Ave	1907	N/A ERHP			0.64 mile northeast
Hilzinger House	2108 Rucker Ave	1907	N/A ERHP			0.63 mile northeast
Wright House	2112 Rucker Ave	1905	N/A ERHP			0.61 mile northeast
Blackman House	2208 Rucker Ave	1910	N/A ERHP			0.54 mile northeast
Austin House	2201 Rucker Ave	1897-1900	N/A ERHP			0.57 mile northeast
Agnew House	2301 Rucker Ave	1899	N/A ERHP			0.49 mile northeast
Krieger Laundry	2808 Hoyt Ave	1915	N/A ERHP			0.3 mile southeast
Walsh Platt/Fisher Motors Building	2902 Rucker Ave	1930	N/A ERHP			0.27 mile southeast
Everett Downtown Storage	3001 Rucker Ave	1919	N/A ERHP			0.36 mile southeast
Howard House	3410 Snohomish Ave	1912	N/A ERHP			0.69 mile southwest
Jackson House	3602 Oakes Ave	1906	N/A ERHP			0.97 mile southeast
Culmback Building	3013 Colby Ave	1924	N/A ERHP			0.48 mile southeast

**Table 4. NRHP/WHR/ERHP-Listed Properties Located within 1.0 Mile of the project area (n = 33).**

Property Name	Address	Date Built	Property/Inventory No./Resource ID	Author	Year	Location Relative to project area
Port Gardner Building	2802 Wetmore Ave	1929	N/A ERHP			0.43 mile east
Bank of Everett (Cope Gillette Theatre)	2703 Wetmore Ave	1963	N/A ERHP			0.44 mile east
Challacombe & Fickel Building	2727 Oakes Ave	1923	N/A ERHP			0.59 mile east
Evergreen Building	1909 Hewitt Ave	1902	N/A ERHP			0.62 mile southeast
Watson's Bakery	1812 Hewitt Ave	1910	N/A ERHP			0.57 mile southeast
Morrow Building	2823 Rockefeller Ave	1925	N/A ERHP			0.54 mile southeast
Van Valey House	2130 Colby Ave	1914	N/A ERHP			0.64 mile northeast
Sahlinger-Muck	2319 Colby Ave	1908	N/A ERHP			0.56 mile northeast
Clark Park	2400 Lombard Ave	1894	N/A ERHP			0.66 mile northeast
Ray Fosheim House	2017 26 <sup>th</sup> St	1892	N/A ERHP			0.7 mile northeast
Lettelier House	2510 Baker Ave	1908	N/A ERHP			0.98 mile northeast

Three historic properties located within 0.5 mile (0.8 km) of the project area have been recommended and determined eligible for listing in the NRHP and/or WHR (Table 5). The Kimberly-Clark Everett Mill Main Office (Property ID 667716) is within 0.09 miles of the project area. The building was originally constructed in 1929 and consisted of a two-story Neoclassical rectangular structure with red brick cladding and low-pitched hipped roof. The building has a projecting Classical portico and round, white-painted Tuscan columns. In the 1940s and 1950s, the building underwent several alterations including the addition of two dormers on the roof, an addition to the south elevation of the building, the addition of a poured concrete deck and steps, and window replacements. The building is recommended as eligible for listing in the NRHP under Criterion A and listing in the WHR based on its historical association with the industrial development of Everett (Sharley 2012). All other listed and eligible properties are separated from the project area by the BNSF Railway train tracks. Most listed properties within one mile of the project area are clustered in areas to the east and to the north-northeast.

**Table 5. Properties Recommended Eligible Located within 0.5 Mile of project area (n = 3)**

Property Name	Address	Date Built	Property ID/ Resource ID	Author	Year	Location Relative to project area
Kimberly-Clark Everett Mill Main Office	2600 Federal Ave	1929	Property ID 667716; Resource ID 614724	Sharley	2012	0.09 mile north
Daulph Delicatessen	1416 Hewitt Ave	1927	Property ID 18268; Resource ID 12597	Dilgard and Riddle	1989	0.33 mile east
Everett Main Post Office	3102 Hoyt Ave	1964	Property ID 270916	Richards	2014	0.44 mile southeast

### 3.1.4 Cemeteries and Burials

According to information provided on the DAHP’s WISAARD, there are no historic or precontact burials located within 1.0 mile (1.6 km) of the project area. One historic columbarium is located approximately 0.47-mile northeast of the project area (DAHP 2009). The Trinity Episcopal Church Columbarium (45SN00555) is situated at 2301 Hoyt Ave. The church was dedicated in 1921 with a new parish hall constructed in 1961 (Trinity Episcopal Church 2019). No further information is provided regarding the columbarium.

## 3.2 Cultural Resources Summary

Archival research indicates a high level of human activity took place adjacent to the project area during precontact and historic times. Given the history of the project area and its immediate vicinity, Cardno concludes that the potential for encountering subsurface archaeological deposits beneath the historic fill layers is moderate to high. Historical land modification, including the introduction of artificial fill and development, reduces the likelihood of encountering in situ precontact artifacts. Ethnographic-period archaeological deposits within and adjacent to the project area may include disturbed or redeposited midden deposits, burials, evidence of a village, or debris associated with short-term occupations and resource-processing locations. Historic-period deposits may include debris from agricultural and historic homestead structures and other early-twentieth-century structure (i.e., “squatters shacks”), or from manufacturing or commercial development.

## 4.0 Recommendations

Cardno recommends that a monitoring and inadvertent discovery plan (MIDP) be implemented to minimize potential impacts to any currently unknown intact archaeological resources. Monitoring should not be necessary in glacial deposits and sediments, nor in existing areas where disturbance has already occurred.

Cardno recommends that the MIDP outline the necessary steps to be taken by contractors in the event of an inadvertent discovery during construction. These steps would serve to minimize damage to any inadvertently discovered archaeological resources during ground-disturbing activities, which may include small, deeply buried, and/or widely dispersed historic or precontact cultural materials (e.g., railroad grade, rails, ties, stakes, and footings; glass bottles; sanitary cans; chipped-stone tools; ground stone; beads; shell; faunal remains; human remains; funerary objects; and objects of cultural patrimony).

Steps included in the MIDP would outline the applicable local laws and regulations, stop-work and notification protocols, discovery protection measures, procedures for assessment by archaeologists, and steps for consultation with the DAHP and any affected Indian tribes. In the state of Washington, archaeological sites are protected from knowing disturbance on both public and private lands. As described in Section 2, RCW 27.44 and RCW 27.53.060 require that a person obtain a permit from the DAHP before excavating, removing, or altering Native American human remains or archaeological resources in Washington. A failure to obtain a permit is punishable by civil fines and penalties under RCW 27.53.095 and criminal prosecution under RCW 27.53.090.

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## About Cardno

Cardno is an ASX-200 professional infrastructure and environmental services company, with expertise in the development and improvement of physical and social infrastructure for communities around the world. Cardno's team includes leading professionals who plan, design, manage, and deliver sustainable projects and community programs. Cardno is an international company listed on the Australian Securities Exchange [ASX:CDD].

## Cardno Zero Harm

*Cardno*  
**ZERO  
HARM**  
EVERY JOB. EVERY DAY.

At Cardno, our primary concern is to develop and maintain safe and healthy conditions for anyone involved at our project worksites. We require full compliance with our Health and Safety Policy Manual and established work procedures and expect the same protocol from our subcontractors. We are committed to achieving our Zero Harm goal by continually improving our safety systems, education, and vigilance at the workplace and in the field. Safety is a Cardno core value and through strong leadership and active employee participation, we seek to implement and reinforce these leading actions on every job, every day.