

Cardno

Suite 1150 Seattle, WA 98104

USA

Fax

801 Second Avenue

Phone +1 206 269 0104

Toll-free +1 877 470 4334 +1 206 269 0098

www.cardno.com

April 21, 2021 Cardno 03144702.R04

Mr. Jason Cook Washington State Department of Ecology Toxics Cleanup Program P.O. Box 47600 Olympia, Washington 98504-7600

SUBJECT Port of Everett – Excavation Delineation Report

> ExxonMobil ADC Agreed Order No.: DE 6184 2717/2731 Federal Avenue Everett, Washington

Mr. Cook:

At the request of ExxonMobil Environmental and Property Solutions, on behalf of ExxonMobil Oil Corporation (ExxonMobil) and American Distribution Company (ADC), Cardno prepared the enclosed Port of Everett -Excavation Delineation Report presenting results of the soil investigation conducted between October 12 through October 14, 2020, January 25 through January 27, 2021, and February 5, 2021, at the subject site.

The purpose of the work was to pre-establish the vertical and lateral extents of the proposed remedial excavation such that collection of soil samples at the time of excavation is not necessary. Cardno requests that the Washington State Department of Ecology provide an opinion regarding whether the excavation extents have been adequately vertically and laterally defined as summarized in the enclosed report.

Please contact Mr. Bobby Thompson, Cardno Project Manager for this site, at 206 510 5855, or Ms. Jennifer Sedlachek, ExxonMobil Project Manager for this site at 469 913 3672 with any questions.

Sincerely,

Cameron Penner-Ash Assistant Project Manager Cardno

Direct Line +1 503 869 1196

Email: cameron.penner-ash@cardno.com

Bobby Thompson Project Manager

Cardno

Direct Line +1 206 510 5855

Email: robert.thompson@cardno.com

ENCLOSURE

Cardno's ExxonMobil Environmental and Property Solutions Port of Everett – Excavation Delineation Drilling Report, dated April 21, 2021



cc: w/ enclosure

Mr. Erik Gerking, Port of Everett (Electronic copy via email)

Mr. Steve Miller, American Distribution Company (Electronic copy via email)

Ms. Sandra Caldwell, Washington State Department of Ecology (Electronic copy via email)

Ms. Jennifer Sedlachek, ExxonMobil Environmental and Property Solutions Company (Filed in project folder)

Port of Everett – Excavation Delineation Report

ExxonMobil ADC 2717/2731 Federal Avenue Everett, Washington

Cardno 03144702.R04

Prepared for ExxonMobil Environmental and Property Solutions

April 21, 2021





Keri Lynn Chappell

Port of Everett – Excavation Delineation Report

ExxonMobil ADC 2717/2731 Federal Avenue Everett, Washington

Cardno 03144702.R04

April 21, 2021

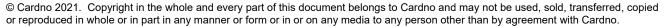
Cameron Penner-Ash Assistant Project Manager Cardno

Direct Line +1 503 869 1196

Email: cameron.penner-ash@cardno.com

Keri Chappell, L.G. 2719 Project Geologist Cardno

Direct Line +1 707 766 2011 Email: keri.chappell@cardno.com



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1 Introduction

1.1 Site Information

Site Name: ExxonMobil ADC

Address: 2717/2731 Federal Avenue

Everett, Washington

Township/Section/Range: Township 29 North, Section 19, Range 5 East

Northern Tax Parcels: 00437161900101

00437161900100

Southern Tax Parcels: 00437161901000

Current Property Owners: Northern Parcel – American Distribution Company (ADC)

Southern Parcel – ExxonMobil Oil Corporation (ExxonMobil) **Agency/Regulatory ID No:** Washington Department of Ecology (Ecology) / FSID #2728

Agreed Order No.: DE 6184

1.2 Purpose

Cardno prepared this report presenting results of the soil sampling investigation conducted on October 12 to October 14, 2020, January 25 to January 27, 2021, and February 5, 2021, on Port of Everett property. The scope of work was performed in order to achieve the following objectives:

- > Advance exploratory soil borings to delineate the proposed remedial excavation extents.
- > Evaluate soil heterogeneity as related to potential preferential pathways that might impact the lateral and vertical extents of the proposed targeted remedial excavation.
- > Characterize the extent of hydrocarbons in soil on the Port of Everett property so that the collection of soil samples during the remedial excavation is not necessary.

The scope of work included:

- > The advancement of 44 excavation delineation soil borings (EB1 through EB41, EB31A, EB31B, and EB32A) to define the extents of the proposed remedial excavation on the Port of Everett property.
- > The advancement of seven step out excavation delineation soil borings (SB1 through SB7) to further define the extents of the proposed remedial excavation on the Port of Everett property.
- > The advancement of two geotechnical borings (GB1 and GB2) to aid in the development of future shoring wall plans to protect Federal Avenue during the remedial excavation.
- Conduct a site survey by a professional survey contractor following the delineation drilling activities to survey the locations of the borings and other relevant site features and utilities. The survey will be used to accurately document the lateral and vertical spacing of each data point to direct the planned remedial activities with a high level of precision.

2 Background

The ExxonMobil ADC site is located at 2717/2731 Federal Avenue, Everett, Snohomish County, Washington, adjacent to the Port of Everett (Plate 1). The site consists of three tax parcels: 00437161900101, 00437161900100, and 00437161901000 (Snohomish County, 2018). The northern parcels are owned by ADC and the southern parcel is owned by ExxonMobil. The property historically operated as a bulk petroleum storage, transfer, and distribution facility. The area of proposed excavation is located directly west

of the ExxonMobil ADC site within five combined tax parcels: 29051900301600, 29051900302500, 29051900302700, 29051900302800, and 29051900302900 (Snohomish County, 2018). The combined tax parcels, located within the Port of Everett, are currently leased for heavy industrial use to Everett Ship Repair, LLC, a subsidiary of Ice Cap Holding, LLC, and Dunlap Towing Company (Wood, 2019). In the early 1900s, the historical shoreline was approximately located along present day Federal Avenue (Plate 2). As development continued, the shoreline was extended westward until it reached its current boundary in 1973 (Wood, 2019). The proposed excavation will take place primarily in material used to backfill the bay and extend the shoreline.

3 Cleanup Level Selection

The site-specific residual saturation concentrations used as remediation levels to guide excavation delineation drilling activities, as defined in Wood Environmental & Infrastructure Solutions, Inc. draft *Site characterization/focused feasibility study report*, dated August 23, 2019 (Wood, 2019), are as follows:

TPHg: 2,470 mg/kgTPHd: 4,800 mg/kgTPHmo: 5,810 mg/kg

4 Port of Everett Subsurface Investigation and Survey

The purpose of this work was to delineate the proposed remedial excavation on the Port of Everett property. All soil boring activities were conducted in accordance with Cardno's *Excavation Delineation Work Plan* – *Port of Everett Property*, dated September 1, 2020 (Cardno 2020a); Cardno's *Subsequent Excavation Delineation Drilling Work Plan*, dated December 21, 2020 (Cardno, 2020b); Cardno's standard field protocol (Appendix A); and under the supervision of a licensed geologist.

4.1 Pre-Field Activities

During pre-planning, Cardno contracted Advanced Underground Utility Locating (AUUL), of Bellevue, Washington, to conduct a comprehensive evaluation of subsurface structures located on Port of Everett property and the City of Everett right-of-way (Federal Avenue). Using a combination of ground penetrating radar and portable electromagnetic survey, AUUL located the extents of sanitary sewer lines, underground power lines, telecommunication lines, and storm sewer lines. Holocene Drilling, Inc. (Holocene), of Puyallup, Washington, obtained Washington start cards from Ecology.

4.2 Subsurface Investigation

In order to completely define the extents of the Port of Everett targeted remedial excavation such that soil sampling at the time of the excavation will not be necessary, Cardno observed Holocene advance 51 excavation delineation soil borings (EB1 through EB41, EB31A, EB31B, EB32A, and SB1 through SB7) where historical data indicated residual concentrations of hydrocarbons above the site-specific residual saturation levels. Drilling was performed during two mobilizations with the first occurring in October 2020 and the second in late January through early February 2021. It was determined following the initial mobilization in October 2020 that supplementary delineation was required; however, additional coordination with the various stakeholders was necessary prior to the second mobilization.

4.2.1 October 2020 Mobilization

On October 12 through October 14, 2020, Cardno observed Holocene advance excavation delineation soil borings in accordance with Cardno's *Excavation Delineation Work Plan – Port of Everett Property*, dated September 1, 2020 (Cardno, 2020a). Per the work plan, 21 borings were advanced by a direct push drill rig. Based on the analytical results reported by the mobile laboratory (Appendix B), nine additional step out borings were advanced to further delineate the extents of the proposed remedial excavation. The locations of borings EB1 through EB30 are shown on Plates 3 through Plate 9 and boring logs are located in Appendix C. Soil samples collected from the borings were field screened and evaluated for the presence of residual hydrocarbon concentrations. Soil samples that indicated the presence of residual hydrocarbons were analyzed on site by Libby Environmental, Inc. (Libby Environmental), a State of Washington-certified mobile laboratory, for constituents of concern. Samples that did not indicate the presence of residual hydrocarbons were preserved for analysis at Libby Environmental's fixed-based laboratory.

Delineation of the remedial excavation extents was largely achieved during the October 2020 mobilization; however, it was determined a subsequent delineation drilling event was warranted to complete delineation activities to the north, northwest, and south.

4.2.2 <u>January/February 2021 Mobilization</u>

On January 25 through January 27 and February 5, 2021, Cardno observed Holocene advance excavation delineation soil borings in accordance with Cardno's *Subsequent Excavation Delineation Drilling Work Plan*, dated December 21, 2020 (Cardno, 2020b). A total of 11 borings were advanced by a direct push drill rig during the mobilization. Based on the analytical results reported by the mobile laboratory, seven additional step out borings were advanced by a direct push drill rig to further delineate the extents of the proposed remedial excavation. The locations of borings EB31 through EB41 and step out borings SB1 through SB7 are shown on Plates 3 through Plate 9 and boring logs are located in Appendix C. Soil samples collected from the borings were field screened and evaluated for the presence of residual hydrocarbon concentrations. Soil samples that indicated the presence of residual hydrocarbons were analyzed on site by Libby Environmental for constituents of concern. Samples that did not indicate the presence of residual hydrocarbons were preserved for analysis at the Libby Environmental fixed-based laboratory.

4.2.3 January 2021 Duplicate Borings

On January 25, 2021, boring EB31 met refusal at 9.5 feet bgs. The 9.5-foot sample depth contained residual hydrocarbons below the site-specific residual saturation remediation levels. On January 25, 2021, boring EB32 was advanced to a maximum depth of 12.5 feet bgs and soil samples were collected at intervals of 10 and 12.5 feet bgs for laboratory analysis. The 10-foot sample depth contained residual hydrocarbons above the site-specific residual saturation remediation levels. Boring EB32 was located approximately 30 feet west of boring EB31 and it was determined that vertical delineation was not achieved at boring EB31 due to the presence of residual hydrocarbons above the site-specific residual saturation remediation levels in the 10foot sample at boring EB32. On January 27, 2021, boring EB31A, located approximately 4 feet north of EB31, was advanced to a maximum depth of 15 feet bgs and soil samples were collected at 15 feet bgs for laboratory analysis. Field screening of the 15-foot sample at location EB31A did not indicate the presence of residual hydrocarbons and the boring was terminated at that depth. The fixed-based laboratory later reported that the 15-foot sample depth contained residual hydrocarbons above the site-specific residual saturation remediation levels. Vertical delineation was not achieved at EB31A thus EB31B, located approximately 4 feet north of EB31A, was advanced to a maximum depth of 20 feet bgs and soil samples were collected at 17.5 and 20 feet bgs for laboratory analysis. Both the 17.5 and 20-foot samples contained residual hydrocarbons below the site-specific residual saturation remediation levels and boring locations EB31, EB31A, and EB31B were determined to be vertically delineated.

Boring EB32 was located approximately 30 feet west of boring EB31A and it was determined that vertical delineation was not achieved at boring EB32 due to the presence of residual hydrocarbons above the site-specific residual saturation remediation levels in the 15-foot sample at boring EB31A. On January 27, 2021,

boring EB32A was advanced to a maximum depth of 20 feet bgs and soil samples were collected at 5, 7.5, 10, 15, 17.5, and 20 feet bgs for laboratory analysis. Only one sample, collected at 10 feet bgs, contained residual hydrocarbon concentrations above the site-specific residual saturation remediation levels and boring locations EB32 and EB32A were determined to be vertically delineated.

4.3 Laboratory Analyses

Soil samples were analyzed by either Libby's mobile or fixed-based laboratory for:

- > TPHg in accordance with NWTPH-Gx.
- > TPHd and TPHmo in accordance with NWTPH-Dx.

Cardno directed soil samples to be either analyzed in near real time in the mobile laboratory or preserved for analysis at the fixed-based laboratory based on field screening results. Laboratory results and COC documentation is included as Appendix B.

4.4 Geotechnical Boring Advancement

January 26, 2021, Cardno observed Holocene clear geotechnical borings GB1 and GB2 to 5 feet bgs using air knife clearance drilling equipment and hand tools. On January 27, 2021, Cardno observed Holocene advanced two geotechnical borings (GB1 and GB2) to aid in the development of a future shoring wall to protect Federal Avenue during the remedial excavation. The borings were advanced with a truck mounted hollow-stem auger drill rig. A split spoon sampler was advanced by a Diedric D-120 140-pound auto hammer calibrated and certified by Robber Miner Dynamic Testing, Inc., on November 19, 2020. Boring logs for GB1 and GB2 are included in Appendix C. Additional geotechnical data will be included in a future engineering design report for the site.

4.5 Topographic Land Survey

On February 4, 5, and 8, 2021, Cardno observed Alpha Subdivision Pro's Inc. Land Surveying and Planning (ASPI), of Everett, Washington, perform a comprehensive survey. The survey was conducted on and around the ExxonMobil ADC site and the Port of Everett parcels leased by Everett Ship Repair and Dunlap Towing Company. The survey consisted of physical site features, monitoring well locations, soil boring locations, above and below ground utilities, fence lines, property lines, right-of-ways, driveways, and vegetated areas. A comprehensive survey file was provided to Cardno on February 19, 2021.

4.6 Waste Management

The soil and decontamination water generated during drilling activities was temporarily stored on the ExxonMobil property in DOT-approved 55-gallon drums. Soil and decontamination water was transported by Advanced Chemical Transport, Inc., of Kent, Washington, to US Ecology Idaho Inc.'s Grandview, Idaho, facility, an ExxonMobil Approved Waste Sites List disposal facility. Waste documentation for soil and water are included in Appendix D.

5 Results of Excavation Delineation Investigation

Soil encountered during this investigation consisted of stratified layers of sand, silt, gravel with sand, and sand with gravel from surface to approximately 31.5 feet bgs (Appendix C). Laboratory results indicate 22 of 51 soil boring locations contained residual hydrocarbons above the site-specific residual saturation remediation levels for at least one sample-depth interval (Table 1). Soil concentrations exceeding the site-specific residual saturation remediation levels were confined to a north/south trending line of approximately 300 feet along Federal Avenue and extending west towards Possession Sound, approximately 75 feet.

As shown on Cross Section A-A' (Plate 10) as well as the depth-interval map series (Plates 3 through 9), soil samples exceeding the site-specific residual saturation remediation levels (illustrated in red) tend to deepen from the 5-foot bgs range in the southern area to the 15-foot bgs range in the northern area. The depth of first encountered groundwater identified during the drilling activities demonstrates a similar pattern where groundwater was first observed at shallower depths in the 5-foot bgs range to the south and deeper depths in the 15-foot bgs range to the north.

According to historical aerial photography (Wood, 2019), most of the proposed remedial excavation area was infilled during shoreline expansion efforts between 1914 and 1947. The northwestern corner (north of approximately EB25 and east to the N-S cross section line A-A' drawn on Plates 3 through 9) was infilled during shoreline expansion efforts between 1967 and 1976. Select infill materials used in the northwestern corner differ from those in the south.

Cardno observed a concrete debris layer up to 4 feet thick in the northwestern corner in EB32, EB32A, and EB34 along with several gravel layers across the entire area that were not observed in other areas of the proposed remedial excavation. Additionally, the sandy infill material in the northwest corner has a higher average percent gravel component; this coarser-grained material has the potential to permit hydrocarbons to travel deeper in this area than in the mid- to southern portions of the proposed remedial excavation area.

In the southern portion of the proposed remedial excavation area, from approximately EB19 to the southern proposed remedial excavation extent, Cardno observed wood debris in layers up to 4 feet thick. The wood debris was characterized by a clay-like texture and matrix. This finer-grained material has the potential to inhibit the vertical migration of hydrocarbons.

Aside from the presence of coarser-grained gravel and concrete debris material in the north that may have permitted additional vertical migration of hydrocarbons, and the finer-grained wood debris material in the south that may have inhibited vertical migration of hydrocarbons, Cardno did not identify any subsurface preferential pathways. The subsurface is remarkably homogeneous given its infill history, comprising primarily coarse-grained sandy sediments. The vertical extent of residual hydrocarbon concentrations has been defined as illustrated on Plate 10 and Plates 3 through 9.

The lateral migration of hydrocarbons from east to west across the Port of Everett property is well-defined on its western extent along a predominantly straight line running longitudinally north-south from SB3 to EB37. The expression of the straight line, perpendicular to groundwater flow direction and downgradient of the known historical release, demonstrates that migration of hydrocarbons occurred uniformly and the likelihood of preferential pathways existing along any east-west axis across the area is low. The western boundary of the excavation, and the interpreted western extent of residual hydrocarbon concentrations, has been defined as illustrated on Plates 3 through 9.

6 Conclusions

The extents of the proposed Port of Everett remedial excavation have been defined and soil sampling at the time of the excavation will not be necessary.

7 Recommendations

The purpose of the work was to establish the vertical and lateral extents of the proposed remedial excavation such that collection of soil samples at the time of excavation is not necessary. Cardno requests that Ecology confirm whether the excavation extents have been adequately vertically and laterally defined based on comparison against the site-specific residual saturation remediation levels and that soil sampling at the time of excavation will not be necessary.

8 Contact Information

The responsible party contact is Ms. Jennifer Sedlachek, ExxonMobil Environmental and Property Solutions Company, 4096 Piedmont Avenue #194, Oakland, California 94611.

The consultant contact is Mr. Bobby Thompson, Cardno, 801 Second Avenue, Suite 1150, Seattle, Washington 98104.

The agency contact is Mr. Jason Cook, Washington State Department of Ecology, Toxics Cleanup Program, P.O. Box 47600, Olympia, Washington 98504.

9 Limitations

For documents cited that were not generated by Cardno, the data taken from those documents is used "as is" and is assumed to be accurate. Cardno does not guarantee the accuracy of this data and makes no warranties for the referenced work performed nor the inferences or conclusions stated in these documents.

This report and the work performed have been undertaken in good faith, with due diligence and with the expertise, experience, capability and specialized knowledge necessary to perform the work in a good and workmanlike manner and within all accepted standards pertaining to providers of environmental services in Washington at the time of investigation. No soil engineering or geotechnical references are implied or should be inferred. The evaluation of the geologic conditions at the site for this investigation is made from a limited number of data points. Subsurface conditions may vary away from these data points.

10 References

Snohomish County Online Property Information (Snohomish County). January 1, 2018. *Interactive Map (SCOPI)*. https://snohomishcountywa.gov/5414/Interactive-Map-SCOPI. Accessed August 27, 2020.

Cardno. September 1, 2020a. *Excavation Delineation Work Plan – Port of Everett Property*. ExxonMobil ADC, 2717/2713 Federal Avenue, Everett, Washington.

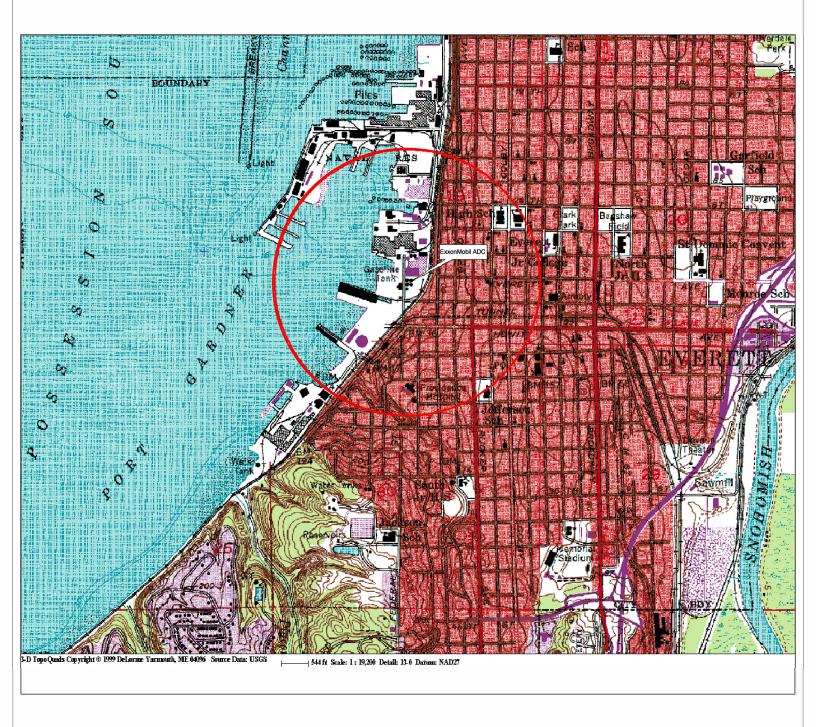
Cardno. December 21, 2020b. Subsequent *Excavation Delineation Drilling Work.* ExxonMobil ADC, 2717/2713 Federal Avenue, Everett, Washington.

Wood Environmental & Infrastructure Solutions, Inc. (Wood). August 23, 2019. draft Site characterization/focused feasibility study report, ExxonMobil/ADC Property, Ecology Site ID 2728, Everett, Washington.

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9 Acronym List

μg/L	Micrograms per liter	NAPL	Non-aqueous phase liquid
μg/m³	Micrograms per cubic meter	NEPA	National Environmental Policy Act
μs	Microsiemens	NGVD	National Geodetic Vertical Datum
1,2-DCA	1,2-dichloroethane	NPDES	National Pollutant Discharge Elimination System
acfm	Actual cubic feet per minute	O&M	Operations and Maintenance
AS	Air sparge	ORP	Oxidation-reduction potential
AST	Aboveground storage tank	OSHA	Occupational Safety and Health Administration
bgs	Below ground surface	OVA	Organic vapor analyzer
BTEX	Benzene, toluene, ethylbenzene, and total xylenes	P&ID	Process and Instrumentation Diagram
cfm	Cubic feet per minute	PAH	Polycyclic aromatic (or polyaromatic) hydrocarbon
COC	Chain-of-Custody	PCB	Polychlorinated biphenyl
CPT	Cone Penetration (Penetrometer) Test	PCE	Tetrachloroethene or perchloroethylene
DIPE	Di-isopropyl ether	PID	Photo-ionization detector
DO	Dissolved oxygen	PLC	Programmable logic control
DOT	Department of Transportation	POTW	Publicly-owned treatment works
DPE	Dual-phase extraction	ppmv	Parts per million by volume
DTW	Depth to water	PQL	Practical quantitation limit
EDB	1,2-dibromoethane	psi	Pounds per square inch
EPA	Environmental Protection Agency	PVC	Polyvinyl chloride
ESL	Environmental screening level	QA/QC	Quality assurance/quality control
ETBE	Ethyl tertiary butyl ether	RBSL	Risk-based screening levels
FID	Flame-ionization detector	RCRA	Resource Conservation and Recovery Act
fpm	Feet per minute	RL	Reporting limit
GAC	Granular activated carbon	scfm	Standard cubic feet per minute
gpd	Gallons per day	SSTL	Site-specific target level
gpm	Gallons per minute	STLC	Soluble threshold limit concentration
GWPTS	Groundwater pump and treat system	SVE	Soil vapor extraction
HIT	High-intensity targeted	SVOC	Semi-volatile organic compound
HVOC	Halogenated volatile organic compound	TAME	Tertiary amyl methyl ether
J	Estimated value between MDL and PQL (RL)	TBA	Tertiary butyl alcohol
LEL	Lower explosive limit	TCE	Trichloroethene
LPC	Liquid-phase carbon	TOC	Top of well casing elevation; datum is msl
LRP	Liquid-ring pump	TOG	Total oil and grease
LUFT	Leaking underground fuel tank	TPH	Total petroleum hydrocarbons
LUST	Leaking underground storage tank	TPHd	Total petroleum hydrocarbons as diesel
MCL	Maximum contaminant level	TPHg	Total petroleum hydrocarbons as gasoline
MDL	Method detection limit	TPHmo	Total petroleum hydrocarbons as motor oil
mg/kg	Milligrams per kilogram	TPHs	Total petroleum hydrocarbons as stoddard solvent
mg/L	Milligrams per liter	TRPH	Total recoverable petroleum hydrocarbons
mg/m ³	Milligrams per cubic meter	UCL	Upper confidence level
MPE	Multi-phase extraction	USCS	Unified Soil Classification System
MRL	Method reporting limit	USGS	United States Geologic Survey
msl	Mean sea level	UST	Underground storage tank
MTBE	Methyl tertiary butyl ether	VCP	Voluntary Cleanup Program
MTCA	Model Toxics Control Act	VOC	Volatile organic compound
NAI	Natural attenuation indicators	VPC	Vapor-phase carbon
14/ 11	ratara attoridation indicators	V1 O	vapor priase ourbori



FN 0314470001

EXPLANATION



1/2-mile radius circle



APPROXIMATE SCALE 0 0.5 1 mile



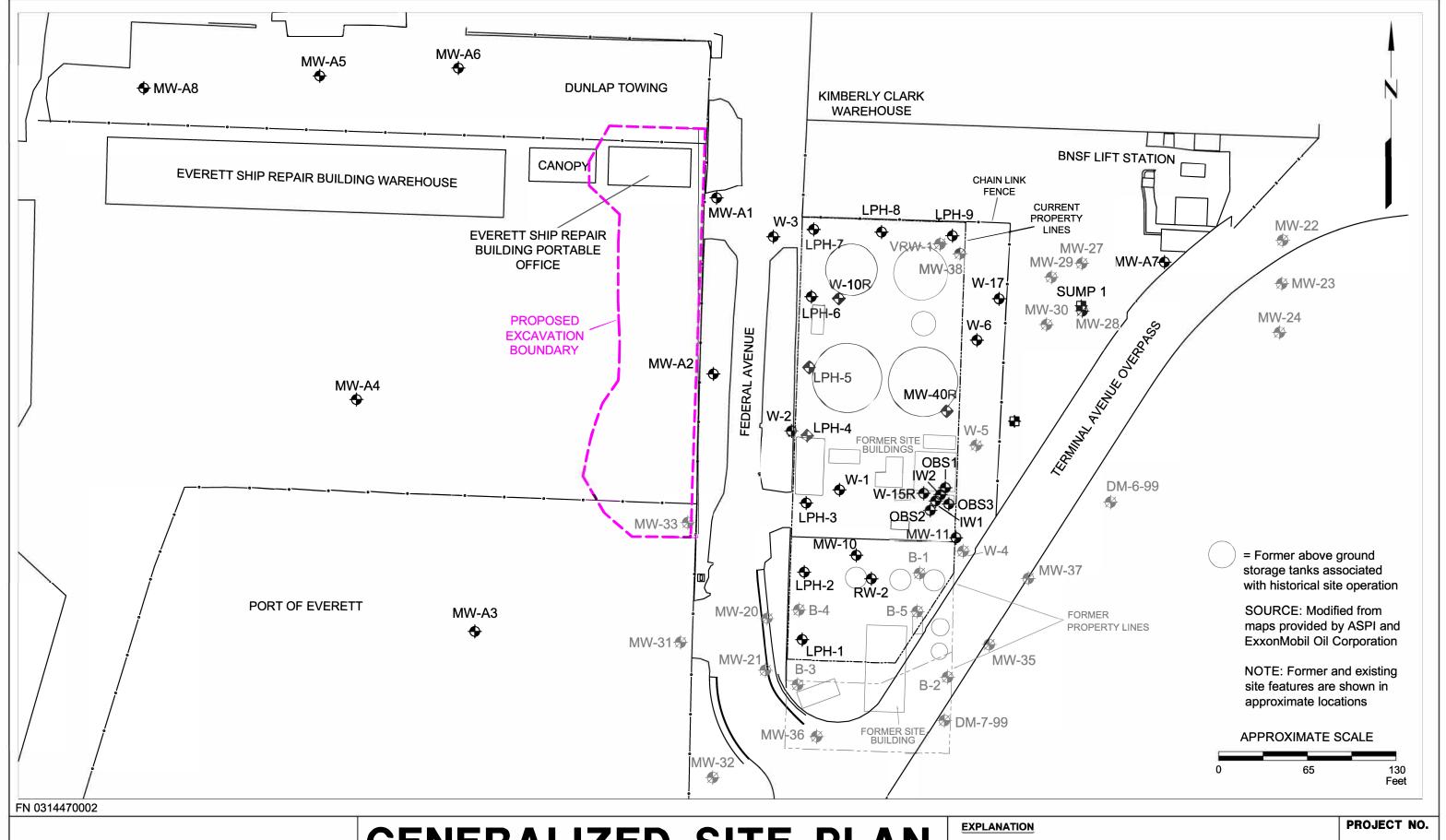
SITE LOCATION MAP

ExxonMobil ADC 2717/2731 Federal Avenue Everett, Washington PROJECT NO.

031447

PLATE 1

CPA: 04/01/21





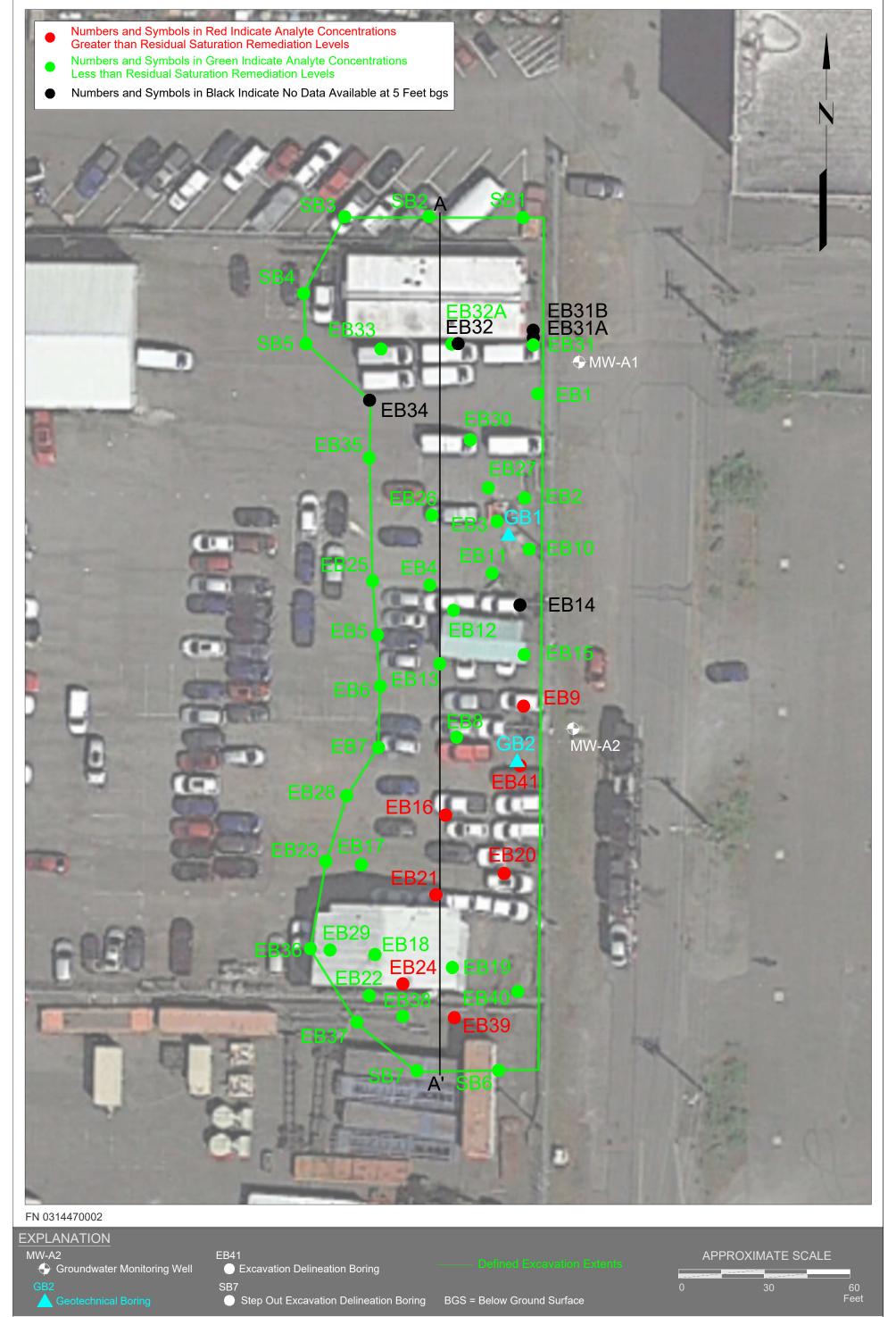
GENERALIZED SITE PLAN

ExxonMobil ADC 2717/2731 Federal Avenue Everett, Washington

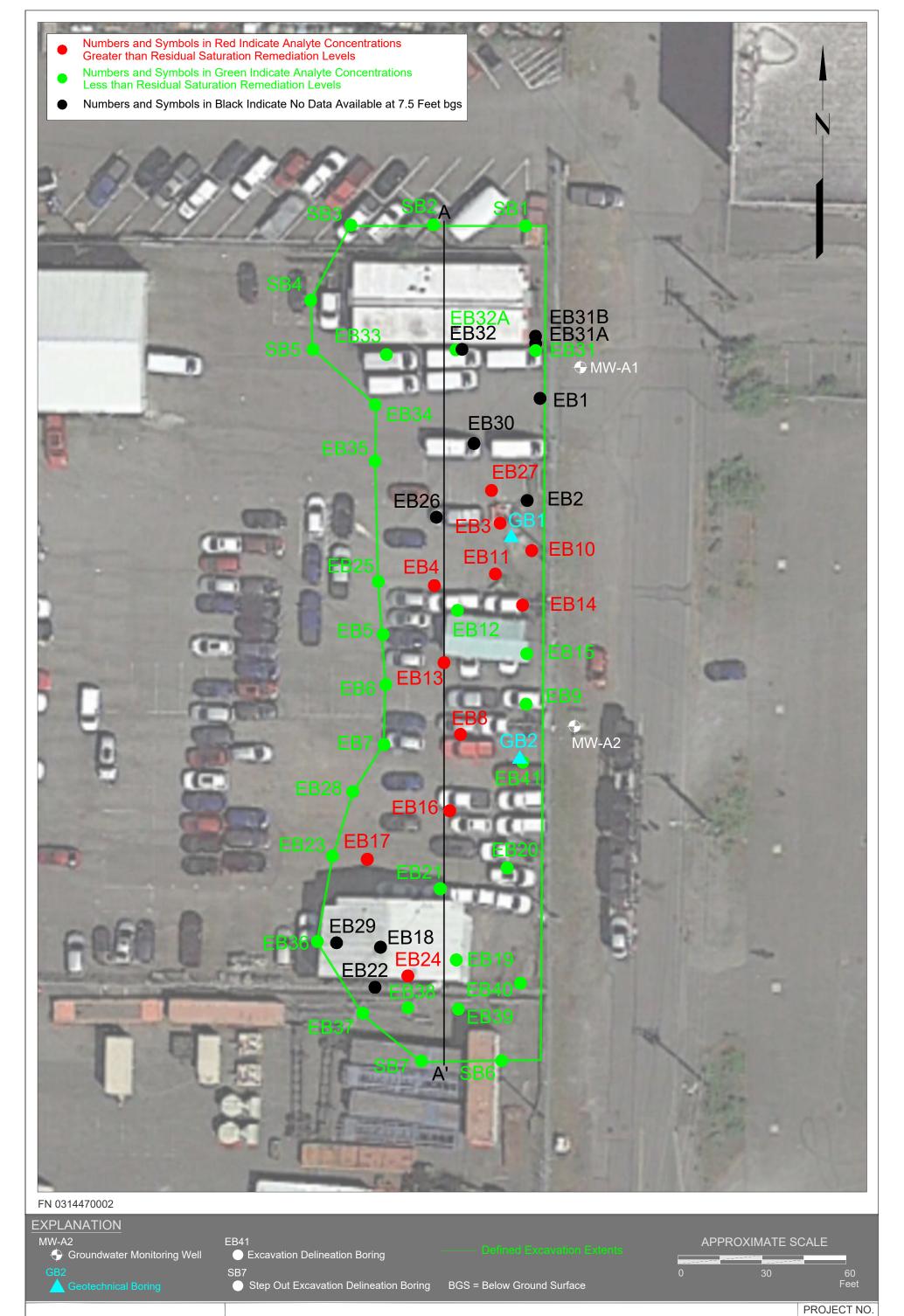
EXPLANATION							
MW-A8	Groundwater Monitoring Well						
SUMP 2	Groundwater Sump						
MW37	Destroyed Groundwater						

PROJECT NO. 031447

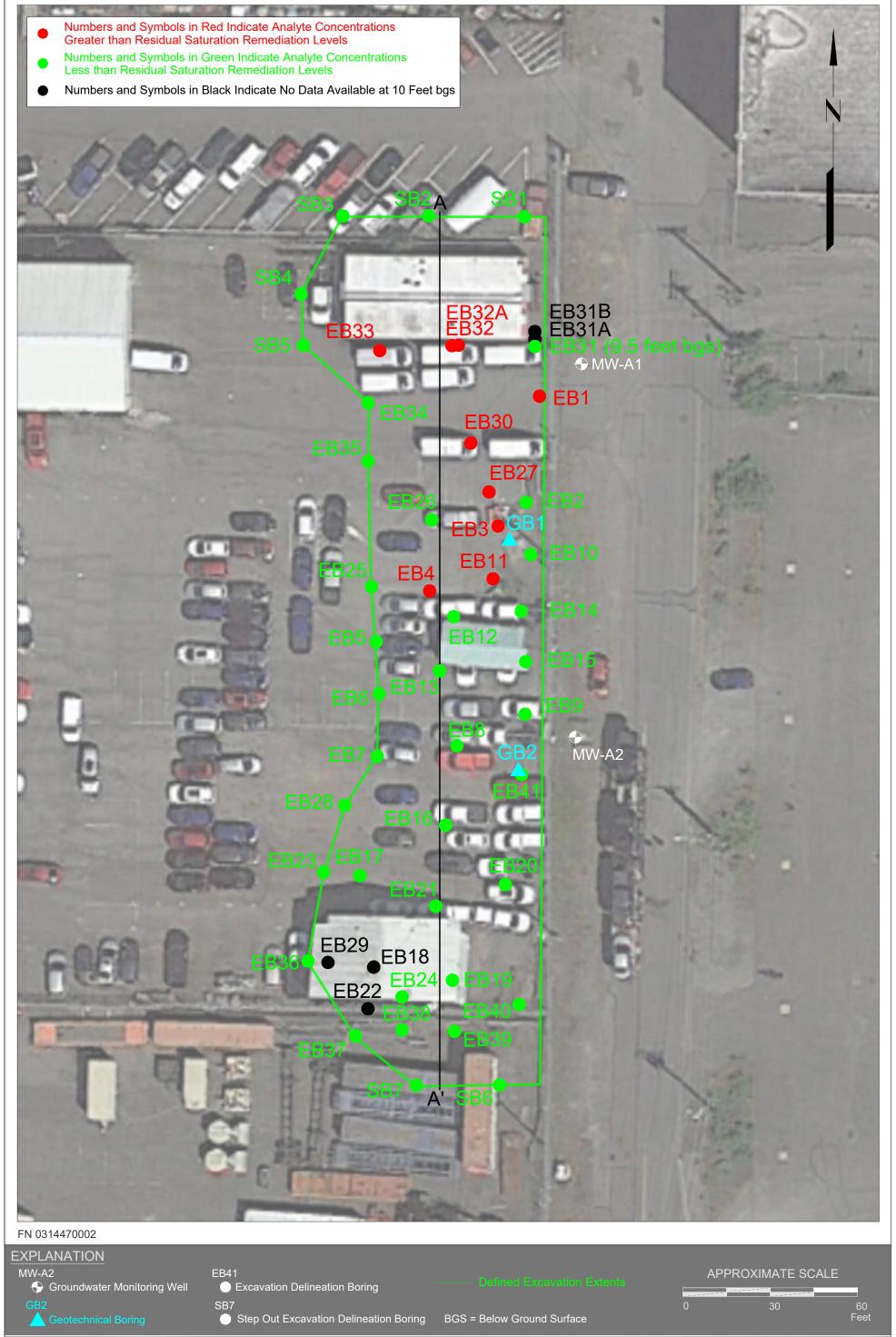
PLATE
2
CPA: 03/30/21

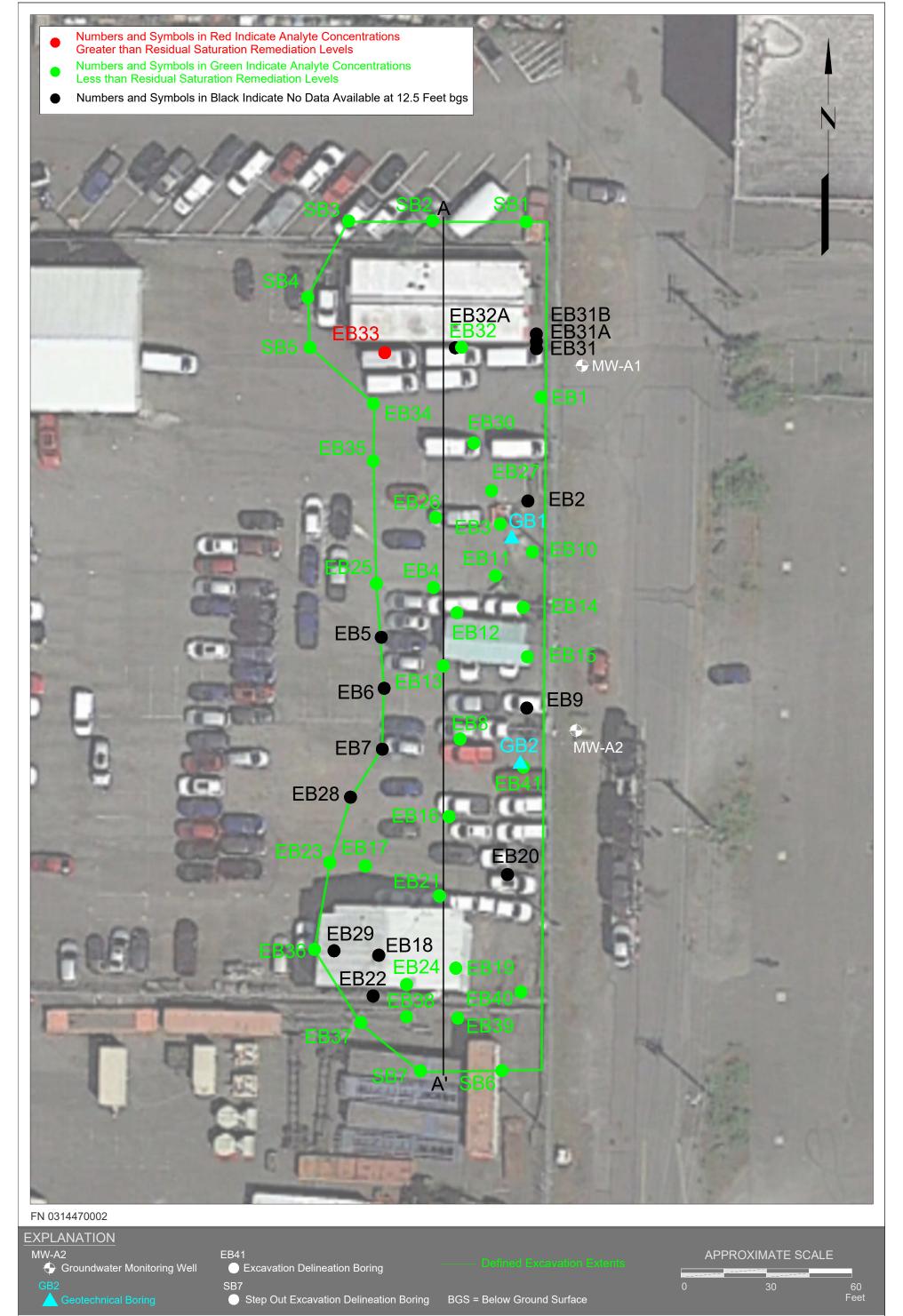


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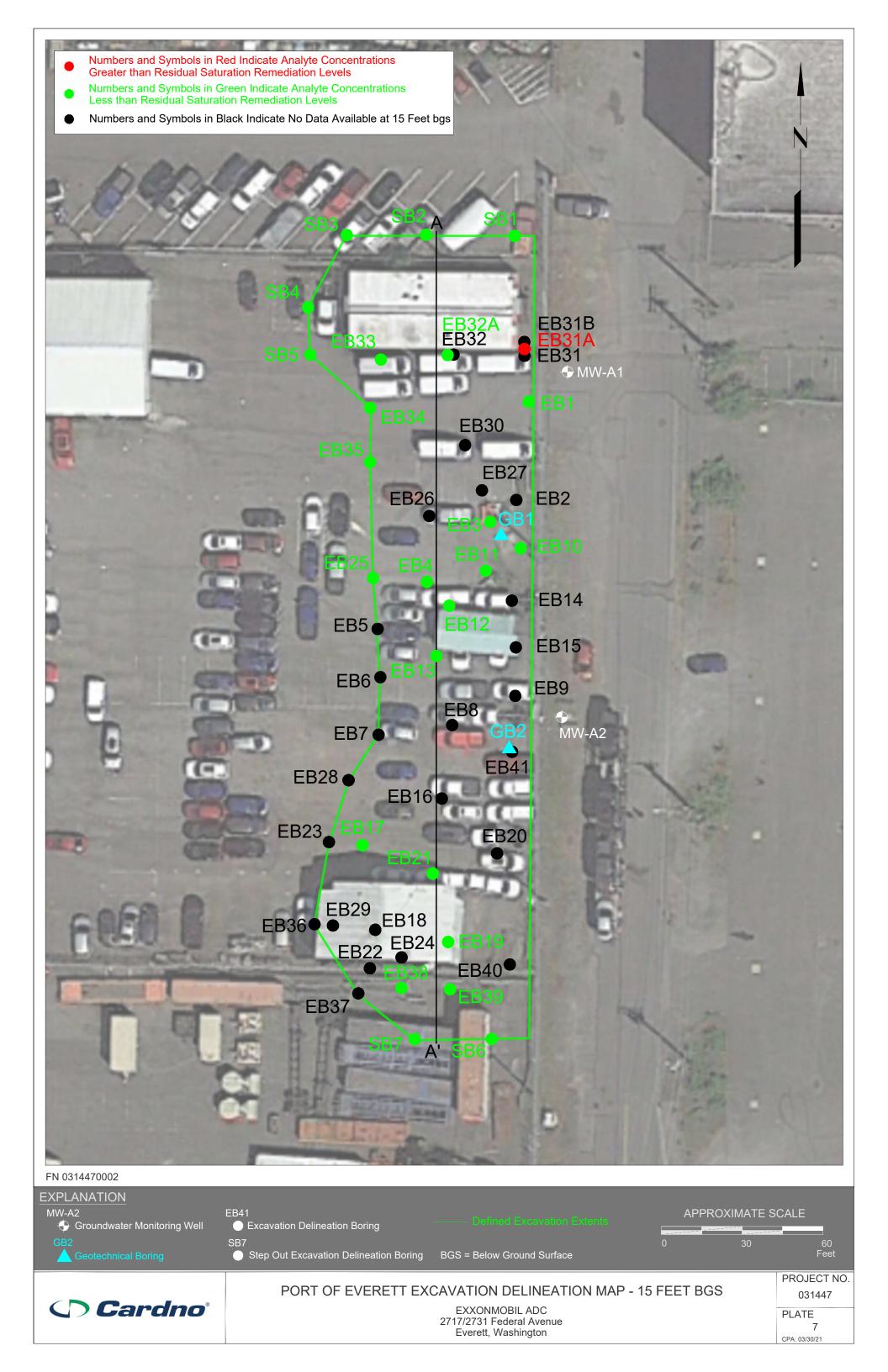


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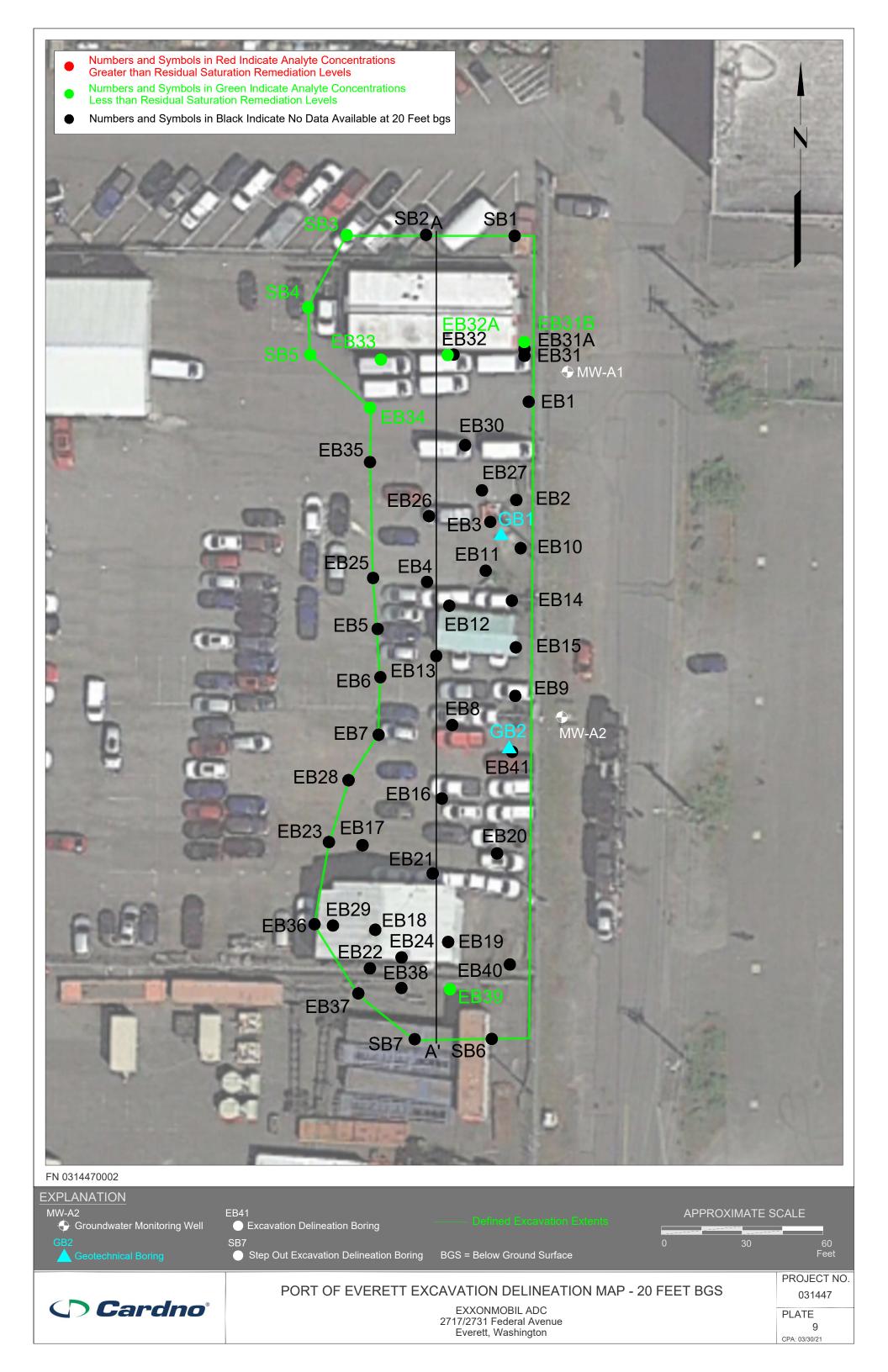


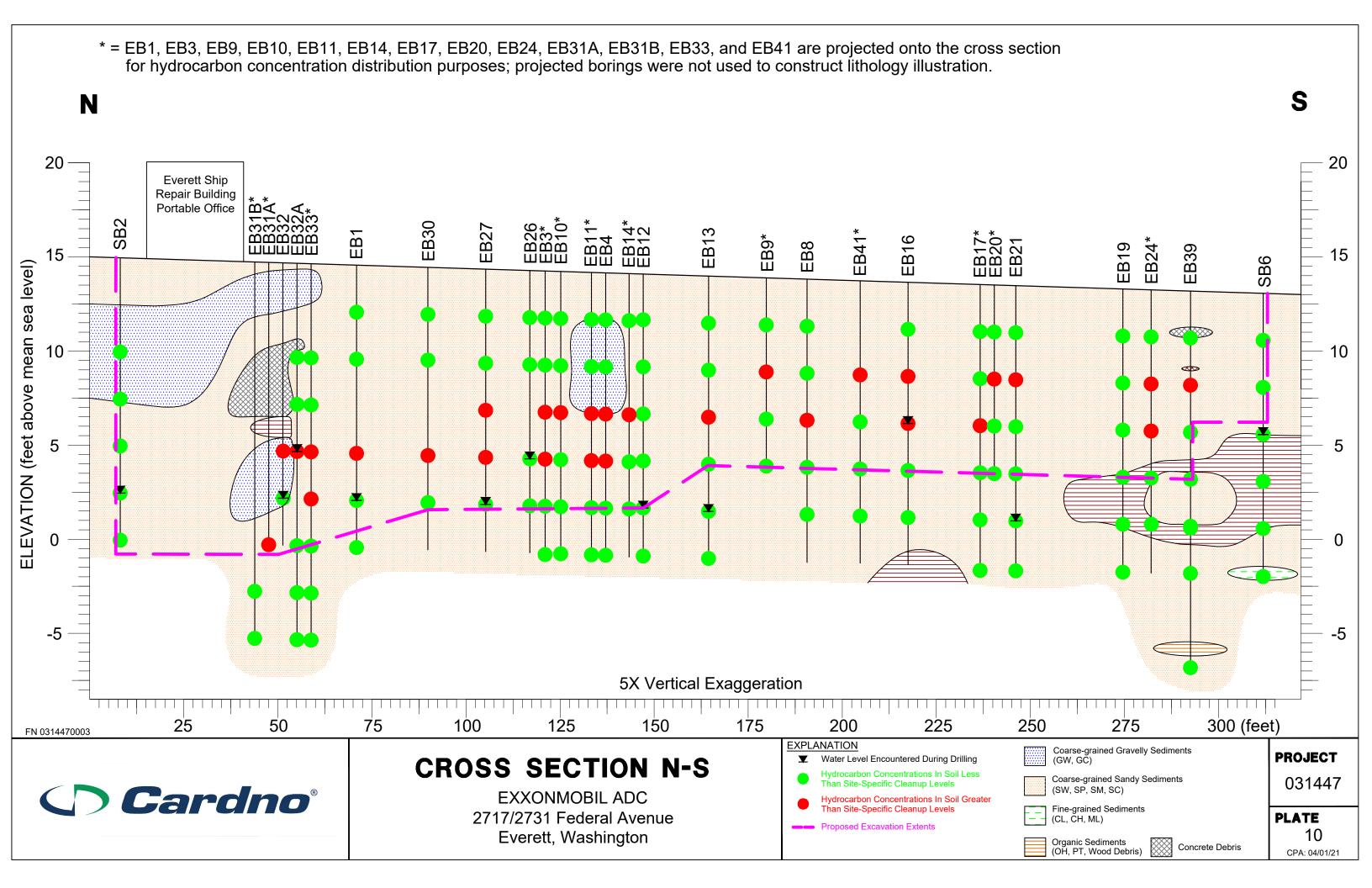


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ExxonMobil ADC 2717/2731 Federal Avenue Everett, Washington Page 1 of 6

Carrata Nama Well ID / Sample Depth TPHg TPHd TPHmo								
Sample Name	VVeil ID / Location	Date	(feet bgs)	(mg/kg)	(mg/kg)	(mg/kg)		
S-2.5-EB1	EB1	10/13/20	2.5	(mg/kg) <10	(Hig/kg) <50	(111g/kg) <250		
S-5-EB1	EB1	10/13/20	5	<10	<50	<250 <250		
S-10-EB1	EB1	10/13/20	10	<100	16,000E	<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 <250		
S-2.5-EB2	EB2	10/13/20	2.5	<10	<50	<250 <250		
S-5-EB2	EB2	10/13/20	5	<10	<50 <50	<250 <250		
S-10-EB2	EB2	10/13/20	10	<10	<50 <50	<250 <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	43,000	<250		
S-10-EB3	EB3	10/12/20	10	<50	15,000	<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	36,000	<250		
S-10-EB4	EB4	10/12/20	10	<100	5,500E	<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	7,400	13,000		
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	11,000E		
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 <50	<250 <250		
S-7.5-EB10	EB10	10/14/20	7.5	<10	12,000	<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		
te-Specific Cleanu	p Levels			2,470	4,800	5,810		

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	Well ID /		Sample Depth	TPHg	TPHd	TPHmo
Sample Name	Location	Date	(feet bgs)	(mg/kg)	(mg/kg)	(mg/kg)
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	<100	44,000	2,700
S-10-EB11	EB11	10/12/20	10	<100	11,000	1,300
S-12.5-EB11	EB11	10/12/20	12.5	<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	<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 <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	11,000	1,800
S-10-EB13	EB13	10/14/20	10	<10	320	<250
S-10-EB13 S-12.5-EB13					<50	
	EB13	10/14/20	12.5	<10		<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	5,000	6,900
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	4,800	1,100
S-7.5-EB16	EB16	10/13/20	7.5	<100	9,700	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	33,000	<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
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 <250
S-2.5-EB20	EB20	10/13/20	2.5	<10	170	<250 <250
ite-Specific Cleanu		10/10/20	۷.5	2,470	4,800	5,810

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Sample Name	Well ID /	Date	Sample Depth	TPHg	TPHd	TPHmo
	Location	Date	(feet bgs)	(mg/kg)	(mg/kg)	(mg/kg)
S-5-EB20	EB20	10/13/20	5	<10	8,400	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	8,100	12,000
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 <50	6,300
S-7.5-EB24	EB24	10/13/20	7.5	<10	8,100	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	10,000	11,000
S-10-EB27	EB27	10/14/20	10	<100	9,100E	<250
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	39,000	<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
e-Specific Cleanu		0 ., 20, 2 1	~	2,470	4,800	5,810

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Sample Name	Well ID /	Date	Sample Depth	TPHg	TPHd	TPHmo
·	Location		(feet bgs)	(mg/kg)	(mg/kg)	(mg/kg)
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	7,000E	<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	6,200	<250
S-10-EB32 ^b	EB32	01/25/21	10		4,700	<250
S-12.5-EB32	EB32	01/25/21	12.5	<10	410	<250
S-12.5-EB32 ^b	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	6,100	<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	<40	28,000	1,580
S-12.5-EB33	EB33	01/25/21	12.5	<10	21,000E	<250
S-15-EB33	EB33	01/25/21	15	<1,000	150	<250
S-17.5-EB33	EB33	01/25/21	17.5	<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
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 <50	<250 <250
S-10-EB38	EB38	01/27/21	10	<10	<50 <50	<250 <250
S-10-EB38	EB38	01/27/21	12.5	<10	<50	<250 <250
	p Levels	UIIZIIZI	14.0	2,470	4,800	5,810

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Sample Name	Well ID /	Date	Sample Depth	TPHg	TPHd	TPHmo
	Location		(feet bgs)	(mg/kg)	(mg/kg)	(mg/kg)
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 ^b	EB39	01/27/21	2.5	<10		
S-5-EB39	EB39	01/27/21	5	<10	5,600	<250
S-5-EB39 ^b	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	490 ^a	<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	9,300	6,700
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
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 <250
S-20-SB3	SB3	01/26/21	20	<10	<50 <50	<250 <250
S-5-SB4	SB4	01/25/21	20 5	<10	<50 <50	<250 <250
S-5-SB4 S-7.5-SB4	SB4 SB4	01/25/21	5 7.5	<10 <10	<50 <50	<250 <250
S-10-SB4	SB4	01/25/21	7.5 10	<10	3,900	<250 <250
S-10-SB4 S-12.5-SB4	SB4 SB4	01/25/21	12.5	<10 <50	3,900 1,700	<250 <250
S-15-SB4	SB4	01/25/21	15	<10	56	<250 <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
te-Specific Cleanu		0 1/20/21	17.0	2,470	4,800	5,810

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Sample Name	Well ID /	Date	Sample Depth	TPHg	TPHd	TPHmo
Sample Name	Location	Date	(feet bgs)	(mg/kg)	(mg/kg)	(mg/kg)
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 Cleanu	p Levels	_		2,470	4,800	5,810

EXPLANATION:

feet bgs = Feet below ground surface

mg/kg = Milligrams per kilogram

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

- < = Less than the stated laboratory reporting limit
- -- = Not Analyzed

All samples run with silica gel cleanup

Shaded values equal or exceed Site-Specific Cleanup Levels

- 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.

ExxonMobil ADC Cardno 03144702.R04

APPENDIX A FIELD PROTOCOL

Cardno Soil Boring and Well Installation Field Protocol

Preliminary Activities

Prior to the onset of field activities at the site, Cardno obtains the appropriate permit(s) from the governing agency(s). Advance notification is made as required by the agency(s) prior to the start of work. Cardno marks the borehole locations and contacts the local one call utility locating service at least 48 hours prior to the start of work to mark buried utilities. Borehole locations may also be checked for buried utilities by a private geophysical surveyor. Prior to drilling, the borehole location is cleared in accordance with the client's procedures. Fieldwork is conducted under the advisement of a registered professional geologist and in accordance with an updated site-specific safety plan prepared for the project, which is available at the job site during field activities.

Drilling and Soil Sampling Procedures

Cardno contracts a licensed driller to advance the boring and collect soil samples. The specific drilling method (e.g., hollow-stem auger, direct push method, or sonic drilling), sampling method [e.g., core barrel or California-modified split spoon sampler (CMSSS)] and sampling depths are documented on the boring log and may be specified in a work plan. Soil samples are typically collected at the capillary fringe and at 5-foot intervals to the total depth of the boring. To determine the depth of the capillary fringe prior to drilling, the static groundwater level is measured with a water level indicator in the closest monitoring well to the boring location, if available.

The borehole is advanced to just above the desired sampling depth. For CMSSSs, the sampler is placed inside the auger and driven to a depth of 18 inches past the bit of the auger. The sampler is driven into the soil with a standard 140-pound hammer repeatedly dropped from a height of 30 inches onto the sampler. The number of blows required to drive the sampler each 6-inch increment is recorded on the boring log. For core samplers (e.g., direct push), the core is driven 18 inches using the rig apparatus.

Soil samples are preserved in the metal or plastic sleeve used with the CMSSS or core sampler, in glass jars or other manner required by the local regulatory agency (e.g., Environmental Protection Agency Method 5035). Sleeves are removed from the sample barrel, and the lowermost sample sleeve is immediately sealed with TeflonTM tape, capped and labeled. Samples are placed in a cooler chilled to 4° Celsius and transported to a state-certified laboratory. The samples are transferred under chain-of-custody (COC) protocol.

Field Screening Procedures

Cardno places the soil from the middle of the sampling interval into a plastic re-sealable bag. The bag is placed away from direct sunlight for approximately 20 minutes, after which the tip of a photo-ionization detector (PID) or similar device is inserted through the plastic bag to measure organic vapor concentrations in the headspace. The PID measurement is recorded on the boring log. At a minimum, the PID or other device is calibrated on a daily basis in accordance with manufacturer's specifications using a hexane or isobutylene standard. The calibration gas and concentration are recorded on a calibration log. Instruments such as the PID are useful for evaluating relative concentrations of volatilized hydrocarbons, but they do not measure the concentration of petroleum hydrocarbons in the soil matrix with the same precision as laboratory analysis. Cardno trained personnel describe the soil in the bag according to the Unified Soil Classification System and record the description on the boring log, which is included in the final report.

Air Monitoring Procedures

Cardno performs a field evaluation for volatile hydrocarbon concentrations in the breathing zone using a calibrated PID or lower explosive level meter.

Groundwater Sampling

A groundwater sample, if desired, is collected from the boring by using HydropunchTM sampling technology or installing a well in the borehole. In the case of using HydropunchTM technology, after collecting the capillary fringe soil sample, the boring is advanced to the top of the soil/groundwater interface and a sampling probe is pushed to approximately 2 feet below the top of the static water level. The probe is opened by partially withdrawing it and thereby exposing the screen. A new or decontaminated bailer is used to collect a water sample from the probe. The water sample is then emptied into laboratory-supplied containers constructed of the correct material and with the correct volume and preservative to comply with the proposed laboratory test. The container is slowly filled with the retrieved water sample until no headspace remains and then promptly sealed with a Teflon-lined cap, checked for the presence of bubbles, labeled, entered onto a COC record and placed in chilled storage at 4° Celsius. Laboratory-supplied trip blanks accompany the water samples as a quality assurance/quality control procedure. Equipment blanks may be collected as required. The samples are kept in chilled storage and transported under COC protocol to a client-approved, state-certified laboratory for analysis.

Backfilling of Soil Boring

If a well is not installed, the boring is backfilled from total depth to approximately 5 feet below ground surface (bgs) with either neat cement or bentonite grout using a tremie pipe. The boring is backfilled from 5 feet bgs to approximately 1 foot bgs with hydrated bentonite chips. The borehole is completed from 1 foot bgs to surface grade with material that best matches existing surface conditions and meets local agency requirements. Site-specific backfilling details are shown on the respective boring log.

Well Construction

A well (if constructed) is completed using materials documented on the boring log or specified in a work plan. The well is constructed with slotted casing across the desired groundwater sampling depth(s) and completed with blank casing to within 6 inches of surface grade. No further construction is conducted on temporary wells. For permanent wells, the annular space of the well is backfilled with Monterey sand from the total depth to approximately 2 feet above the top of the screened casing. A hydrated granular bentonite seal is placed on top of the sand filter pack. Grout may be placed on top of the bentonite seal to the desired depth using a tremie pipe. The well may be completed to surface grade with a 1-foot thick concrete pad. A traffic-rated well vault and locking cap for the well casing may be installed to protect against surfacewater infiltration and unauthorized entry. Site-specific well construction details including type of well, well depth, casing diameter, slot size, length of screen interval and sand size are documented on the boring log or specified in the work plan.

Well Development and Sampling

If a permanent groundwater monitoring well is installed, the grout is allowed to cure a minimum of 48 hours before development. Cardno personnel or a contracted driller use a submersible pump or surge block to develop the newly installed well. Prior to development, the pump is decontaminated by allowing it to run and re-circulate while immersed in a non-phosphate solution followed by successive immersions in potable water and de-ionized water baths. The well is developed until sufficient well casing volumes are removed so that turbidity is within allowable limits and pH, conductivity and temperature levels stabilize in the purge water. The volume of groundwater extracted is recorded on a log.

Following development, groundwater within the well is allowed to recharge until at least 80% of the drawdown is recovered. A new or decontaminated bailer is slowly lowered past the air/water interface in the well, and a water sample is collected and checked for the presence of non-aqueous phase liquid, sheen or emulsions. The water sample is then emptied into laboratory-supplied containers as discussed above.

Surveying

If required, wells are surveyed by a licensed land surveyor relative to an established benchmark of known elevation above mean sea level to an accuracy of +/- 0.01 foot. The casing is notched or marked on one side to identify a consistent surveying and measuring point.

Decontamination Procedures

Cardno or the contracted driller decontaminates soil and water sampling equipment between each sampling event with a non-phosphate solution, followed by a minimum of two tap water rinses. De-ionized water may be used for the final rinse. Downhole drilling equipment is steam-cleaned prior to drilling the borehole and at completion of the borehole.

Waste Treatment and Soil Disposal

Soil cuttings generated from the drilling or sampling are stored on site in labeled, Department of Transportation-approved, 55-gallon drums or other appropriate storage container. The soil is removed from the site and transported under manifest to a client- and regulatory-approved facility for recycling or disposal. Decontamination fluids and purge water from well development and sampling activities, if conducted, are stored on site in labeled, regulatory-approved storage containers. Fluids are subsequently transported under manifest to a client- and regulatory-approved facility for disposal or treated with a permitted mobile or fixed-base carbon treatment system.

ExxonMobil ADC Cardno 03144702.R04

APPENDIX B LABORATORY ANALYTICAL RESULTS

ExxonMobil ADC Cardno 03144702.R04

APPENDIX C USCS & BORING LOGS

UNIFIED SOIL CLASSIFICATION SYSTEM KEY

MAJOR DIVISIONS		LTR	DESCRIPTION	MAJOR DIVISIONS		LTR	DESCRIPTION
		GW	Well-graded gravels or gravel sand mixtures, little or no fines			ML	Inorganic silts and very fine- grained sands, rock flour, silty
	GRAVEL AND	GP	Poorly-graded gravels or gravel sand mixture, little or no fines	FINE GRAINED SOILS	SILTS AND		or clayey fine sands or clayey silts with slight plasticity
	GRAVELLY SOILS	GM	Silty gravels, gravel-sand-clay mixtures		CLAYS LL<50	CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
COARSE		GC	Clayey gravels, gravel-sand-clay mixtures			OL	Organic silts and organic silt- clays of low plasticity
GRAINED SOILS		SW	Well-graded sands or gravelly sands, little or no fines			MH	Inorganic silts, micaceous or diatomaceous fine-grained sandy or silty soils, elastic silts
	SAND AND	SP	Poorly-graded sands or gravelly sands, little or no fines		SILTS AND CLAYS	СН	Inorganic clays of high plasticity, fat clays
	SANDY SOILS	SM	Silty sands, sand-silt mixtures		LL>50	ОН	Organic clays of medium to high plasticity
		SC	Clayey sands, sand-clay mixtures	HIGHLY ORGANIC SOILS		Pt	Peat and other highly organic soils

BLOW COUNTS REPRESENT THE NUMBER OF BLOWS OF A 140- OR 300-POUND HAMMER FALLING 30 INCHES TO DRIVE THE SAMPLER THROUGH EACH 6 INCHES OF PENETRATION.

FN:QuiklogUSCS.dwg

DASHED LINES SEPARATING UNITS ON THE LOG REPRESENT APPROXIMATE BOUNDARIES ONLY. ACTUAL BOUNDARIES MAY BE GRADUAL. LOGS REPRESENT SUBSURFACE CONDITIONS AT THE BORING LOCATION AT THE TIME OF DRILLING ONLY.



UNIFIED SOIL CLASSIFICATION SYSTEM AND LOG OF BORINGS SYMBOL KEY



(Page 1 of 1)

Project No.: : 031447

: ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Brett McLees

Site:

20

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Loubhapell

Date Drilled: : 10/13/20

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3"

Casing Diameter: : N/A

Latitude : N/A

Longitude : N/A

Total Depth: : 15' bgs

First GW Depth: : 13' bgs

Sample Condition Water Levels ▼ After Completion No Recovery Sampled Interval □ During Drilling Boring: EB1 **Described Sample Blow Count** Depth (ft) OVM/PID (ppmv) Preserved Sample Sample Column **USCS** DESCRIPTION (%clay/silt/sand/gravel) 0 3" Asphalt -Asphalt Borehole was not logged from 3 inches bgs to 2.5 feet bgs. 0.0 SAND: fine- to medium-grained, light brown, dry, rounded, poorly graded, thin lamina; trace fine gravel; 100% recovery (0/0/95/5) 100% recovery (0/0/100/0) 5 0.7 no recovery Bentonite SP 10-100% recovery (0/0/95/5) 9.0 gray, wet; 100% recovery 18.6 ∇ 100% recovery 15 **Backfill Materials:** 0.2 50-lb. bag of Asphalt 0.5 50-lb. bag of Bentonite Chips



Project No.:

15-

20

BORING LOG EB2

(Page 1 of 1)

Date Drilled: : 10/13/20 Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method:

: Dual Tube

Boring: EB2

Borehole Diameter: : 3" Casing Diameter: : N/A Latitude : N/A Longitude : N/A Total Depth: : 10' bgs First GW Depth: : N/A

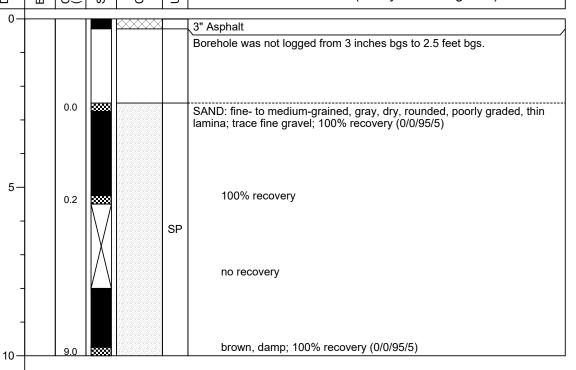
Logged By: : Brett McLees Reviewed By:

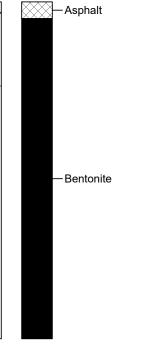
: 031447

: Keri Chappell, L.G. 2719 : Keulhapsell Signature:

Sample Condition Water Levels ▼ After Completion No Recovery Sampled Interval □ During Drilling **Described Sample Blow Count** Depth (ft) OVM/PID (ppmv) Preserved Sample Sample Column **USCS** DESCRIPTION (%clay/silt/sand/gravel)

: ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA





Backfill Materials:

0.2 50-lb. bag of Asphalt



(Page 1 of 1)

Date Drilled: : 10/12/20

Drilling Co.: : Holocene Drilling, Inc. : Push Probe Drilling Method:

Sampling Method: : Dual Tube Borehole Diameter: : 3" Casing Diameter: : N/A Latitude : N/A Longitude : N/A Total Depth: : 15' bgs

Project No.: : 031447

20

: ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

Reviewed By: : Keri Chappell, L.G. 2719

Keulhappell First GW Depth: : N/A Signature: Sample Condition Water Levels No Recovery ▼ After Completion Sampled Interval During Drilling Boring: EB3 **Described Sample Blow Count** OVM/PID (ppmv) Depth (ft) Preserved Sample Sample Column **USCS** DESCRIPTION (%clay/silt/sand/gravel) 0 3" Asphalt -Asphalt Borehole was not logged from 3 inches bgs to 2.5 feet bgs. SAND: fine- to medium-grained, gray brown, dry; fine to coarse gravel, subangular; 40% recovery (0/10/50/40) SP 5 SILT: dark brown to olive gray, damp, fine gravel, subangular; 50% recovery (0/90/0/10) ML SAND: fine- to coarse-grained, dark brown, moist; trace silt; 60% Bentonite recovery (0/5/95/0) 10-100% recovery SW 100% recovery 100% recovery (0/5/90/5) 15 **Backfill Materials:** 0.2 50-lb. bag of Asphalt 0.5 50-lb. bag of Bentonite Chips Note: PID unavailable for use during fieldwork on 10/12/20.



Project No.:

5

10

15

20

BORING LOG EB4

(Page 1 of 1)

Date Drilled: : 10/12/20

Drilling Co.: : Holocene Drilling, Inc.

Boring: EB4

Asphalt

Bentonite

 ∇

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3" Casing Diameter: : N/A Latitude : N/A Longitude : N/A Total Depth: : 15' bgs : 10' bgs First GW Depth:

: ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA Logged By: : Paul Prevou

Reviewed By: : Keri Chappell, L.G. 2719 Keulhappell Signature:

: 031447

Sample Condition Water Levels No Recovery ▼ After Completion Sampled Interval During Drilling **Described Sample Blow Count** OVM/PID (ppmv) Depth (ft) 888888 Preserved Sample Sample Column **USCS** DESCRIPTION (%clay/silt/sand/gravel) 0 3" Asphalt Borehole was not logged from 3 inches bgs to 2.5 feet bgs.

(0/5/45/50)

GΡ

SP

SAND with Gravel: medium- to coarse-grained, dark brown, damp, poorly graded; fine to coarse gravel, subrounded, poorly graded; trace silt and silty clasts; 50% recovery (0/5/75/20)

GRAVEL with Sand: fine to coarse gravel, subrounded; medium- to coarse-grained sand, brown, damp; trace silt; 75% recovery

black to dark gray, wet; gravel subangular; no silty clasts; 50% recovery (0/5/85/10)

100% recovery

100% recovery

Backfill Materials:

0.2 50-lb. bag of Asphalt

0.5 50-lb. bag of Bentonite Chips

Note: PID unavailable for use during fieldwork on 10/12/20.



(Page 1 of 1)

Project No.: : 031447

20-

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

Reviewed By: : Keri Chappell, L.G. 2719 Signature: : You ha 60 0 U Date Drilled: : 10/12/20

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3"

Casing Diameter: : N/A

Latitude : N/A

Longitude : N/A

Total Depth: : 10' bgs

First GW Depth: : N/A

Signatu	re:		X	Soul!	ap	pell		First GW Depth:	: N/A
Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	nscs	Sample Condition No Recovery Sampled Interval Described Sample Preserved Sample DESCRIPTION (%c	Water Levels ▼ After Completion ▼ During Drilling Itay/silt/sand/gra		Boring: EB5
0				 		3" Asphalt			— Asphalt
- - -						Borehole was not logged from 3 inche	s bgs to 2.5 feet bg	js.	— Азр пан
5-			*****		GP	GRAVEL with Sand: fine to coarse grafine- to coarse-grained sand, light gra 80% recovery (0/5/40/55) well graded sand, occasional si (0/5/30/65)	y, dry, well graded;	trace silt;	— Bentonite
10			2000		SP	SAND with Gravel: medium- to coarse graded; fine to coarse gravel, subang trace silt; 80% recovery (0/5/70/25) 100% recovery	e-grained, gray, dry ular to subrounded,	, poorly well graded;	
						Backfill Materials:			
-						0.2 50-lb. bag of Asphalt 0.5 50-lb. bag of Bentonite Chips			
-						Note: PID unavailable for use during f	ieldwork on 10/12/2	20.	
15-									



(Page 1 of 1)

Project No.: : 031447

: ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

20-

Date Drilled: : 10/12/20

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe : Dual Tube Sampling Method:

Borehole Diameter: : 3" Casing Diameter: : N/A Latitude : N/A Longitude : N/A Total Depth: : 10' bgs

Review Signatu	•		: Ker	i Chappell	L.G.	2719		Total Depth: First GW Depth:	: 10' bgs : N/A
Oigridio			· <u>-</u>		ap	Sample Condition	Water Levels		
						No Recovery	▼ After Completion	on	
						Sampled Interval	□ During Drilling		
	m					Described Sample			Boring: EB6
th (ff	ပို	MP[5]	ble	Ш	တ္လ	Preserved Sample			
Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	nscs	DESCRIPTION (%d	lay/silt/sand/gra	avel)	
0-						3" Asphalt			— Asphalt
						Borehole was not logged from 3 inche	es bgs to 2.5 feet bo		XXXX
1									
-									
			****			GRAVEL with Sand: fine to coarse gr	avel, subangular to	subrounded;	
-						fine- to coarse-grained sand, light gra 60% recovery (0/5/40/55)	y, dry, well graded;	trace silt;	
						(0/3/40/33)			
5-					GW	gray, well graded sand; trace si (0/5/30/65)	ilty clasts; 80%	recovery	— Bentonite
			30000			(0/3/30/03)			
-									
				0 0 0 0 0 0		SAND with Gravel: medium- to coarso	e-grained, grav, dar	mp. poorly	
			*****			graded; fine to coarse gravel, subang 80% recovery (0/5/75/20)	ular to subrounded;	trace silt;	
					SP	80 % Tecovery (0/3/73/20)			
						4000/(0/5/75/00)			
10			<u></u>			100% recovery (0/5/75/20)			
						Backfill Materials:			
						0.2 50-lb. bag of Asphalt 0.5 50-lb. bag of Bentonite Chips			
						Note: PID unavailable for use during t	fieldwork on 10/12/2	20.	
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-									
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(Page 1 of 1)

Project No.: : 031447

20

: ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

Reviewed By: : Kerj Chappell, L.G. 2719 Date Drilled: : 10/12/20

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3" Casing Diameter: : N/A Latitude : N/A Longitude : N/A Total Depth: : 10' bgs

Keulhappell First GW Depth: : N/A Signature: Sample Condition Water Levels No Recovery ▼ After Completion Sampled Interval During Drilling Boring: EB7 **Described Sample Blow Count** OVM/PID (ppmv) Depth (ft) Preserved Sample Sample Column **USCS** DESCRIPTION (%clay/silt/sand/gravel) 0 3" Asphalt Asphalt Boring was not logged from 3 inches bgs to 5 feet bgs. No recovery 5 GRAVEL with Sand: fine to coarse gravel, subrounded to subangular, well graded; fine- to coarse-grained sand, light brown, dry, well graded; trace silty clasts; 30% recovery (0/5/30/65) Bentonite GW SILT: olive brown, damp, well consolidated; 30% recovery (0/100/0/0) ML SAND: medium- to coarse-grained, damp, poorly graded, non-plastic; 10 trace fine gravel, subangular; 80% recovery (0/5/90/5) **Backfill Materials:** 0.2 50-lb. bag of Asphalt 0.5 50-lb. bag of Bentonite Chips Note: PID unavailable for use during field work on 10/12/20. 15-



(Page 1 of 1)

Project No.: : 031447

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Brett McLees

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Loubhapell

Date Drilled: : 10/14/20

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3"

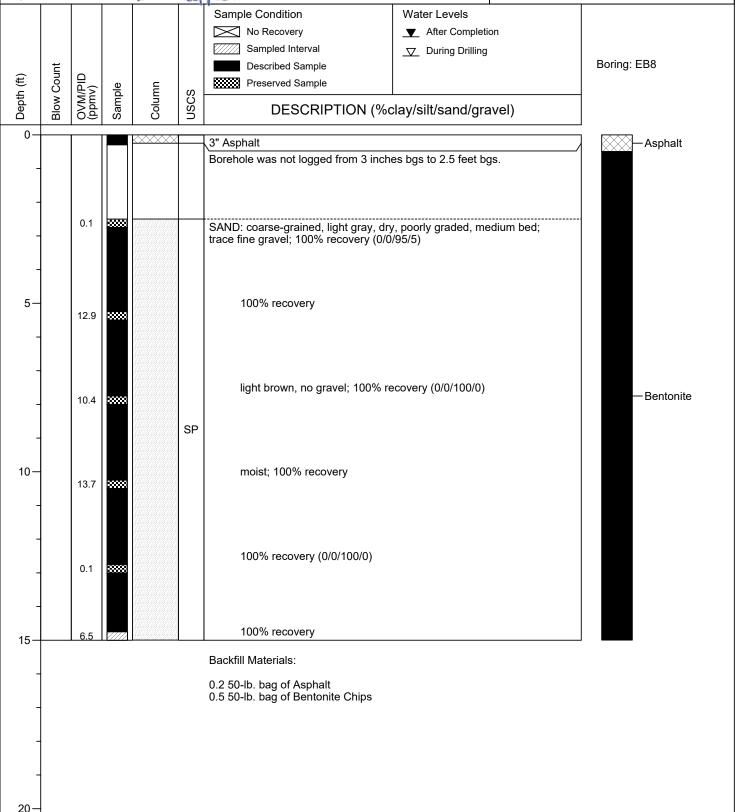
Casing Diameter: : N/A

Latitude : N/A

Longitude : N/A

Total Depth: : 15' bgs

First GW Depth: : N/A





(Page 1 of 1)

Date Drilled: : 10/14/20

Drilling Co.: : Holocene Drilling, Inc. Drilling Method: : Push Probe

: Dual Tube

Sampling Method: Borehole Diameter: : 3" Casing Diameter: : N/A Latitude : N/A Longitude : N/A Total Depth: : 10' bgs

Project No.: : 031447

: ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Brett McLees

2.0

10

15-

20

Reviewed By: : Keri Chappell, L.G. 2719 Keulhappell Signature:

First GW Depth: : N/A Sample Condition Water Levels ▼ After Completion No Recovery Sampled Interval □ During Drilling Boring: EB9 **Described Sample Blow Count** Depth (ft) OVM/PID (ppmv) Preserved Sample Sample Column **USCS** DESCRIPTION (%clay/silt/sand/gravel) 3" Asphalt -Asphalt Borehole was not logged from 3 inches bgs to 2.5 feet bgs. 0.0 SAND: coarse-grained, gray, dry, rounded, poorly graded, thin bed; trace fine gravel; 100% recovery (0/0/95/5) 100% recovery 5-Bentonite 44.0 SP

no gravel; 100% recovery (0/0/100/0)

CH | CLAY: wood debris; 100% recovery (100/0/0/0)



0.2 50-lb. bag of Asphalt



(Page 1 of 1)

Project No.: : 031447

20

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Brett McLees

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Luchapell

Date Drilled: : 10/14/20

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

 Borehole Diameter:
 : 3"

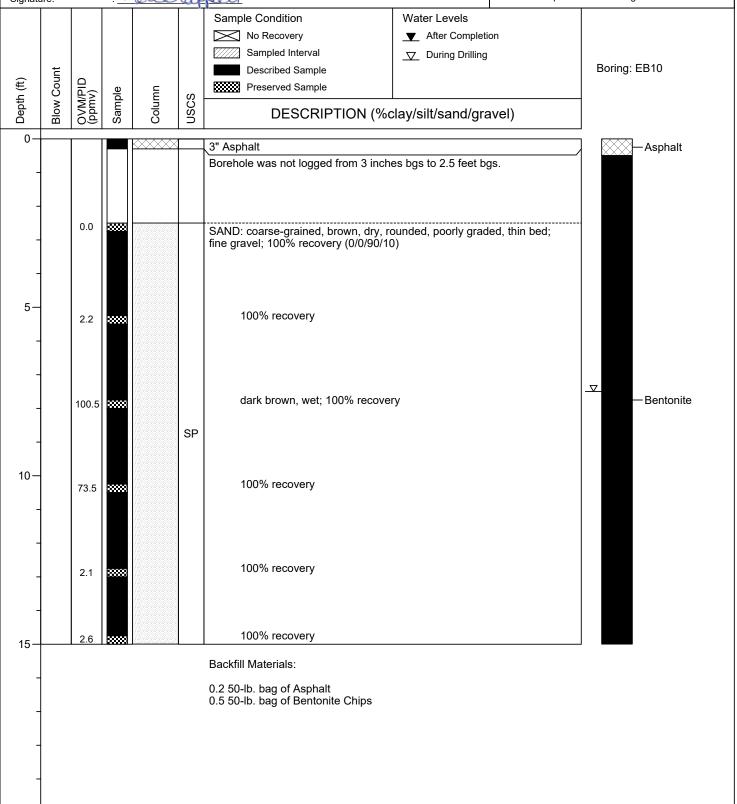
 Casing Diameter:
 : N/A

 Latitude
 : N/A

 Longitude
 : N/A

 Total Depth:
 : 15' bgs

 First GW Depth:
 : 7.5' bgs





(Page 1 of 1)

Date Drilled: : 10/12/20

Drilling Co.: : Holocene Drilling, Inc. Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3" Casing Diameter: : N/A Latitude : N/A Longitude : N/A Total Depth: : 15' bgs

Project No.: : 031447

20

: ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

Reviewed By: : Keri Chappell, L.G. 2719 Keulhappell Signature:

First GW Depth: : 7.5' bgs Sample Condition Water Levels No Recovery ▼ After Completion Sampled Interval During Drilling Boring: EB11 **Described Sample Blow Count** OVM/PID (ppmv) Depth (ft) Preserved Sample Column Sample **USCS** DESCRIPTION (%clay/silt/sand/gravel) 0 3" Asphalt Asphalt Borehole was not logged from 3 inches bgs to 2.5 feet bgs. SAND with Gravel: fine- to coarse-grained, dark brown, damp, well graded; fine to coarse gravel, subangular to angular, well graded; 60% recovery (0/10/50/40) SW SILT: moist, reduced organic material; 100% recovery (0/100/0/0) ML 5 SAND: medium- to coarse-grained, light brown, damp, poorly graded; trace silt; 60% recovery (0/5/95/0) ∇ gray, wet, NAPL observed; 100% recovery Bentonite 10-SP NAPL observed; 100% recovery NAPL observed; 100% recovery no NAPL; 100% recovery 15 **Backfill Materials:** 0.2 50-lb. bag of Asphalt 0.5 50-lb. bag of Bentonite Chips Note: PID unavailable for use during fieldwork on 10/12/20.



(Page 1 of 1)

Project No.: : 031447

20-

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Luchapell

Date Drilled: : 10/12/20

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3"

Casing Diameter: : N/A

Latitude : N/A

Longitude : N/A

Total Depth: : 15' bgs

First GW Depth: : 12.5' bgs

Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	nscs	Sample Condition No Recovery Sampled Interval Described Sample Preserved Sample	Water Levels ▼ After Completion □ During Drilling clay/silt/sand/gravel)	Boring: EB12
	BI	ဝ်ခ	ΐ	ŭ	Š	DESCRIPTION (70	ciay/siit/saiid/gravei)	
0-						3" Asphalt		— Asphalt
-			****		sw	SAND with Gravel: fine- to coarse-graded; fine to coarse gravel, suban 60% recovery (0/5/55/40)	rained, gray brown, damp, well	
5-			20000			SAND: fine- to coarse-grained, most brown, damp, poorly graded; trace s	ly medium- to coarse-grained, ilt; 60% recovery (0/5/95/0)	
-			*****			fine- to medium-grained, dark (0/5/95/0)	brown; trace silt; 100% recovery	— Bentonite
10-			20000		SP	coarse-grained, gray, moist, p	oorly graded; 100% recovery	
-			*****			NAPL observed, wet; 100% re	·	
15—			****			fine gravel, subrounded; 100%	o recovery (0/5/85/10)	
_						Backfill Materials:		
						0.2 50-lb. bag of Asphalt 0.5 50-lb. bag of Bentonite Chips		
						Note: PID unavailable for use during	fieldwork on 10/12/20.	
-								



(Page 1 of 1)

Project No.: : 031447

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Brett McLees

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Luchapell

Date Drilled: : 10/14/20

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

 Borehole Diameter:
 : 3"

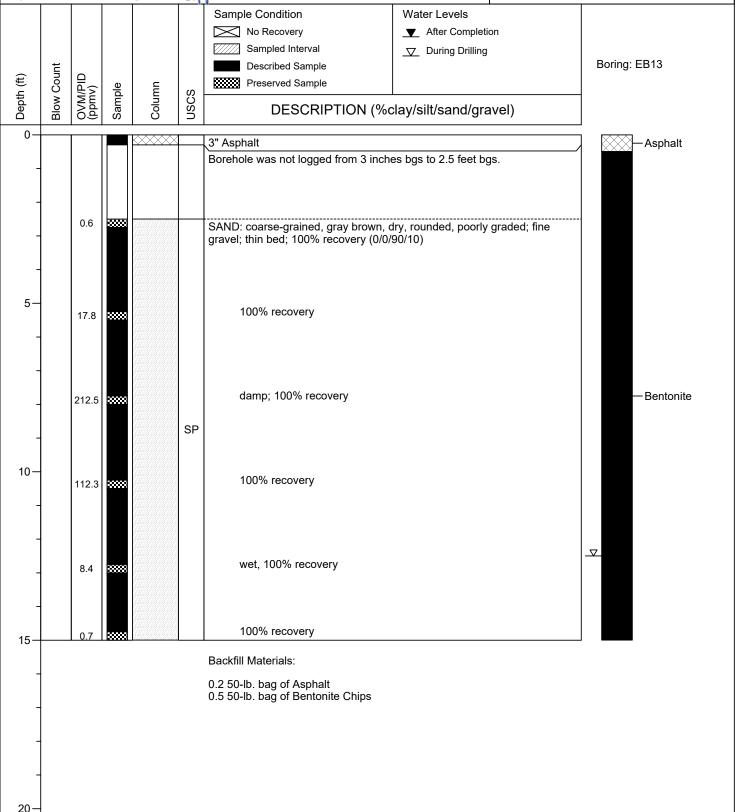
 Casing Diameter:
 : N/A

 Latitude
 : N/A

 Longitude
 : N/A

 Total Depth:
 : 15' bgs

 First GW Depth:
 : 12.5' bgs





(Page 1 of 1)

Project No.: : 031447

20

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Brett McLees

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Luchapell

Date Drilled: : 10/14/20

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

 Borehole Diameter:
 : 3"

 Casing Diameter:
 : N/A

 Latitude
 : N/A

 Longitude
 : N/A

 Total Depth:
 : 15' bgs

 First GW Depth:
 : N/A

Water Levels Sample Condition ▼ After Completion No Recovery Sampled Interval □ During Drilling Boring: EB14 **Described Sample Blow Count** OVM/PID (ppmv) Depth (ft) Preserved Sample Sample Column **USCS** DESCRIPTION (%clay/silt/sand/gravel) 0 3" Asphalt -Asphalt Borehole was not logged from 3 inches bgs to 2.5 feet bgs. SAND: coarse-grained, gray, dry, rounded, poorly graded, thin bed; trace fine gravel; 100% recovery (0/0/95/5) 0.0 5 No recovery ∇ brown, wet; 100% recovery 98.3 Bentonite SP 10-100% recovery 160.3 4.5 100% recovery 100% recovery 15 **Backfill Materials:** 0.2 50-lb. bag of Asphalt 0.5 50-lb. bag of Bentonite Chips



(Page 1 of 1)

(Page 1

: ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Brett McLees

Project No.:

20

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Luchapell

: 031447

Date Drilled: : 10/14/20

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

 Borehole Diameter:
 : 3"

 Casing Diameter:
 : N/A

 Latitude
 : N/A

 Longitude
 : N/A

 Total Depth:
 : 15' bgs

 First GW Depth:
 : 12.5' bgs

Sample Condition Water Levels ▼ After Completion No Recovery Sampled Interval During Drilling Boring: EB15 **Described Sample Blow Count** OVM/PID (ppmv) Depth (ft) Preserved Sample Sample Column **USCS** DESCRIPTION (%clay/silt/sand/gravel) 0 3" Asphalt -Asphalt Borehole was not logged from 3 inches bgs to 2.5 feet bgs. 0.1 SAND with Gravel: coarse-grained, dark gray, dry, rounded, poorly graded, thin bed; fine gravel; 100% recovery (0/0/80/20) SP 5 100% recovery 22.0 SAND: coarse-grained, dark gray, damp, rounded, poorly graded, thin Bentonite 174.0 bed; 100% recovery (0/0/100/0) 10-100% recovery 6.0 SP ∇ wet, 100% recovery 3.4 100% recovery 15 **Backfill Materials:** 0.2 50-lb. bag of Asphalt 0.5 50-lb. bag of Bentonite Chips



(Page 1 of 1)

Project No.: : 031447

20

Site: : ExxonMobil/ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Brett McLees

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Luchapell

Date Drilled: : 10/13/20

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

 Borehole Diameter:
 : 3"

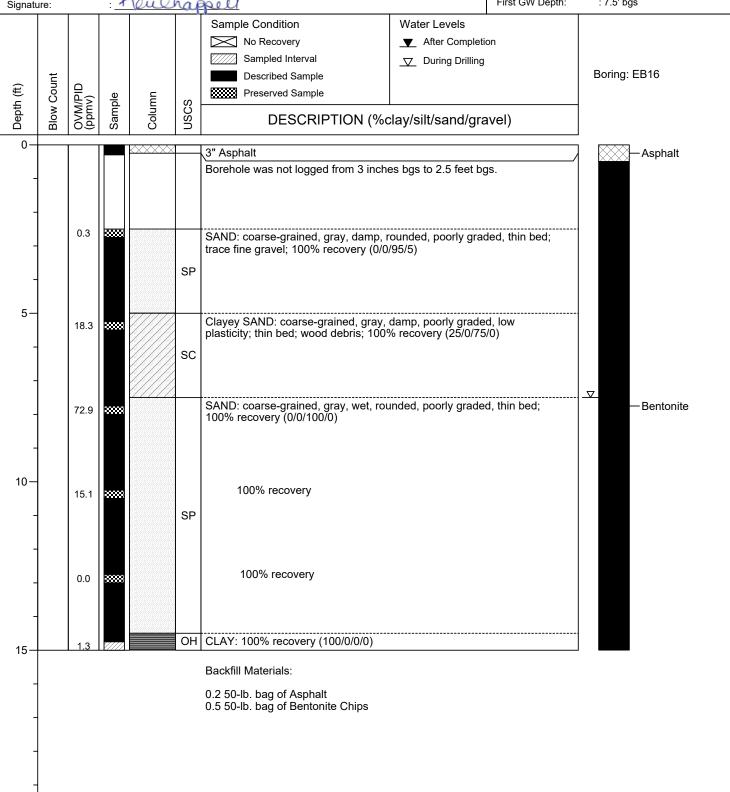
 Casing Diameter:
 : N/A

 Latitude
 : N/A

 Longitude
 : N/A

 Total Depth:
 : 15' bgs

 First GW Depth:
 : 7.5' bgs





(Page 1 of 1)

Project No.: : 031447

: ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Brett McLees

20

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Loubhapell

Date Drilled: : 10/13/2020

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

 Borehole Diameter:
 : 3"

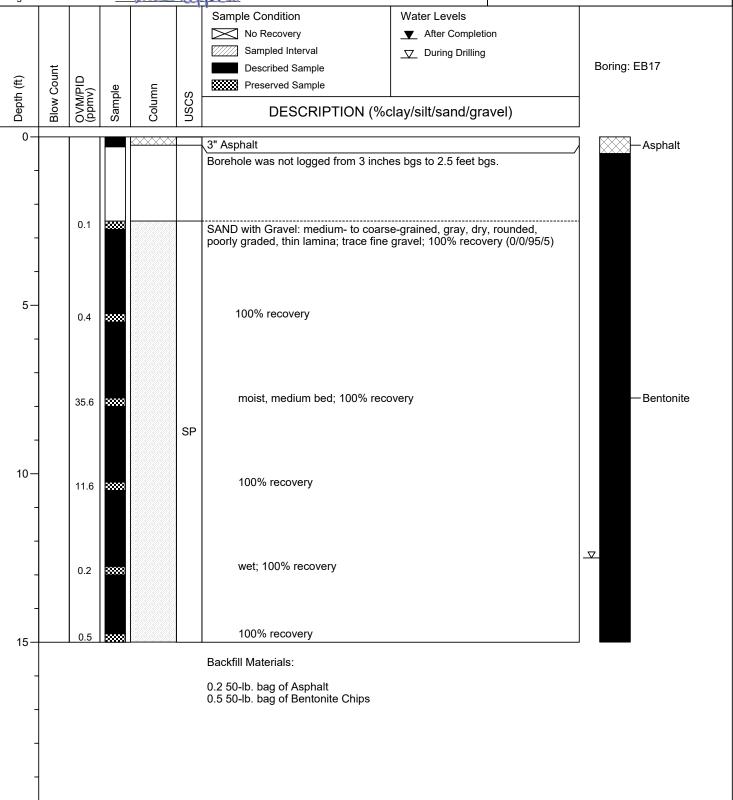
 Casing Diameter:
 : N/A

 Latitude
 : N/A

 Longitude
 : N/A

 Total Depth:
 : 15' bgs

 First GW Depth:
 : 12.5' bgs





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Project No.: : 031447

10-

15-

20

: ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Brett McLees

: Keri Chappell, L.G 2719 : Houshappell Reviewed By: Signature:

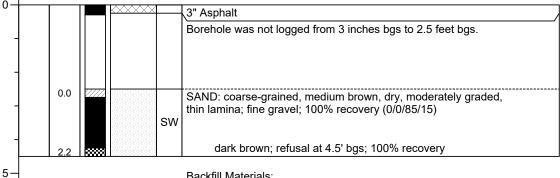
Date Drilled: : 10/13/20

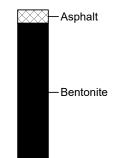
Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3" Casing Diameter: : N/A Latitude : N/A Longitude : N/A Total Depth: : 4.5' bgs First GW Depth: : N/A

Sample Condition Water Levels ▼ After Completion No Recovery Sampled Interval During Drilling **Described Sample Blow Count** Depth (ft) OVM/PID (ppmv) Preserved Sample Sample Column DESCRIPTION (%clay/silt/sand/gravel)





Boring: EB18

Backfill Materials:

0.2 50-lb. bag of Asphalt



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Project No.: : 031447

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Brett McLees

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Louch Boot 1

Date Drilled: : 10/13/20

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3"

Casing Diameter: : N/A

Latitude : N/A

Longitude : N/A

Total Depth: : 15' bgs

First GW Depth: : N/A

Signatu	ure:		1	Soul	rap	pell		First GW Depth:	: N/A
Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	SOSO	Sample Condition No Recovery Sampled Interval Described Sample Preserved Sample DESCRIPTION (%cd.) 3" Asphalt		avel)	Boring: EB19 —Asphalt
5—		7.0 95.7	****			SAND: coarse-grained, gray, damp, r 100% recovery			
- 10-		77.2	3000 3000		SP	100% recovery PEAT: reduced organics			— Bentonite
-		0.4	38888		PT	SAND: coarse-grained, gray, damp, pwood debris; 100% recovery (0/0/100	poorly graded; thin b	ped, trace	
15-		52.3	L188883			Backfill Materials: 0.2 50-lb. bag of Asphalt 0.5 50-lb. bag of Bentonite Chips			



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Project No.: : 031447

20

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Brett McLees

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Louchappell

Date Drilled: : 10/13/20

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3"

Casing Diameter: : N/A

Latitude : N/A

Longitude : N/A

Total Depth: : 10' bgs

First GW Depth: : N/A

Sample Condition Water Levels ▼ After Completion No Recovery Sampled Interval □ During Drilling Boring: EB20 **Described Sample Blow Count** Depth (ft) OVM/PID (ppmv) Preserved Sample Sample Column **USCS** DESCRIPTION (%clay/silt/sand/gravel) 3" Asphalt -Asphalt Borehole was not logged from 3 inches bgs to 2.5 feet bgs. 2.7 SAND: coarse-grained, gray, damp, rounded, poorly graded, thin bed; trace gravel; 100% recovery (0/0/95/5) 5-Bentonite brown; 100% recovery 53.4 SP 100% recovery 3.7 OH CLAY: organic; wood debris; 100% recovery (100/0/0/0) 10 Backfill Materials: 0.2 50-lb. bag of Asphalt 0.5 50-lb. bag of Bentonite Chips 15-



(Page 1 of 1)

Project No.: : 031447

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Brett McLees

20

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Luchapell

Date Drilled: : 10/13/20

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

 Borehole Diameter:
 : 3"

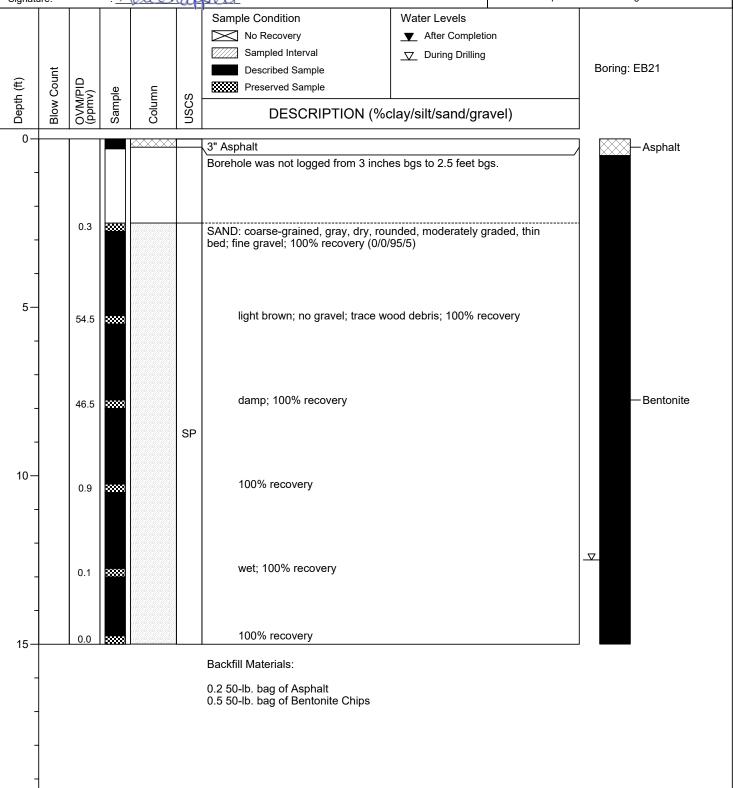
 Casing Diameter:
 : N/A

 Latitude
 : N/A

 Longitude
 : N/A

 Total Depth:
 : 15' bgs

 First GW Depth:
 : 12.5' bgs





(Page 1 of 1)

Project No.: : 031447

10-

15-

20

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Brett McLees

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Luchapell

Date Drilled: : 10/13/20

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3"

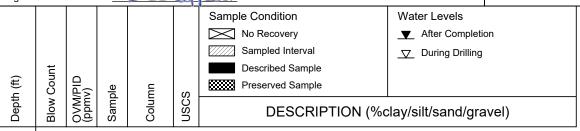
Casing Diameter: : N/A

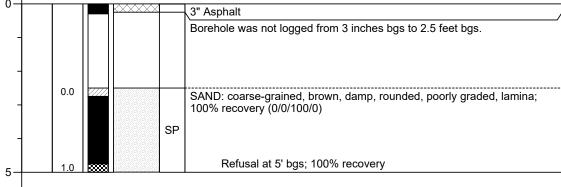
Latitude : N/A

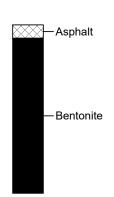
Longitude : N/A

Total Depth: : 5' bgs

First GW Depth: : N/A







Boring: EB22

Backfill Materials:

0.2 50-lb. bag of Asphalt



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Project No.: : 031447

20

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Brett McLees

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Luchapell

Date Drilled: : 10/14/20

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3"

Casing Diameter: : N/A

Latitude : N/A

Longitude : N/A

Total Depth: : 15' bgs

First GW Depth: : N/A

Sample Condition Water Levels ▼ After Completion No Recovery Sampled Interval □ During Drilling Boring: EB23 **Described Sample Blow Count** OVM/PID (ppmv) Depth (ft) Preserved Sample Sample Column **USCS** DESCRIPTION (%clay/silt/sand/gravel) 0. 3" Asphalt -Asphalt Borehole was not logged from 3 inches bgs to 2.5 feet bgs. 0.0 SAND: coarse-grained, light gray, dry, rounded, poorly graded, medium bed; trace gravel; 100% recovery (0/0/95/5) 5-100% recovery 0.0 100% recovery Bentonite 0.4 SP 10-100% recovery 27.0 100% recovery 0.6 100% recovery 15 **Backfill Materials:** 0.2 50-lb. bag of Asphalt 0.5 50-lb. bag of Bentonite Chips



(Page 1 of 1)

Project No.: : 031447

20

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Brett McLees

Date Drilled: : 10/13/20

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

 Borehole Diameter:
 : 3"

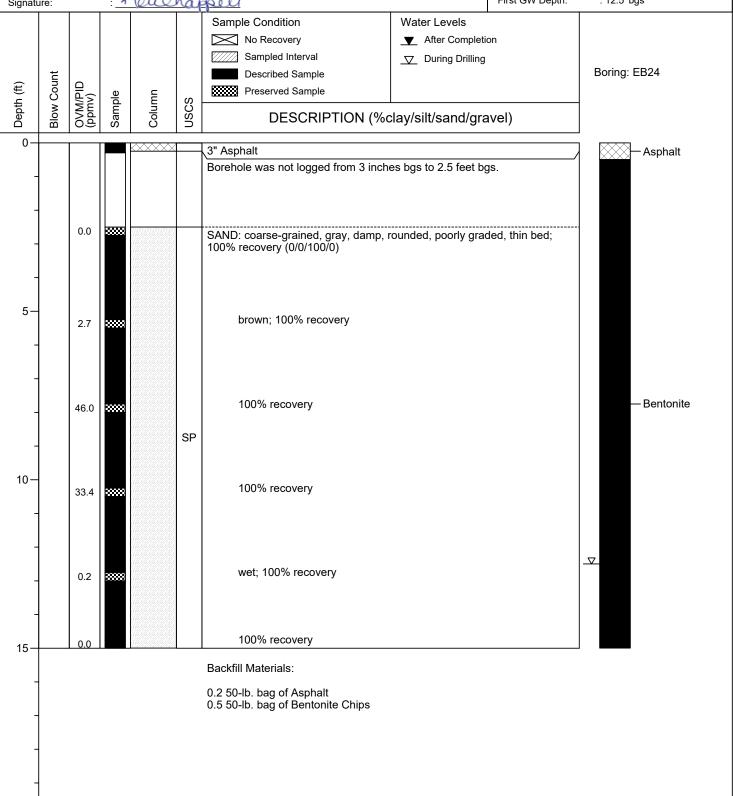
 Casing Diameter:
 : N/A

 Latitude
 : N/A

 Longitude
 : N/A

 Total Depth:
 : 15' bgs

 First GW Depth:
 : 12.5' bgs





(Page 1 of 1)

Project No.: : 031447

20

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Brett McLees

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Luchapell

Date Drilled: : 10/14/20

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

 Borehole Diameter:
 : 3"

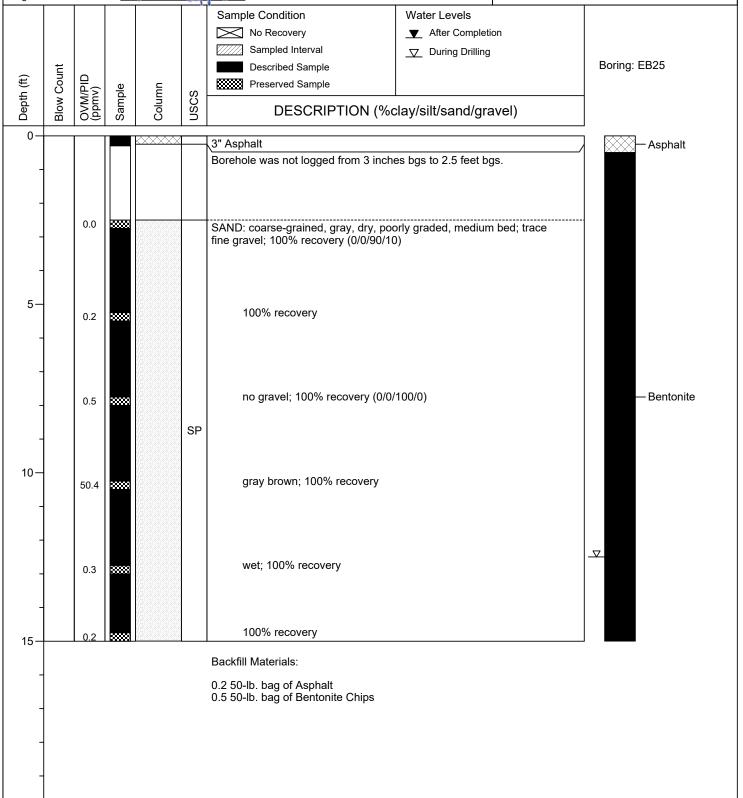
 Casing Diameter:
 : N/A

 Latitude
 : N/A

 Longitude
 : N/A

 Total Depth:
 : 15' bgs

 First GW Depth:
 : 12.5' bgs





(Page 1 of 1)

Project No.: : 031447

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Brett McLees

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Luchappell

Date Drilled: : 10/14/20

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

 Borehole Diameter:
 : 3"

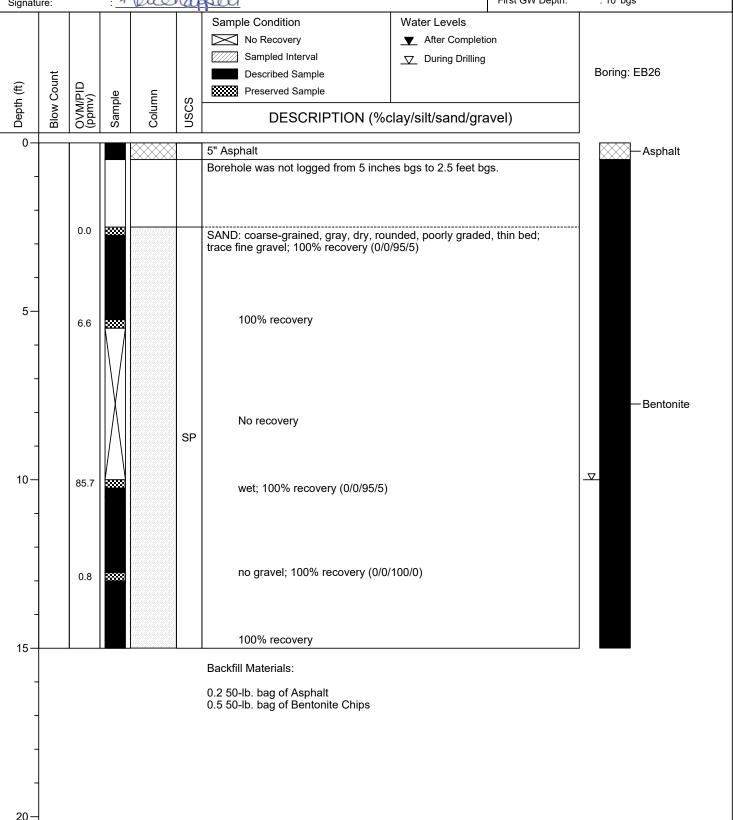
 Casing Diameter:
 : N/A

 Latitude
 : N/A

 Longitude
 : N/A

 Total Depth:
 : 15' bgs

 First GW Depth:
 : 10' bgs





(Page 1 of 1)

Project No.: : 031447

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Brett McLees

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Luchappell

Date Drilled: : 10/14/20

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3"

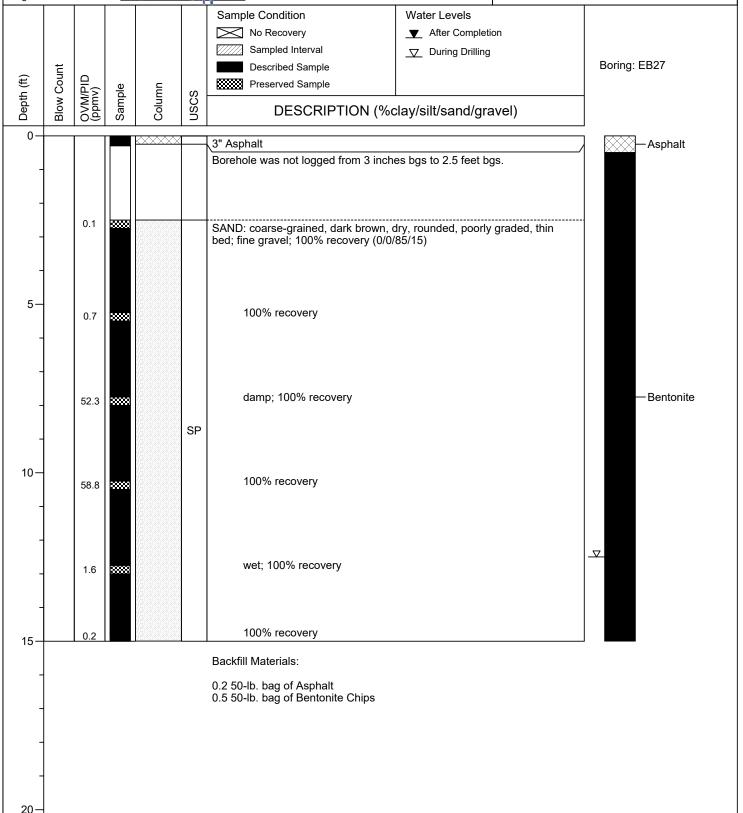
Casing Diameter: : N/A

Latitude : N/A

Longitude : N/A

Total Depth: : 15' bgs

First GW Depth: : 12.5' bgs





(Page 1 of 1)

Project No.: : 031447

15-

20

: ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Brett McLees

Reviewed By: : Keri Chappell, L.G. 2719 Keulhappell Signature:

Date Drilled: : 10/14/20

Drilling Co.: : Holocene Drilling, Inc.

Boring: EB28

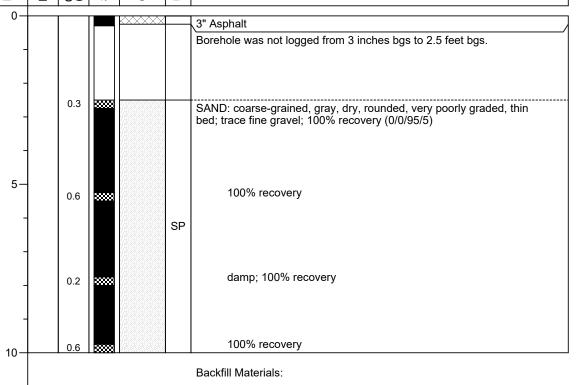
-Asphalt

Bentonite

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3" Casing Diameter: : N/A Latitude : N/A Longitude : N/A Total Depth: : 15' bgs First GW Depth: : N/A

Sample Condition Water Levels ▼ After Completion No Recovery Sampled Interval □ During Drilling **Described Sample Blow Count** Depth (ft) OVM/PID (ppmv) Preserved Sample Sample Column **USCS** DESCRIPTION (%clay/silt/sand/gravel)



0.2 50-lb. bag of Asphalt



(Page 1 of 1)

Project No.: : 031447

10-

15-

20

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Brett McLees

Date Drilled: : 10/14/20

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3"

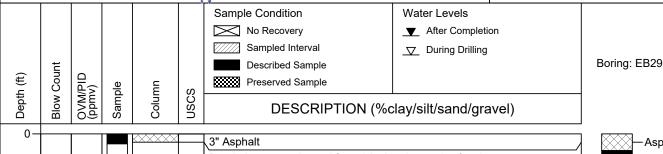
Casing Diameter: : N/A

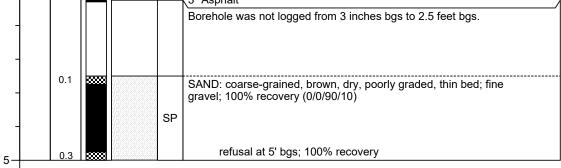
Latitude : N/A

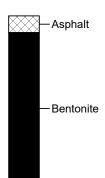
Longitude : N/A

Total Depth: : 5' bgs

First GW Depth: : N/A







Backfill Materials:

0.2 50-lb. bag of Asphalt



(Page 1 of 1)

Project No.: : 031447

20

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Brett McLees

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Luchapell

Date Drilled: : 10/14/20

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3"

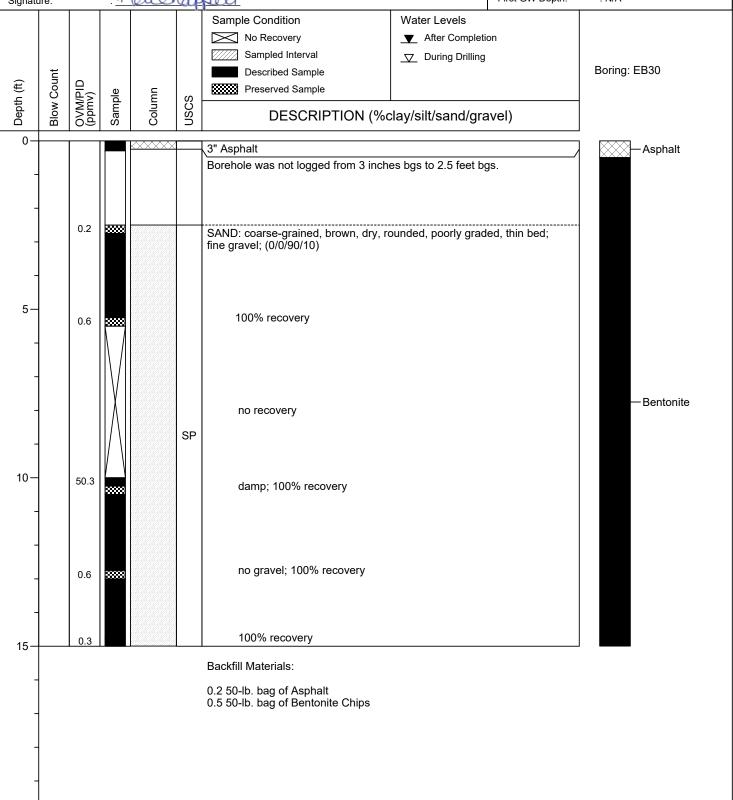
Casing Diameter: : N/A

Latitude : N/A

Longitude : N/A

Total Depth: : 15' bgs

First GW Depth: : N/A





(Page 1 of 1)

Project No.: : 031447

15-

20

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Luchapell

Date Drilled: : 01/25/21

Drilling Co.: : Holocene Drilling, Inc.

Boring: EB31

Drilling Method: : Push Probe Sampling Method: : Dual Tube

 Borehole Diameter:
 : 3"

 Casing Diameter:
 : N/A

 Latitude
 : N/A

 Longitude
 : N/A

 Total Depth:
 : 9.5' bgs

 First GW Depth:
 : N/A

Sample Condition

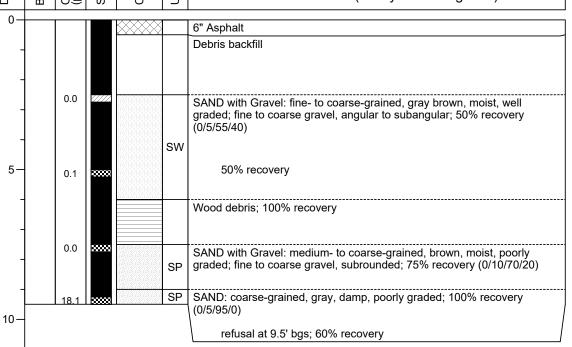
No Recovery

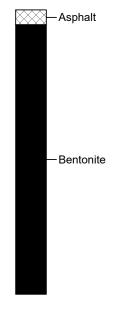
Sampled Interval

Described Sample

Preserved Sample

DESCRIPTION (%clay/silt/sand/gravel)





Backfill Materials:

0.2 50-lb. bag of Asphalt



BORING LOG EB31A

(Page 1 of 1)

Project No.: : 031447

20

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Luchapell

Date Drilled: : 01/27/21

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3"

Casing Diameter: : N/A

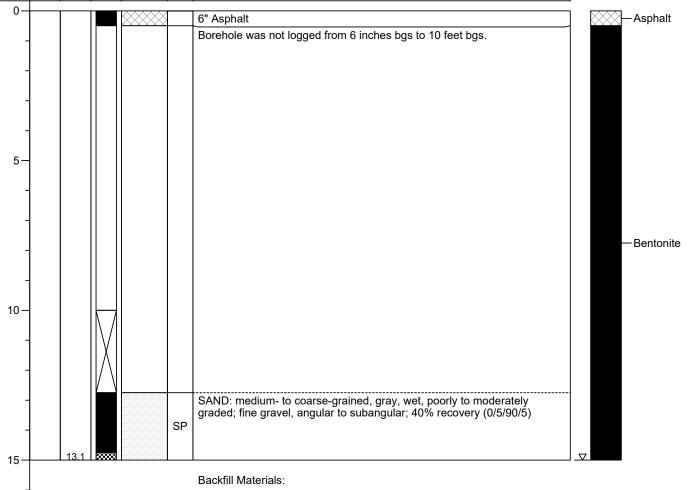
Latitude : N/A

Longitude : N/A

Total Depth: : 15' bgs

First GW Depth: : 15' bgs

- 1	3									
Ī							Sample Condition	Water Levels		
							No Recovery	_ ▼ After Completi	on	
							Sampled Interval	<u></u> During Drilling		
	_	unt					Described Sample			Boring: EB31A
	ר(#)	So	V)	ple	E	(0	Preserved Sample			
	Depth	οM	VM,	amp	olumi	nscs	DESCRIPTION (%d	rlay/silt/sand/ara	avel)	
ļ	۵	Blo	Q o	ß	Ŏ	Ď	DESCRIPTION (700	nay/siit/sarid/gre		
	Λ _									
	· ·				$\times\times\times\times\times$	1	G" Aanhalt			Acabalt



0.2 50-lb. bag of Asphalt



BORING LOG EB31B

(Page 1 of 1)

Date Drilled: : 01/27/21

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3" Casing Diameter: : N/A Latitude : N/A Longitude : N/A Total Depth: : 20' bgs

Project No.: : 031447

: ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

: Keri Chappell, L.G. 2719 : Houshappell Reviewed By:

First GW Depth: : 17.5' bgs Signature: Sample Condition Water Levels ▼ After Completion No Recovery Sampled Interval □ During Drilling Boring: EB31B **Described Sample Blow Count** Depth (ft) OVM/PID (ppmv) Preserved Sample Sample Column **USCS** DESCRIPTION (%clay/silt/sand/gravel) 0 6" Asphalt -Asphalt Borehole was not logged from 6 inches bgs to 17.5 feet bgs. 5 10 -Bentonite 15 0.4 SAND: medium- to coarse-grained, gray to dark gray, wet, poorly graded; fine gravel, subangular; 100% recovery (0/5/90/5) SP 20 CLAY: gray brown, moist, high plasticity; trace fine sand; 100% recovery (95/0/5/0) Backfill Materials: 0.2 50-lb. bag of Asphalt



(Page 1 of 1)

Project No.: : 031447

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Keri Chappell, L.G. 2719

Date Drilled: : 01/25/21

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3"

Casing Diameter: : N/A

Latitude : N/A

Longitude : N/A

Total Depth: : 15' bgs

First GW Depth: : 12.5' bgs

Signatu	ıre:		1	reul	har	pell		First GW Depth:	: 12.5' bgs
						Sample Condition	Water Levels		
						No Recovery	▼ After Completic	on	
						Sampled Interval	□ During Drilling		
	=					Described Sample			Boring: EB32
(£)	onr	₽	a)	_		Preserved Sample			
th (O ×	M/P	ople	l E	SS	baccaca T TodoTVod Campio			
Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	nscs	DESCRIPTION (%d	clay/silt/sand/gra	vel)	
0-				· · · · · · · · · · · · · · · · · · ·	1	Oll A I II			
				×××××	*	6" Asphalt Borehole was not logged from 6 inch	as has to 0.5 feet ha		— Asphalt
-						Borenole was not logged from 6 inch	es bys to 2.5 feet by	5.	
		0.0	////		0)4/				
-		0.0			GW	GRAVEL: fine to coarse, brown, dry, medium-grained sand, moderately gr			
					SP	(0/5/10/85)		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
-						SAND with Gravel: fine- to medium-c	grained, gray, dry, mo	oderately	
5-					2	\graded; fine to coarse gravel, angula Concrete debris	r; 100% recovery (0/	0/75/25)	
		0.0	////			Concrete debris			
-									
-					2	1000/			
		0.0 0.0				100% recovery			— Bentonite
		0.0				Wood debris			
-						GRAVEL with Sand: fine to coarse g	ravel moist dark bro		
40						subrounded, well graded; fine- to coa	arse-grained sand, w	ell graded;	
10-		99.8	500000			25% recovery (0/15/30/55)			
_					GW	@10' bgs: black; 25% recovery	•		
-									
		7.7	*****			SAND: medium- to coarse-grained, o	 lark brown to gray, w	/et, angular;	
1						trace fine gravel; 100% recovery (0/1	0/85/5)		
					SW				
						100% recovery			
15-		0.7	V////	1	1				
						Backfill Materials:			
						0.2 50-lb. bag of Asphalt			
-						0.5 50-lb. bag of Bentonite Chips			
-									
20-									
1	l								



BORING LOG EB32A

(Page 1 of 1)

Date Drilled: : 01/27/21

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3" Casing Diameter: : N/A Latitude : N/A Longitude : N/A Total Depth: : 20' bgs First GW Depth: : 10.5' bgs

Logged By: : Paul Prevou Reviewed By:

Project No.:

Site:

: Keri Chappell, L.G. 2719 : You Chappell Signature:

: 031447

: ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Signati	ıre:		: 1	auci	rap	pell		First GW Deptil.	. 10.5 bgs			
						Sample Condition	Water Levels	ion				
						No Recovery	▼ After Complete					
						Sampled Interval	□ During Drilling					
	ır					Described Sample			Boring: EB32A			
h (ft)	So	√ ∏(\	əlc	Ę	S	Preserved Sample						
Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	nscs	DESCRIPTION (%c	slay/silt/sand/gra	avel)				
0-					1	6" Asphalt			— Asphalt			
						GRAVEL: fine to coarse, brown, dry,	well graded, angula	ar; fine- to				
				0 0 0 0 0 0		medium-grained sand, moderately gra	aded; trace silt; 100)% recovery				
_				0 0 0 0 0 0	GW	(0/5/10/85)						
				0 0 0 0 0 0								
_												
					SP	SAND: fine- to medium-grained, gray coarse gravel, angular; 100% recover	, dry, moderately gr v	raded; fine to				
_					-	Concrete debris						
					21.1							
5-		0.3	33333		SM	Silty SAND: fine- to medium-grained, trace fine gravel, angular, poorly grad	brown, moist, mod	erately graded;	,			
			$ \setminus / $			1\80% recovery (0/30/65/5)		1				
			I									
			$ /\rangle $									
		0.6										
_		0.6	*****			SAND with Gravel: fine- to coarse-gra	ained, brown, damp	, well graded;				
						fine to coarse gravel, angular, well gra						
_					SW							
10-		52.2	500000			dark brown; 80% recovery (0/15	Bentonite					
						SAND: medium- to coarse-grained, g	ray, wet, poorly gra	ded; trace				
					SP	fine gravel; 100% recovery (0/5/90/5)						
_					"							
			////									
-			7777			Silty SAND: medium- to coarse-grain wet; trace fine gravel; 100% recovery	ed, dark brown to o (0/15/80/5)	live brown,				
					SM		(0/10/00/0)					
-					Olvi	@13.5' bgs: gray						
		1.7	800000									
15-		1.7				SAND: medium- to coarse-grained, g	ray, wet; trace fine	gravel; 100%	1			
						recovery (0/5/90/5)	• * •	-				
		0.7	50000		SP	100% recovery						
_		0.7	*****			,						
-												
						100% recovery						
20-				Terminal months of the particular of the particu	1	Backfill Materials:						
						0.250 lb box of A						
						0.2 50-lb. bag of Asphalt 0.5 50-lb. bag of Bentonite Chips						
						- J						



(Page 1 of 1)

Project No.: : 031447

: ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Luchappell

Date Drilled: : 01/25/21

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3"

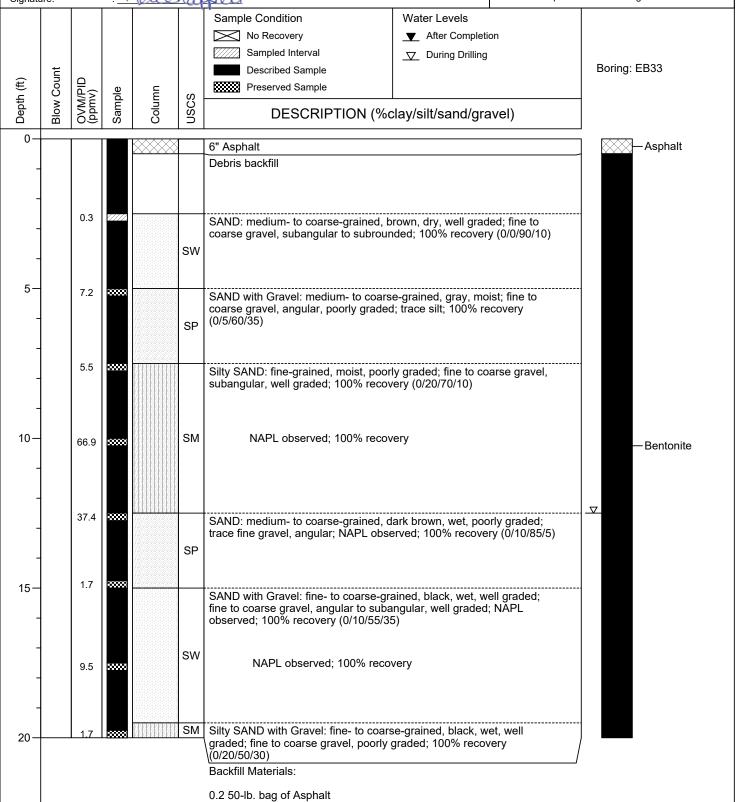
Casing Diameter: : N/A

Latitude : N/A

Longitude : N/A

Total Depth: : 20' bgs

First GW Depth: : 12.5' bgs





(Page 1 of 1)

Project No.: : 031447

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Luchappell

Date Drilled: : 01/25/21

Drilling Co.: : Holocene Drilling, Inc.

Boring: EB34

Drilling Method: : Push Probe Sampling Method: : Dual Tube

 Borehole Diameter:
 : 3"

 Casing Diameter:
 : N/A

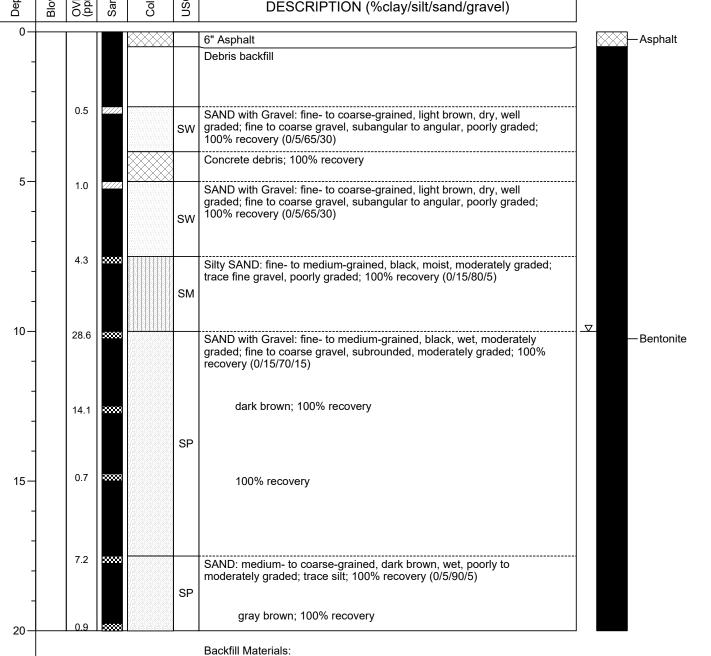
 Latitude
 : N/A

 Longitude
 : N/A

 Total Depth:
 : 20' bgs

 First GW Depth:
 : 10' bgs

Sample Condition Water Levels No Recovery ▼ After Completion Sampled Interval During Drilling Described Sample **Blow Count** OVM/PID (ppmv) Depth (ft) Preserved Sample Column Sample **USCS** DESCRIPTION (%clay/silt/sand/gravel) 0



0.2 50-lb. bag of Asphalt

0.5 50-lb. bag of Bentonite Chips



(Page 1 of 1)

Project No.: : 031447

20

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Luchapell

Date Drilled: : 01/25/21

Drilling Co.: : Holocene Drilling, Inc.

Boring: EB35

-Asphalt

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3"

Casing Diameter: : N/A

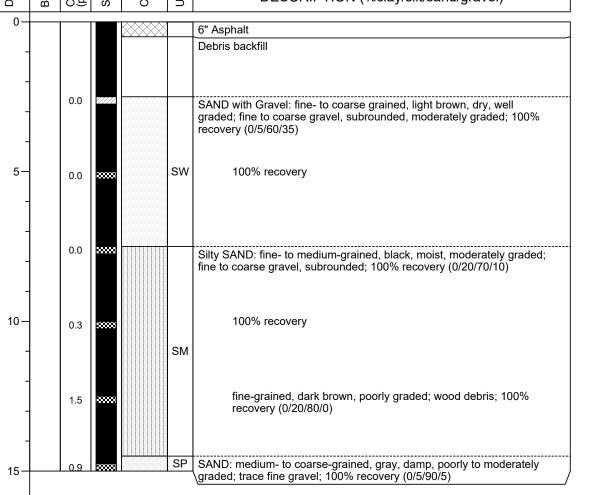
Latitude : N/A

Longitude : N/A

Total Depth: : 15' bgs

First GW Depth: : N/A

						*	
						Sample Condition	Water Levels
						No Recovery	▼ After Completion
						Sampled Interval	During Drilling
_	±	_				Described Sample	
(#)	Š	//PID	ple	E	S	Preserved Sample	
Depth (ft)	Blow	(ppm)	Samp	Column	USCS	DESCRIPTION (%d	clay/silt/sand/gravel)
0							



— Bentonite

Backfill Materials:

0.2 50-lb. bag of Asphalt

0.5 50-lb. bag of Bentonite Chips



(Page 1 of 1)

(Page 1 c

: ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

Project No.:

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Luchapell

: 031447

Date Drilled: : 01/26/21

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

 Borehole Diameter:
 : 3"

 Casing Diameter:
 : N/A

 Latitude
 : N/A

 Longitude
 : N/A

 Total Depth:
 : 15' bgs

 First GW Depth:
 : 8.5' bgs

Sample Condition Water Levels No Recovery ▼ After Completion Sampled Interval During Drilling Boring: EB36 **Described Sample Blow Count** OVM/PID (ppmv) Depth (ft) Preserved Sample Column Sample **USCS** DESCRIPTION (%clay/silt/sand/gravel) 6" Asphalt Ashpalt SAND: fine- to medium-grained, gray, dry, poorly graded; (0/5/95/0) 100% recovery 0.0 SP 5 100% recovery 0.4 100% recvoery 0.3 30000 Bentonite Wood debris, wet ∇ Silty SAND: fine- to coarse-grained, gray to dark gray, wet, well graded; trace fine gravel, subrounded; 100% recovery (0/15/80/5) 10-1.0 SW 0.3 SAND: medium- to coarse-grained, gray, wet, poorly graded; trace fine gravel, angular; 100% recovery (0/5/90/5) SP Wood debris, 3" layer SP SAND: medium- to coarse-grained, gray, wet, poorly graded; trace 15 fine gravel, angular; 100% recovery (0/5/90/5) **Backfill Materials:** 0.2 50-lb. bag of Asphalt 0.5 50-lb. bag of Bentonite Chips 20



(Page 1 of 1)

Project No.: : 031447

20-

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Keri Chappell, L.G. 2719

Date Drilled: : 01/27/21

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3"

Casing Diameter: : N/A

Latitude : N/A

Longitude : N/A

Total Depth: : 15' bgs

First GW Depth: : 10' bgs

Signatu	ıre:		1	roull	rap	pell		First GW Depth:	: 10' bgs
						Sample Condition	Water Levels		
						No Recovery	▼ After Completi	on	
						Sampled Interval	During Drilling		
	nt					Described Sample			Boring: EB37
Depth (ft)	Blow Count	OVM/PID (ppmv)	<u>e</u>	٤		Preserved Sample			
pth) MC	ΜĚ	Sample	Column	nscs	DESCRIPTION (9)		1\	-
ă	Bic	QĒ	Se	ပိ	🛎	DESCRIPTION (%d	ay/siii/sand/gra	avei)	
0-					1	6" Asphalt			— Asphalt
				××××××		Borehole was not logged from 6 inch	es bgs to 2.5 feet bo	gs.	
						95			
-									
		0.0	////			SAND: medium- to coarse-grained, g	ray moist to dry no	oorly graded:	
-						100% recovery (0/5/95/0)	ray, molec to ary, pe	oony gradou,	
5-		0.5	200000		SP	dark brown; 100% recovery (0	/15/85/0)		
-									
		0.2	30000			Wood debris			
-		0.2				SAND: fine- to coarse-grained, gray, recovery (0/5/95/0)	damp, well graded;	100%	— Bentonite
10-		0.2	90000			wet; 100% recovery			
		0.2				•			
-					SW				
]						100% recovery			
		0.3	8000			1007010001019			
-									
15-		0.2	7///			100% recovery			
15						Backfill Materials:			
-									
						0.2 50-lb. bag of Asphalt 0.5 50-lb. bag of Bentonite Chips			
-						o.o oo-ib. bag of bentoffice offips			



(Page 1 of 1)

Project No.: : 031447

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Luchappell

Date Drilled: : 01/27/21

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3"

Casing Diameter: : N/A

Latitude : N/A

Longitude : N/A

Total Depth: : 15' bgs

First GW Depth: : N/A

Signatu	ii C.		1	euc	ray	plu			,
Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	nscs	Sample Condition No Recovery Sampled Interval Described Sample Preserved Sample DESCRIPTION (%6	Water Levels ▼ After Completion ▼ During Drilling Clay/silt/sand/gra		Boring: EB38
0-		1			1]
						6" Asphalt			— Asphalt
-						Borehole was not logged from 6 inch			
-		2.7	////			SAND: medium- to coarse-grained, g 100% recovery (0/5/95/0)	ray, dry to damp, po	oorly graded;	
5-		1.0	20000			100% recovery			
-		0.5	20000		SP	dark gray; 100% recovery			— Bentonite
10-		0.3	55555			black and dark gray; organic 100% recovery (0/10/90/0)			
-		0.2	****			gray to dark gray; no organic recovery	s and plant material		
						Wood debris, 2" layer		/	
- 15-		6.9	20000		SP	SAND: medium- to coarse-grained, g poorly graded; 100% recovery (0/10/9	ray to dark gray, dry 90/0)	to damp,	
-						Backfill Materials:			
-						0.2 50-lb. bag of Asphalt 0.5 50-lb. bag of Bentonite Chips			
-									
-									
20 —									



(Page 1 of 1)

Date Drilled: : 01/27/21

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3" Casing Diameter: : N/A Latitude : N/A Longitude : N/A : 20' bgs Total Depth: First GW Depth: : N/A

Project No.: : 031447

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By:

: Keri Chappell, L.G. 2719 Reviewed By: Signature:

Signatu	ıre:		1	roull	raf	pell		First GW Depth:	: N/A			
Depth (ft) Blow Count OVM/PID (ppmv) Sample Column USCS					nscs	Sample Condition No Recovery Sampled Interval Described Sample Preserved Sample DESCRIPTION (%conditions)	Boring: EB39					
4						Borehole was not logged from 6 inche	es bgs to 2.5 feet bo	gs.				
-		4.2	****		SP	Concrete debris SAND: medium- to coarse-grained, b 100% recovery (0/5/95/0) Wood debris, 2" layer SAND: medium- to coarse-grained of						
5		12.7 8.4	*****		SP	100% recovery (0/10/90/0) dark gray, organic material pr	GAND: medium- to coarse-grained, gray, dry to damp, poorly graded; 100% recovery (0/10/90/0) dark gray, organic material present; 100% recovery					
						Wood debris with brown clay, mediun	n plasticity; 100% re	ecovery				
10-		3.7	90000		SP	SAND: medium- to coarse-grained, d graded; 100% recovery (0/10/90/0)	— Bentonite					
		4.2	80000			Wood debris with dark brown clay, m	edium plasticity: 10	0% recovery				
15 —		10.1 SSP		SP	SAND: medium- to coarse-grained, g 100% recovery (0/10/90/0) dark gray; 100% recovery 100% recovery							
20-		0.7	**************************************		SP	Wood debris with brown clay, mediun coarse-grained sand; 100% recovery SAND: medium- to coarse-grained, d						
						graded; 100% recovery (0/10/90/0)						
						Backfill Materials:	<u> </u>					
						0.2 50-lb. bag of Asphalt 0.5 50-lb. bag of Bentonite Chips						



(Page 1 of 1)

Project No.: : 031447

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Luchapell

Date Drilled: : 01/26/21

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

 Borehole Diameter:
 : 3"

 Casing Diameter:
 : N/A

 Latitude
 : N/A

 Longitude
 : N/A

 Total Depth:
 : 15' bgs

 First GW Depth:
 : 7.5' bgs

Sample Condition Water Levels No Recovery ▼ After Completion Sampled Interval During Drilling Boring: EB40 **Described Sample Blow Count** OVM/PID (ppmv) Depth (ft) Preserved Sample Column Sample **USCS** DESCRIPTION (%clay/silt/sand/gravel) 0 6" Asphalt Asphalt GRAVEL with Sand: fine to coarse, well graded, angular; fine- to coarse grained sand, brown, dry, well graded; 70% recovery (0/5/25/70)GW 0.2 SAND: medium- to coarse-grained, gray, moist, poorly graded; trace fine to coarse gravel; (0/5/90/5) 5 3.0 100% recovery SP ∇ 0.3 30000 Silty SAND: fine- to medium-grained, gray to olive brown, wet, Bentonite moderately graded; trace fine to coarse gravel; 80% recovery (0/25/70/5)SW 10 clayey wood debris and plant roots; 100% recovery 0.5 CLAY: blue gray; 100% recovery (100/0/0/0) CL 0.4 Wood debris; 100% recovery SAND: medium- to coarse-grained, dark gray, wet, poorly graded; SP trace fine gravel; (0/5/90/5) 15 100% recovery **Backfill Materials:** 0.2 50-lb. bag of Asphalt 0.5 50-lb. bag of Bentonite Chips 20



(Page 1 of 1)

Project No.: : 031447

20-

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Luchappell

Date Drilled: : 01/27/21

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3"

Casing Diameter: : N/A

Latitude : N/A

Longitude : N/A

Total Depth: : 15' bgs

First GW Depth: : N/A

Signatu	ıre:		1	reul	har	pell		First GW Depth:	: N/A
					<u>'</u>	Sample Condition	Water Levels		
						No Recovery	▼ After Completion	on	
						Sampled Interval	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □		
	ŧ					Described Sample	<u></u>		Boring: EB41
Œ	oni	₽ (ø.	_		Preserved Sample			
Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	nscs	· · · · · · · · · · · · · · · · · · ·			
De	Bo	Og Og	Sal	ပိ	ns	DESCRIPTION (%	clay/silt/sand/gra	avel)	
0-				· 		O!! A 4			A amb alt
						3" Asphalt SAND with Gravel: fine- to coarse-gr	— Asphalt		
-					sw	to coarse gravel, angular, well grade			
					300		,		
1 1		0.4							
		0.4	(////.			SAND: fine- to coarse-grained, gray,	moist, poorly graded	d; 100%	
						recovery (0/5/95/0)			
-									
_									
5-		36.0	20000		sw	gray to dark gray; 100% reco			
-									
		27.5	50000			wood chips; 100% recovery (0/10/90/0)		— Bentonite
-						Wood debris in dark brown clay	Bentonite		
						,			
1						SAND: fine- to coarse-grained, gray	to dark gray, moist, ¡	poorly	
10-		5.8	50000			graded; 100% recovery (0/5/95/0)			
		5.0							
-									
1					SP	100% recovery			
		5.6	*****			100 % recovery			
-									
		4.0				wood debris; 100% recovery	(0/15/85/0)		
15		1.9	L <i>Y////</i>	I.					
						Backfill Materials:			
						0.2 50-lb. bag of Asphalt			
-						0.5 50-lb. bag of Bentonite Chips			



(Page 1 of 1)

Project No.: : 031447

: ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

Site:

20-

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Luchappell

Date Drilled: : 01/26/21

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3"

Casing Diameter: : N/A

Latitude : N/A

Longitude : N/A

Total Depth: : 15' bgs

First GW Depth: : 10' bgs

Signatu	ıre:		1	Veu ()	har	pell		First GW Depth:	: 10' bgs
						Sample Condition	Water Levels		
						No Recovery	▼ After Completion	on	
						Sampled Interval	✓ During Drilling		
	+					Described Sample	<u>_v</u> =g =g		Boring: SB1
(#)	l our	₽	ø.	_		Preserved Sample			
Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	nscs				•
Del	B B	Sg	Sar	8	ns	DESCRIPTION (%c	:lay/silt/sand/gra	avel)	
0-					1	OII A L II			,] [XXXX] , , ,,
						3" Asphalt Debris backfill		/	— Asphalt
-						Deblis backilli			
-						SAND with Gravel: fine- to coarse-gra	ained dark brown r	noist well	
		0.6				graded; fine to coarse gravel, subrout	nded, well graded; 1	100%	
-						recovery (0/15/45/40)			
_									
_					SW	light brown trops solblos 100			
5-		0.1	****			light brown, trace cobbles; 100			
		0.4							
_		0.4	*****			Silty SAND with Gravel: fine- to coars well graded; fine gravel to cobbles, su	— Bentonite		
						recovery (0/20/40/40)	ibiouilded, well gra	ded, 50 %	
_						,			
10-		0.2	20000		SM	fine- to medium-grained, gray/b	prown, wet; fine to c	oarse gravel,	
		V				subrounded and subangular; 5	0% recovery (0/25/4	40/35)	
-									
-									
		15.0	20000			SAND with Gravel: fine- to coarse-gra			
-					100%				
					sw	recovery (0/10/60/30)			
-						medium- to coarse-grained, gra		avel, poorly	
45		0.9	20000			graded, subangular; 100% reco	very (0/0/75/25)		
15—	·	0.0			•		· 		
						Backfill Materials:			
		0.2 50-lb. bag of Asphalt							
						0.5 50-lb. bag of Bentonite Chips			
-									
-									
ا مما	I								



(Page 1 of 1)

Date Drilled: : 01/26/21

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3" Casing Diameter: : N/A Latitude : N/A Longitude : N/A Total Depth: : 15' bgs First GW Depth: : 12.5' bgs

Project No.: : 031447

: ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

Reviewed By: : Keri Chappell, L.G. 2719 Keulhappell Signature:

Sample Condition Water Levels No Recovery ▼ After Completion Sampled Interval During Drilling Described Sample Boring: SB2 **Blow Count** OVM/PID (ppmv) Depth (ft) Preserved Sample Column Sample **USCS** DESCRIPTION (%clay/silt/sand/gravel) 0 5" Asphalt -Asphalt Debris backfill 0.0 GRAVEL with Sand: fine to coarse gravel, subangular, well graded; fine- to coarse-grained sand, gray, dry, well graded; 100% recovery (0/5/40/55)GW 5 100% recovery 0.0 0.3 Silty SAND with Gravel: fine- to medium-grained, olive brown, well Bentonite graded; fine to coarse gravel, subrounded, poorly graded; 80% recovery (0/30/40/30) SM 10 0.2 Clayey SAND: fine- to medium-grained, light brown, moist; high plasticity; 100% recovery (50/0/50/0) SC ∇ 0.4 SAND with Gravel: fine- to coarse-grained, black, wet, well graded; fine to coarse gravel, subangular; 100% recovery (0/10/50/40) SW SAND: fine- to medium-grained, gray, wet; trace fine gravel; 100% 15 recovery (0/5/90/5) **Backfill Materials:** 0.2 50-lb. bag of Asphalt 0.5 50-lb. bag of Bentonite Chips 20



(Page 1 of 1)

Date Drilled: : 01/26/21

Drilling Co.: : Holocene Drilling, Inc. : Push Probe Drilling Method: : Dual Tube

Sampling Method: Borehole Diameter: : 3" Casing Diameter: : N/A Latitude : N/A Longitude : N/A Total Depth: : 20' bgs

Project No.: : 031447

: ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

: Keri Chappell, L.G. 2719 : Houshappell Reviewed By:

First GW Depth: : 10' bgs Signature: Sample Condition Water Levels No Recovery ▼ After Completion Sampled Interval During Drilling Boring: SB3 Described Sample **Blow Count** OVM/PID (ppmv) Depth (ft) Preserved Sample Column Sample **USCS** DESCRIPTION (%clay/silt/sand/gravel) 0 4" Asphalt Asphalt Debris backfill SAND with Gravel: fine- to coarse-grained, light brown, dry, well graded; fine to coarse gravel, subrounded to subangular, moderately 0.2 graded; 100% recovery (0/5/65/30) SW 5 black, moist; organics and wood present; 100% recovery 0.4 (0/5/65/30)0.3 30000 Silty SAND: fine- to medium-grained, dark brown, moist, moderate to poorly graded; 100% recovery (0/20/80/0) SM Wood debris ∇ 10 0.1 Clay lense, 2" thick -Bentonite Silty SAND: fine-grained, olive brown, wet, poorly graded; 100% recovery (0/50/50/0) SM 100% recovery 0.2 Wood debris, 2" layer 15 0.4 Silty SAND: fine-grained, olive brown, wet, poorly graded; 100% $\,$ recovery (0/50/50/0) SM 100% recovery 0.1 100% recovery 20 Backfill Materials:

0.2 50-lb. bag of Asphalt

0.5 50-lb. bag of Bentonite Chips



(Page 1 of 1)

(Page

Project No.: : 031447
Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

Date Drilled: : 01/25/21

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

 Borehole Diameter:
 : 3"

 Casing Diameter:
 : N/A

 Latitude
 : N/A

 Longitude
 : N/A

 Total Depth:
 : 20' bgs

 First GW Depth:
 : 10' bgs

Sample Condition Water Levels No Recovery ▼ After Completion Sampled Interval During Drilling Boring: SB4 Described Sample **Blow Count** OVM/PID (ppmv) Depth (ft) Preserved Sample Column Sample **USCS** DESCRIPTION (%clay/silt/sand/gravel) 0 6" Asphalt Asphalt Debris backfill 0.0 SAND: fine- to coarse-grained, brown, dry; fine to coarse gravel, subangular; 80% recovery (0/5/85/10) SW wood debris 5 0.2 SAND: coarse-grained, gray, dry, poorly graded; trace fine gravel; 100% recovery (0/5/90/5) SP 0.4 30000 ∇ 10 28.9 SAND with Gravel: fine- to medium-grained, brown, wet, poorly -Bentonite graded; fine to coarse gravel, poorly graded, subrounded; trace silt; 30% recovery (0/5/50/45) SP 24.5 SAND: medium-grained, black, wet, poorly graded; 100% recovery SP 15 medium- to coarse-grained, trace medium gravel, 14.6 subrounded; 100% recovery 12.2 Silty SAND: medium- to coarse-grained, black, wet, moderate to poorly graded; trace fine gravel; 100% recovery (0/20/75/5) SM SAND with Gravel: medium- to coarse-grained, gray, wet, moderately 20 graded; fine to coarse gravel, poorly graded, subangular; 100% recovery (0/5/65/30) **Backfill Materials:** 0.2 50-lb. bag of Asphalt 0.5 50-lb. bag of Bentonite Chips



(Page 1 of 1)

Project No.: : 031447

: ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

: Keri Chappell, L.G. 2719 : Houchappell Reviewed By: Signature:

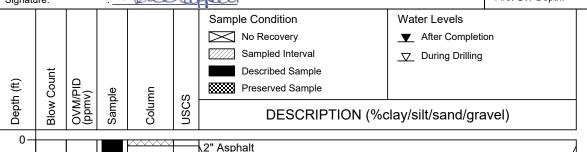
Date Drilled: : 01/26/21

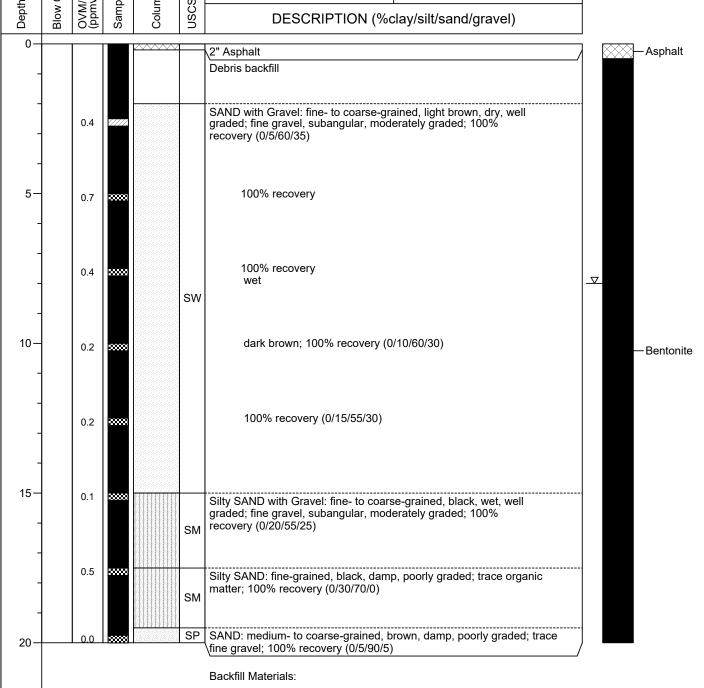
Drilling Co.: : Holocene Drilling, Inc.

Boring: SB5

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3" Casing Diameter: : N/A Latitude : N/A Longitude : N/A Total Depth: : 20' bgs First GW Depth: : 8' bgs





0.2 50-lb. bag of Asphalt 0.5 50-lb. bag of Bentonite Chips



(Page 1 of 1)

: ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

Project No.:

: Keri Chappell, L.G. 2719 : Luchappell Reviewed By:

: 031447

Date Drilled: : 02/05/21

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

Borehole Diameter: : 3" Casing Diameter: : N/A Latitude : N/A Longitude : N/A Total Depth: : 15' bgs

: 7.5' bgs First GW Depth: Signature: Sample Condition Water Levels No Recovery ▼ After Completion Sampled Interval During Drilling Boring: SB6 **Described Sample Blow Count** OVM/PID (ppmv) Depth (ft) Preserved Sample Column Sample **USCS** DESCRIPTION (%clay/silt/sand/gravel) 5" Asphalt Asphalt Borehole was not logged from 6 inches bgs to 2.5 feet bgs. 3.5 SAND with Gravel: fine- to coarse-grained, black to dark brown, moist, moderately graded; fine to coarse gravel, rounded to subangular, well graded; 100% recovery (0/5/60/35) SW 5 0.3 333333 Silty SAND: very fine- to medium-grained, gray, moist; 100% recovery (0/30/70/0)SM ∇ fine- to coarse-grained, bimodal primarily 0.1 30000 Bentonite coarse-grained, brown, wet, low plasticity; trace fine gravel; 100% recovery (0/20/75/5) Wood debris with brown clay, dry to moist, roots 10 0.1 0.0 SAND: medium- to coarse-grained, gray, wet, poorly graded; 100% recovery (0/5/95/0) SP CLAY with Sand: dark brown, moist, high plasticity; fine-grained sand, 15 poorly graded; 100% recovery (85/0/15/0) **Backfill Materials:** 0.2 50-lb. bag of Asphalt 0.5 50-lb. bag of Bentonite Chips 20



(Page 1 of 1)

Project No.: : 031447

Site: : ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Paul Prevou

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : Luchapell

Date Drilled: : 02/05/21

Drilling Co.: : Holocene Drilling, Inc.

Drilling Method: : Push Probe Sampling Method: : Dual Tube

 Borehole Diameter:
 : 3"

 Casing Diameter:
 : N/A

 Latitude
 : N/A

 Longitude
 : N/A

 Total Depth:
 : 15' bgs

 First GW Depth:
 : 12.5' bgs

Sample Condition Water Levels No Recovery ▼ After Completion Sampled Interval During Drilling Boring: SB7 **Described Sample Blow Count** OVM/PID (ppmv) Depth (ft) Preserved Sample Column Sample USCS DESCRIPTION (%clay/silt/sand/gravel) 5" Asphalt Asphalt Borehole not logged from 5 inches bgs to 2.5 feet bgs. 0.1 SAND with Gravel: fine- to coarse-grained, black to dark brown, moist, moderately graded; fine to coarse gravel, subrounded to subangular, well to moderately graded; 100% recovery (0/5/60/35) SW 5 0.1 SAND: fine- to medium-grained, brown, moist, poorly graded; trace fine gravel; 100% recovery (0/5/90/5) SP 0.0 30000 SAND: fine- to coarse-grained, dark gray, moist, moderately graded; Bentonite SW | 100% recovery (0/5/95/0) Wood debris in brown clay, roots, high plasticity 10-100% recovery 3.4 ∇ 0.2 Clayey SAND: fine- to medium-grained, dark brown, wet, poorly to moderately graded, medium plasticity; decayed plant material present; SC 100% recovery (40/0/60/0) SAND: medium- to coarse-grained, dark gray, wet, poorly to 15 moderately graded; 100% recovery (0/10/90/0) **Backfill Materials:** 0.2 50-lb. bag of Asphalt 0.5 50-lb. bag of Bentonite Chips 20



Project No.:

BORING LOG GB1

(Page 1 of 1)

Date Drilled: : 01/27/21

Drilling Co.: : Holocene Drilling, Inc. Drilling Method: : Hollow-Stem Auger

Sampling Method: : Split Spoon

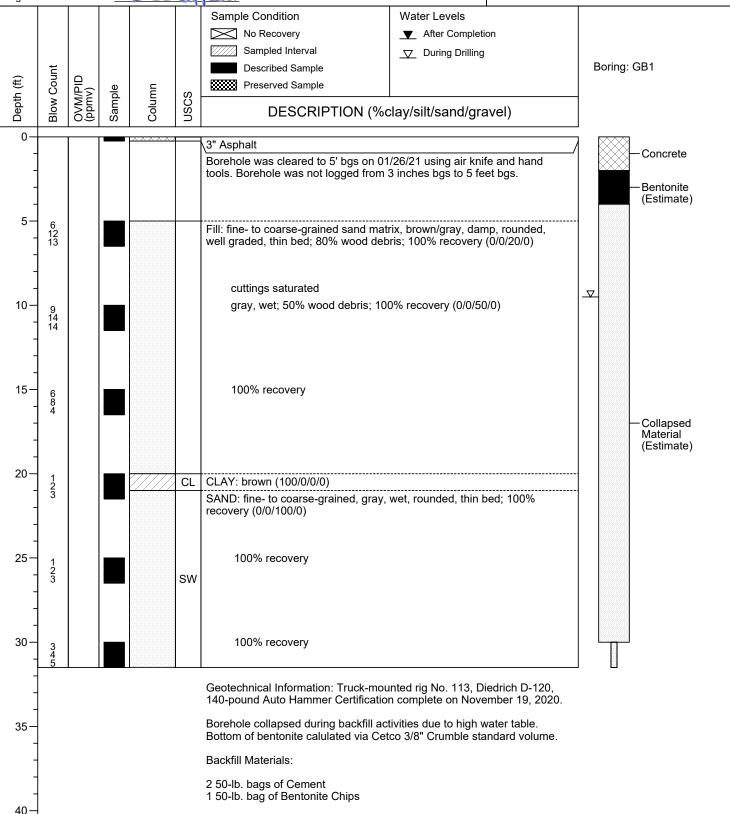
Borehole Diameter: : 8" Casing Diameter: : N/A Latitude : N/A Longitude : N/A Total Depth: : 31.5' bgs First GW Depth: : 9' bgs

Logged By: : Brett McLees Reviewed By: : Keri Chappell, L.G. 2719

: 031447

: ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Keulhappell Signature:





(Page 1 of 1)

Project No.: : 031447

: ExxonMobil ADC, 2717/2731 Federal Avenue, Everett, WA

Logged By: : Brett McLees

Reviewed By: : Keri Chappell, L.G. 2719
Signature: : :

Date Drilled: : 01/27/21

Drilling Co.: : Holocene Drilling, Inc.
Drilling Method: : Hollow-Stem Auger

Sampling Method: : Split Spoon

 Borehole Diameter:
 : 8"

 Casing Diameter:
 : N/A

 Latitude
 : N/A

 Longitude
 : N/A

 Total Depth:
 : 31.5' bgs

 First GW Depth:
 : 10' bgs

Sample Condition Water Levels No Recovery ▼ After Completion Sampled Interval During Drilling Boring: GB2 **Described Sample Blow Count** OVM/PID (ppmv) Depth (ft) Preserved Sample Column Sample **USCS** DESCRIPTION (%clay/silt/sand/gravel) 0 3" Asphalt Concrete Borehole was cleared to 5' bgs on 01/26/21 using air knife and hand tools. Borehole was not logged from 3 inches bgs to 5 feet bgs. Bentonite (Estimate) 5 2 5 5 SAND: fine- to coarse-grained, gray, damp, rounded; 100% recovery (0/0/100/0) ∇ 10 wet; 100% recovery 15 brown; trace silt; trace wood; 100% recovery (0/5/95/0) 1 2 3 Collapsed Material SW (Estimate) 20 gray; 100% recovery 4 5 5 25 100% recovery 6 9 11 30 100% recovery Geotechnical Information: Truck-mounted rig No. 113, Diedrich D-120, 140-pound Auto Hammer Certification complete on November 19, 2020. Borehole collapsed during backfill activities due to high water table. 35 Bottom of bentonite calulated via Cetco 3/8" Crumble standard volume. **Backfill Materials:** 2 50-lb. bags of Cement 1 50-lb. bag of Bentonite Chips 40

ExxonMobil ADC Cardno 03144702.R04

APPENDIX D WASTE DOCUMENTATION

	ease print or type arm designed for use on elite (12-pito			2703	1200	1000									
1	HOR-HALAHDOOD	Generator ID Number	2. Page 1 of 3. Emergency Response Phone					4. Waste Tracking Number							
	5. Generator's Name and Mailing A	VSQG		1		8-785-		2790	279650/D341718 an mailing address)						
	Execution Mobil Oil Corporation Seattle, WA 98104 Generator's Phone:														
	6. Transporter 1 Company Name Advanced Chemical T.	Number	@1=												
	7. Transporter 2 Company Name							U.S. EPA ID	Number	CAR00	00070540				
No.	8 Designated Facility Name and Sit	to Addrose						1							
	US Ecology Idaho Inc 20400 Lemley Rd Grandview, ID 83624	Designated Facility Name and Site Address U.S. EPA ID Number US Ecology Idaho Inc Site B 20400 Lemley Rd Grandview, ID 83624 acility's Phone 208-834-2275													
	9. Waste Shipping Name and	Description				10. Con No.	tainers Type	11. Total Quantity	12. Unit Wt./Vol.						
GENERATOR -	¹ Non-RCRA/Non-I CUTTINGS)	DOT Regulated Mate	rial Solid (SOIL			2	DM	750	Р						
- GEN	(GROUNDWATE	DOT Regulated Mate R)	rial Liquid		1	4	DM	7,000	P						
	3.														
	4.														
H	13. Special Handling Instructions an	d Additional Information													
	1) 52930-0 EXU-A1 2) 000052916-0 EXU-	A2-5)	1ber 279650		ent#: D34										
H	14. GENERATOR'S CERTIFICATION Generator's/Offeror's Printed/Typed N	I: I certify the materials described	above on this manifest a			gulations for	reporting pro	per disposal of Ha	zardous Wa						
V	Brett McLes on be		. /	1	nature W	on be	half o	of Exton	Mahil	Month 02	Day Year				
Z	15. International Shipments	Import to U.S.		Export from U.		Port of er		7. (1010							
5	Transporter Signature (for exports on 16. Transporter Acknowledgment of F					Date leav	ing U.S.:								
E CE	Transporter 1 Printed/Typed Name	–		Sign	ature					Month	Day Year				
2	Transporter Printed/Typed Name	ight		Sign	ature					Month	192				
=										Worter	Day Year				
R ⊢	17. Discrepancy 17a. Discrepancy Indication Space														
	Cuantity Type L Residue L Partial Rejection										uli Rejection				
-	17b. Alternate Facility (or Generator)	4.11			Manifest F	Reference N	lumber:	U.S. EPA ID N	umber						
LACIE	Facility's Phone:							1							
2	17c. Signature of Alternate Facility (or	Generator)		I				1		Month	Day Year				
Loidie															
1															
-	18. Designated Facility Owner or Oper. Printed/Typed Name					em 17a									
	Javan	mah Richar	dan	Signa	ature	OF	2			Month 3 1	Day Year				

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



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.

