TRUE NORTH

GEOTECHNICAL

in collaboration with

STRATADESIGN

Post-Construction Summary Report
Contaminated Media Management Plan

Block 290 West
2070 NW Quimby Street
Portland, Oregon 97209

True North Project No. 22-0061-9

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INTRODUCTION

This Construction Completion Report (CCR) has been prepared by True North, in collaboration with Strata Design, for the Site identified as Block 290 West, located at 2070 NW Quimby Street in Portland, Oregon (Site) on behalf of Guardian Real Estate Services for the purpose of achieving regulatory closure. This report summarizes work completed in regard to the impacts to soil and soil-vapor previously documented at the Site. Additionally, this report details the remedial actions taken for the management and removal of impacted soils at the Site, documents the results for confirmation samples, and documents the implementation of mitigative components of construction and engineering controls to address the potential for vapor migration into indoor urban residential and occupational spaces.

BACKGROUND

SUMMARY OF PROPERTY HISTORY

The 2-acre Site is located northeast of the intersection of NW Pettygrove Street and NW 21st Avenue in Portland, Oregon (refer to **Figure 1**). Historical Site addresses were identified as 2050 NW Quimby Street and 1433 NW 20th Avenue.

The Site was originally part of two tax lots: TL 102 (Block 290 East) and 103 (Block 290 West). The Site (Block 290 West) and adjacent Block 290 East are shown on Figure 3. The Site and adjacent Block 290 East were undeveloped until sometime between 1889 and 1901. Per historic aerial photographs and Sanborn Fire Insurance Maps (SFIM), the block was gradually developed with residential and commercial properties through 1944 (refer to **Figures 2** and **3**). A German Evangelical church and later a German Lutheran church occupied the southwest corner of this block in the early 1900s.

Sometime between 1944 and 1950 most of the residential structures were removed and this block was developed with the former Consolidated Auto Truck Service and Parking that included various buildings, including a truck shop, offices, a truck-greasing building, and truck scales. The block was redeveloped with the 1967-era 44,000 square foot T-shaped building consisting of a mezzanine and partial basement and paved parking. The building was occupied with a truck maintenance transfer and repair facility, Consolidated Freightways (CF), from at least 1969 to 1999 (refer to **Figure 4-1**). Thirty-nine truck bays were located on the north and south sides of the building as well as 22 backs in the east truck shop, 12 in the west truck shop and other bays located at the spray painting and engine dynometer shops.

During its use as truck maintenance transfer and repair facility, numerous underground storage tanks (USTs) were located beneath the original building near Bay 39 which included the following:

- one 58,000-gallon diesel UST
- one 10,000-gallon diesel UST
- one 650-gallon oil UST
- one 600-gallon UST (labeled as unused)
- one 550-gallon lube oil UST

In addition, three designated fueling stations were located north of the original building between the building and NW Quimby Street. A sump was located near the south end of the building and a truck wash shed on the east side

of the building. A railroad spur was located at the southwest corner of the Site. Two sludge tanks were proposed for the planned CF facility and were located south of the east truck shop and south of the west truck shop.

City of Portland Fire Bureau had tank and fuel pump application cards for seven USTs installed at the Site in 1966 and included the following:

- one 30,000-gallon diesel tank (Permit #2278; March 7, 1966)
- one 10,000-gallon motor oil tank (Permit #2279; March 7, 1966)
- one 500-gallon antifreeze tank (Permit #2280; March 7, 1966)
- one 500-gallon solvent tank (Permit #2281; March 7, 1966)
- one 500-gallon reclaim oil tank (Permit #2282; March 7, 1966)
- one 500-gallon sludge tank (Permit #2283; March 7, 1966)
- one 500-gallon sludge tank (Permit #2284; March 7, 1966)

It also appears that the 10,000-gallon motor oil tank had a pump replaced in June 1978 (Permit #10103). Copies of UST Decommissioning Records are included in **Appendix A**.

PREVIOUS INVESTIGATIONS & ODEQ CORRESPONDENCE

From 1989 to 2014, environmental investigations identified the presence of petroleum contaminated soils (PCS) and multiple USTs throughout the Site from past activities associated with a former truck maintenance building located on the Site from 1967 through 1999. The investigations and resulting cleanup reports are summarized as follows:

- Tank Removal, Consolidated Freightways, 2050 NW Quimby, Portland, Oregon dated December 5, 1989, prepared by Blymyer Engineers, Inc., Project #85919;
- Observation and Environmental Sampling, Consolidated Freightways, Inc., Portland, OR dated March 27, 1990, prepared by L.R. Squier Associates, Inc., Project #90416;
- Contamination Assessment, Consolidated Freightways, Portland, Oregon, dated April 18, 1990, prepared by Blymyer Engineers, Inc, Project #89519;
- Observation and Environmental Soil and Ground Water Sampling, Consolidated Freightways, Portland, Oregon, dated January 10, 1991, prepared by Squier Associates, Project #90416.1;
- Phase Subsurface Investigation, Consolidated Freightways, Portland, Oregon dated April 5, 1991, prepared by Blymyer Engineers, Inc, Project #89519;
- Underground Storage Tank Closure and Soil Matrix Cleanup Report, CF MotorFreight (PTS), 2050 NW Quimby, Portland, Oregon dated November 30, 1995, prepared by Blymyer Engineers, Inc. Project #95002.
- Soil Contamination Investigation Report, CF MotorFreight, 2050 NW Quimby Street, Portland, Oregon dated September 6, 1996, prepared by Olympus Environmental. Project #6437;
- No Further Action Letter, Consolidated Freightways, dated September 24, 1996, prepared by Oregon DEQ. File No. 26-95-0308;
- Phase 1 Environmental Site Assessment, Limited Asbestos Survey, and Groundwater Sampling, Consolidated Freightways Building, 2050 NW Quimby Street, Portland, Oregon dated August 5, 1999, prepared by GEO Design, Project CF-1;
- Report of Environmental Services, Con-Way Property, 2050 NW Quimby Street, Portland, Oregon dated January 23, 2007, prepared by GEO Design, Project ConWayInc-01;
- Groundwater Monitoring and Sampling Report, Con-Way Property, 2050 NW Quimby Street, Portland, Oregon dated May 16, 2007, prepared by GEO Design, Project ConWayInc-1-02;

- Groundwater Monitoring and Sampling Report, Con-Way Property, 2050 NW Quimby Street, Portland, Oregon dated May 5, 2008, prepared by GEO Design, Project ConWayInc-1-02;
- Report of Environmental Services, Con-Way Property, 2050 NW Quimby Street, Portland, Oregon dated September 2, 2009, prepared by GEO Design, Project ConWayInc-1-02;
- Report of Environmental Services, Con-Way Property, 2050 NW Quimby Street, Portland, Oregon dated December 3, 2010, prepared by GEO Design, Project ConWayInc-1-03;
- Annual Environmental Services, Con-Way Property, 2050 NW Quimby Street, Portland, Oregon dated January 26, 2012, prepared by GEO Design, Project ConWayInc-1-04;
- No Further Action Letter, Consolidated Freightways, dated October 3, 2012, prepared by Oregon DEQ. File No. 26-89-0305;
- Environmental Services Report, Con-Way Pettygrove and 21st – Mixed Use Project (Block 290), NW 21st Avenue and NW Pettygrove, Portland, Oregon dated November 21, 2014, prepared by GEO Design, Project GuardianRE-1-02.

Within the 1999 Phase 1 Environmental Site Assessment report, GeoDesign provided the following historical timeline. Note that many of the former features mentioned here are also shown on Figure 5.

Oct. 1990	PEMCO files a Notice of Underground Storage Tank Decommissioning with the DEQ to remove a 500-gallon waste oil UST from the Site
March 1990	One waste oil UST was removed south of Bay 26 on the south side of the building, south of the west truck shop. Visible staining was observed in surrounding soils.
March 1990	Soil samples were obtained from two hollow-stem auger borings in the vicinity of the former waste oil UST. Field screening of soil samples indicated that soil contaminated with petroleum hydrocarbons was limited to within 5 feet of the waste oil tank excavation at a depth between 9 and 13.5 feet below ground surface (bgs). Results of chemical analytical testing indicated that oil and grease, toluene, xylenes, tetrachloroethene, and trichloroethene were detected in soil samples from the two borings. It is not clear whether additional soil removal was performed in the former waste oil excavation.
Nov. 1990	Four soil borings with monitoring well installations were drilled on the Site to evaluate the presence and extent of observed soil contamination that resulted from the release associated with the former waste oil UST, and to evaluate possible groundwater contamination associated with possible on-and off-site sources. No evidence of petroleum hydrocarbons was observed in soil samples obtained from the borings.
Sept. 1993	Suspected release from a 10,000-gallon motor oil UST, based on failure of a tightness test, was reported to the Oregon DEQ. However, the suspected release was resolved when a cap at the remote fill location for the UST was determined to have been loose during the tightness test. The tank was re-tested and passed.
Nov. 1995	Blymyer Engineers, Inc. monitors Silver Sun Construction Company during the removal of the following tanks from the Site: • 30,000-gallon diesel • 20,000-gallon diesel

- 10,000-gallon motor oil
- 5,000-gallon antifreeze
- 2,500-gallon waste oil
- 1,500-gallon waste oil
- 1,000-gallon antifreeze (previously contained non-halogenated solvent)
- 1,000-gallon gear oil

March 1996 — Approximately 477 tons (340 cubic yards) of contaminated soil was removed from the UST excavations and transported to TPS Technologies for thermal desorption.

August 1996 — Olympus Environmental advances four soil borings to depths up to 20 feet bgs in the vicinity the remote fill ports and product piping for six of the USTs that were removed from the Site in 1996. Based on results of their investigation, it was determined that a zone of contamination was identified from the ground surface just below the remote fill ports in the sidewalk to approximately midway beneath the vehicle ramp on the east side of the building. The estimated total volume of contaminated soil was approximately 170 cubic yards.

Sept. 1996 — Oregon DEQ issues a conditional No Further Action (NFA) decision regarding the UST removal and cleanup at the subject Site. The NFA decision was made with the condition that should the "pocket" of contamination beneath the sidewalk and vehicle ramp on the east side of the building become accessible, the efforts to remediate affected soil should be conducted.

Nov. 1996 — Blymyer submits a UST closure report to the Oregon DEQ. The report confirms that eight USTs and associated accessible underground piping were decommissioned by Silver Sun Construction Company in November 1990. The report indicated 477 tons of petroleum contaminated soil was transported to TPS Technologies for thermal desorption. The report also confirmed that a "pocket of contamination" exists beneath the sidewalk and vehicle ramp on the east side of the building.

Analytical Results from the early 1990's are included within **Tables 1 through 4**. GEO Design became involved in 1999 with the preparation of Phase 1 Environmental Site Assessment (ESA), Limited Asbestos Survey, and Groundwater Sampling. They concluded of the 1999 Phase 1 ESA a recommendation of the following: a geophysical survey around the perimeter of the Site to evaluate for the presence of USTs and second sludge tank; a second groundwater monitoring event, installation of a fifth monitoring well to the north/northeast of MW-4, advancement of several soil borings in the vicinity of the former waste oil tank and second sludge tank in the vicinity of the former waste oil tank for further soil analysis.

In October 2006, GeoDesign conducted a geophysical survey on the Site and in the former parking lot to the north to determine if USTs or associated anomalies (backfill of former UST/relict UST piping) to the north of the building and the parking areas to the south of the building (approximately 1 acre) along with sidewalk areas. The geophysical survey confirmed the locations of the excavations for the former waste UST in the northeast corner of southwest parking area and waste oil and sludge USTs in the north-central portion of the southeast parking area. No subsurface anomalies were observed. An anomaly was noted in the central portion of the northern parking area that consisted of a vertically oriented, cylindrical metal object (possibly a drum or small UST). An unknown metallic object with associated piping was identified in the northeast area of the Site and underground piping in the vicinity of a former above ground storage tank (AGST) was detected in the northwest portion of the Site that could be related to the

former fueling areas. Three direct push soil borings were advanced by GeoDesign as well (GP-1 through GP-3). Petroleum hydrocarbons were detected in soil sample GP-1 (14-15) and GP-2 (13.5-14.5) near the former waste oil USTs. Detected soil concentrations and VOCs were below applicable DEQ Risk Based Concentrations (RBCs) for occupational exposure pathways with the exception of the concentration of gasoline range hydrocarbons for leaching to groundwater pathway. However, the lab results indicated that the results were indicative of mineral spirits rather than gasoline and the pathway is incomplete because OWRD records indicate that groundwater is not used domestically due to all domestic water provided by City of Portland. The former location of these USTs and sample locations are shown in **Figures 4-1 and 4-2.** Refer to **Tables 6 and 7** for soil sample analytical results.

Groundwater sampling was completed by GeoDesign between 1999 and 2010. Refer to **Tables 5 and 8** for water sample analytical results. GeoDesign submitted a Report of Environmental Services to Oregon DEQ (ODEQ) in 2010, documenting monitoring well (MW) sampling activities at the Site to delineate groundwater impacted by chlorinated Volatile Organic Compounds (VOCs) down gradient of former waste oil UST excavations. ODEQ responded that Trichloroethene (TCE) and tetrachloroethane concentrations were equivalent to and/or higher than levels detected in June 2009 borings GP-4 and GP-7. DEQ concluded that the lateral delineation of groundwater impacted by chlorinated VOCs was incomplete. TCE levels increased in MW-4 concurrent with an apparent decrease, suggesting an unknown source of chlorinated VOCs in groundwater may be present at the Site (i.e., former waste oil USTs are unlikely to have been the source). The Site was recommended to be entered in the Environmental Site Cleanup Information (ECSI) database for management under a Voluntary Cleanup Agreement.

Groundwater sampling was completed by GeoDesign in 2011 through 2012 on an adjacent northeast property (Block 263) owned by Con-Way. Perchloroethylene (PCE) and TCE were detected in both groundwater samples (DP-1W and DP-3W) at concentrations greater than the DEQ RBCs for Ingestion and Inhalation from Tap Water exposure pathway for an Urban Residential scenario, which was considered incomplete in the Block 290 and Block 263 vicinity. The concentrations do not exceed any other applicable DEQ RBCs and are less than groundwater concentrations detected in down-gradient sample locations on the down-gradient side of the Con-Way project site (GP-8 and GP-9). Refer to **Figure 4-3** and **Table 9** for analytical results.

In 2012, ODEQ submitted an NFA Determination concerning UST decommissioning and cleanup conducted at the Site applying to soil and groundwater contaminated with petroleum hydrocarbons and petroleum-related constituents from the October 1989 release. The NFA determination did not apply to chlorinated VOCs of unknown origin historically detected in Site groundwater. However, it should be noted that TCE has been detected at concentrations ranging from 4.55 µg/L to 18.79 µg/L in MW-1, located at the up-gradient (southwest) corner of the Site. Because chlorinated VOCs were not detected at concentrations exceeding RBCs for the Groundwater Vapor Intrusion into Building exposure pathway under the most stringent of exposure scenarios, and because groundwater in the area of the Site has no current or likely future beneficial use as drinking water, DEQ did not require further assessment.

In 2014, GeoDesign completed eight direct-push soil borings (DP-1 through DP-8). Explorations DP-1, DP-2, and DP-4 through DP-8 were advanced to a depth of 20.0 BGS, and exploration DP-3 was advanced to a depth of 30.0 feet bgs. Refer to **Figures 4-1** and **4-2** for approximately sampling locations. Eighteen soil samples were submitted to ESC Lab Sciences of Mt. Juliet, Tennessee, for analysis of hydrocarbon identification by Northwest Total Petroleum Hydrocarbons Identification (NWTPH-HCID) and Resource Conservation and Recovery Act (RCRA) 8 total metals. In addition, nine of the soil samples collected within the depths of the anticipated construction excavation were submitted for follow-up analysis of Polycyclic Aromatic Hydrocarbons (PAHs) by Environmental Protection Agency (EPA) Method 8270D-SIM. Based on the laboratory results, petroleum hydrocarbons were not qualitatively detected

at concentrations greater than the laboratory Maximum Residue Levels (MRLs). In addition, PAHs were not detected at concentrations greater than the laboratory MRLs in the soil samples submitted for follow-up analysis. Metals were either not detected in soil or were detected at concentrations less than applicable DEQ Generic RBCs and Clean Fill Criteria.

Subsurface exploration locations can be referenced in **Figure 4-1 through 4-3** and are included within **Appendix I**.

Kane Environmental reviewed available documentation in 2016 and determined additional probes completed by GeoDesign in 2014 with soil testing and performed extensively throughout the Conway building area, particularly in Block 290 (part of the Subject Property) indicated no detectable petroleum hydrocarbons (including related PAHs) and insignificant concentrations of metals. Kane concluded that no additional test data would change DEQ's NFA letter issued in 2012. As a result, an update of the 2012 NFA letter was considered not necessary.

In August 2020, GEO Consultants Northwest (GCN) became involved with the project with environmental professionals David Rankin and Tima Carlson involved. GCN completed a Contaminated Media Management Plan (CMMP) that detailed existing nature/extent of contamination, required contractor submittals, and recommendations if/when discovery, handling, and disposition of contaminated debris waste, soil and groundwater is encountered during construction. A revision to the CMMP took place in March 2021. The 2021 CMMP is included within **Appendix E**.

GCN prepared a memorandum dated August 31, 2021, summarizing the known and anticipated environmental conditions below the ground surface based on their review of environmental documents. GCN concluded there were two areas of interest on Block 290 West; Former Area A – "First Generation" Truck Facility and fuel pump station, and Former Area D – former waste oil tank in northeast corner. The results of past explorations/testing and Oregon DEQ UST files suggested that the UST removal and subsequent soil cleanup was relatively thorough for the era in which the work was performed. Pockets of soil contamination were believed to exist at contaminant concentrations above current DEQ guidance from just below the existing pavement and up to depths of 10 to 18 feet, near the base former UST excavations base ~10 to 18 feet (possibly below the excavation bases). Former pockets of contamination along the shallow remote fill ports and/or the piping which connected the ports to the UST nests, particularly if the piping was not removed during the UST removal in the 1990's.

True North acquired GCN in January 2022 with construction project management and activity monitored by True North with Tima Carlson as project manager. True North submitted the Voluntary Cleanup Program (VCP) Intent Form on February 24, 2022. A DEQ project manager was assigned on March 28, 2024. Following a review of the project file to date, Oregon Department of Environmental Quality (ODEQ) Project Manager David LaMadrid administratively closed a Leaking Underground Storage Tank (LUST) file for an oil-water separator that was encountered in the southeast corner of Block 290 West.

Laboratory analytical sample results for all previous investigations are summarized in **Tables 1 through 9** attached to this report for reference.

PHYSICAL SETTING

The Site is situated in the Willamette River basin. Sediments in this area are mapped as repeated catastrophic Ice Age floods known as the Missoula Floods that originated in Montana, poured through the Cascades via the Columbia River, and extended as far north as Kalama, Washington and Eugene, Oregon before eventually draining to the

Pacific Ocean. The Site is located at approximately 69 feet above mean sea level.

The Site is mapped primarily as Urban Land, 3 to 15 percent slopes. Urban Land is soil that has been disturbed and modified by streets, buildings, and other structures.

According to a well log investigation conducted on the Oregon Water Resources Department (OWRD) website, no significant shallow groundwater resources have been encountered in wells advanced in close proximity to the Site. Water bearing zones were estimated to be approximately 40 feet below the ground surface by GCN and 50 to 55 feet below the surface by L.R. Squier Associates during the winter months. The water-bearing units within the area are comprised of flood deposits and alluvium. No on-site water wells or springs were observed during Site activities. Domestic water is supplied to the Site by the City of Portland.

Based on a review of the Portland, Oregon Quadrangle 7.5-minute series topographic map, the inferred groundwater flow at the Site is to the northeast towards the Willamette River (approximately 0.5 miles to the northeast). The Site does not overlie a sole source aquifer. According to the USEPA Ground Water Handbook, Vol.1 Ground Water and Contamination, September 1990, the water table typically conforms to surface topography.

Soil encountered during investigations conducted by GCN, previous investigations conducted by Squier in 1990, and redevelopment activities consisted of between 30 and 32 feet of flood deposited layers of silt, fine sand, and mixtures of both. This layer is underlain by dense to very dense gravel with silt and sand believed to be a component of the Troutdale Formation.

PRE-DEVELOPMENT ACTIVITIES

True North's understanding of the pre-development subsurface conditions is based on previous investigations conducted at the Site between 1989 and 2014 (discussed in above Background section of this report).

UST DECOMMISSIONING

The record suggests that most of the underground storage tanks (USTs) had been removed prior to construction of the 1965-era building, some of the USTs were decommissioned in-place in accordance with DEQ guidance at the time of decommissioning, and results of the UST removal or in-place decommissioning were reported to Oregon DEQ. Most of the USTs were issued a NFA letter by Oregon DEQ after the UST removal report(s) were reviewed.

Several cards for the decommissioning of on-site tanks were identified and included the following:

- One 500-gallon waste oil tank (Permit #891181, October 9, 1990; approved February 5, 1990)

Blymyer Engineers, Inc. oversaw the removal of eight (8) USTs and associated accessible underground piping, removed by Silver Sun Construction Company between November 8 and November 10, 1995. The following tanks (Permit #951235; November 2, 1995) were removed:

- 30,000-gallon diesel UST
- 20,000-gallon diesel UST
- 10,000-gallon motor oil UST
- 5,000-gallon antifreeze UST
- 2,500-gallon waste oil UST
- 1,500-gallon waste oil UST

- 1,000-gallon gear oil UST
- 1,000-gallon antifreeze UST that previously stored a non-halogenated petroleum-based solvent.

Minor localized staining was observed around the submersible pumps and fill pipes for the diesel USTs and the fill pipe for the motor oil UST. Approximately 477 tons of contaminated material were removed from the excavation. Analytical results indicated that the soil samples collected from within the remote fill piping extended west of the fill ports contained concentrations of TPH in excess of DEQ Level 2 Soil Matrix Cleanup Standards (circa 1995). Ethylene glycol was also detected in the north pipe run. Because of the sidewalk, street, and ramp along NW 20th Avenue, the area was inaccessible, and Blymyer recommended the pocket of contaminated soil be left in place. ODEQ requested additional sampling within the plume area to determine extent, volume and average concentration of petroleum and antifreeze contamination remaining at the Site.

Olympus Environmental conducted 4 soil probes (B-1 through B-4) on August 21, 1996, within the plume area. Geoprobes B-3 and B-4 had no analytes detected. However, soil probes B-1 and B-2 supported the assertion that plume was concentrated in the vicinity of the removed fill ports and along the backfilling piping runs extending west towards the UST excavation. Olympus estimated 238 tons (170 cubic yards) of PCS remained as a pocket of contamination under the sidewalk along NW 20th Ave. Oregon DEQ issued a conditional NFA for the cleanup associated with the UST removals at the Site.

Soil borings were drilled in many areas throughout the Site and surrounding areas, as shown on **Figures 4-1** through **4-3**. Some borings were drilled and groundwater monitoring wells were also installed in the vicinity of the USTs and other areas of interest. Additional explorations were also conducted in other areas of the Site.

The results of past explorations/testing and Oregon DEQ UST files suggest that the UST removal and subsequent soil cleanup was relatively thorough for the era in which the work was performed.

A map showing the former tank soil sample locations are included in **Figures 4-1 through 4-3**.

Laboratory analytical sample results are summarized in **Table 1 through 10** attached to this report. Copies of the laboratory analytical reports are provided in **Appendix B**.

Other Unidentified Tanks or Petroleum Contamination. Available historic records and environmental reports suggest that no other UST or other sources of contamination exist in areas beyond those already identified in this report. As a result, it is unlikely that other/older tanks or other sources of petroleum contamination exist in areas besides those already identified in this report, with the exception of residue from surface spills of diesel/gasoline/oil.

Catch Basins. Within the two-block property, historic records indicate that there may have been up to fourteen (14) catch basins connected to 8-inch city sanitary/storm sewer lines. Catch basins were removed during mass excavation of the Site, as documented in **Figure 4-1**.

Dry Wells. It does not appear that dry wells were on the Site based on review of past reports prepared by others. However, discussion was made on November 24, 2021, between the contractor LMC and GCN that the contractor would coordinate decommissioning of any existing dry wells if they were encountered during construction. GCN and True North were not notified of dry wells being encountered on the site. Refer to Groundwater Monitoring Wells section in this report on the evidence of decommissioning of dry wells found during site development.

Groundwater Monitoring Wells. Four soil borings (MW-1 through MW-4) were drilled and converted to 65-foot-deep groundwater monitoring wells on November 26 through November 30, 1990, by Squier Associates to assess the extent of petroleum hydrocarbon and chlorinated solvent contamination in the groundwater at the Site. Groundwater flow was determined to be north/northeast. Groundwater sample MW-4 S-4 contained concentrations of TCE below US EPA Maximum Contaminant Levels and PCE above US EPA Maximum Contaminant Levels.

GeoDesign conducted intermittent groundwater sampling of the monitoring wells from 1999 to 2010. The following summaries of each area are detailed below:

1999 - Chemical analysis for VOCs revealed that TCE was detected from the four on-site monitoring wells. Concentrations of TCE exceed the federal drinking water standard in groundwater samples obtained from MW-3 and MW-4. PCE was detected in the groundwater sample from MW-4 but did not exceed the federal drinking water standard.

2006 - MW-2 and MW-3 did not have measurable groundwater in the wells. MW-1 and MW-4 had some measurable groundwater. However, MW-4 (most downgradient) was the only monitoring well with enough groundwater for sampling. TCE and PCE were detected. However, concentrations were less than the DEQ RBCs for occupational scenario with the exception of the ingestion or inhalation from tap water pathway. Other VOCs were not detected above method reporting limits.

2007 - TCE and PCE were detected in all monitoring wells. Detected concentrations of TCE and PCE were greater than DEQ's generic RBC for Ingestion and Inhalation from Tap Water exposure pathway in an occupational receptor scenario in all four wells. With the Site groundwater not used for drinking water; the pathway was considered incomplete. The VOC 1,1,1-TCA was detected at a concentration below applicable DEQ generic RBCs in MW-1. No other VOCs were detected above laboratory MRLs in the monitoring wells MW-1 through MW-4.

2008 - TCE and PCE were detected in all monitoring wells. Detected concentrations of TCE and PCE were greater than DEQ's generic RBC for Ingestion and Inhalation from Tap Water exposure pathway in an occupational receptor scenario in all four wells. With the project site groundwater not used for drinking water, the pathway was considered incomplete. The VOC 1,1,1-TCA was detected at a concentration below applicable DEQ generic RBCs in MW-1. No other VOCs were detected above laboratory MRLs in the monitoring wells MW-1 through MW-4.

2009 - Concentrations of PCE and TPE in monitoring well MW-4 exceeded DEQ generic RBCs for the Ingestion and Inhalation from Tap Water exposure pathway. Because the Site groundwater is not used for drinking water, the exposure pathway is incomplete for the Site and vicinity and are less than the remaining DEQ generic RBCs for an occupational exposure scenario.

2010 - GeoDesign concluded concentrations of PCE and TCE in monitoring wells MW-1 through MW-4 exceeded the DEQ generic RBCs for the Ingestion and Inhalation from Tap Water exposure pathway. Because the Site groundwater is not used for drinking water, the exposure pathway is incomplete for the project site. The VOC TEC was detected at a concentration above applicable DEQ generic RBC for Vapor Intrusion into Buildings exposure pathway for residential scenario but less that the RBC for occupational scenario in MW-4. The VOC 1,1,1-TCA was detected at a concentration below applicable DEQ generic RBCs in MW-4. The concentrations of PCE and TCE in groundwater was less than the remaining DEQ generic RBCs.

Oregon DEQ prepared a response in December 2010 noting TCE levels in monitoring well MW-4 increased over the last 6 documented sampling events, concurrent with an apparent decrease, over the last 3 events, in TCE concentrations in upgradient monitoring well MW-4, suggesting an unknown source of chlorinated VOCs in groundwater may be present on the Site. USTs are not considered to be significant source of chlorinated VOCs in groundwater.

An NFA determination was prepared by ODEQ in October 2012 citing the low levels of PCE and TCE detected in groundwater from monitoring well MW-4. Chlorinated VOCs included PCE, TCE, 1,1,1-TCA, carbon tetrachloride, chloroform, cis-1,2-dichloroethene, and 1,1-dichloroethane were historically detected in Site wells along with gasoline-, diesel-, and oil-range TPH were not detected at levels exceeding laboratory MRLs. Source of chlorinated VOCs not known at the time and not detected at concentrations exceeding RBCs for the Groundwater Vapor Intrusion into Building exposure pathway under the most stringent of exposure scenarios, and because groundwater has not current or likely future beneficial use as drinking water, DEQ did not require further assessment and recommended monitoring wells be properly decommissioned.

GCN conducted a site walk on May 21, 2020. A photo in the center portion of Block 290 West, looking north towards the historic structure in the area of monitoring well MW-3. No monuments are visible. Historic street views available through Google Maps show visible monuments from 2007 to 2019. It is presumed the monitoring wells were decommissioned sometime between late 2019 and early to mid-2020 based on photos taken during the 2020 site walk. It is unknown whom the decommissioning driller was as OWRD does not have decommissioning records available for the Site. Refer to attached **Photo Log** with associated dates compiled for reference.

SITE REDEVELOPMENT

The Site redevelopment included construction of a seven-story mixed-use (urban residential) building consisting of residential units over ground floor businesses with one levels of underground parking. No on-site excavated soil was used as fill during construction of the building. Virtually the entire surface of the Site will be rendered impervious due to construction of the seven-story structure. Existing native soils will be used for on-site infiltration of storm water at depth located in the northeast portion of the Site.

The underground parking garage is founded on a subslab barrier (footing/grade beam) and 15-mil vapor barrier geomembrane.

The Site is identified on a Site Location Map (**Figure 1**), and Topographic Map and Site Plan with a layout of the building footprint (**Figure 2**), both of which are located in the Figures section attached to this report.

DEVELOPMENT ACTIVITIES

SOLDIER PILE INSTALLATION

In March 2022, True North provided construction observation and media management services starting with the oversight of the permanent soldier pile wall installation for the lateral support shoring retention system of the building foundation by DeWitt Construction Inc which, based on previous investigations, was expected to encounter PCS throughout the Site.

Between March 17 and April 4, 2022, True North oversaw the installation of 113 soldier piles to depths up to 47.5 feet bgs. PCS was documented during installation on March 22nd through March 24th in the northeast corner of the the Site and on April 1st in the northwest corner of the Site. All contaminated soil encountered during pile driving activities was transported to the Waste Management Hillsboro Subtitle D Landfill for disposal under profile #137367OR. Soldier Pile locations around the perimeter of the building footprint/excavation boundary are included in **Figure 5**.

Piles installed in the subsurface are generally understood to be a preferential pathway for contamination to spread vertically downward. However, because the depth to groundwater has been demonstrated to be 50 to 55 feet below ground surface in the vicinity of the Site and the piles only extend to 47.5 feet below ground surface, there is no potential for the downward migration of contamination to enter the water table. Additional soil sampling to further characterize the Site was regarded as unnecessary as the extent of contamination had already been characterized as per previous investigations.

TIE-BACK ANCHOR INSTALLATION

Upon completion of soldier pile installation, True North oversaw the installation of 113 tie-back anchors to depths up to 41.2 feet bgs (at a 30-degree angle batter) between March 28 and April 28, 2022. No PCS was documented during installation. All soil encountered during pile driving activities was transported to the Waste Management Hillsboro Subtitle D Landfill for disposal under profile #137367OR. Tie-Back Anchor locations around the perimeter of the building footprint/excavation boundary are included in **Figure 5**.

Piles installed in the subsurface are generally understood to be a preferential pathway for contamination to spread vertically downward. However, because the piles were completed after removal of known contaminated soils, the potential for the downward migration of contamination to enter the water table is low to negligible.

EXCAVATION OF CONTAMINATED SOILS

Between May and June 2022, True North oversaw the removal of contaminated soils during the construction of the shoring retention system in which the overall Site grade (mass excavation) was brought down 20 feet bgs to accommodate the subgrade parking garage, elevator shafts, and building infrastructure. Multiple lens of PCS was encountered in the soil profile at depths ranging from 2 to 5 feet bgs mostly in the northeast and northwest portion of the building footprint which varied in thickness from 3 to 4 feet. In addition, True North oversaw removal of a previously unknown oil/water (O/W) separator and installation of dry wells in the north portion of the Site. We had anticipated encountering a UST in the northeast corner but one was not discovered. Further detail of O/W separator and drywell installation are discussed in sections below.

PCS was identified using visual and olfactory observations, as well as field screening using a handheld photoionization detector (PID). Excavation of the Site continued on an as-needed basis for the remainder of the shoring and grading process. All areas of PCS encountered during the mass excavation are shown on **Figure 5** and represent removed portions of the known contamination. No groundwater was encountered during excavation activities.

Contaminated soil generated during grading activities was transported to the Waste Management Hillsboro Subtitle D Landfill for disposal under Profile #137367OR. In total, remedial actions overseen by True North in April 2022 and February 2023 resulted in the removal and disposal of 3,556.3 tons of impacted soil. A copy of the transaction history

of profile #137367OR is included as **Appendix C**. Photos taken during before and during construction operations are included within **Appendix F**.

OIL-WATER SEPARATOR

On November 9, 2022, an unknown oil-water separator was encountered during the excavation for utilities in the east portion of the Site adjacent to building footprint (refer to **Figure 5** for approximate location). The 15-ft long by 4-ft wide concrete oil water separator, observed in a north-south direction, was encountered at a depth of 5-feet. Universal Applicators (UA) was contacted to conduct the removal of the tanks and PCS. UA notified and submitted documentation to DEQ (closed LUST 26-22-0860). Laboratory results are included in **Table 10** and **Appendix B**. Documentation submitted to DEQ by UA is included as **Appendix G**.

Known oil-water separators located in the south portion of the Site, shown on Figure 4-1, were not encountered during construction and presumed to have been removed prior to redevelopment.

DRY WELL INSTALLATION

True North observed the installation of three (3) drywells and one (1) interceptor in the north portion of the Site between December 21, 2022 to January 11, 2023. The contractor, Torrent, began installation with a 6-foot diameter auger shifting to a 4-inch diameter auger at a depth determined by the civil team. True North monitored soil cuttings for gross indicators of contamination. Samples were collected at various depths including the termination depth and submitted to the laboratory for NWTPH-ID. Drywells were terminated at a depth of 35 feet bgs in coarse sand with subrounded gravel, scattered cobbles and occasional boulders. The interceptor was terminated at a depth of 13 feet bgs. Groundwater was not encountered during drywell installation. Samples submitted to the lab were not found to contain PCS. Laboratory results are included in **Table 10** and **Appendix B**.

GROUNDWATER MONITORING WELLS

As mentioned earlier, discussions were made in November 2021 between the contractor LMC and GCN that the contractor would coordinate decommissioning of any existing wells if they were encountered during construction. GCN was not notified of monitoring wells being decommissioned prior to pre-construction. It was reiterated to the contractor in emails when construction commenced to contact True North if wells were encountered. True North was not notified of monitoring wells being encountered during demolition or if the monitoring wells were decommissioned by others in accordance with Oregon Water Resources Division (OWRD) regulations.

True North researched the OWRD well log database and did not locate the original 1990 well logs nor the decommissioned records of the monitoring wells, presumed completed prior to 2022. True North contacted OWRD who researched available paper records. OWRD located four (4) decommissioned wells (MW-1 through MW-4) matching the same depths from 2018, but they were found to be for Block 294 several blocks to the north, unrelated to the Site.

In conversations with the General Contractor LMC and the Earthwork Contractor Lauzon, we understand neither were involved in the decommissioning of monitoring wells. LOI Environmental & Demolition Services was the demolition contractor and was not involved with the decommissioning of the monitoring wells. GeoDesign has researched available records and as of yet has been unable to determine if the wells were decommissioned.

However, based on GCN's May 2020 site walk and review of available Google Map street view images, we believe the wells were decommissioned sometime between late 2019 and early to mid-2020.

TANKS

No tanks were encountered during mass excavation and/or utility installation.

CONFIRMATION SAMPLING

Between April 5, 2022, and January 17, 2023, confirmation soil samples were collected from the floor and sidewalls of the mass excavation. Samples were collected at a frequency of, on average, one confirmation sample per 300 square feet to characterize the soils remaining below the subgrade parking garage. True North conducted the sampling as follows from sidewall and subgrade locations throughout the Site:

- **MASS EXCAVATION**
  - Samples 1 through 26, 30, 31, 34, 35, 41 through 45, 47, 50 through 52, 56 through 58, 61, 62, 65 through 67, 70 through 73, 85, 87, 90, 91, 94, 95, 98 through 107, 126, 129, 131 through 133, and 135 through 137 were collected from the sidewalls of the mass excavation at depths ranging from 1 to 17 feet as the excavations were progressing. Some visual staining noted in sidewalls from 1 to 5 feet bgs near piles N19 through N22. No other indications of soil contamination in the form of visual staining, odor, or VOC detections with a PID were noted in this location at the final grade.
  - Samples 27 through 29, 32, 33, 36 through 40, 46, 48, 49, 53 through 55, 59, 60, 63, 64, 68, 69, 74 through 84, 86, 88, 89, 92, 93, 96, 97, 108 through 125, 127, 128, 130, 134 and 138 were collected from the terminal depth of the mass excavation at a depth of 20 feet bgs. No indications of soil contamination in the form of visual staining, odor, or VOC detections with a PID were noted in this location at the final grade.
- **OIL WATER SEPARATOR**
  - Samples 139 through 141 were collected from the oil-water separator encountered in November 2022 at a depth of 4 feet in the southeast corner of the Site in the sidewalls prior to removal. DEQ was provided separate documentation from Universal Applicators who assisted with removal.
- **DRY WELLS**
  - Samples 142 through 147 were collected from various depths of installed Drywells 3 through 5 and Interceptor 13 at depths ranging from 2.5 to 35 feet bgs using a truck mounted auger drill (Digger Derrick). Some visual staining was observed at depths of 2 to 8 feet bgs in Drywells 3, 4 and the Interceptor. No indications of soil contamination in the form of visual staining, odor, or VOC detections with a PID were noted in this location at the final grade.
- **UTILITY EXCAVATIONS**
  - Samples 148 through 157 were collected within the NW Pettygrove right-of-way at depths ranging from 1

to 6 feet where visual staining was noted off-site while connecting to city utilities. The samples were collected to represent lateral delineation and soil conditions. No indications of soil contamination in the form of sheen, odor, or VOC detections with a PID were noted in this location at the final grade.

Soil samples were transported under chain of custody to Apex Laboratories. The samples were analyzed for NWTPH-HCID, NWTP-Dx and Total Lead EPA Method 6020B.

Laboratory analytical sample results are summarized in **Table 10 (Confirmation Soil Sample Results)** attached to this report. Copies of the laboratory analytical reports are provided in **Appendix B**.

Laboratory QA/QC measures were performed through data validation of available analytical data generated as part of these sampling events. Data validation considered the following:

- Method Detection and/or Reporting Limits
- Laboratory Matrix Blanks
- Sample Holding Times
- Surrogate and Matrix Spike Recoveries, and
- Laboratory Duplicate Analysis Results

Apex did not report qualifiers that would indicate problems with the sample results. According to the lab reports all analyses were performed with the appropriate Batch QC (including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates) in order to meet or exceed method and regulatory requirements. Exceptions are qualified in the analytical report. In cases where there is insufficient sample material provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.

Contaminated soil was removed in accordance with Oregon DEQ guidance and a site-specific Contaminated Media Management Plan (CMMP), prepared by GCN in August 2020 and revised in March 2021. The CMMP is included in Appendix E. The excavated areas within Block 290 West were located within the planned deep excavation for the future below-grade parking and backfilled with engineered structural fill.

CONCEPTUAL SITE MODEL (CSM)

PRIMARY SOURCES, NATURE, AND EXTENT OF CONTAMINATION

Primary sources of historical contamination include the following:

- Potential release of motor fuel (principally diesel but also gasoline), motor oil, waste oil and other products (anti-freeze, etc.) used during truck fueling and maintenance within and below former UST locations.

A summary of contamination, since removed, is presented in the following paragraphs (refer to **Figures 4-1** and **4-2** for reference):

Area A. When the “first generation” truck facility was operational, in the late 1940’s, a fueling station was added to include a 10,000-gallon diesel UST and a 6,000-gallon UST (installed to contain antifreeze) with a nearby 675-gallon diesel tank. A 58,000-gallon diesel tank was identified in our review of City microfiche records. This specific tank was also listed to be removed as noted in the 1965 Project Manual & Specifications.

The 1967-era building included a 1+ story basement. The basement area overlapped all but one of the mapped "first generation" tanks. Site walks prior to demolition found no surface indicators of tanks or tank connection, inside or outside the existing building.

In 2019, soil borings were drilled at several locations. One machined drilled deep "DP" boring was drilled, and three hand drilled borings were accomplished to depths ranging from 1 to 5.5 feet. Tests indicate no petroleum-related contaminants.

Area D. Contamination from a former waste oil tank may have existed in the northeast corner of Area D. The DEQ record suggests that a "no further action" letter was issued but the DEQ file on the tank suggests some concern about the contamination within the tank area. In 2019, additional explorations/testing indicated significant (somewhat elevated above DEQ threshold) gasoline-range petroleum concentrations at a depth of 12 to 13.5 feet. Given that this was a former waste oil UST location, we suspect that some solvent or gasoline (used as a solvent) was incorporated into the waste oil stream and leaked out of this UST. Contaminated soil removal was completed in this area after building demolition and during construction of the future below-grade parking level.

There were also several above-ground tanks and trench drains with some apparently used to contain water, a parts washer, possibly two oil/water separators (one or both may be below-ground), trench drains and a fuel tank. Initial soil sampling/testing in 2019 suggested soil was not contaminated.

A small area located northwest of Area D labeled "empty 55-gallon and 5-gallon drums". Drums were removed in 2020. All tanks were checked for contents, cleaned, and otherwise properly decommissioned by others in accordance with Oregon DEQ and City Fire Marshall guidance.

From 1989 to 2014, environmental investigations identified the presence of PCS from multiple underground storage tanks (USTs) throughout the Site from past activities associated with a former truck maintenance facility located on the Site from 1935 through 1947 and 1967 through 1999. Tanks were removed prior to construction of the 1967 truck maintenance facility and between 1990 and 1995 The investigations of resulting cleanup prepared by others are summarized as follows:

- Blymyer Engineers, Inc., (1989-Dec), UST removal confirmation letter by Richard Ried UST Manager (source: Oregon DEQ paper files – June 18, 2015)
- Blymyer Engineers, Inc., (1989-Oct), RECORD OF SITE VISIT from waste oil tank removal by Rohan Horobel (source: Oregon DEQ paper files – June 18, 2015)
- Blymyer Engineers, Inc., (1990-April), Contamination Assessment by Unknown (source: Oregon DEQ paper files – June 18, 2015)
- Blymyer Engineers, Inc., (1990-April), Contamination Assessment for Consolidated Freightways (source: Oregon DEQ paper files – June 18, 2015)
- Blymyer Engineers, Inc., (1990-April), Proposed work plan Phase I Subsurface Investigation for 2050 N.W. Quimby Avenue by Delane Fitzpatrick, Project Geologist, Harry Short, R.G., C.E.G, California Registered Geologist (source: Oregon DEQ paper files – June 18, 2015)
- L.R. Squier Associates, Inc, (1990-Mar), Observation and Environmental Sampling, Consolidated Freightways, Inc., Portland, Oregon by Unknown (source: Oregon DEQ paper files – June 18, 2015)
- L.R. Squier Associates, Inc, (1990-Mar), Observation and Environmental Sampling, Consolidated Freightways, Inc., Portland, Oregon by Unknown (source: Oregon DEQ paper files – June 18, 2015)
- Squier Associates, (1991-Jan), Observation and Environmental Soil and Ground Water Sampling, Consolidated

Freightways, Inc., Portland, Oregon by Robert E. Belding, R.P.G., (source: Oregon DEQ paper files – June 18, 2015)

- Blymyer Engineers, Inc., (1995-Nov), Underground Storage Tank Closure and Soil Matrix
- Cleanup Report by Michael S. Lewis and Ramon Khu (source: Oregon DEQ paper files – June 18, 2015)
- Olympus Environmental, Inc, (1996-Sept), Soil contamination investigation performed by Olympus Environmental, Inc. (Olympus) on August 21, 1996, at the CF Motor Freight (CFMF) facility located at 2050 N.W. Quimby Street in Portland, Oregon (includes permits) by Will Neff (source: Oregon DEQ paper files – June 18, 2015
- Blymyer Engineers, Inc., (1995-Dec), Copy of the Underground Storage Tank Closure and Soil Matrix Cleanup Report by Michael S. Lewis (source: Oregon DEQ paper files – June 18, 2015)
- Blymyer Engineers, Inc., (1996-Feb), UST Decommissioning Checklist and UST
- Blymyer Engineers, Inc., (1995-Oct), Memo-Soil Sampling Plan for the antifreeze USTs located at the subject site by Adam Phillips (source: Oregon DEQ paper files – June 18, 2015)
- Blymyer Engineers, Inc., (1994-Jan), Initial tightness test failure and copies of order and vac test results from Tankology by Michael S. Lewis (source: Oregon DEQ paper files – June 18, 2015)
- Blymyer Engineers, Inc., (1997-Sept) Petroleum Release Form by Unknown (source: Oregon DEQ paper files – June 18, 2015)
- Blymyer Engineers, Inc, (1995-Nov), Initial 20-Day Report Form by Unknown (source: Oregon DEQ paper files – June 18, 2015)
- GeoDesign, Inc., (2007-Jan), Results of environmental services completed by Robert E. Belding,R.P.G. and Stephen C. Nelson (source: Oregon DEQ paper files – June 18, 2015)
- GeoDesign, Inc., (2007-May), Groundwater Monitoring and Sampling Report from April 2007event by Robert E. Belding, R.P.G. and Stephen C. Nelson (source: Oregon DEQ paper files – June 18, 2015)
- GeoDesign, Inc., (2008-May), Groundwater Monitoring and Sampling Report from April 200 event by Robert E. Belding, R.P.G. and Stephen C. Nelson (source: Oregon DEQ paper files – June 18, 2015)
- GeoDesign, Inc., (2009-Sept), Report of Environmental Services that summarizes the results of additional investigation and sampling conducted in June 2009 by Robert E. Belding, R.P.G. and
- Stephen C. Nelson (source: Oregon DEQ paper files – June 18, 2015)
- GeoDesign, Inc., (2010-Jul), DRAFT-Additional Subsurface Investigation Work Plan for the Con-Way, Inc. property located at 2050 NW Quimby Street (project site) in Portland, Oregon by Unknown (source: Oregon DEQ paper files – June 18, 2015)
- GeoDesign, Inc., (2010-Dec), Report of Environmental Services that summarizes the results of additional subsurface investigation and sampling conducted in August 2010 by Robert E. Belding, R.P.G. and Stephen C. Nelson (source: Oregon DEQ paper files – June 18, 2015)
- GeoDesign, Inc., (2012-Jan), Summary of additional environmental with updated evaluation of project site conditions by Robert E. Belding, R.P.G. and Stephen C. Nelson (source: Oregon DEQ paper files – June 18, 2015)
- Pettygrove and 21st – Mixed-Use Project (Block 290) in Portland, Oregon by Nick Paveglio, P.E., and Brett A. Shipton, P.E., G.E. (source: Guardian Real Estate Services LLC)
- GeoDesign, Inc., (2014-Nov), Results of Phase I and Phase II ESAs and hazardous building materials survey of the Con-Way Pettygrove and 21st – Mixed-Use Project (Block 290) located at NW 21st Avenue and NW Pettygrove Street in Portland, Oregon by Robert E. Belding, R.G. (source: Guardian Real Estate Services LLC)
- GeoDesign, Inc., (2019-Apr), Phase II Environmental Site Assessment of Modera Slabtown at 1417 NW 20th Avenue in Portland, Oregon by Jason O'Donnel, R.G. – report prepared for Mill Creek Residential Trust (source: Guardian Real Estate Services LLC)

In October 2006, three direct push soil borings were advanced by GeoDesign (GP-1 through GP-3). Petroleum hydrocarbons were detected in soil sample GP-1 (14-15) and GP-2 (13.5-14.5) near the former waste oil USTs. The former location of these USTs and sample locations are shown in **Figures 4-1** and **4-2.** Detected soil concentrations and VOCs were below applicable DEQ RBCs for occupational exposure pathways with the exception of the concentration of gasoline range hydrocarbons for leaching to groundwater pathway. However, the lab results indicated that the results were indicative of mineral spirits rather than gasoline and the pathway is incomplete because OWRD records indicate that groundwater is not used domestically due to all domestic water provided by City of Portland.

In September 2009, four direct push borings (GP-4 through GP-7) were conducted by GeoDesign in the parking lot to the north of the Site (refer to **Figure 4-3**). Evidence of hydrocarbon impact was not observed during field screening of soils. Gasoline-, diesel-, and heavy oil-range hydrocarbons were not detected at concentrations above laboratory MRLs in the soil samples analyzed from the explorations. PCE and TCE in groundwater within GP-4 through GP-7 exceeded the DEQ generic RBSs for the Ingestion and Inhalation from Tap Water exposure pathway. However, as discussed earlier domestic water wells are not in use in the vicinity of Site. The concentrations of PCE and TCE in groundwater are less than the remaining DEQ generic RBCs for an occupational exposure scenario.

Additional subsurface sampling was conducted by GeoDesign in December 2010 with two direct push borings (GP-8 and GP-9) in the parking lot to the north of the Site (refer to **Figure 4-3**) to a depth of 55 bgs. Detected soil concentrations and VOCs were below applicable DEQ RBCs for occupational exposure pathways with the exception of the concentration of gasoline range hydrocarbons for leaching to groundwater pathway which is found to be incomplete due to domestic water use being supplied by the city. The concentration of TCE recorded in GP-5 and GP-9 are greater than the generic RBC for Vapor Intrusion into Buildings exposure pathway for a residential scenario but less than the RBC for an occupational scenario. The concentrations of PCE and TCE in groundwater are less than the remaining DEQ generic RBCs.

Oregon DEQ provided a NFA determination letter on October 3, 2012, that the cleanup at 2050 NW Quimby Street met the requirements of the Oregon Administrative Reule (OAR) 340-122-0205 through 340-122-0360 with no further action required at that time. The former waste oil USTs were ruled out as being a likely source for chlorinated VOCs found in groundwater on the east and northeast portions of the Site.

Following completion of deep foundation installation and mass excavation, True North provided preliminary lab results and sampling locations to DEQ Project Manager David LaMadrid for review on May 9, 2024. True North provided a DRAFT Post-Construction Summary Report, Contaminated Media Management plan on May 17, 2024. DEQ provided their comments on June 25, 2024, requesting additional information to meet Oregon Administrative Rule (OAR) Chapter 340 Division 122 (Hazardous Substance Remedial Action rules).

CONTAMINANTS OF CONCERN/INTEREST

To identify compounds detected in Site soil and soil vapor that are most likely to be of concern to human health, detected concentrations of these contaminants were compared to a series of risk-based screening criteria that cover the range of potential human activities that may be practiced on the Site currently or in the future.

Contaminants of Concern (COCs) are contaminants present on a site that pose an unacceptable risk to human health or the environment. Contaminants of Potential Concern (COPCs) are potentially site-related contaminant that have shown possible harmful effect through scientific research but have not been definitely assessed as posing a risk.

Compounds with detected concentrations that in general do not pose a significant risk are identified as being Contaminants of Interest (COIs). It should be noted that the identification of COIs does not indicate that an unacceptable risk or that a threat exists. Also, COI identification does not necessarily indicate that remediation of specific environmental media is required. Screening criteria are purposely conservative so chemicals that may contribute to Site risk can be further evaluated.

No detected concentrations of COIs were encountered on the Site at depth and would be located beneath the 15-mil thick liner of polyolefin geomembrane vapor barrier. Areas excluded (not covered with vapor barrier) include the Right-of Way (ROW). Refer to Figure 5, Table 9, and Appendix B for sample locations and lab results

CONTAMINANTS OF INTEREST			
Contaminant	**Depth (Soil)**	**Soil Max Concentration (mg/kg)**	**Soil Gas Max Concentration (ug/m^3)**
TPH – Gx	1-20’	None Detected	None Detected
TPH - Dx	1-6’	1,660*	None Detected
TPH - RRO	1-6’	4,190*	None Detected

Table Notes:

** Off-Site – NW Pettygrove Ave Gx = Gasoline Range Organics*

Dx= Diesel Range Organics

RRO=Heavy Oil, Residual Range Organics

COIs that have concentrations less than one or more RBCs can be screened out as COIs. COI constituents that remain after the screening are then considered COPCs and have been bolded. The COPCs have been carried forward for the risk screening discussed below in ***Receptors, Pathways, and Human Health and Ecological Risk Assessment****.*

EXTENT OF CONTAMINATION

Soil

A single detection of oil range in soil sample (S3) near pile N24 was detected in the sidewall of the building footprint at a depth of 3 ft bgs. However, the soil sample was non-detect for TPH for diesel and heavy oil.

Based on the field observations made during the Site-wide mass excavation and deep foundation installation, PCS noted in past explorations were removed during construction and transported off-site. No known pockets of contaminated soil are present on-site based on existing laboratory analysis.

Off-Site within ROW and NW Pettygrove Street, we encountered the following:

- An approximate 50 square foot pocket of diesel and heavy oil confirmed by soil samples 150 through 156 collected from the sidewall of the utility excavation within the ROW near the southeast corner of the Site and at depths ranging from 1 to 6 feet bgs. Delineation was determined based on observed staining. Based on this assumption, approximately 6 cubic yards of contaminated soil with levels below Risk Based Decision Making (RBDM) Urban Residential RBCss for Soil Ingestion, Dermal Contact and Inhalation of 400 mg/kg lie within roadway in the area confirmed by samples 150 through 156 at a depth of 1 to 6 feet bgs.

Refer to **Figure 5** for the locations of PCS remaining in place. Soil sample laboratory analytical results are summarized in **Table 10.**

Water

Monitoring wells and groundwater in excavations were not observed by True North staff during construction inspection. However, based on lab analysis recorded in 2010, water sampling of MW-1 through MW-4 at a depth of 65 feet bgs exceeded the DEQ generic RBCs for the Ingestion and Inhalation from Tap Water exposure pathway. The VOC TEC was detected at a concentration above applicable DEQ generic RBC for Vapor Intrusion into Buildings exposure pathway for residential scenario but less that the RBC for occupational scenario in MW-4.

Water sample laboratory analytical results from 1990 to 2011 are summarized in **Tables 4** through **5** and **Table 8**.

Soil Gas

Past records of soil gas sampling found several VOCs in soil sample GP-1 from a depth of 14 to 15 ft bgs (note: True North did not detect field indictors of VOCs in this area during construction inspection and soil at this depth and location was removed during construction).

VOCs detected in GP-1 were sampled at concentrations significantly less than the applicable DEQ RBCs for an occupational scenario. In addition, soil-gas analytical results indicated that PCE was detected off-site to the northeast in DP-8/VP-8 but was found to be at levels less than the DEQ RBC for Vapor Intrusion into Building exposure pathway.

Past sampling locations on-site have since been removed to a depth of 20 feet bgs during construction of the Block 290 West building footprint.

Soil gas sampling was completed by GeoDesign in 2011 through 2012 on another lot adjacent to the northeast edge of the Site. This adjacent lot (Block 263) is owned by Con-Way. Soil-gas analytical results indicated that PCE was detected in one soil-gas sample (VP-8) at a concentration of 10 micrograms per cubic meter, which is less than the DEQ RBC for Vapor Intrusion into Buildings exposure pathway. PCE was not detected at concentrations greater than the laboratory MRLs in the remaining soil-gas samples. TCE was detected at concentrations greater than the laboratory MRLs in the four soil-gas samples.

Soil gas laboratory analytical results are summarized in **Tables 3, 4, and 7 through 9.**

EXPOSURE PATHWAY SUMMARY

Exposure Pathways for Soil

The following summarizes the exposure pathways for soil.

- Soil Ingestion, Dermal Contact, and Inhalation (RBC_{SS}) – This exposure pathway is considered incomplete for all current and future occupational and urban residential receptors, as impacted soils are not accessible. This pathway is considered potentially complete for excavation workers, as the impacted soil may become accessible during future construction work.
- Volatilization to Outdoor Air (RBC_{SO}) – This pathway is considered incomplete for all current and future receptors as impacted soils are not accessible.
- Vapor Intrusion into Buildings (RBC_{Si}) – This pathway is considered incomplete for all current and future receptors as impacted soils are not accessible.

- Leaching to Groundwater (RBC_{sw}) – This pathway is considered incomplete for all current and future receptor scenarios, as impacted shallow groundwater is not present.

Exposure Pathways for Groundwater

The following summarizes the exposure pathways for groundwater.

- Ingestion and Inhalation from Tapwater (RBC_{tw}) – This pathway is considered incomplete, as the beneficial use of water survey detailed in below conducted for the Site did not identify use of shallow groundwater as a source of drinking water at the Site or Site vicinity.
- Volatilization to Outdoor Air (RBC_{wo}) – This pathway is considered incomplete, as the beneficial use of water survey detailed in below conducted for the Site did not identify use of shallow groundwater as a source of drinking water at the Site or Site vicinity.
- Vapor Intrusion into Buildings (RBC_{wi}) – This pathway is considered incomplete, as the beneficial use of water survey detailed in below conducted for the Site did not identify use of shallow groundwater as a source of drinking water at the Site or Site vicinity.
- Groundwater in Excavation (RBC_{we}) – This pathway is considered incomplete, as the beneficial use of water survey detailed in below conducted for the Site did not identify use of shallow groundwater as a source of drinking water at the Site or Site vicinity.

Exposure Pathways for Soil Gas

The following summarizes the exposure pathways for soil.

- Vapor Intrusion into Buildings (RBC_{sv}) – This pathway is considered incomplete for all current and future receptors as impacted soils are not accessible.

Conceptual Site Model

A Conceptual Site Model (CSM) defines the potentially complete exposure pathways through which human or ecological receptors may be exposed to site contaminants under current or anticipated future land use conditions. A discussion of Site geology and hydrogeology, potential contaminant sources, and the nature and extent of contamination are presented above. An evaluation of current and reasonably likely future receptor- exposure pathway analysis is presented below.

The Summary of the CSM, which includes the reasoning for accepting or rejecting exposure scenarios, is presented in the table below.

SUMMARY OF CSM			
Pathway	**Receptor**	**Applicable RBC**	**Basis for selection/exclusion**
SOIL			
Ingestion, Dermal Contact, and Inhalation	Residential	No	Impacted soils are not present. Impacted soil concentrations at property lines did not exceed Occupational receptor RBCs
	Urban Residential (Current and Future)	No	
	Occupational (Current and Future)	No	Impacted soils are not present. Impacted soil concentrations at property lines did not exceed Occupational receptor RBCs
	Construction Worker (Future)	No	

	Excavation Worker (Future)	No	Impacted soils are not present. Impacted soil concentrations at property lines did not exceed Occupational receptor RBCs
Volatilization to Outdoor Air	Residential	No	Impacted soils are not present. Impacted soil concentrations at property lines did not exceed Occupational receptor RBCs
	Urban Residential (Current and Future)	No	
	Occupational (Current and Future)	No	Impacted soils are not present. Impacted soil concentrations at property lines did not exceed Occupational receptor RBCs
Vapor Intrusion into Buildings	Residential	No	Impacted soils are not present. Impacted soil concentrations at property lines did not exceed Occupational receptor RBCs
	Urban Residential (Current and Future)	No	
	Occupational (Current and Future)	No	
Leaching to Groundwater	Residential	No	Impacted soils are not present. Impacted soil concentrations at property lines did not exceed Occupational receptor RBCs
	Urban Residential (Future)	No	
	Occupational (Current and Future)	No	
GROUNDWATER			
Ingestion and Inhalation from Tapwater	Residential	No	No shallow groundwater at the Site and the beneficial use of water survey conducted for the Site did not identify use of shallow groundwater as a source of drinking water at the Site or Site vicinity.
	Urban Residential (Current and Future)	No	
	Occupational (Current and Future)	No	
Volatilization to Outdoor Air	Residential	No	No shallow groundwater at the Site
	Urban Residential (Current and Future)	No	
	Occupational (Current and Future)	No	
Vapor Intrusion into Buildings	Residential	No	No shallow groundwater at the Site
	Urban Residential (Current and Future)	No	
	Occupational (Current and Future)	No	
Groundwater in Excavation	Construction and excavation workers (Future)	No	No shallow groundwater at the Site

BENEFICIAL LAND AND WATER USE DETERMINATIONS

The purpose of the Beneficial Land and Water Use Determinations (BLWUD) is to collect and document information regarding the current and reasonably likely future beneficial uses of land and water in the locality of the facility (LOF), as defined by DEQ.

Beneficial use determinations provide the basis for the development of exposure scenarios discussed later in this

report. The BLWUD was completed in accordance with the ODEQ's Guidance for Conducting Beneficial Water Use Determinations at Environmental Cleanup Sites (ODEQ, 1998) and Guidance for Consideration of Land Use (ODEQ, 1998).

Summary of Land Use

The current zoning of the Site is CM3 (Commercial Mixed Use). The CM3 zone is a large-scale commercial mixed-use zone intended for sites close to the central City. Buildings in this land use zone are generally expected to be up to 7 stories.

Adjoining properties are zoned as CM3 to the north, east and west.

True North has considered this zoning as part of the CSM.

Summary of Water Use

The Site and surrounding properties are provided water by the City of Portland. According to the 2024 City of Portland Water Quality Report, Portland's water system is supplied from two sources – Bull Run Watershed and the Columbia South Shore Well Field. Water flows from the Bull Run Watershed held by a reservoir and concrete diversion dam to the Headworks Water Treatment Facility, where it is treated and sent to Powell Butte Underground Reservoirs merging with the supply from Columbia South Shore Well Field.

Based on our review of the available data information from the City of Portland, the Site and immediately surrounding areas are connected to the municipal water supply system.

The Site (1N1E33BA 00103) is located in the NW ¼ of the NE ¼ of Section 33, T.1N, R.1E. True North performed a search using the Oregon Water Resources Department (OWRD) Well Report Mapping tool. Research of well logs filed with the OWRD revealed no drinking water supply wells within 1000 feet of the Site. Therefore, no copies of well logs are included.

True North inspected adjoining properties during the investigation and observed water meters that indicate connection to the municipal drinking water supply for all buildings located on adjoining properties.

RECEPTORS, PATHWAYS, AND HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENTS

Potential receptors are those individuals who might be likely be exposed to the COPCs under current and reasonably likely future land-use conditions. Current land use at the Site and surrounding areas is zoned CM3 which allows for mixed residential and commercial uses. Any further future development for these properties is expected to be for commercial purposes based on the zoning. Current and potential human receptors that have been identified in risk-based screening include the following:

- Adults in current and future occupational scenario; and,
- Adults and children in current and future urban residential scenario; and,
- Adults in the future construction/excavation worker scenario.

Of the 157 samples collected on-site and within roadway, there were no COPCs exceeding RBCs appliable exposure pathways for the Site. However, COPCs were encountered below RBC levels that included diesel and heavy oil at depths ranging from 1 to 6 feet bgs located off Site in ROW. Analytical results were compared to ODEQ RBCs (May

2018) for the applicable exposure pathways.

Soil

COPCs detected in soil off-site in roadway:

- Diesel and heavy oil in soil concentrations below the Urban Residential and Construction Workers RBC_{SS} for Soil Ingestion, Dermal Contact, and Inhalation.
  This pathway is considered incomplete as samples collected off-site, away from residential structures, at depths ranging from 1 to 6 feet bgs within the roadway. If future development off-site results in disturbance of the impacted soil, it is recommended that the work be overseen by a qualified environmental contractor to ensure that conditions are protective of worker safety, and that impacted soils are properly managed.

- Diesel and heavy oil in soil concentrations below the Urban Residential RBC_{SW} for Leaching to Groundwater.
  This pathway is considered incomplete as shallow groundwater is not found on Site and off-site NW Pettygrove Street and NW 21st Avenue, to the south and west of the Site respectively, are paved with stormwater collected to nearby catch basins. If future development of the Site results in disturbance of the impacted soil, it is recommended that the work be overseen by a qualified environmental contractor to ensure that conditions are protective of worker safety, and that impacted soils are properly managed.

Soil Gas

Soil samples collected were not tested for VOCs during construction observation. However, based on past laboratory analysis, TEC was detected at a concentration above applicable DEQ generic RBC for Vapor Intrusion into Buildings exposure pathway for residential scenario but less than the RBC for occupational scenario in MW-4.

The vapor intrusion pathway is considered incomplete as the PCS within the area and depth of MW-4, has been removed and sealed with vapor barrier. Any future development outside the building footing should have additional vapor testing and may require additional institutional or engineering controls to ensure urban residential receptors are not exposed to harmful vapors.

Ecological Risk Assessments

Ecological risk was assessed according to guidance outlined in "Conducting Ecological Risk Assessments" (ODEQ, September 2020). A Basic Site Information Checklist with supporting documentation is included as **Appendix H.** An aerial map is included in **Figure 7.**

No ecological zones at risk of impact from the Site release were identified and no significant on-site exposure pathways have been identified for ecological receptors.

CONSTRUCTION OF ENGINEERING CONTROLS

UNDER SLAB VAPOR BARRIER

The under slab system consists of coarse aggregate with a vapor barrier liner that is located beneath the floor slab at depths ranging from 1.5 to 10 feet below the concrete slab or finished floor elevation as shown in **Figure 6**. The under slab system is designed to mitigate potential vapor risks, including VOCs originating from historically impacted soil.

Installation and construction of the vapor mitigation system designed by LRS began in March 2022 and the as-built design of the system was constructed in general accordance with the pre-construction schematic included in

Appendix D.

The under slab vapor barrier consists of a 15-mil thick liner polyolefin geomembrane manufactured by Raven Industries. VaporBlock® High Performance Underslab Vapor Barrier is a multi-layer co-extruded geomembrane consisting of flexible, linear low-density polyethylene (LLDPE) with an inner layer of chemically resistant EVOH barrier resin designed specifically for protection from radon, methane, and VOCs.

The installation of the VaporBlock® 15 mil vapor barrier was not observed by Morrison Hershfield but they were able to forward a Return of Submittal dated March 7, 2022.

CONCLUSIONS

The remedial actions and measures taken for the management and removal of impacted soils at the Site during redevelopment activities have been completed in general accordance with the scope of work originally discussed in the March 2021 CMMP prepared by GCN. A total of approximately 3,556 tons of impacted soil was transported to the Waste Management Hillsboro Subtitle D Landfill for disposal during the mass excavation and installation of soldier piles.

PETROLEUM CONTAMINATED SOIL

As discussed in this report, PCS remains in place at various on-site and off-site locations detailed below:

- On-site – near Pile N24 (north sidewall of building footprint)
    - PCS was encountered in sample S3 at a depth of 3 feet below ground surface (bgs).
    - The soil sample tested non-detect for TPH in diesel and heavy oil.
- Off-site – within NW Pettygrove
    - PCS (below Risk-Based Decision Matrix, RBDM remains at depths between 1 to 6 feet bgs.
    - Contamination consists of diesel (DRO) and heavy oil (RRO), both below the Urban Residential Risk-Based Concentrations (RBCS) for:
    - Soil ingestion
    - Dermal contact
    - Inhalation
    - Vapor intrusion into buildings (DRO – 2,200 mg/kg; RRO – 5,700 mg/kg)
    - Approximately 50 square feet of contaminated soil was confirmed through samples 150–156, collected from the sidewall of a utility excavation.
    - Vertical delineation could not be determined due to access limitations; visual staining was used to estimate the extent.
    - An estimated total of 6 cubic yards of PCS-DRO and PCS-RRO remain in place beneath NW Pettygrove.
    - Contamination levels are below Urban Residential RBCS, DEQ Clean Fill Values, and Oregon Background Levels for Metals in the Portland Basin.

Refer to Figure 5 for the approximate locations of PCS remaining in place on-site and off-site. No other known pockets of contaminated soil are present on site based on current laboratory analyses.

RECOMMENDATIONS

If future development of the Site results in disturbance of the impacted soil, it is recommended that the work be overseen by a qualified environmental consultant/contractor to ensure that conditions are protective of worker safety, and that impacted soils are properly managed.

LIMITATIONS

True North has performed this work in general accordance with generally accepted professional practices using the standard of the industry today, for the nature and conditions of the work completed in the same locality and at the same time as the work was performed, and with the terms and conditions as set forth in our proposal.

In preparing this report, True North has reviewed historical records, conducted interviews with persons identified herein, conducted an on-site visual inspection of the Site, and performed sampling/testing of soil and otherwise implemented the CMMP.

We have examined and relied upon documents referenced in the report and on oral statements made by certain individuals. True North has not conducted an independent examination of the facts contained in referenced materials and statements. We have assumed that these documents are genuine, and that the information provided in these documents and statements are true and accurate. True North shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time the report was prepared. Facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time the work was performed.

This report does not include other services not specifically in the scope of work for this project. Conclusions were made within the operative constraints of the scope of work, budget, and schedule for this project.

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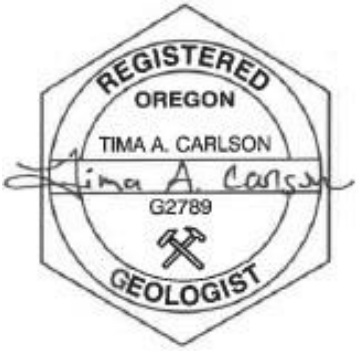
CLOSING

We appreciate DEQ's continued oversight. We trust that this report is an acceptable Construction Completion Report to satisfy DEQ requirements to grant a No Further Action determination. At this time, True North and Strata Design are available to have a virtual or in person meeting to discuss the project. Otherwise, we trust that this report meets your expectations and an NFA will be issued shortly. Please let us know what your availability is for a meeting to discuss the report or your anticipated completion of an NFA.

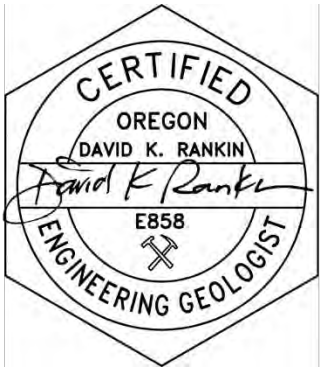
If you have any questions regarding the information contained in this Construction Completion Report, please do not hesitate to contact Tima Carlson at 360-984-6584, or by email at tima@tnorthgeo.com. The point of contact for the current Site owner is Levi Curran, Project Manager of Guardian Real Estate, who can be reached by phone at 503-802-3680, or by email at Levi.Curran@gres.com.

Respectfully Submitted,



Expires May 31, 2026

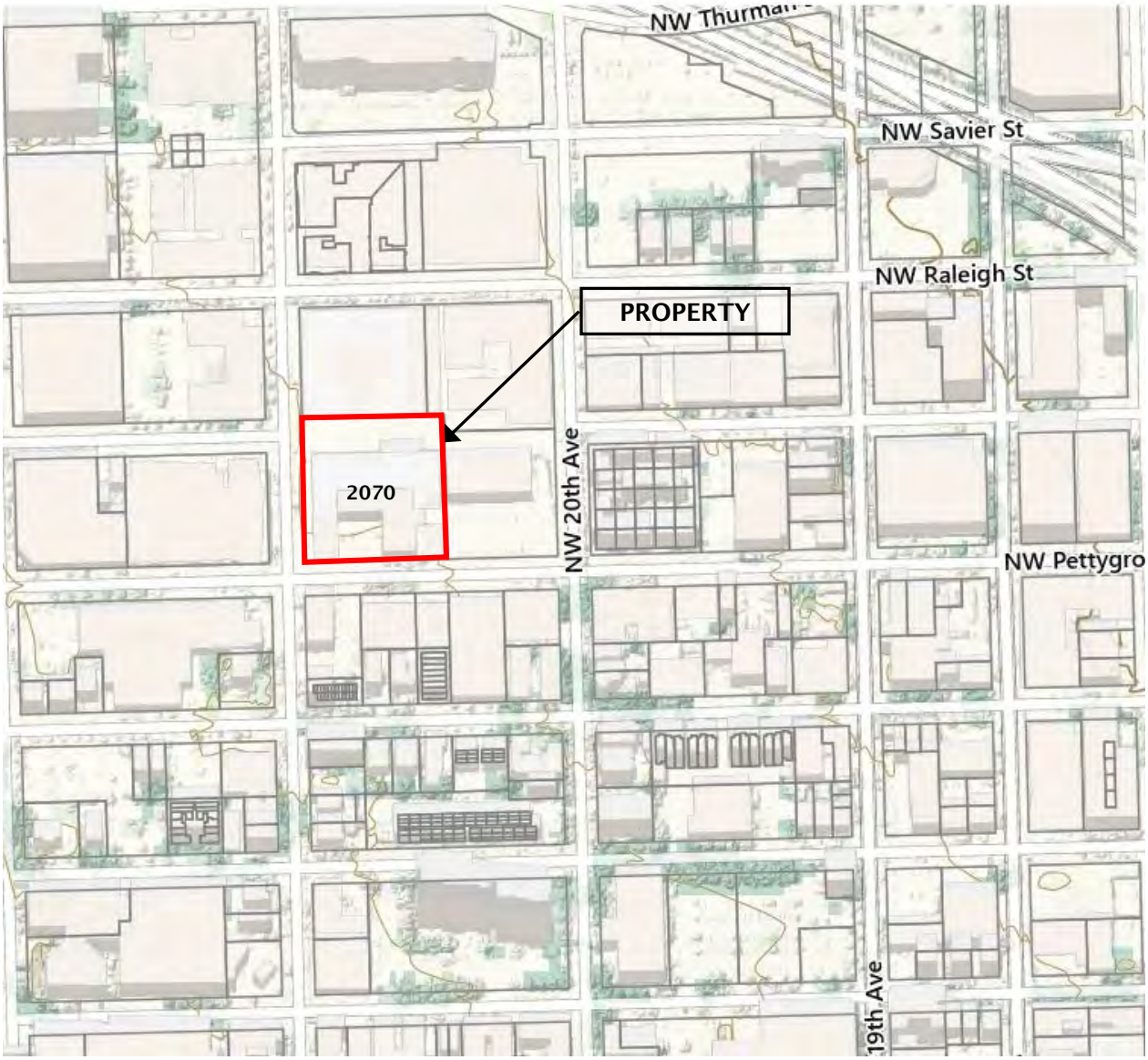
Tima Carlson, R.G.
Project Manager
True North



Expires June 1, 2026

David K. Rankin, R.G., C.E.G.
Senior Engineering Geologist
Environmental Professional
Strata Design

FIGURES



METROMAP.COM
2070 NW QUIMBY ST, PORTLAND, OREGON 97209

LAT 45.533 N, LON 122.694 W; TOWNSHIP 1N RANGE 1E SECTION 33

SCALE: 1 INCH = 300 FEET

N

TRUE NORTH GEOTECHNICAL	Guardian Real Estate Services Block 290 West Portland, Oregon	Project # 22-0061-9
219 West 4th Street Vancouver, WA 98660 360-984-6584	June 2025	Figure 1 – Site Vicinity Map

USGS 7.5 MINUTE TOPOGRAPHICAL MAP, PORTLAND, OREGON 2024

SCALE: 1 INCH = 500 FEET

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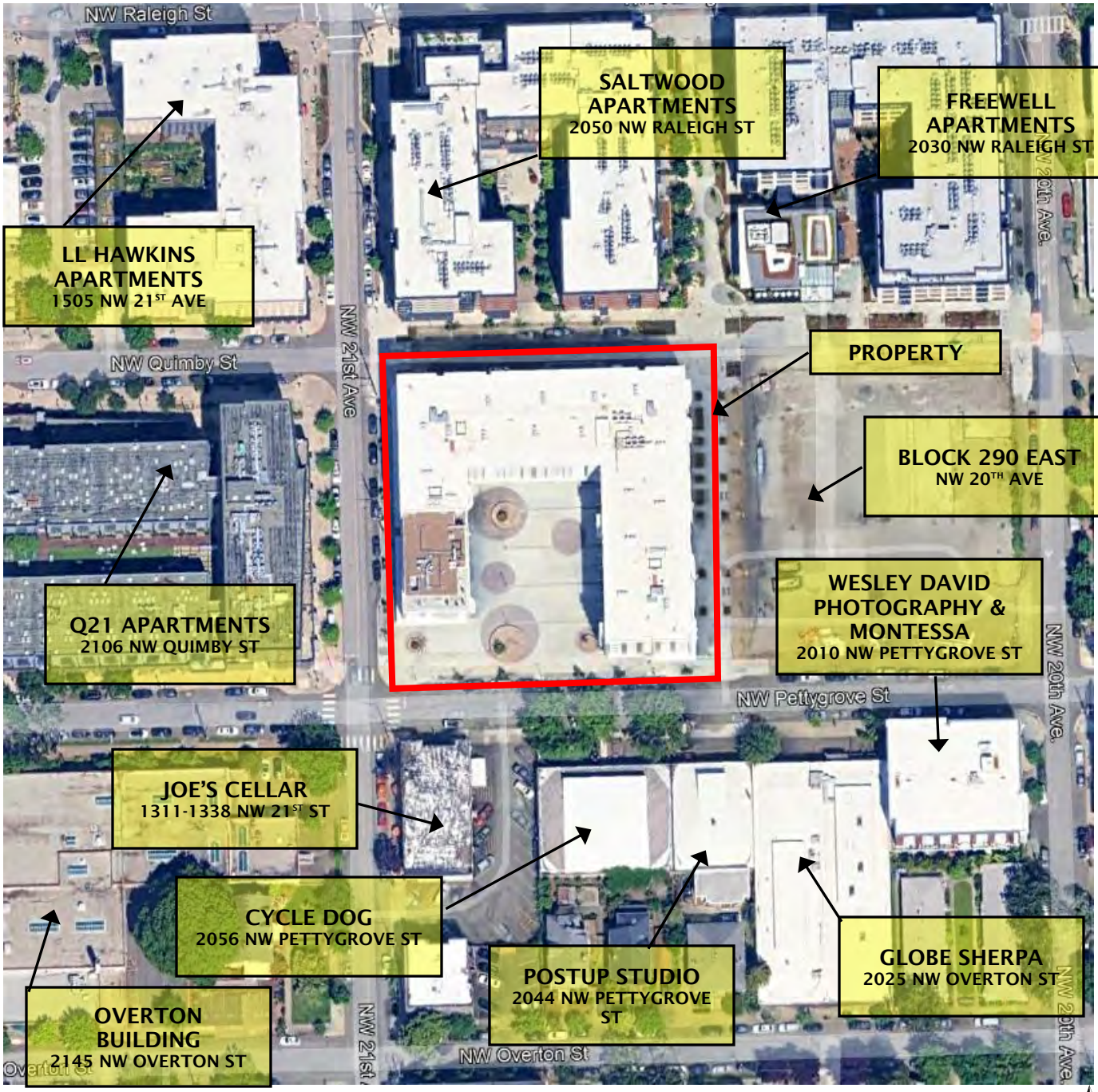
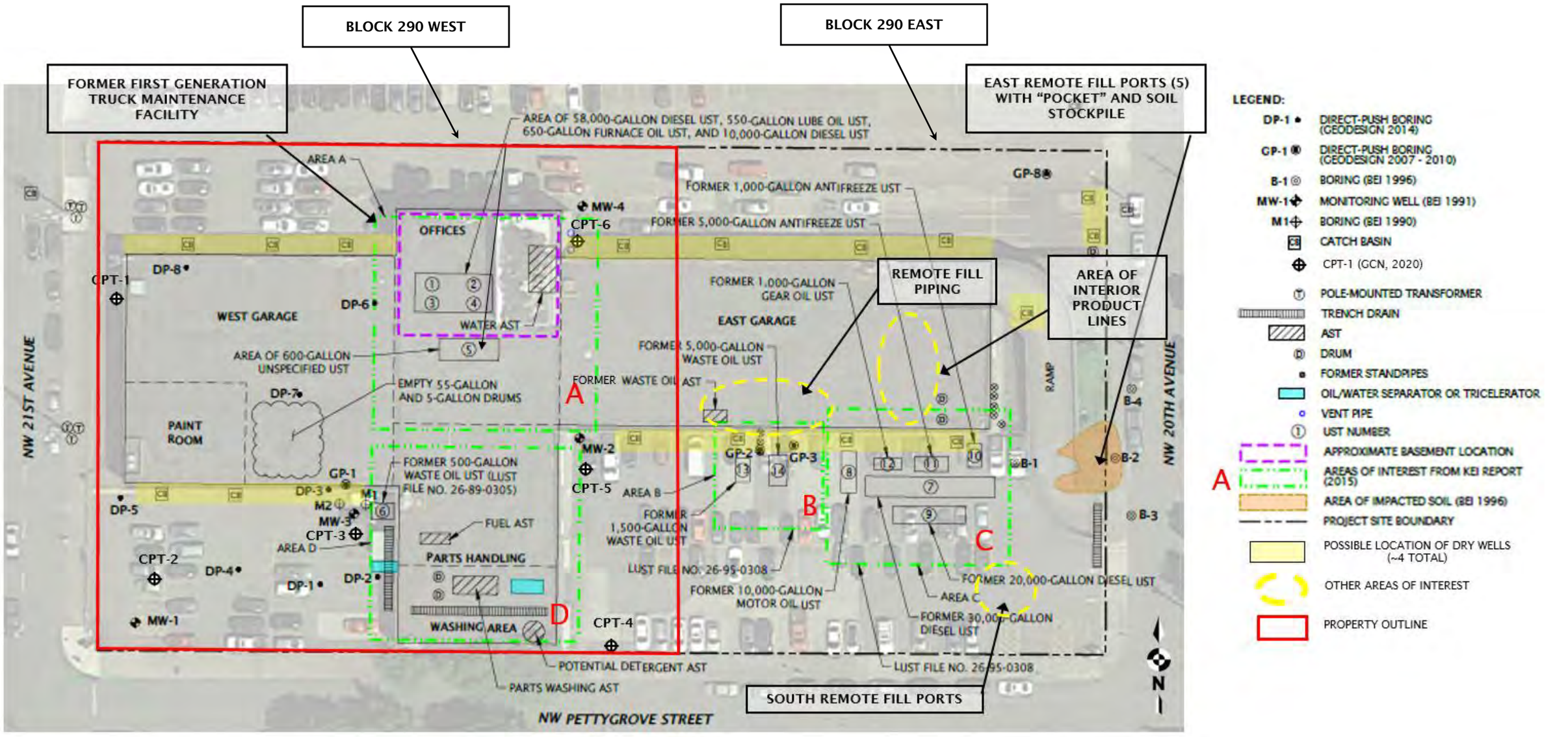
TRUE NORTH GEOTECHNICAL	Guardian Real Estate Services Block 290 West Portland, Oregon	Project # 22-0061-9
219 West 4th Street Vancouver, WA 98660 360-984-6584	June 2025	Figure 2 – Topographic Map



METROMAP.COM

SCALE: 1 INCH = ~50 FEET

TRUE NORTH GEOTECHNICAL	Guardian Real Estate Services Block 290 West Portland, Oregon	Project # 22-0061-1
219 West 4th Street Vancouver, WA 98660 360-984-6584	June 2025	Figure 3 – Site Plan



BASEDRAWING: "SITE PLAN", CREATED BY GEODESIGN, PREPARED 2019, WITH GCN CPT LOCATION OVERLAY.

SCALE: 1 INCH = 30 FEET (PRINTED ON 11 X 17)

UST = UNDERGROUND STORAGE TANK
AST = ABOVEGROUND STORAGE TANK.

TRUE NORTH GEOTECHNICAL	Guardian Real Estate Services Block 290 West Development Portland, Oregon	Project # 22-0061-9
219 West 4th Street Vancouver, WA 98660 360-984-6584	June 2025	Figure 4-1 – UST LOCATION MAP & PREVIOUSLY STUDIED AREAS

LEGEND:

- B-1 ● BORING (GEODESIGN, 2014)
- GP-1 ○ DIRECT-PUSH BORING (GEODESIGN 2006)
- MW-1 ⊕ MONITORING WELL
- DP-1 ● DIRECT-PUSH BORING (GEODESIGN 2014)
- CB CATCH BASIN
- T POLE-MOUNTED TRANSFORMER
- AS-01 ○ SUSPECT ACM SAMPLE (RED INDICATES ASBESTOS GREATER 1%)
- TRENCH DRAIN

N

0 50 100

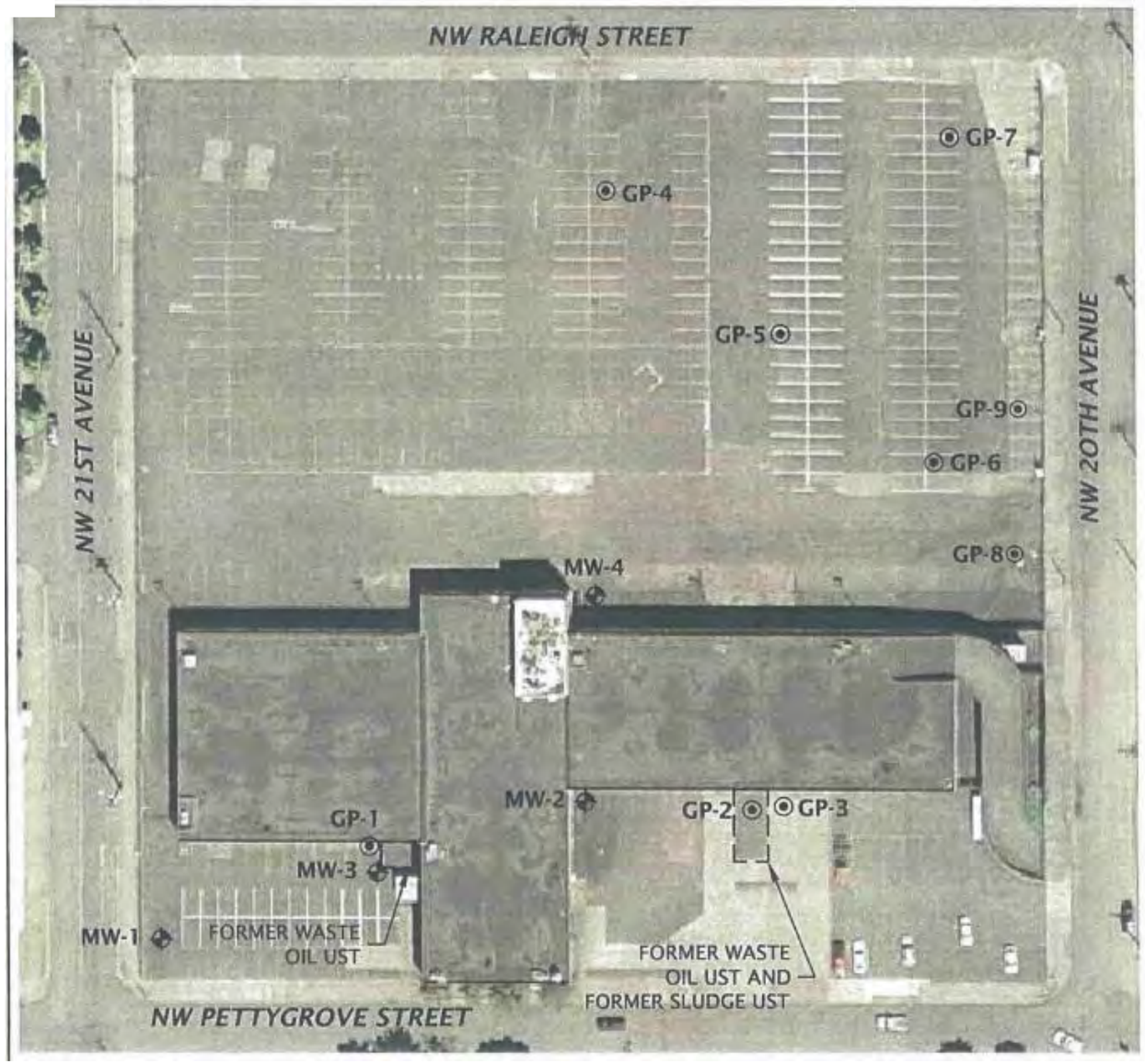
(SCALE IN FEET)

SITE PLAN BASED ON AERIAL PHOTOGRAPH OBTAINED FROM GOOGLE EARTH PRO®, SEPTEMBER 22, 2014

N

BASEDRAWING: "SITE PLAN", CREATED BY GEODESIGN, PREPARED NOVEMBER 2014.

TRUE NORTH GEOTECHNICAL	Guardian Real Estate Services Block 290 West Development Portland, Oregon	Project # 22-0061-9
219 West 4th Street Vancouver, WA 98660 360-984-6584	June 2025	Figure 4-2 – AREAS PREVIOUSLY STUDIED (GEODESIGN)



LEGEND:

GP-1 ⊙	DIRECT-PUSH BORING
MW-1 ⊕	MONITORING WELL

N

0 80 160

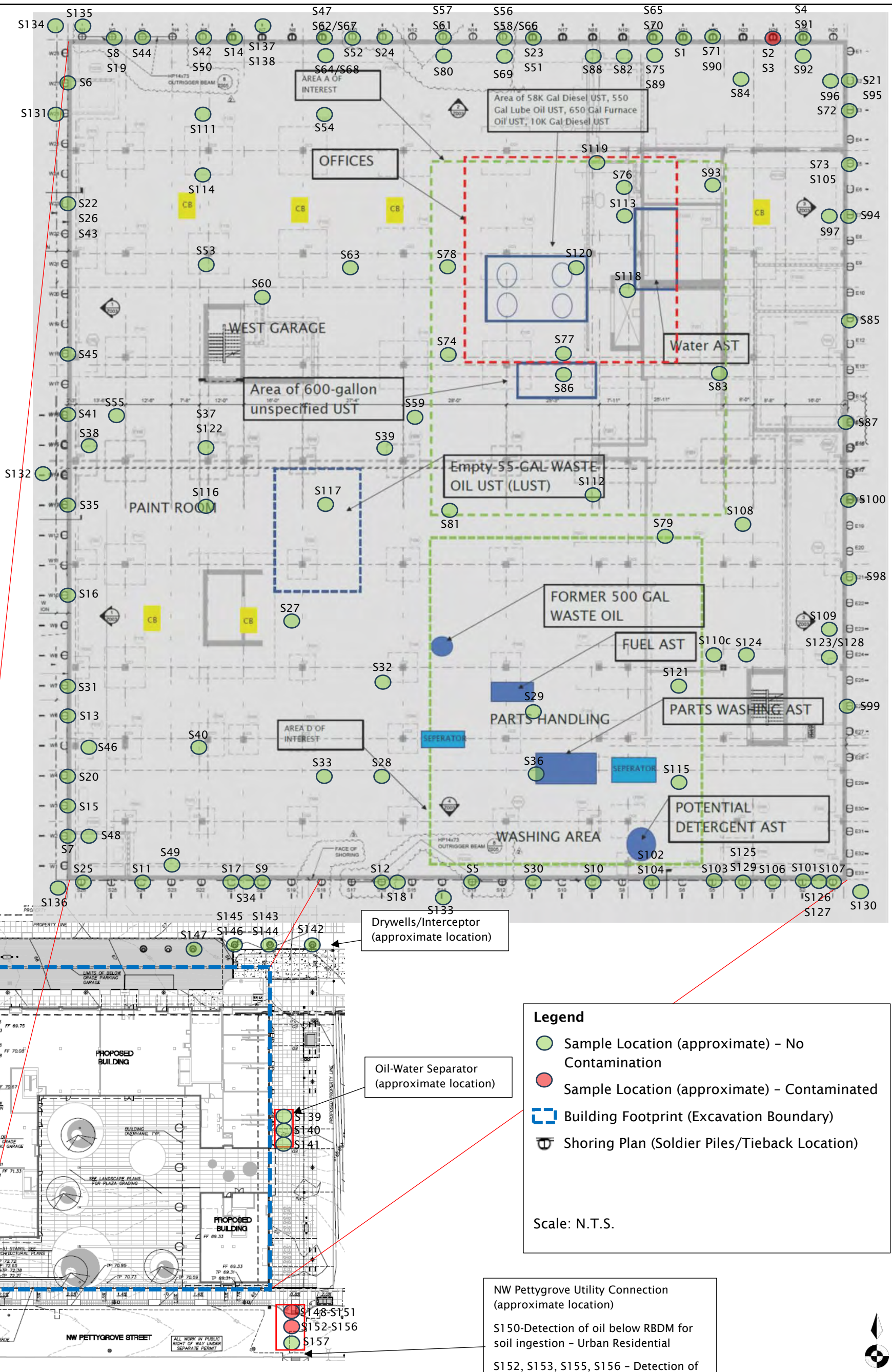
(SCALE IN APPROXIMATE FEET)

SITE PLAN BASED ON AERIAL PHOTOGRAPH OBTAINED FROM PORTLAND MAPS

N

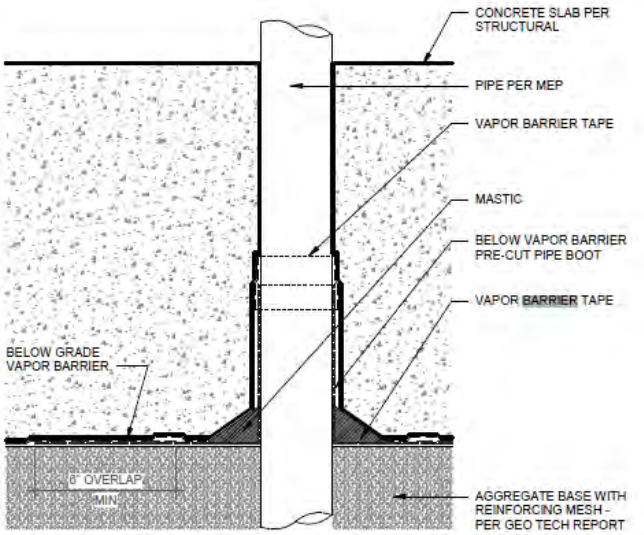
BASEDRAWING: "SITE PLAN", CREATED BY GEODESIGN, PREPARED DECEMBER 2010.

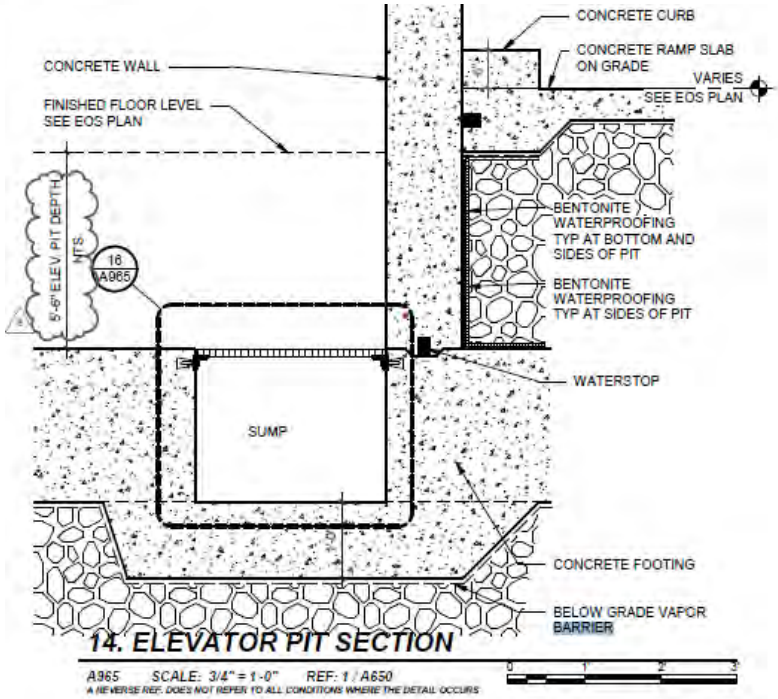
TRUE NORTH GEOTECHNICAL	Guardian Real Estate Services Block 290 West Development Portland, Oregon	Project # 22-0061-9
219 West 4th Street Vancouver, WA 98660 360-984-6584	June 2025	Figure 4-3 – AREAS PREVIOUSLY STUDIED (GEODESIGN)



SOURCE: BASE DRAWINGS "GRADING PLAN" LRS ARCHITECTS/HUMBER DESIGN GROUP, DATE CREATED MARCH 2020 AND "BASEMENT FOUNDATION PLAN A-B" PREPARED BY LRS ARCHITECTS, DATE CREATED APRIL 2019.

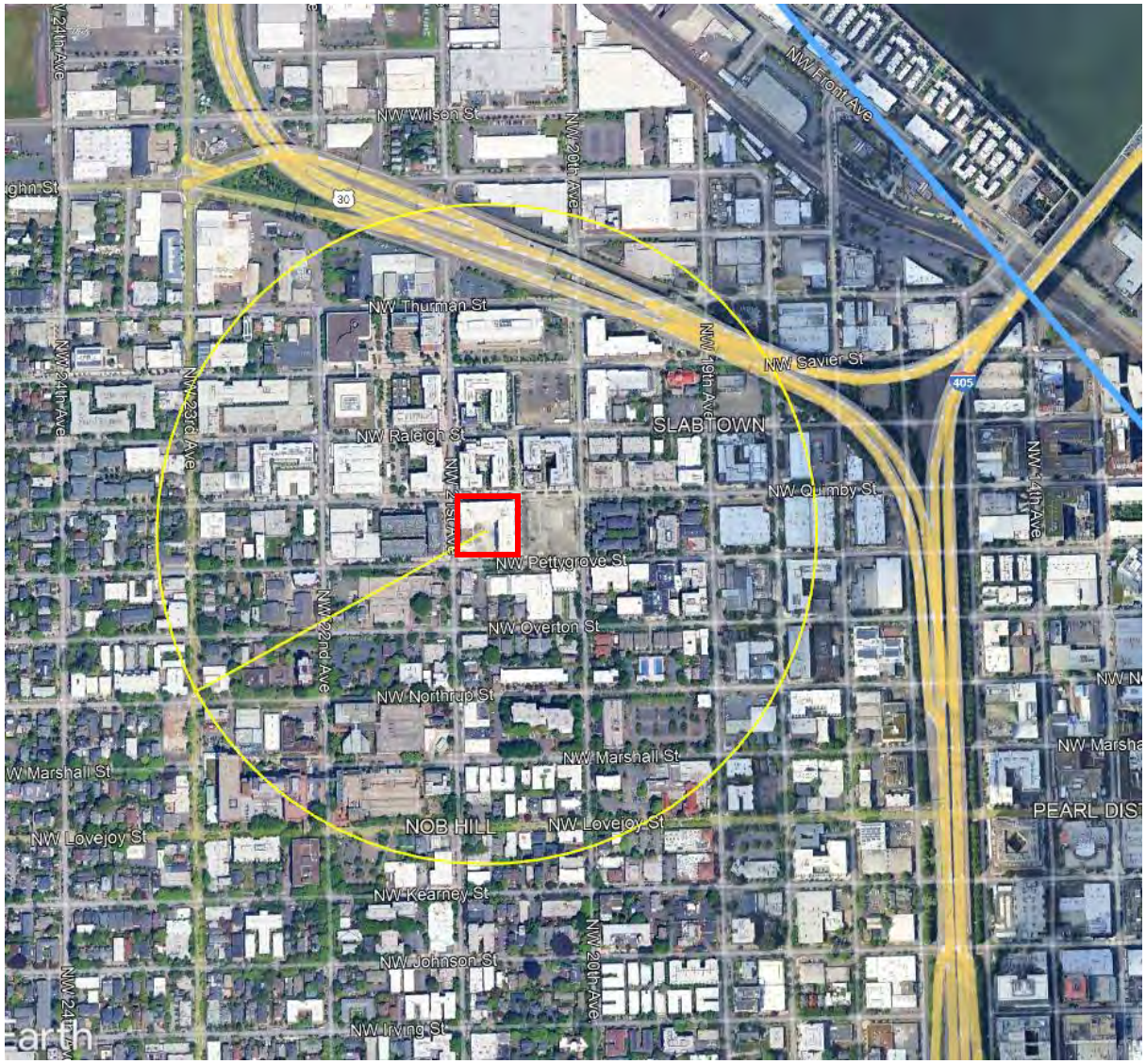
TRUE NORTH GEOTECHNICAL	Guardian Real Estate Services Block 290 West Development Portland, Oregon	Project # 22-0061-9
219 West 4th Street Vancouver, WA 98660 360-984-6584	June 2025	Figure 5 – MASS EXCAVATION AND FORMER PCS BOUNDARY





SOURCE: ARCHITECTURAL DRAWINGS A902 AND A965, DESIGNED BY LRS ARCHITECTS, DATE CREATED MARCH 4, 2020.

TRUE NORTH GEOTECHNICAL	Guardian Real Estate Services Block 290 West Development Portland, Oregon	Project # 22-0061-9
219 West 4th Street Vancouver, WA 98660 360-984-6584	June 2025	Figure 6 – Vapor System Detail



LEGEND

- DISTANCE (QTR MILE)
- PARKS/RECREATION AREA
- WATER BODY OUTLINE

N

TRUE NORTH GEOTECHNICAL	Guardian Real Estate Services Block 290 West Development Portland, Oregon	Project # 22-0061-9	
219 West 4th Street Vancouver, WA 98660 360-984-6584	June 2025	Figure 7 – Ecological Risk Assessment Aerial Map	GOOGLE EARTH, NOVEMBER 2024 AERIAL SCALE: 1 INCH = 500 FEET

TABLES

Table 1 – April 1990 Soil Sample Laboratory Analytical Results

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS

SAMPLE NUMBER	DEPTH	PID RESULTS (PPM)	EPA METHOD 418.1 OIL & GREASE (mg/Kg)		EPA METHOD 8020[1] (ug/Kg)	
			TOTAL	NONPOLAR	TOLUENE	XYLENE
M1-S1	5.0-6.5	ND	120	ND	ND	ND
M1-S2	10.0-11.5	160	14,000	13,000	2.6	230
M1-S3	15.0-16.5	ND	77	71	ND	ND
M1-S4	20.0-21.5	ND	ND	ND	ND	ND
M1-S5	25.0-26.5	ND	ND	ND	ND	ND
M1-S6	30.0-31.5	ND	68	ND	ND	ND
M2-S1	5.0-6.5	ND	ND	74	ND	ND
M2-S2	10.0-11.5	ND	ND	ND	ND	ND
M2-S3	15.0-16.5	ND	ND	ND	ND	ND
M2-S4	15.0-16.5	ND	ND	ND	ND	ND
M2-S5	25.0-26.5	ND	66	ND	ND	ND
M2-S6	30.0-30.5	ND	ND	ND	ND	ND

ND = NOT DETECTED

[1] BENZENE AND ETHYL BENZENE WERE NOT DETECTED

ug/Kg = MICROGRAMS PER KILOGRAM

mg/Kg = MILLIGRAMS PER KILOGRAM

PPM = PARTS PER MILLION

Table 2 – April 1990 Soil Sample Laboratory Analytical Results

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS

SAMPLE NUMBER	DEPTH	EPA METHOD 8010* (ug/Kg)		EP TOXICITY (mg/l)	EPA METHOD 8080 (ug/Kg)
		PCE[2]	1,1,1-TCA[3]	METALS[4]	PCB[5]
M1-S1	5.0-6.5	ND	ND	ND	ND
M1-S2	10.0-11.5	2.9	4.3	ND	ND
M1-S3	15.0-16.5	ND	ND	ND	ND
M1-S4	20.0-21.5	ND	ND	ND	ND
M1-S5	25.0-26.5	ND	ND	ND	ND
M1-S6	30.0-31.5	ND	ND	ND	ND
M2-S1	5.0-6.5	ND	ND	ND	ND
M2-S2	10.0-11.5	ND	ND	ND	ND
M2-S3	15.0-16.5	ND	ND	ND	ND
M2-S4	20.0-21.5	ND	ND	ND	ND
M2-S5	25.0-26.5	ND	ND	ND	ND
M2-S6	30.0-31.5	ND	ND	ND	ND

[2] PCE = TETRACHLOROETHENE

[3] 1,1,1-TCA = TRICHLOROETHANE

[4] EP TOXICITY METALS TESTED WERE,
ARSENIC, BARIUM, CADMIUM, TOTAL CHROMIUM, LEAD AND ZINC

[5] PCB = POLYCHLORINATED BIPHENYLS

* ONLY DETECTABLE HALOGENATED VOLATILE ORGANICS PRESENTED IN THIS TABLE.

ug/Kg = MICROGRAMS PER KILOGRAM

mg/Kg = MILLIGRAMS PER KILOGRAM

mg/L = MILLIGRAMS PER LITER

Table 3 – April 1990 Soil Sample Laboratory Analytical Results

Soil Sample Analytical Results

Total Oil and Grease, SM5520 C/E (mg/Kg)
Non-Polar Oil and Grease, SM5520 C/E/F (mg/Kg)
Halogenated Volatile Organic Compounds, EPA Method 8010 (µg/Kg)
Benzene, Ethylbenzene, Toluene, Xylenes, EPA Method 8020 (µg/Kg)

Sample ID	DEPTH (feet)	Total O&G	Non-Polar O&G	8010	8020
B-1, S-1	5	ND	ND	ND	ND
B-1, S-3	15	ND	ND	ND	ND
B-1, S-6	30	ND	ND	ND	ND
B-1, S-10	50	ND	ND	ND	ND
B-1, S-12	60	ND	ND	ND	ND
B-2, S-1	5	ND	ND	ND	ND
B-2, S-2	10	ND	ND	ND	ND
B-2, S-5	25	ND	ND	ND	ND
B-2, S-10	50	ND	ND	ND	ND
B-3, S-1	5	ND	ND	ND	ND
B-3, S-4	20	ND	ND	ND	ND
B-3, S-6	30	ND	ND	ND	ND
B-3, S-11	55	ND	ND	ND	ND
B-4, S-2	10	ND	ND	ND	ND
B-4, S-4	20	ND	ND	ND	ND
B-4, S-9	45	ND	ND	ND	ND
B-4, S-10	50	ND	ND	ND	ND

ND = not detected
mg/Kg = parts per million (milligrams per Kilogram)
µg/Kg = parts per billion (micrograms per Kilogram)

Table 4 – October 1990 Water Sample Laboratory Analytical Results

Summary of Water Sample Analytical Results

Total Oil and Grease, SM5520 B/C (mg/L)
Non-Polar Oil and Grease, SM5520 B/C/F
Halogenated Volatile Organic Compounds, EPA Method 8010 (µg/L)
Benzene, Ethylbenzene, Toluene, Xylenes, EPA Method 602 (µg/L)

	MW-1 S-1	MW-2 S-2	MW-3 S-3	MW-4 S-4	Equipment Blank
SM5520 B/C	ND	ND	5.5	ND	ND
SM5520 B/C/F	ND	ND	5.2	ND	ND
8010					
Bromodichloromethane	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND
Carbon tetrachloride	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND
2-Chloroethylvinyl ether	ND	ND	ND	ND	ND
Chloroform	5.5	4.3	5.9	3.1	1.8
Chloromethane	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND
Dichlorodifluormethane	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND
trans-1,2,-Dichloroethene	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND
Methylene chloride	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	1.2	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	3.6	ND
Trichlorofluoromethane	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND
8020					
Benzene	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND
Xylenes, total	ND	ND	ND	ND	ND

mg/L = milligrams per Liter (parts per million)
µg/L = micrograms per Liter (parts per billion)
ND = Not Detected

Table 5 – June 1999 Water Sample Laboratory Analytical Results

Groundwater Sample Results
June 26, 1999

Monitoring Well/ Sample Number	Well Depth	Depth to Water (feet bgs)	TCE (µg/l)	PCE (µg/l)
MW-1	67.0	52.20	1.53	ND
MW-2	64.5	44.65	4.13	ND
MW-3	64.5	47.10	5.24	ND
MW-4	64.5	45.80	39.30	2.88
EPA Drinking Water Standard	-	-	5 µg/l	5 µg/l

Notes:

All samples analyzed by Specialty Analytical, Inc. in Tualatin, Oregon.

bgs = below ground surface

µg/l = micrograms per liter

ND = none detected

Table 6 – November 2006 Soil Sample Laboratory Analytical Results

Summary of Soil Sample Chemical Analytical Data: Hydrocarbons and PAHs
Con-Way Property
Portland, Oregon

Sample I.D.	Date	Field Screening Results		Hydrocarbon Identification Using Method NWTPH-HCID (mg/Kg)			Diesel- and Heavy Oil-Range Hydrocarbons Using Method NWTPH-Dx (mg/Kg)		Gasoline-Range Hydrocarbons Using Method NWTPH-Gx (mg/kg)	PAHs Using EPA Method 8270C-SIM (mg/kg)
		Headspace Vapor (ppm)	Sheen	Gasoline	Diesel	Heavy Oil	Diesel	Heavy Oil		
GP-1(14-15)	11/03/06	325.0	No Sheen	DET	DET	DET	451	459	2950	ND<0.343
GP-1(19-20)	11/03/06	0.0	No Sheen	NA	NA	NA	ND<22.4	ND<44.8	ND<4.65	NA
GP-2(13.5-14.5)	11/03/06	0.0	No Sheen	ND<24.2	ND<60.4	DET	ND<124	367	NA	ND<0.793
GP-3(19-20)	11/03/06	190.0	No Sheen	ND<21.0	ND<52.5	ND<105	NA	NA	NA	NA
DEQ RBCs (mg/Kg)										
Soil Ingestion, Dermal Contact, and Inhalation (Occupational)				NE	NE	NE	70,000		22,000	varies
Soil Ingestion, Dermal Contact, and Inhalation (Construction Worker)				NE	NE	NE	23,000		13,000	varies
Soil Ingestion, Dermal Contact, and Inhalation (Excavation Worker)				NE	NE	NE	>Max		>Max	varies
Volatilization to Outdoor Air (Occupational)				NE	NE	NE	>Max		80,000	varies
Vapor Intrusion into Buildings (Occupational)				NE	NE	NE	>Max		>Max	varies
Leaching to Groundwater (Occupational)				NE	NE	NE	>Max		110	varies

Notes:
Chemical analyses performed by Apex Laboratories, LLC of Tigard, Oregon.
>Max: The constituent RBC for this pathway is greater than 100,000 mg/Kg. The TPH RBC is greater than the maximum amount that would be present if all of the initial air space is filled with petroluem products. DEQ believes it is highly unlikely that such concentrations will ever be encountered.
ND: not detected above method reporting limits

Table 7 – November 2006 Soil Sample Laboratory Analytical Results

Summary of Soil Sample Chemical Analytical Data: VOCs
Con-Way Property
Portland, Oregon

Sample I.D.	Date	VOCs Using EPA Method 8260B (mg/Kg)									
		1,2,4-TMB	1,3,5-TMB	4-Isopropyltoluene	Isopropylbenzene	Methylene Chloride	n-Butylbenzene	n-Propylbenzene	sec-Butylbenzene	tert-Butylbenzene	Others
GP-1(14-15)	11/03/06	17.300	3.570	3.870	0.620	ND<6.200	3.160	1.750	3.040	1.120	ND
GP-2(13.5-14.5)	11/03/06	ND<0.0293	ND<0.0293	ND<0.0293	ND<0.0293	1.710	ND<0.0293	ND<0.0293	ND<0.0293	ND<0.0293	ND
DEQ RBCs (mg/Kg)											
Soil Ingestion, Dermal Contact, and Inhalation (Occupational)		1,500	1,500	NE	51,000	NE	NE	19,000	NE	NE	varies
Soil Ingestion, Dermal Contact, and Inhalation (Construction Worker)		1,400	1,400	NE	24,000	NE	NE	9,300	NE	NE	varies
Soil Ingestion, Dermal Contact, and Inhalation (Excavation Worker)		40,000	40,000	NE	>Max	NE	NE	>Max	NE	NE	varies
Volatilization to Outdoor Air (Occupational)		790	>Csat	NE	>Csat	NE	NE	>Csat	NE	NE	varies
Vapor Intrusion into Buildings (Occupational)		840	140	NE	>Csat	NE	NE	>Csat	NE	NE	varies
Leaching to Groundwater (Occupational)		55	12	NE	>Csat	NE	NE	>Csat	NE	NE	varies

Notes:
Chemical analyses performed by Apex Laboratories, LLC of Tigard, Oregon.
>Csat: This soil RBC exceeds the limit of three-phase equilibrium partitioning. Soil concentrations in excess of Csat indicate that free product might be present.
>Max: The constituent RBC for this pathway is greater than 100,000 mg/Kg. The TPH RBC is greater than the maximum amount that would be present if all of the initial air space is filled with petroluem products. DEQ believes it is highly unlikely that such concentrations will ever be encountered.
ND: not detected above method reporting limits

Table 8 – 1999 – 2011 Water Sample Laboratory Analytical Results

Summary of Groundwater Chemical Analytical Data
Con-Way, Inc. Property
Portland, Oregon

Well I.D./ Sample Number	Date	Depth to Water (feet BGS)	Groundwater Elevation (feet above MSL)	VOCs by EPA Method 8260B (µg/L)							
				TCE	PCE	Carbon Tetrachloride	1,1,1-TCA	Chloroform	cis-1,2-DCE	1,1-DCA	Others
MW-1	06/26/99	52.20	18.79	1.53	ND<1.00	ND<1.00	ND<1.0	ND	ND	ND	ND
	08/14/01	56.96	14.03	ND<1.00	ND<1.00	ND<1.00	ND<1.0	ND	ND	ND	ND
	10/27/06	66.44	4.55	--	--	--	--	--	--	--	--
	04/05/07	61.14	9.85	9.50	1.47	ND<0.5	0.51	ND<0.5	ND<0.5	ND<0.5	ND
	04/14/08	57.60	13.39	6.71	0.920	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND
	08/31/10	57.60	13.39	3.64	0.670	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND
MW-2	06/26/99	44.65	18.86	4.13	ND<1.00	ND<1.00	ND<1.0	ND	ND	ND	ND
	08/14/01	49.44	14.07	ND<1.00	ND<1.00	1.19	ND<1.0	ND	ND	ND	ND
	10/27/06	NA	NA	--	--	--	--	--	--	--	--
	04/05/07	57.20	6.31	7.84	0.9	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND
	04/14/08	50.18	13.33	5.36	0.63	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND
	08/31/10	50.00	13.51	3.82	0.650	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND
MW-3	06/26/99	47.10	19.77	5.24	ND<1.00	ND<1.00	ND<1.0	ND	ND	ND	ND
	08/14/01	52.84	14.03	ND<1.00	ND<1.00	ND<1.00	ND<1.0	ND	ND	ND	ND
	10/27/06	NA	NA	--	--	--	--	--	--	--	--
	04/05/07	54.10	12.77	3.15	0.79	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND
	04/14/08	53.50	13.37	3.93	0.730	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND
	08/31/10	53.45	13.42	2.71	0.750	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND
MW-4	06/26/99	45.80	18.82	39.30	2.88	ND<1.00	ND<1.0	ND	ND	ND	ND
	08/14/01	50.74	13.88	9.68	2.80	ND<1.00	ND<1.0	ND	ND	ND	ND
	10/27/06	60.07	4.55	13.60	2.47	ND<1.00	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND
	04/05/07	55.00	9.62	16.80	2.78	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND
	04/14/08	51.26	13.36	18.90	1.87	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND
	06/16/09	50.05	14.57	28.60	4.66	ND<0.5	0.9	ND<1.0	ND<0.5	ND<0.5	ND
	08/31/10	51.20	13.42	39.7	7.30	ND<0.5	0.790	ND<1.0	0.510	0.550	ND
GP-4	06/16/09	NA	NA	7.70	2.27	ND<0.5	ND<0.5	1.38	ND<0.5	ND<0.5	ND
GP-5	06/16/09	NA	NA	43.60	4.72	ND<0.5	0.81	ND<1.0	0.77	0.68	ND
GP-6	06/16/09	NA	NA	23.70	2.08	ND<0.5	0.63	ND<1.0	ND<0.5	ND<0.5	ND
GP-7	06/16/09	NA	NA	2.91	2.58	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND
GP-8	08/31/10	NA	NA	20.2	5.05	ND<0.5	0.530	ND<1.0	ND<0.5	ND<0.5	ND
GP-9	08/31/10	NA	NA	47.3	5.97	ND<0.5	0.810	ND<1.0	1.00	0.780	ND
DP-1W	08/18/11	NA	NA	6.60	1.69	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	see lab report
DP-3W	08/18/11	NA	NA	12.0	1.52	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	see lab report

Table 8 – 1999 – 2011 Water Sample Laboratory Analytical Results (cont'd)

Summary of Groundwater Chemical Analytical Data
Con-Way, Inc. Property
Portland, Oregon

Well I.D./ Sample Number	Date	Depth to Water (feet BGS)	Groundwater Elevation (feet above MSL)	VOCs by EPA Method 8260B (µg/L)							
				TCE	PCE	Carbon Tetrachloride	1,1,1-TCA	Chloroform	cis-1,2-DCE	1,1-DCA	Others
DEQ RBCs (µg/L)											
Ingestion and Inhalation from Tap Water											
Urban Residential				1.7	0.34	1.7	18,000	0.98	150	11	varies
Occupational				3.6	0.64	2.4	38,000	0.99	290	13	varies
Volatilization to Outdoor Air											
Urban Residential				6,600	5,000	2,900	>S	3,000	>S	40,000	varies
Occupational				19,000	9,200	5,400	>S	5,500	>S	73,000	varies
Vapor Intrusion into Buildings											
Urban Residential				380	260	140	1,200,000	220	>S	2,900	varies
Occupational				3,300	1,400	790	>S	1,200	>S	16,000	varies
Groundwater in Excavation				430	240	1,700	1,100,000	720	24,000	10,000	varies

Notes:
1999 and 2001 samples analyzed by Specialty Analytical, Inc. of Tualatin, Oregon. 2006 samples analyzed by Test America of Beaverton, Oregon. 2007 through 2010 samples analyzed by Apex Laboratories, LLC of Tigard, Oregon.
--: not analyzed
BGS: below ground surface
DCA: dichloroethane
DCE: dichloroethene
DEQ: Oregon Department of Environmental Quality
EPA: U.S. Environmental Protection Agency
MSL: mean sea level
NA: not applicable
ND: not detected above laboratory method reporting limit
PCE: tetrachloroethene
RBC: risk-based concentration
>S: This groundwater RBC exceeds the solubility limit.
TCA: trichloroethane
TCE: trichloroethene
µg/L: micrograms per liter
VOC: volatile organic compound

Table 9–2011 Soil Gas Sample Laboratory Analytical Results

Summary of Soil-Gas Sample Chemical Analytical Results[1]
VOCs
Block 263
Portland, Oregon

Sample I.D.	Date Collected	Sample Depth (feet BGS)	VOCs by Modified EPA Method TO-15 GC/MS Full Scan[2] (µg/m³)																
			Ethanol	Acetone	2-Butanone (Methyl Ethyl Ketone)	Chloroform	Carbon Tetrachloride	Benzene	Hexane	Cyclohexane	Heptane	Toluene	Tetrachloroethene	Ethylbenzene	Total Xylenes	Propylbenzene	4-Ethyltoluene	1,3,5-TMB	1,2,4-TMB
VP-1	08/19/11	5-6	17	71	<14	<6.0	<7.8	7.2	16	5.7	9.5	29	<8.4	<5.4	8.1	<6.1	<6.1	<6.1	<6.1
VP-2	08/19/11	5-6	43	190	37	<6.4	<8.3	34	75	16	40	130	<9.0	18	81	<6.5	12	<6.5	14
VP-6	08/19/11	5-5.5	53	110	<17	<7.0	<9.1	9.7	22	<5.0	26	56	<9.8	14	88	9.1	28	9.5	39
VP-8	08/19/11	5-5.5	20	110	16	93	44	8.7	<4.6	<4.5	14	26	10	9.2	54	6.5	26	12	77
DEQ Generic RBCs																			
Vapor Intrusion into Buildings																			
Residential			NE	NE	NE	21	81	62	NE	NE	NE	1,000,000	82	190	21,000	NE	NE	>Pv	1,500
Urban Residential			NE	NE	NE	58	220	170	NE	NE	NE	1,000,000	220	530	21,000	NE	NE	>Pv	1,500
Occupational			NE	NE	NE	530	2,000	1,600	NE	NE	NE	22,000,000	2,100	4,900	440,000	NE	NE	>Pv	31,000

Notes:
1. Chemical analysis performed by Air Toxics, Ltd. of Folsom, California.
2. Samples collected during this investigation were analyzed for the full VOC Modified EPA Method TO-15 GC/MS Full Scan list of analytes. Only detected compounds are shown in this table. For the full list of analyzed compounds and the associated laboratory method reporting limits (MRLs), refer to the laboratory report in the Attachment.

<: not detected at concentrations greater than the laboratory MRL (shown)
BGS: below ground surface
DEQ: Oregon Department of Environmental Quality
EPA: U.S. Environmental Protection Agency
>Pv: The air concentration reported for the RBC exceeds the vapor pressure of the pure chemical. It can be assumed that this constituent cannot create an unacceptable risk by this pathway.
RBC: risk-based concentration
TMB: trimethylbenzene
VOC: volatile organic compound
Bolding indicates analyte detection.
Shading indicates analyte concentration exceeds one or more DEQ RBCs.

Table 10
April 2022-January 2023 Summary Soil Sample Laboratory Analytical Results
Block 290 West

Portland ,Oregon

AREA	Inset Map Figure #	Map ID	Sample Date	Sample ID (Chain of Custody)	Notes	Lab report # ends in " "	Estimated Sample Depth (below nearest sidewalk grade)	Hydrocarbon Identification Screen - Gasoline Range Organics*	Hydrocarbon Identification Screen - Diesel Range Organics*	Hydrocarbon Identification Screen - Oil Range Organics*	Total Petroleum Hydrocarbons-Gasoline (GRO/Gx)	Total Petroleum Hydrocarbons-Diesel (DRO/Dx)	Total Petroleum Hydrocarbons-Heavy Oil (RRO)
							feet	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Construction Phase													
Pile Location N21 - 4	3-2	S1	4/5/2022	N21-4	Construction Phase, Pile N21, 4-ft below street grade, sidewall	201	4	nd	nd	nd	-	-	-
Pile Location N24-1	3-2	S2	4/5/2022	N24-1	Construction Phase, Pile N24, 1-ft below street grade, sidewall	201	1	nd	nd	nd	-	-	-
Pile Location N24-3	3-2	S3	4/15/2022	N24-3	Construction Phase, Pile N24, 3-ft below street grade, sidewall	620	3	nd	nd	**det**	-	nd	nd
Pile Location N25-3	3-2	S4	4/15/2022	N25-3	Construction Phase, Pile N25, 1-ft below street grade, sidewall	620	1	nd	nd	nd	-	-	-
Pile Location S13-5	3-2	S5	4/21/2022	S13-5	Construction Phase, Pile S13, 5-ft below street grade, sidewall	899	5	nd	nd	nd	-	-	-
Pile Location W27-5	3-2	S6	4/21/2022	W27-5	Construction Phase, Pile W21, 5-ft below street grade, sidewall	899	5	nd	nd	nd	-	-	-
Pile Location W2-10	3-2	S7	4/21/2022	W2-10	Construction Phase, Pile W2, 10-ft below street grade, sidewall	899	10	nd	nd	nd	-	-	-
Pile Location N2-4	3-2	S8	4/21/2022	N2-4	Construction Phase, Pile N2, 4-ft below street grade, sidewall	899	4	nd	nd	nd	-	-	-
Pile Location S20-10	3-2	S9	4/21/2022	S20-10	Construction Phase, Pile S20, 10-ft below street grade, sidewall	899	10	nd	nd	nd	-	-	-
Pile Location S9-5	3-2	S10	4/21/2022	S9-5	Construction Phase, Pile S9, 5-ft below street grade, sidewall	899	5	nd	nd	nd	-	-	-
Pile Location S24-10	3-2	S11	4/21/2022	S24-10	Construction Phase, Pile S24, 10-ft below street grade, sidewall	899	10	nd	nd	nd	-	-	-
Pile Location S16-11	3-2	S12	4/21/2022	S16-11	Construction Phase, Pile S16, 11-ft below street grade, sidewall	899	11	nd	nd	nd	-	-	-
Pile Location W6-10	3-2	S13	4/21/2022	W6-10	Construction Phase, Pile W6, 10-ft below street grade, sidewall	899	10	nd	nd	nd	-	-	-
Pile Location N6-5	3-2	S14	4/21/2022	N6-5	Construction Phase, Pile N6, 5-ft below street grade, sidewall	899	5	nd	nd	nd	-	-	-
Pile Location W3-5	3-2	S15	4/21/2022	W3-5	Construction Phase, Pile W3, 5-ft below street grade, sidewall	899	5	nd	nd	nd	-	-	-
Pile Location W10-15	3-2	S16	4/28/2022	W10-15	Construction Phase, Pile W10, 15-ft below street grade, sidewall	166	15	nd	nd	nd	-	-	-
Pile Location S21-16.75	3-2	S17	4/28/2022	S21-16.75	Construction Phase, Pile S21, 16.75-ft below street grade, sidewall	166	16.75	nd	nd	nd	-	-	-
Pile Location S16-S15-16.75	3-2	S18	4/28/2022	S16-S15-16.75	Construction Phase, Pile S16-S15, 16.75-ft below street grade, sidewall	166	16.75	nd	nd	nd	-	-	-
Pile Location N2-4	3-2	S19	4/28/2022	N2-4	Construction Phase, Pile N2, 4-ft below street grade, sidewall	166	4	nd	nd	nd	-	-	-
Pile Location W4-16	3-2	S20	4/28/2022	W4-16	Construction Phase, Pile W4, 16-ft below street grade, sidewall	166	16	nd	nd	nd	-	-	-
Pile Location E2-3	3-2	S21	4/28/2022	E2-3	Construction Phase, Pile E2, 3-ft below street grade, sidewall	166	3	nd	nd	nd	-	-	-
Pile Location W23-16.75	3-2	S22	4/28/2022	W23-16.75	Construction Phase, Pile W23,16.75-ft below street grade, sidewall	166	16.75	nd	nd	nd	-	-	-
Pile Location N16-5	3-2	S23	4/28/2022	N16-5	Construction Phase, Pile N16, 5-ft below street grade, sidewall	166	5	nd	nd	nd	-	-	-
Pile Location N11-7	3-2	S24	4/28/2022	N11-7	Construction Phase, Pile N11, 7-ft below street grade, sidewall	166	7	nd	nd	nd	-	-	-
Pile Location S26-16	3-2	S25	4/29/2022	S26-16	Construction Phase, Pile S26, 16-ft below street grade, sidewall	166	16	nd	nd	nd	-	-	-
Pile Location W23-5	3-2	S26	4/29/2022	W23-5	Construction Phase, Pile W23, 5-ft below street grade, sidewall	166	5	nd	nd	nd	-	-	-
SW Corner	3-2	S27	5/2/2022	S19/W9	Construction Phase, SW Corner,Subgrade	190	17	nd	nd	nd	-	-	-
SW Corner	3-2	S28	5/2/2022	S16/W4	Construction Phase, SW Corner, subgrade	190	17	nd	nd	nd	-	-	-
SW Corner	3-2	S29	5/2/2022	S11/W6	Construction Phase, SW Corner, subgrade	190	17	nd	nd	nd	-	-	-
Pile Location S11-15	3-2	S30	5/2/2022	S11	Construction Phase, S11, 15-ft below street grade, sidewall	190	15	nd	nd	nd	-	-	-
Pile Location W7-15	3-2	S31	5/2/2022	W7	Construction Phase, W7, 15-ft below street grade, sidewall	190	15	nd	nd	nd	-	-	-
SW Corner	3-2	S32	5/2/2022	S16/W7	Construction Phase, SW Corner, subgrade	190	17	nd	nd	nd	-	-	-
SW Corner	3-2	S33	5/2/2022	S19/W4	Construction Phase, SW Corner, subgrade	190	17	nd	nd	nd	-	-	-
Pile Location S20-S21-15	3-2	S34	5/2/2022	S20-S21-15	Construction Phase, S20-S21, 15-ft below street grade, sidewall	190	15	nd	nd	nd	-	-	-
Pile Location W13-15	3-2	S35	5/2/2022	W13-15	Construction Phase, W13, 15-ft below street grade, sidewall	190	15	nd	nd	nd	-	-	-
SW Corner	3-2	S36	5/4/2022	S11/W4	Construction Phase, SW Corner, subgrade	249	17	nd	nd	nd	-	-	-
SW Corner	3-2	S37	5/4/2022	S22/W15	Construction Phase, SW Corner, subgrade	249	17	nd	nd	nd	-	-	-
SW Corner	3-2	S38	5/4/2022	S26/W15	Construction Phase, SW Corner, subgrade	249	17	nd	nd	nd	-	-	-
SW Corner	3-2	S39	5/4/2022	S16/W15	Construction Phase, SW Corner, subgrade	249	17	nd	nd	nd	-	-	-
SW Corner	3-2	S40	5/4/2022	S22/W5	Construction Phase, SW Corner, subgrade	249	17	nd	nd	nd	-	-	-
Pile Location W16-13	3-2	S41	5/5/2022	W16-13	Construction Phase, W16, 13-ft below street grade, sidewall	249	13	nd	nd	nd	-	-	-
Pile Location N5-10	3-2	S42	5/5/2022	N5-10	Construction Phase, N5, 10-ft below street grade, sidewall	249	10	nd	nd	nd	-	-	-
Pile Location W23-15	3-2	S43	5/5/2022	W23-15	Construction Phase, W23, 15-ft below street grade, sidewall	249	15	nd	nd	nd	-	-	-
Pile Location N3-13	3-2	S44	5/5/2022	N3-13	Construction Phase, N3, 13-ft below street grade, sidewall	249	13	nd	nd	nd	-	-	-
Pile Location W18-12	3-2	S45	5/4/2022	W18-12	Construction Phase, W18, 12-ft below street grade, sidewall	249	12	nd	nd	nd	-	-	-
SW Corner	3-2	S46	5/4/2022	W5/S26	Construction Phase, SW Corner, subgrade	249	17	nd	nd	nd	-	-	-
Pile Location N9-9	3-2	S47	5/6/2022	N9-9	Construction Phase, N9, 9-ft below street grade, sidewall	249	9	nd	nd	nd	-	-	-
SW Corner	3-2	S48	5/4/2022	S26/W2	Construction Phase, SW Corner, subgrade	249	17	nd	nd	nd	-	-	-
SW Corner	3-2	S49	5/4/2022	S23/W1	Construction Phase, SW Corner, subgrade	249	17	nd	nd	nd	-	-	-
Pile Location N5-13	3-2	S50	5/5/2022	N5-13	Construction Phase, N5, 13-ft below street grade, sidewall	249	13	nd	nd	nd	-	-	-
Pile Location N16-7	3-2	S51	5/6/2022	N16-7	Construction Phase, N16, 13-ft below street grade, sidewall	249	13	nd	nd	nd	-	-	-
Pile Location N10-16	3-2	S52	5/9/2022	N10-16	Construction Phase, N10, 16-ft below street grade, sidewall	336	16	nd	nd	nd	-	-	-
NW Corner	3-2	S53	5/9/2022	N5/W21	Construction Phase, NW Corner, subgrade	336	17	nd	nd	nd	-	-	-
NW Corner	3-2	S54	5/9/2022	N9/W26	Construction Phase, NW Corner, subgrade	336	17	nd	nd	nd	-	-	-
NW Corner	3-2	S55	5/9/2022	N2/W16	Construction Phase, NW Corner, subgrade	336	17	nd	nd	nd	-	-	-
Pile Location N15-10	3-2	S56	5/9/2022	N15-10	Construction Phase, N15, 10-ft below street grade, sidewall	336	10	nd	nd	nd	-	-	-
Pile Location N13-10	3-2	S57	5/9/2022	N13-10	Construction Phase, N13, 10-ft below street grade, sidewall	336	10	nd	nd	nd	-	-	-
Pile Location N15-13	3-2	S58	5/9/2022	N15-13	Construction Phase, N15, 13-ft below street grade, sidewall	336	13	nd	nd	nd	-	-	-
NW Corner	3-2	S59	5/9/2022	N12/W16-15	Construction Phase, NW Corner, subgrade	336	15	nd	nd	nd	-	-	-
NW Corner	3-2	S60	5/9/2022	N7/W20	Construction Phase, NW Corner, subgrade	336	17	nd	nd	nd	-	-	-
Pile Location N13-12	3-2	S61	5/9/2022	N13-12	Construction Phase, N13, 12-ft below street grade, sidewall	336	12	nd	nd	nd	-	-	-
Pile Location N9-15	3-2	S62	5/9/2022	N9-15	Construction Phase, N9, 15-ft below street grade, sidewall	336	15	nd	nd	nd	-	-	-
NW Corner	3-2	S63	5/9/2022	N10/W21	Construction Phase, NW Corner, subgrade	336	17	nd	nd	nd	-	-	-
NW Corner	3-2	S64	5/9/2022	N9/W28	Construction Phase, NW Corner, subgrade	336	17	nd	nd	nd	-	-	-
Pile Location N20-12	3-2	S65	5/9/2022	N20-12	Construction Phase, N20, 12-ft below street grade, sidewall	336	12	nd	nd	nd	-	-	-
Pile Location N15-15	3-2	S66	5/16/2022	N15-15	Construction Phase, N15, 15-ft below street grade, sidewall	589	15	nd	nd	nd	-	-	-
Pile Location N9-15	3-2	S67	5/16/2022	N9-15	Construction Phase, N9, 15-ft below street grade, sidewall	589	15	nd	nd	nd	-	-	-
NW Corner	3-2	S68	5/16/2022	N9/W28	Construction Phase, NW Corner, subgrade	589	17	nd	nd	nd	-	-	-
NW Corner	3-2	S69	5/16/2022	N15/W28	Construction Phase, NW Corner, subgrade	589	17	nd	nd	nd	-	-	-
Pile Location N20-15	3-2	S70	5/16/2022	N20-15	Construction Phase, N20, 15-ft below street grade, sidewall	589	15	nd	nd	nd	-	-	-
Pile Location N22-15	3-2	S71	5/16/2022	N22-15	Construction Phase, N22, 15-ft below street grade, sidewall	589	15	nd	nd	nd	-	-	-
Pile Location E3-7	3-2	S72	5/16/2022	E3-7	Construction Phase, E3, 7-ft below street grade, sidewall	589	7	nd	nd	nd	-	-	-
Pile Location E5-7	3-2	S73	5/16/2022	E5-7	Construction Phase, E5, 7-ft below street grade, sidewall	589	7	nd	nd	nd	-	-	-
NW Corner	3-2	S74	5/16/2022	N13/W18	Construction Phase, NW Corner, subgrade	589	17	nd	nd	nd	-	-	-
NW Corner	3-2	S75	5/16/2022	N20/W28	Construction Phase, NE Corner, subgrade	589	17	nd	nd	nd	-	-	-
NE Corrner	3-2	S76	5/16/2022	N19/E6	Construction Phase, NE Corner, subgrade	589	15	nd	nd	nd	-	-	-
NW Corner	3-2	S77	5/16/2022	N17/W18	Construction Phase, NE Corner, subgrade	589	15	nd	nd	nd	-	-	-
NE Corrner	3-2	S78	5/16/2022	N13/E9	Construction Phase, NE Corner, subgrade	589	15	nd	nd	nd	-	-	-
NW Corner	3-2	S79	5/16/2022	N20/W12	Construction Phase, SE Corner, subgrade	589	17	nd	nd	nd	-	-	-
NE Corrner	3-2	S80	5/16/2022	N13/E1	Construction Phase, NW Corner, subgrade	589	15	nd	nd	nd	-	-	-
NW Corner	3-2	S81	5/16/2022	N13/W13	Construction Phase, SW Corner, subgrade	589	17	nd	nd	nd	-	-	-
NE Corrner	3-2	S82	5/16/2022	N19/E1	Construction Phase, NE Corner, subgrade	589	15	nd	nd	nd	-	-	-
NE Corrner	3-2	S83	5/18/2022	N22/E13	Construction Phase, NE Corner, subgrade	784	15	nd	nd	nd	-	-	-
NE Corrner	3-2	S84	5/18/2022	N23/E2	Construction Phase, NE Corner, subgrade	784	15	nd	nd	nd	-	-	-

Table 9
Summary of Contaminants - Remaining In Place Soil on Property
Block 290 West

Portland ,Oregon

AREA	Inset Map Figure #	Map ID	Sample Date	Sample ID (Chain of Custody)	Notes	Lab report # ends in " "	Estimated Sample Depth (below nearest sidewalk grade)	Hydrocarbon Identification Screen - Gasoline Range Organics*	Hydrocarbon Identification Screen - Diesel Range Organics*	Hydrocarbon Identification Screen - Oil Range Organics*	Total Petroleum Hydrocarbons-Gasoline (GRO/Gx)	Total Petroleum Hydrocarbons-Diesel (DRO/Dx)	Total Petroleum Hydrocarbons-Heavy Oil (RRO)
							feet	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Pile Location E11-3	3-2	S85	5/18/2022	E11-3	Construction Phase, E11, 3-ft below street grade, sidewall	784	3	nd	nd	nd	-	-	-
NE Corrner	3-2	S86	5/18/2022	N17/E13	Construction Phase, NE Corner, subgrade	784	15	nd	nd	nd	-	-	-
Pile Location E16-3	3-2	S87	5/18/2022	E16-3	Construction Phase, E16, 3-ft below street grade, sidewall	784	3	nd	nd	nd	-	-	-
NE Corrner	3-2	S88	5/18/2022	N18/E1	Construction Phase, NE Corner, subgrade	784	15	nd	nd	nd	-	-	-
NE Corrner	3-2	S89	5/20/2022	N22/E1	Construction Phase, NE Corner, subgrade	784	15	nd	nd	nd	-	-	-
Pile Location N22-13	3-2	S90	5/20/2022	N22-13	Construction Phase, N22, 13-ft below street grade, sidewall	784	13	nd	nd	nd	-	-	-
Pile Location N25-13	3-2	S91	5/20/2022	N25-13	Construction Phase, N25, 13-ft below street grade, sidewall	784	13	nd	nd	nd	-	-	-
NE Corrner	3-2	S92	5/20/2022	N25/E1	Construction Phase, NE Corner, subgrade	784	15	nd	nd	nd	-	-	-
NE Corrner	3-2	S93	5/20/2022	N22/E6	Construction Phase, NE Corner, subgrade	784	15	nd	nd	nd	-	-	-
Pile Location E7-9	3-2	S94	5/20/2022	E7-9	Construction Phase, E7, 9-ft below street grade, sidewall	784	9	nd	nd	nd	-	-	-
Pile Location E2-11	3-2	S95	5/20/2022	E2-11	Construction Phase, E2, 11-ft below street grade, sidewall	784	11	nd	nd	nd	-	-	-
NE Corrner	3-2	S96	5/20/2022	N26/E2	Construction Phase, NE Corner, subgrade	784	15	nd	nd	nd	-	-	-
NE Corrner	3-2	S97	5/20/2022	N26/E7	Construction Phase, NE Corner, subgrade	784	15	nd	nd	nd	-	-	-
Pile Location E21-10	3-2	S98	6/2/2022	E21-10	Construction Phase, E21, 10-ft below street grade, sidewall	51	10	nd	nd	nd	-	-	-
Pile Location E26-6	3-2	S99	6/2/2022	E26-6	Construction Phase, E26, 6-ft below street grade, sidewall	51	6	nd	nd	nd	-	-	-
Pile Location E18-10	3-2	S100	6/2/2022	E18-10	Construction Phase, E18, 10-ft below street grade, sidewall	51	10	nd	nd	nd	-	-	-
Pile Location S2-5	3-2	S101	6/2/2022	S2-5	Construction Phase, S2, 5-ft below street grade, sidewall	51	5	nd	nd	nd	-	-	-
Pile Location S7-8	3-2	S102	6/2/2022	S7-8	Construction Phase, S7, 8-ft below street grade, sidewall	51	8	nd	nd	nd	-	-	-
Pile Location S5-12	3-2	S103	6/7/2022	S5-12	Construction Phase, S5, 12-ft below street grade, sidewall	369	12	nd	nd	nd	-	-	-
Pile Location S7-12	3-2	S104	6/7/2022	S7-12	Construction Phase, S7, 12-ft below street grade, sidewall	369	12	nd	nd	nd	-	-	-
Pile Location E5-14	3-2	S105	6/7/2022	E5-14	Construction Phase, E5, 14-ft below street grade, sidewall	369	14	nd	nd	nd	-	-	-
Pile Location S3-12	3-2	S106	6/7/2022	S3-12	Construction Phase, S3, 12-ft below street grade, sidewall	369	12	nd	nd	nd	-	-	-
Pile Location S1-12	3-2	S107	6/7/2022	S1-12	Construction Phase, S1, 12-ft below street grade, sidewall	369	12	nd	nd	nd	-	-	-
NE Corrner	3-2	S108	6/7/2022	N23/E19	Construction Phase, NE Corner, subgrade	369	15	nd	nd	nd	-	-	-
SE Corner	3-2	S109	6/7/2022	S1/E23	Construction Phase, SE Corner, subgrade	369	18	nd	nd	nd	-	-	-
NE Corrner	3-2	S110	6/7/2022	N22/E24	Construction Phase, NE Corner, subgrade	369	18	nd	nd	nd	-	-	-
NW Corner	3-2	S111	6/13/2022	N5/W26	Construction Phase, NW Corner, subgrade	526	17	nd	nd	nd	-	-	-
NE Corrner	3-2	S112	6/13/2022	N18/E18	Construction Phase, NE Corner, subgrade	526	17	nd	nd	nd	-	-	-
NE Corrner	3-2	S113	6/13/2022	N19/E7	Construction Phase, NE Corner, subgrade	526	17	nd	nd	nd	-	-	-
NW Corner	3-2	S114	6/13/2022	N5/W24	Construction Phase, NW Corner, subgrade	526	17	nd	nd	nd	-	-	-
SE Corner	3-2	S115	6/13/2022	S6/E29	Construction Phase, SE Corner, subgrade	526	17	nd	nd	nd	-	-	-
NW Corner	3-2	S116	6/13/2022	N5/W13	Construction Phase, NW Corner, subgrade	526	17	nd	nd	nd	-	-	-
NW Corner	3-2	S117	6/13/2022	N9/W13	Construction Phase, NW Corner, subgrade	526	17	nd	nd	nd	-	-	-
NE Corrner	3-2	S118	6/13/2022	N19/E10	Construction Phase, NE Corner, subgrade	526	17	nd	nd	nd	-	-	-
NE Corrner	3-2	S119	6/13/2022	N18/E5	Construction Phase, NE Corner, subgrade	526	17	nd	nd	nd	-	-	-
NE Corrner	3-2	S120	6/13/2022	N17/E9	Construction Phase, NE Corner, subgrade	526	17	nd	nd	nd	-	-	-
SE Corner	3-2	S121	6/13/2022	S6/E25	Construction Phase, SE Corner, subgrade	526	17	nd	nd	nd	-	-	-
NW Corner	3-2	S122	6/13/2022	N5/W16	Construction Phase, NW Corner, subgrade	526	17	nd	nd	nd	-	-	-
SE Corner	3-2	S123	6/20/2022	S1/E24	Construction Phase, SE Corner, subgrade	693	17	nd	nd	nd	-	-	-
SE Corner	3-2	S124	6/20/2022	S4/E24	Construction Phase, SE Corner, subgrade	693	17	nd	nd	nd	-	-	-
Pile Location S4	3-2	S125	6/20/2022	S4	Construction Phase, S4, subgrade	693	17	nd	nd	nd	-	-	-
Pile Location S1.5-15	3-2	S126	6/20/2022	S1.5-15	Construction Phase, S1.5, 15-ft below street grade, sidewall	693	15	nd	nd	nd	-	-	-
Pile Location S1.5	3-2	S127	6/20/2022	S1.5	Construction Phase, S1.5, subgrade	693	17	nd	nd	nd	-	-	-
SE Corner	3-2	S128	6/20/2022	S1/E24-15	Construction Phase, SE Corner, subgrade	693	17	nd	nd	nd	-	-	-
Pile Location S4-15	3-2	S129	6/20/2022	S4-15	Construction Phase, S4, 15-ft below street grade, sidewall	693	15	nd	nd	nd	-	-	-
5 ft SE from SE Corner	3-2	S130	10/5/2022	SE Corner	Construction Phase, SE Corner, subgrade	182	2.5	nd	nd	nd	-	-	-
3 ft W from Pile Location W26	3-2	S131	10/5/2022	W26	Construction Phase, W26, sidewall	182	4	nd	nd	nd	-	-	-
3 ft W from Pile Location W14	3-2	S132	10/5/2022	W14	Construction Phase, W14, sidewall	182	3	nd	nd	nd	-	-	-
5 ft S from Pile Location S14	3-2	S133	10/5/2022	S14	Construction Phase, S14, sidewall	182	3.5	nd	nd	nd	-	-	-
3 ft NW of NW Corner	3-2	S134	10/5/2022	NW Corner	Construction Phase, NW corner, subgrade	182	4	nd	nd	nd	-	-	-
3 ft N of Pile Location N1	3-2	S135	10/5/2022	N1	Construction Phase, N1, sidewall	182	4	nd	nd	nd	-	-	-
3 ft SW of SW Corner	3-2	S136	10/5/2022	SW Corner	Construction Phase, SW Corner, sidewall	182	5	nd	nd	nd	-	-	-
North Utility Vault near N7	3-2	S137	11/2/2022	N7	Construction Phase, N7, sidewall	185	2	nd	nd	nd	-	-	-
North Utility Vault near N7	3-2	S138	11/2/2022	N7	Construction Phase, N7, subgrade	185	4	nd	nd	nd	-	-	-
Oil Water Separator (prior to removal)													
10 ft E of Pile Location E13	3-2	S139	11/11/2022	E13	Construction Phase, construction of utility line, east property line, sidewall. See UA Report for further detail and testing.	528	4	nd	nd	nd	-	-	-
10 ft E of Pile Location E15	3-2	S140	11/14/2022	E15	Construction Phase, construction of utility line, east property line, sidewall. See UA Report for further detail and testing.	528	4	nd	nd	nd	-	-	-
10 ft E of Pile Location E18	3-2	S141	11/14/2022	E18	Construction Phase, construction of utility line, east property line, sidewall. See UA Report for further detail and testing.	528	4	nd	nd	nd	-	-	-
Drywell Installation													
Drywell 5	3-2	S142	12/21/2022	DW5	Construction Phase, northeast corner of property	955	35	nd	nd	nd	-	-	-
Drywell 4	3-2	S143	1/5/2023	DW 4	Construction Phase, northeast corner of property	233	2.5	nd	nd	nd	-	-	-
Drywell 4	3-2	S144	1/5/2023	DW 4	Construction Phase, northeast corner of property	233	35	nd	nd	nd	-	-	-
Drywell 3	3-2	S145	1/6/2023	DW 3	Construction Phase, northeast corner of property	233	2.5	nd	nd	nd	-	-	-
Drywell 3	3-2	S146	1/6/2023	DW 3	Construction Phase, northeast corner of property	233	35	nd	nd	nd	-	-	-
Interceptor 13	3-2	S147	1/5/2003	Interceptor	Construction Phase, northeast corner of property	233	13	nd	nd	nd	-	-	-
NW Pettygrove Street Utility													
NW Pettygrove Street ROW	3-2	S148	10/28/2022	TN-S1	Construction Phase, ROW, southeast of property	959	1	nd	nd	nd	-	-	-
NW Pettygrove Street ROW	3-2	S149	10/28/2022	TN-S2	Construction Phase, ROW, southeast of property	959	1	nd	nd	nd	-	-	-
NW Pettygrove Street ROW	3-2	S150	10/28/2022	TN-S3	Construction Phase, ROW, southeast of property	959	1	nd	**det**	**det**	-	nd	**4,190**
NW Pettygrove Street ROW	3-2	S151	10/28/2022	TN-S4	Construction Phase, ROW, southeast of property	959	1	nd	nd	nd	-	-	-
NW Pettygrove Street	3-2	S152	11/17/2022	ROW SE Corner	Construction Phase, utlility connection to city, southeast of property	677	6	nd	**det**	nd	-	**1,050**	nd
NW Pettygrove Street	3-2	S153	11/17/2022	ROW SE Corner	Construction Phase, utlility connection to city, southeast of property	677	3	nd	**det**	nd	-	**1,210**	nd
NW Pettygrove Street	3-2	S154	11/17/2022	ROW SE Corner	Construction Phase, utlility connection to city, southeast of property	677	2	nd	nd	nd	-	-	-
NW Pettygrove Street	3-2	S155	11/17/2022	ROW SE Corner	Construction Phase, utlility connection to city, southeast of property	677	4	nd	**det**	nd	-	**1,660**	nd
NW Pettygrove Street	3-2	S156	11/17/2022	ROW SE Corner	Construction Phase, utlility connection to city, southeast of property	677	5	nd	**det**	nd	-	**1,040**	nd
NW Pettygrove Street	3-2	S157	1/18/2023	ROW SE Corner	Construction Phase, utlility connection to city, southeast of property	233	1.2	nd	nd	nd	-	-	-
					Method Reporting Limit ^			26.3	64.8	130	26.3	27	55
					Risk Based Decision Making (RBDM) Screening Level for Soil for Vapor Intrusion into Buildings - Urban Residential (ppm)			n/a	n/a	n/a	94	>Max	>Max
					Risk Based Decision Making (RBDM) Screening Level for Soil for Leaching to Groundwater - Urban Residential (ppm)			n/a	n/a	n/a	31	9,500	>Max
					Risk Based Decision Making (RBDM) Screening Level for Soil Ingestion, Dermal Contact & Inhalation - Urban Residential (ppm)			n/a	n/a	n/a	2,500	2,200	5,700
					Risk Based Decision Making (RBDM) Screening Level for Soil Ingestion, Dermal Contact & Inhalation - Construction Worker (ppm)			n/a	n/a	n/a	9,700	4,600	11,000

Table 9
Summary of Contaminants - Remaining In Place Soil on Property
Block 290 West

Portland ,Oregon

AREA	Inset Map Figure #	Map ID	Sample Date	Sample ID (Chain of Custody)	Notes	Lab report # ends in " "	Estimated Sample Depth (below nearest sidewalk grade)	Hydrocarbon Identification Screen - Gasoline Range Organics*	Hydrocarbon Identification Screen - Diesel Range Organics*	Hydrocarbon Identification Screen - Oil Range Organics*	Total Petroleum Hydrocarbons-Gasoline (GRO/Gx)	Total Petroleum Hydrocarbons-Diesel (DRO/Dx)	Total Petroleum Hydrocarbons-Heavy Oil (RRO)
							feet	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Oregon DEQ Soil Matrix Cleanup Level - Level 3 (ppm)								n/a	n/a	n/a	130	1,000	n/a

Notes:

mg/kg = milligrams per kilogram (equivalent to parts per million [ppm]).
n/a = screening/cleanup level not applicable to this analytes.
nd = not detected at Method Reporting Limit.
>Max = risk-based concentration for this constituent is calculated as greater than 1,000,000 mg/kg (ppm), therefore, this substance is deemed not to pose risks in this scenario.
>Csat = soil RBC exceeds the limit of three-phase equilibrium partitioning.
Underlined and bold concentrations are above at least one of the screening levels.
- = sample was not analyzed for analyte
* = results for these analytes are indicated as a detection (det) or non-detection (nd), as Method NWTPH-HCID tests for detection of analyte.
^ = Method Reporting Limit values vary by sample - typical high end MRL shown - see analytical report for complete details.

APPENDICES

APPENDIX A

UST DECOMMISSIONING RECORDS/

DEQ CORRESPONDENCE

BLYMYER
ENGINEERS, INC.

December 5, 1989
BEI # 89519

Mr. Ben Encisco
Consolidated Freightways, Inc.
175 Linfield Drive
Menlo Park, CA 94025

Subject: Tank Removal, Consolidated Freightways, 2050 N.W. Quimby, Portland, Oregon 97209

Dear Ben:

In accordance with your request, BEI has conducted the subject work. The purpose of the work was to remove an underground storage tank. The work was conducted as follows.

Tank Removal

On October 30, 1989 one waste oil underground storage tank (approximately 500 gallon capacity) was removed from the subject site by Petroleum Equipment Maintenance Company (PEMCO). The tank was buried thirteen feet below grade level. A concrete manway, constructed in three pieces, was attached to the top of the tank. To stabilize the excavation, excavated soil was stockpiled in the excavation.

A representative of BEI was present during the removal and obtained two soil samples. Contamination was visible in the excavation around were the samples were taken. Groundwater was not present in the excavation. The samples were sent to NET/Pacific and analyzed for Oil and Grease (Extractable Petroleum Hydrocarbons by EPA method #418.1), Halogenated Volatile Organics (EPA method #8010) and EP Toxicity for the metals lead, cadmium, chromium and zinc. Notice that the attached lab results incorrectly show results for a WET analysis. NET has confirmed that the EP Toxicity analysis was preformed and that the values shown are for the same. A revised report will be issued.

As expected, petroleum hydrocarbons were found in large concentrations in both of the soil samples (14,000 ppm in sample S-1 and 6,200 in sample S-2). The EP Toxicity analysis showed leachable zinc (0.70 ppm in sample S-1 and 0.40 ppm in sample S-2). Halogenated volatile organics analysis showed tetrachloroethene (7.6 ppb and 25 ppb for samples S-1 and S-2, respectively).

Conclusions

Based upon the levels of hydrocarbons detected, BEI recommends submitting the referenced soil test results to the DEQ.

(415) 521-3773 • 1829 Clement Avenue, Alameda, California 94501-1395 • FAX (415) 865-2594

Cordially,
Blymyer Engineers, Inc.

Richard Riedl
UST Manager

enclosures:

NET/Pacific Lab Results dated 11/20/89.
BEI Record of Site Visit dated 10/30/89.

BLYMYER
ENGINEERS, INC.

1829 Clement Avenue, Alameda, California 94501

RECORD OF SITE VISIT

Site: PORTLAND, OREGON Date: 10/30/89 Time On: 12:00 PM Time Off: 6:00PM

Client: CONSOLIDATED FREIGHTWAYS Name: ROMAN WOROBEL

Purpose: WASTE OIL TANK REMOVAL Job No: 89519

General Contractor/Super: PEMCO Weather: CLEAR Temp: 50's

SUPERVISOR, BOB RATHKE Photos: Wind: 2 mph

Sub Contractors:

Equipment on Site: TRACTOR/TRAILER, BACKHOE, (1) PICK-UP, JACK HAMMER, AIR COMPRESSOR

Comments:

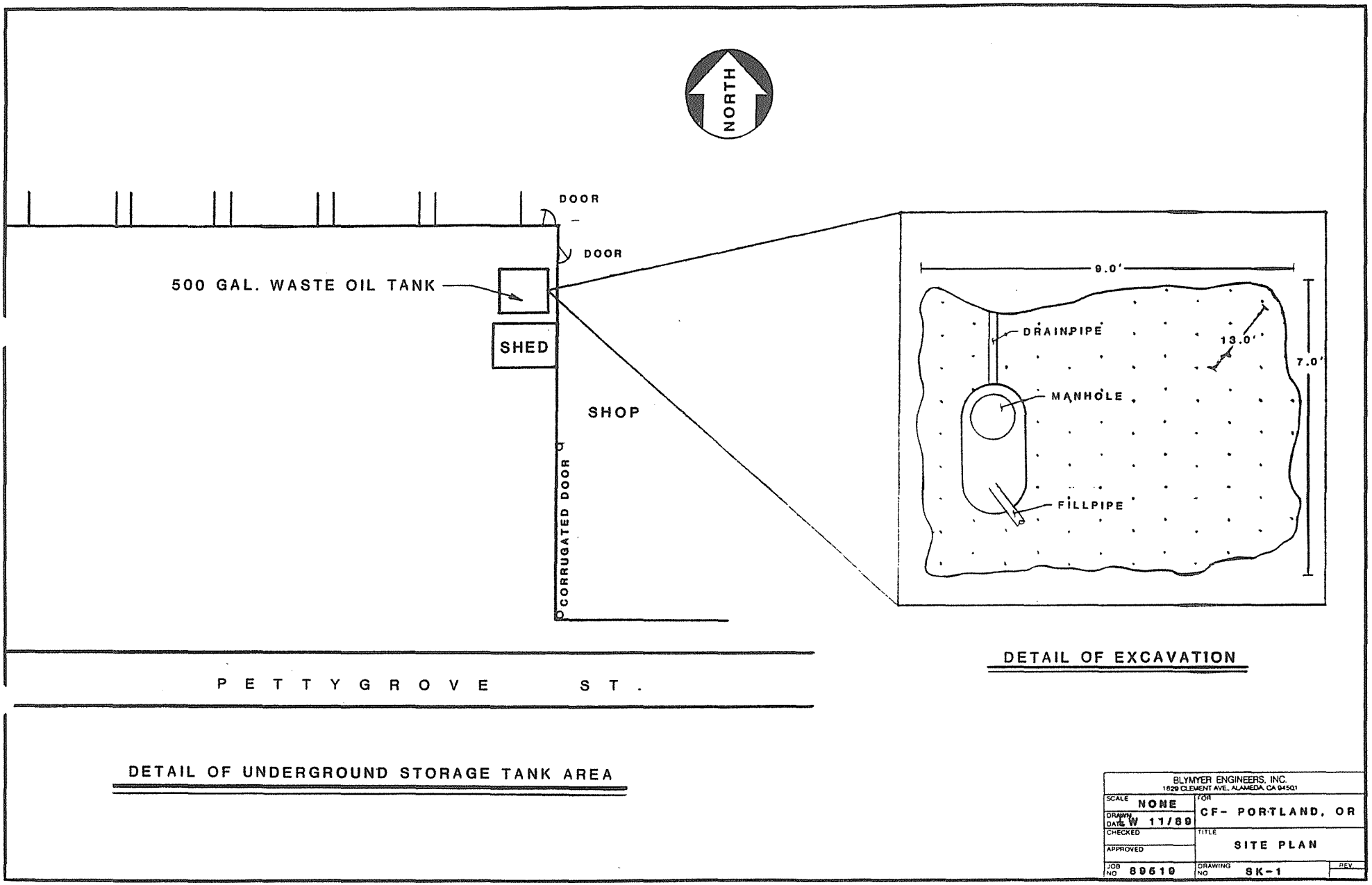
1. PEMCO began work at 1:00 PM.
2. Waste oil tank was attached to a concrete manhole.
3. Drain pipe leading into waste oil tank was broken during excavation but no leakage was observed.
4. Evidence of spillage resulted during tank removal at 5:20 PM.
5. Spillage was very evident around steel manhole of tank, once it was removed.
6. Excavation dimensions were 7' (L), 9' (W) and 13' (D).
7. Collected sample S-1 at fill end and S-2 at end where drain pipe fed into the holding tank. Both samples were heavily contaminated with waste oil. No ground water was noticed in the bottom of the excavation.

Copies to:

RECORD OF SITE VISIT

8. Both samples were collected at 5:30 PM.
9. Told PEMCO to backfill hole once samples were collected and install barricades around the excavation.
10. Told PEMCO BEI will contact them.

UST
Decommissioning
Figure



DETAIL OF EXCAVATION

DETAIL OF UNDERGROUND STORAGE TANK AREA

BLYMYER ENGINEERS, INC. 1829 CLEMENT AVE., ALAMEDA, CA 94501	
SCALE NONE	FOR CF- PORTLAND, OR
DRAWN W DATE 11/89	
CHECKED	TITLE SITE PLAN
APPROVED	
JOB NO 89619	DRAWING NO SK-1 REV

Underground Storage Tank Closure and Soil Matrix Cleanup Report

CF MotorFreight (PTS)
2050 N.W. Quimby
Portland, Oregon
Facility ID No. 1999
ODEQ Log No. 26-95-308

November 30, 1995 BEI Job No. 95002

Prepared for:

CF MotorFreight
P. O. Box 3010
Menlo Park, CA 94026-3010
(415) 326-1700

Prepared by:

Blymyer Engineers, Inc.
1829 Clement Avenue
Alameda, CA 94501-1395
(510) 521-3773

Limitations

Services performed by Blymyer Engineers, Inc. have been provided in accordance with generally accepted professional practices for the nature and conditions of similar work completed in the same or similar localities, at the time the work was performed. The scope of work for the project was conducted within the limitations prescribed by the client. This report is not meant to represent a legal opinion. No other warranty, expressed or implied, is made. This report was prepared for the sole use of CF MotorFreight.

Blymyer Engineers, Inc.

By:_____

Michael S. Lewis
Vice President, Technical Services
Soil Matrix Cleanup Supervisor License No. 10865

And:_____

Ramon Khu
Director, UST Services

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Figure 2: Site Plan

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Appendices

Appendix A: UST Removal Photographs

Appendix B: Laboratory Report, National Environmental Testing, Inc., November 17, 1995

Appendix C: Matrix Score Sheet and Matrix Checklist

1.0 Background

CF MotorFreight (CFMF) retained Blymyer Engineers, Inc. to arrange for the removal of the following underground storage tanks (USTs) at a property located at 2050 N.W. Quimby in Portland, Oregon:

- One (1) 30,000-gallon diesel UST
- One (1) 20,000-gallon diesel UST
- One (1) 10,000-gallon motor oil UST
- One (1) 5,000-gallon antifreeze UST
- One (1) 2,500-gallon waste oil UST
- One (1) 1,500-gallon waste oil UST
- One (1) 1,000-gallon gear oil UST
- One (1) 1,000-gallon antifreeze UST that previously stored a non-halogenated, petroleum-based solvent

The site is located in a commercial and industrial area situated to the north of downtown Portland, Oregon (Figure 1). The site comprises the entire area between N.W. Raleigh Street and N.W. Pettygrove Street to the north and south and N.W. 20th Avenue and N.W. 21st Avenue to the east and west (Figure 2). The site contains one large, T-shaped building that houses maintenance bays, offices, a steam cleaning area, and a former wash bay. A ramp east of the building provides access from N.W. 20th Avenue to parking on the roof of the building. The removed USTs were located in two separate excavations south of the eastern portion of the building and north of N.W. Pettygrove Street (Figures 2 and 3). A large vehicle parking area is located north of the building, between N.W. Quimby, which is blocked off at the property lines and runs through the center of the site, and N.W. Raleigh Street. The entire site is surfaced with asphalt and concrete. Portions of the site are secured with chain-link fencing.

The site is owned by CFMF and is used for maintenance of tractors and trailers operated by CFMF.

2.0 Underground Storage Tank Closure

The USTs and associated accessible underground piping were removed by Silver Sun Construction Company of Gresham, Oregon, between November 8 and November 10, 1995. Photographs of the UST removal are included as Appendix A.

Mr. Mitch Scheel of the Oregon Department of Environmental Quality (ODEQ) briefly visited the site during the UST removal on November 9, 1995.

A cursory inspection of each UST was performed by a representative of Blymyer Engineers after removal. A summary of UST closure information is presented in Table I. The actual capacities of the two waste oil USTs calculated from the measured dimensions were 5,000 gallons and 1,000 gallons. It was noted during removal that all of the USTs were cathodically protected with sacrificial anodes and were in good condition. The disposal documentation for residual liquid and sludge and the removed USTs will be forwarded to ODEQ with the UST Closure Checklist.

Accessible underground piping associated with the USTs was cut at the edge of the excavations and the portion lying within the excavations was removed. The product piping associated with the USTs had been wrapped with black tape up to the point where it entered a concrete-lined pump room and trench under the shop building. All removed piping was observed to be in very good condition. The ends of the inaccessible portions of the piping were capped with concrete at the edges of the excavations. The layout of the product piping and remote fills for the USTs is shown in Figure 3.

The backfill material in the UST excavation was composed predominantly of brown sand and gravel. The backfill around the 20,000-gallon diesel UST, which was installed more recently than the other USTs, was composed of light brown sand. The native soil surrounding the UST excavations was composed of brown clayey silt, silty sand, and sand. The only evidence of petroleum contamination observed during removal of the USTs was minor, localized discoloration

of the backfill around the submersible pumps and fill pipes for the two diesel USTs and the fill pipe for the motor oil UST.

Groundwater was not encountered in the UST excavation during the UST removal; however, all of the USTs except the 20,000-gallon diesel UST were strapped to concrete hold-down pads and minor amounts of perched water were observed under the former motor oil UST and 30,000-gallon diesel UST. Depth-to-groundwater measurements from four existing monitoring wells at the site indicate that groundwater has historically been deeper than 50 feet below ground surface (bgs).

3.0 Closure Site Assessment

Soil samples were collected from the native soil in the UST excavations, near the remote fills for the USTs (except the waste oil USTs), and from the stockpiled soil by a representative of Blymyer Engineers between November 8 and November 10, 1995. The locations of all soil samples are shown on Figure 3.

The locations where soil samples could be collected from the UST excavations and along the remote fills were limited by the presence of the concrete hold-down pads in the bottom of the excavations, and by the presence of the building to the north, the ramp to the east, and a large soil stockpile between the UST excavations. Consequently, soil samples could not be collected in exact accordance with ODEQ requirements (i.e., one soil sample per 150 square feet of surface area from the bottom of the UST excavations and every 20 feet along remote fills). Soil samples could not be collected along the remote fill piping for the waste oil USTs due to the depth of the piping and sampling equipment available, and the location of the piping inside the building in operating maintenance bays.

Soil samples AF-NE-1, D30-E-1, MO-S-1, WO5-NW-1, WO-S-1, and WO1-E-1 were collected using the excavator bucket from the sidewalls of the UST excavations, at the level of the top of the hold-down pad in each area, at depths ranging from 8 to 18 feet bgs. Soil sample GO-W-1 was collected using the excavator bucket along the side and slightly below the level of the hold-down pad under the removed gear oil UST at a depth of 10 feet bgs. Soil samples D20-E-1 and D20-W-1 were collected using the excavator bucket from under the east and west ends, respectively, of the removed 20,000-gallon diesel UST, at a depth of 17 feet bgs. Soil samples RF-1-3', RF-1-6.5', and RF-2-3' were collected using a clean hand auger at depths of 3 to 6.5 feet bgs near the remote fills located along N.W. 20th Avenue. Soil sample RF-3 was collected from an open excavation near the remote fills located toward N.W. Pettygrove Street.

Soil samples SP-1 through SP-7 were collected from the stockpiled soil at the rate of one sample per approximately 50 cubic yards of stockpiled soil.

Soil from each sampling location in the UST excavations and remote fill areas was screened in the field for organic vapors. Prior to sampling, a small amount of soil was placed in an unused, resealable plastic bag for headspace analysis. Each plastic bag was immediately sealed and left undisturbed for a minimum duration of 5 minutes to allow for the volatilization of any organic vapors in the soil into the headspace. After the specified time had elapsed, the probe of a photoionization detector (PID), which was calibrated daily to an isobutylene gas standard, was quickly inserted into the resealable bag and the maximum detected organic vapor reading was recorded. The PID readings are included in Table II.

Each soil sample for laboratory analysis was collected by scraping away several inches of overlying soil and transferring some of the underlying soil into a pre-cleaned, laboratory-supplied, 9-ounce glass jar with a Teflon®-lined lid. The soil samples were labeled, placed in a cooler with ice, and delivered with proper chain-of-custody documentation to National Environmental Testing, Inc. (NET) in Portland, Oregon.

All soil samples except RF-1-6.5' were analyzed by NET for Total Petroleum Hydrocarbons (TPH) using the Hydrocarbon Identification (HCID) test (Oregon Administrative Rules [OAR]-HCID method). In addition, soil samples AF-NE-1, RF-1-3', SP-2, and SP-7 were analyzed for ethylene glycol by modified EPA Method 8015 (GC/FID). These soil samples were collected in the vicinity of the removed antifreeze USTs and the remote fills for the antifreeze USTs, and from the excavated backfill around the antifreeze USTs. The laboratory analytical results are summarized in Tables II and III and the laboratory report is included as Appendix B.

Gasoline and diesel were identified in the TPH-HCID test and ethylene glycol was detected at a concentration of 73 milligrams per kilogram (mg/kg) in soil sample RF-1-3'. This soil sample was subsequently analyzed for TPH as gasoline (TPH-G) and TPH as diesel (TPH-D) using OAR methods. TPH-G and TPH-D were detected at concentrations of 29 and 3,000 mg/kg, respectively. Soil sample RF-1-6.5', collected 3.5 feet below soil sample RF-1-3' in the same hand-augered bore, was not analyzed because it was obviously contaminated.

Gasoline, diesel, and heavy oil were identified in the TPH-HCID test in soil sample RF-2-3'. This soil sample was subsequently analyzed for TPH-G using the OAR method and Total Recoverable Petroleum Hydrocarbons (TRPH) using the OAR TPH-418.1M method. TPH-G and TRPH were detected at concentrations of 27 and 4,000 mg/kg, respectively.

Diesel and heavy oil were identified in the TPH-HCID test in soil sample SP-2. This soil sample was subsequently analyzed for TRPH using the OAR TPH-418.1M method and was found to contain TRPH at a concentration of 850 mg/kg. Diesel was identified in the TPH-HCID test in soil sample SP-6. This soil sample was subsequently analyzed for TPH-D using the OAR method and found to contain TPH-D at a concentration of 120 mg/kg. Ethylene glycol was detected in soil sample SP-7 at a concentration of 11 mg/kg.

Based on the presence of gasoline, diesel, and heavy oil in the TPH-HCID tests, and the detectable levels of ethylene glycol, a confirmed release was reported to the ODEQ on November 14, 1995. The Matrix Score Sheet was completed for the site and based on a matrix score of 39, Level 2 Cleanup Standards were determined to apply to the site. There is no established cleanup standard for ethylene glycol. The completed Matrix Score Sheet and Matrix Checklist are presented as Appendix C.

The concentrations of TPH-D in soil sample RF-1-3' and TRPH in soil samples RF-2-3' and SP-2 exceeded the Level 2 Cleanup Standard of 500 mg/kg. The detected concentrations of TPH-G in soil samples RF-1-3' and RF-2-3' did not exceed the Level 2 Cleanup Standard of 80 mg/kg. The TPH-D concentration in soil sample SP-6 also did not exceed the Level 2 Cleanup Standard of 500 mg/kg.

On November 15, 1995, the ODEQ approved the backfilling of the UST excavations with imported fill and the two soil stockpiles represented by soil samples SP-1, SP-5, SP-6, and SP-7. The backfilled areas will be resurfaced with asphalt.

The stockpiled soil represented by soil samples SP-2, SP-3, and SP-4 will be transported to TPS Oregon Hydrocarbon, Inc. for recycling using thermal treatment.

4.0 Summary and Recommendations

- Eight USTs and associated accessible underground piping were removed by Silver Sun Construction Company between November 8 and November 10, 1995. The USTs and removed piping were in good condition with no corrosion holes observed.

- Minor, localized discoloration of the backfill was observed around the submersible pumps and fill pipes for the diesel USTs and the fill pipe for the motor oil UST. This material was removed from the excavation with the surrounding backfill during removal of the USTs. The elevated concentration of TRPH in soil stockpile sample SP-2 is believed to be due to this removed contaminated backfill. Stockpiled soil represented by soil samples SP-2, SP-3, and SP-4 will be hauled off-site and recycled.

- Groundwater was not encountered in the excavation during the removal of the USTs and is known to be historically deeper than 50 feet bgs.

- Evidence of a release of petroleum and antifreeze was found near the remote fills along N.W. 20th Avenue. Due to the presence of the sidewalk, street, and ramp, soil contaminated with diesel and heavy oil in excess of Level 2 Cleanup Standards in this area is inaccessible and cannot be excavated. Blymyer Engineers recommends that the extent, volume, and level of contamination in this area be defined and that the pocket of contaminated soil be left in place pursuant to OAR 340-122-355(4).

- Blymyer Engineers recommends that a copy of this report be submitted to:

Oregon Department of Environmental Quality
Northwest Region
2020 S.W. Fourth Avenue, Suite 400
Portland, OR 97201-4987
Attn: Mitch Scheel

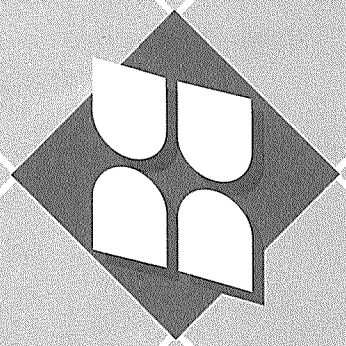


Table I, UST Closure Summary
CF MotorFreight (PTS)
2050 N.W. Quimby, Portland, Oregon
BEI Job No. 95002

Tank I.D.	Capacity (gallons)	Contents	Dimensions	Tank Construction	Piping Construction	Installation Date	Date Out of Service	Pump Type	Condition of Tank and Piping
D-1	30,000	Diesel	11'-6"D x 39'-1"L	SWS	SWS	1966	12/94	PR	Good, no holes observed.
D-2	20,000	Diesel	9'-9"D x 35'-1"L	SWS	SWS	1980	12/94	PR	Very good, no holes observed.
MO-1	10,000	Motor Oil	7'-11"D x 28'L	SWS	SWS	1966	12/94	SU	Good, no holes observed.
WO-1	5,000	Waste Oil	7'-11"D x 14'-2"L	SWS	SWS	1966	12/94	GR	Good, no holes observed.
AF-1	5,000	Antifreeze	7'-11'D x 14'-2"L	SWS	SWS	1966	12/94	SU	Good, no holes observed.
WO-2	1,000	Waste Oil	3'-8" x 12'L	SWS	SWS	1966	12/94	GR	Good, no holes observed.
AF-2	1,000	Antifreeze*	3'-8" x 12'L	SWS	SWS	1966	12/94	SU	Good, no holes observed.
GO-1	1,000	Gear Oil	3'-8"D x 12'L	SWS	SWS	1966	12/94	SU	Good, no holes observed.

UST = Underground Storage Tank
D = Diameter
L = Length
SWS = Single-walled Steel
PR = Pressure
SU = Suction
GR = Gravity (no pump)
* This UST previously contained non-halogenated, petroleum-based solvent.

Table II, Summary of Excavation Soil Sample Analytical Results
CF MotorFreight (PTS)
2050 N.W. Quimby, Portland, Oregon
BEI Job No. 95002

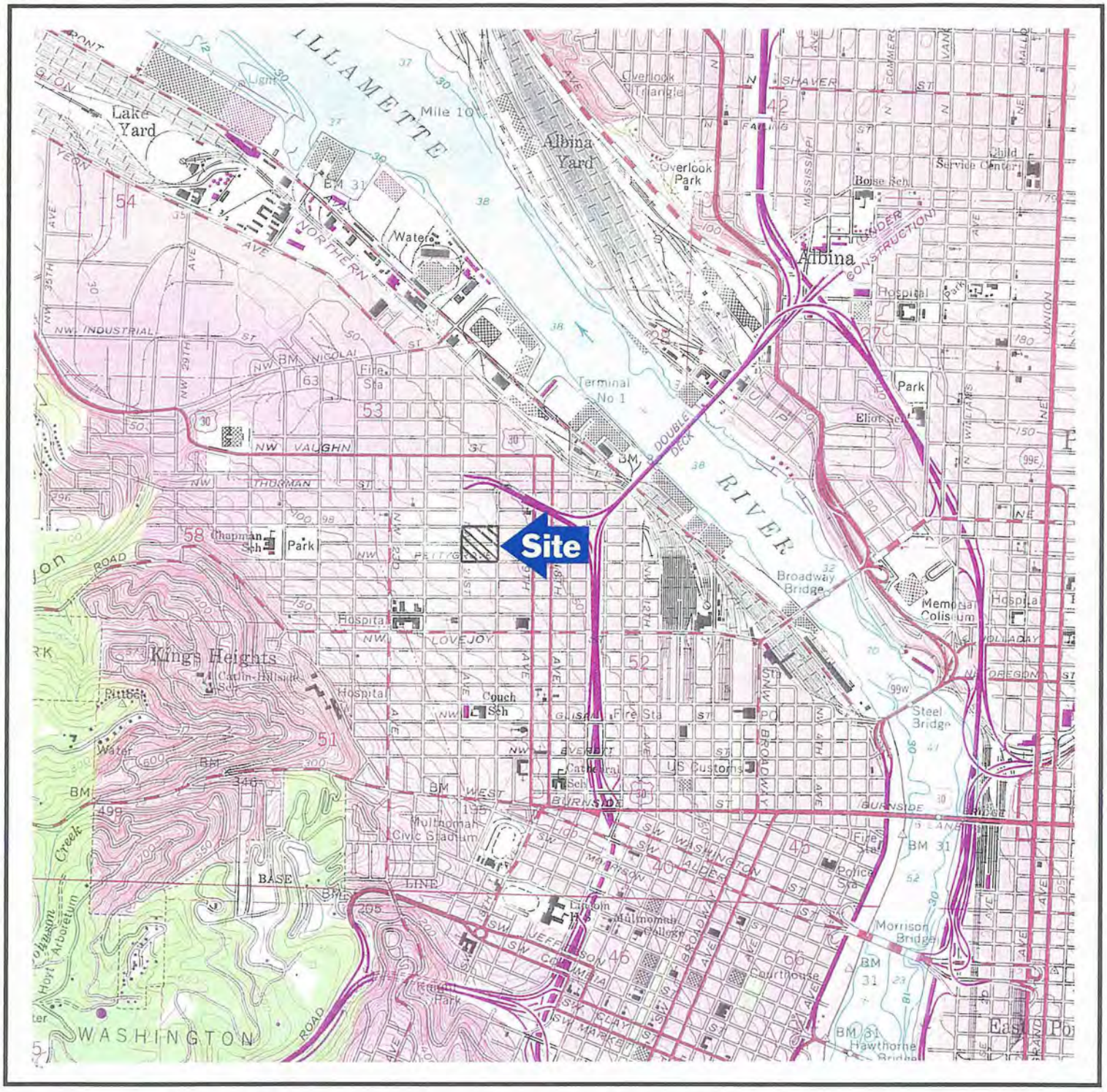
Sample I.D.	Collection Date	Depth (feet bgs)	PID Reading (ppm)	TPH-HCID	Ethylene Glycol	TPH-G	TPH-D	TRPH
				No Units	mg/kg	mg/kg	mg/kg	mg/kg
AF-NE-1	11/8/95	8	0	ND	<10	NA	NA	NA
GO-W-1	11/9/95	10	0	ND	NA	NA	NA	NA
RF-1-3'	11/9/95	3	93	**G,D**	**73**	**29**	**3,000**	NA
RF-1-6.5'	11/9/95	6.5	110	NA	NA	NA	NA	NA
RF-2-3'	11/9/95	3	60	**G,D,HO**	NA	**27**	NA	**4,000**
D30-E-1	11/10/95	15	0	ND	NA	NA	NA	NA
D20-E-1	11/10/95	17	0	ND	NA	NA	NA	NA
WO5-NW-1	11/10/95	18	3.1	ND	NA	NA	NA	NA
WO-S-1	11/10/95	18	3.1	ND	NA	NA	NA	NA
WO1-E-1	11/10/95	14	2.3	ND	NA	NA	NA	NA
MO-S-1	11/10/95	12	0	ND	NA	NA	NA	NA
D20-W-1	11/10/95	17	0	ND	NA	NA	NA	NA
RF-3	11/10/95	3	0	ND	NA	NA	NA	NA
Level 2 Soil Matrix Cleanup Standard					-	80	500	500

bgs = below ground surface
PID = Photoionization Detector
ppm = parts per million
TPH = Total Petroleum Hydrocarbons
mg/kg = milligrams per kilogram (ppm)
HCID = Hydrocarbon Identification Test
G = Gasoline
D = Diesel
HO = Heavy Oil
TRPH = Total Recoverable Petroleum Hydrocarbons
ND = Not Detected
NA = Not Analyzed
- = Not Applicable
<x = Less than method reporting limit *x*

Table III, Summary of Soil Stockpile Sample Analytical Results
CF MotorFreight (PTS)
2050 N.W. Quimby, Portland, Oregon
BEI Job No. 95002

Sample I.D.	Collection Date	TPH-HCID	Ethylene Glycol	TPH-G	TPH-D	TRPH
		No Units	mg/kg	mg/kg	mg/kg	mg/kg
SP-1	11/10/95	ND	NA	NA	NA	NA
SP-2	11/10/95	**D,HO**	<10	NA	NA	**850**
SP-3	11/10/95	ND	NA	NA	NA	NA
SP-4	11/10/95	ND	NA	NA	NA	NA
SP-5	11/10/95	ND	NA	NA	NA	NA
SP-6	11/10/95	**D**	NA	NA	**120**	NA
SP-7	11/10/95	ND	**11**	NA	NA	NA
Level 2 Soil Matrix Cleanup Standard			-	40	500	500

TPH	=	Total Petroleum Hydrocarbons
mg/kg	=	milligrams per kilogram (parts per million)
HCID	=	Hydrocarbon Identification Test
G	=	Gasoline
D	=	Diesel
HO	=	Heavy Oil
TRPH	=	Total Recoverable Petroleum Hydrocarbons
ND	=	Not Detected
NA	=	Not Analyzed
-	=	Not Applicable
<*x*	=	Less than method reporting limit *x*



UNITED STATES GEOLOGICAL SURVEY 7.5' QUAD. "PORTLAND, OR-WA" ED. 1961 AND PHOTOREVISED 1970 AND 1977.

BLYMYER ENGINEERS, INC.

BEI JOB NO. 95002

DATE 11/27/95

0 1000 2000

SCALE IN FEET

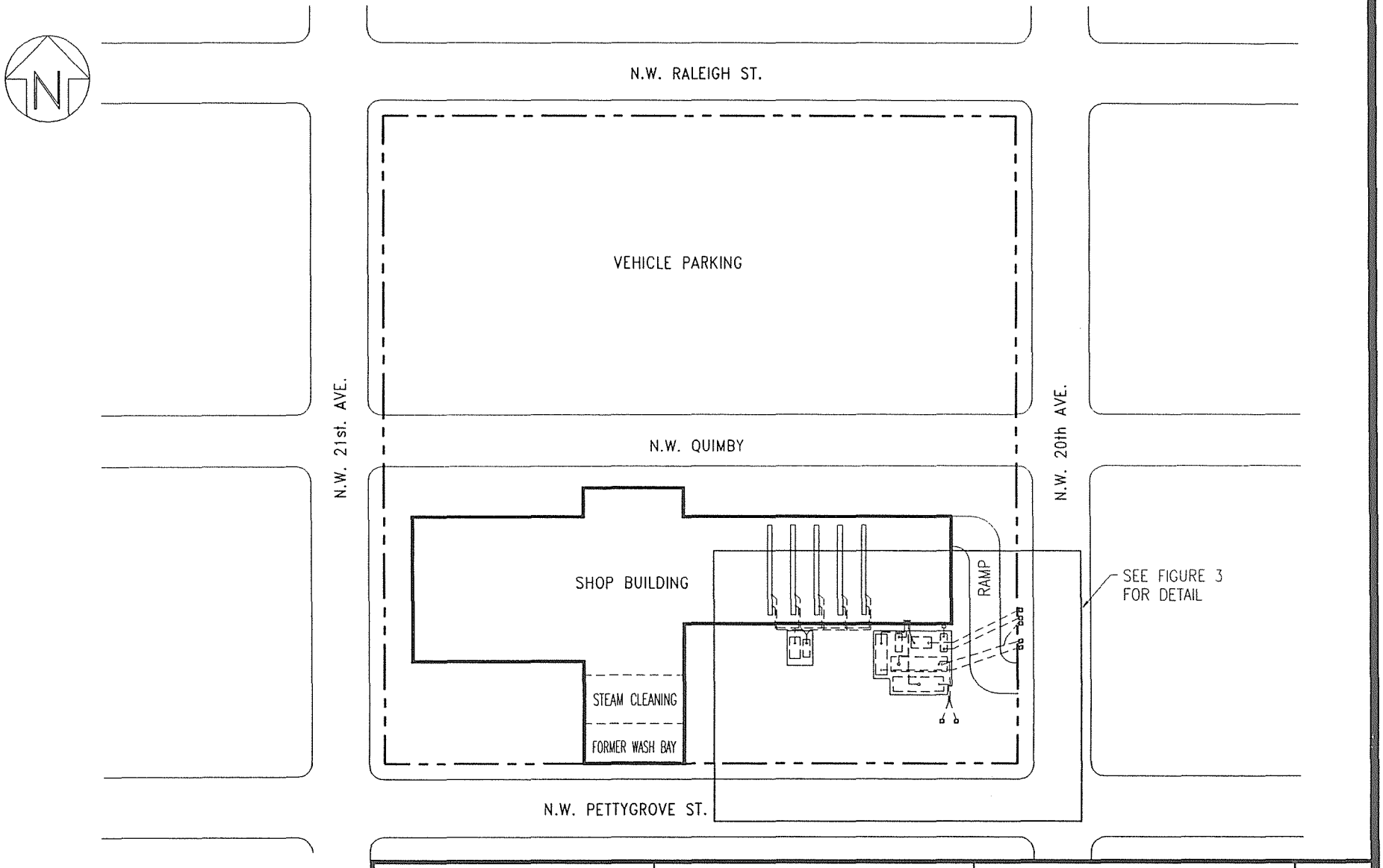
N

SITE LOCATION MAP

CF MOTORFREIGHT
2050 N.W. QUIMBY
PORTLAND, OR

FIGURE 1

THE USE OF THESE DRAWINGS AND SPECIFICATIONS SHALL BE RESTRICTED TO THE ORIGINAL USE FOR WHICH THEY WERE PREPARED. REUSE, REPRODUCTION, OR PUBLICATION, IN WHOLE OR IN PART, IS PROHIBITED WITHOUT THE WRITTEN CONSENT OF BLYMYER ENGINEERS, INC.



BLYMYER ENGINEERS, INC.

BEI JOB NO.	DATE
95002	11/28/95

LEGEND

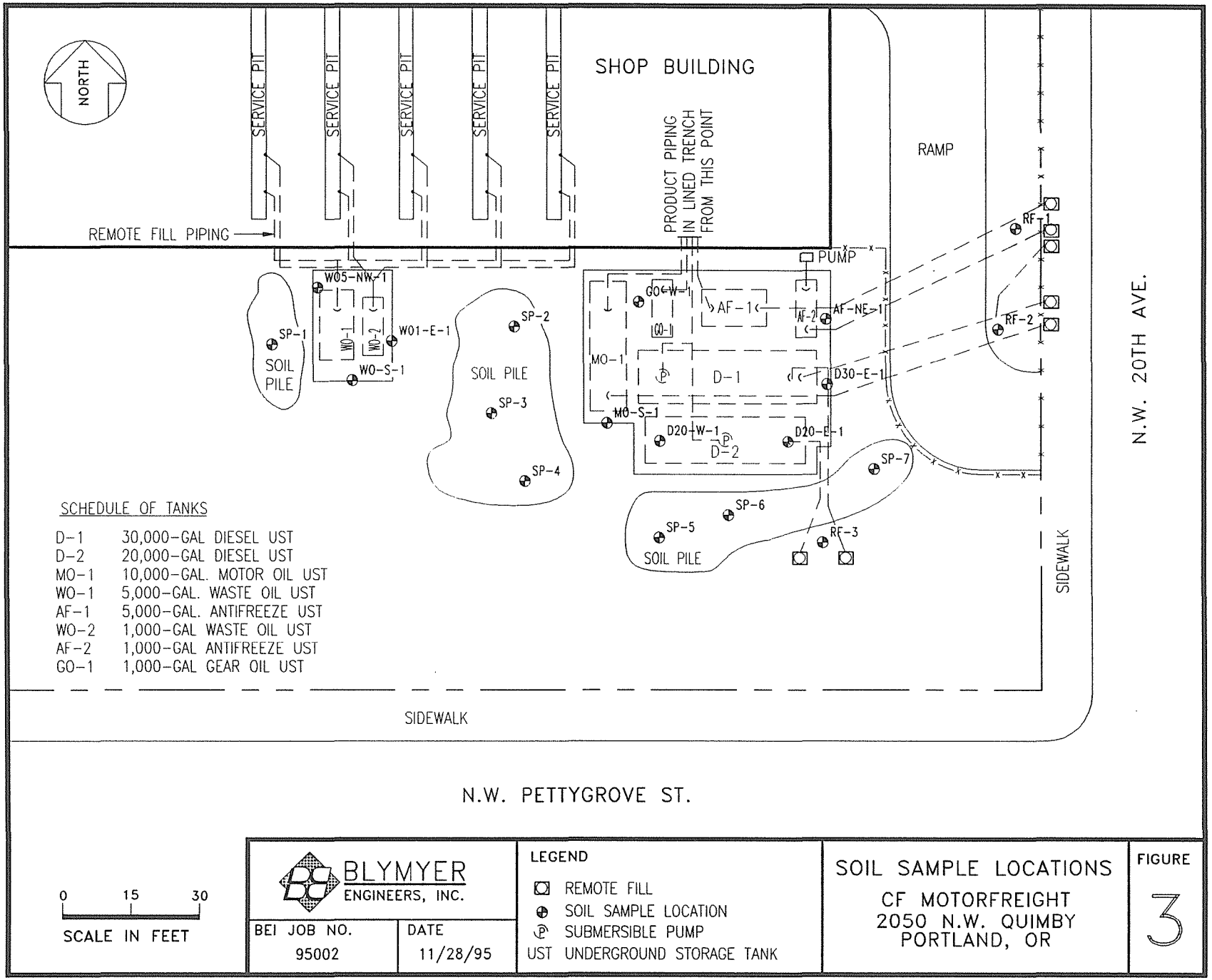
SITE PLAN

CF MOTORFREIGHT
2050 N.W. QUIMBY
PORTLAND, OR

FIGURE 2

REVISED 11-29-95 H:\PUBLIC\ACADLW\950022

THE USE OF THESE DRAWINGS AND SPECIFICATIONS SHALL BE RESTRICTED TO THE ORIGINAL USE FOR WHICH THEY WERE PREPARED. REUSE, REPRODUCTION, OR PUBLICATION, IN WHOLE OR IN PART, IS PROHIBITED WITHOUT THE WRITTEN CONSENT OF BLYMYER ENGINEERS, INC.



SCHEDULE OF TANKS

D-1	30,000-GAL DIESEL UST
D-2	20,000-GAL DIESEL UST
MO-1	10,000-GAL. MOTOR OIL UST
WO-1	5,000-GAL. WASTE OIL UST
AF-1	5,000-GAL. ANTIFREEZE UST
WO-2	1,000-GAL WASTE OIL UST
AF-2	1,000-GAL ANTIFREEZE UST
GO-1	1,000-GAL GEAR OIL UST

0 15 30
SCALE IN FEET

BLYMYER ENGINEERS, INC.

BEI JOB NO.	DATE
95002	11/28/95

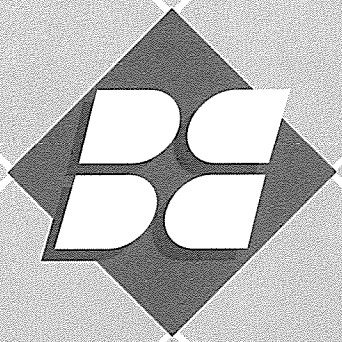
LEGEND
- REMOTE FILL
- SOIL SAMPLE LOCATION
- SUBMERSIBLE PUMP
- UST UNDERGROUND STORAGE TANK

SOIL SAMPLE LOCATIONS

CF MOTORFREIGHT
2050 N.W. QUIMBY
PORTLAND, OR

FIGURE 3

REVISED 11-29-95 H:\PUBLIC\ACADLW\950023



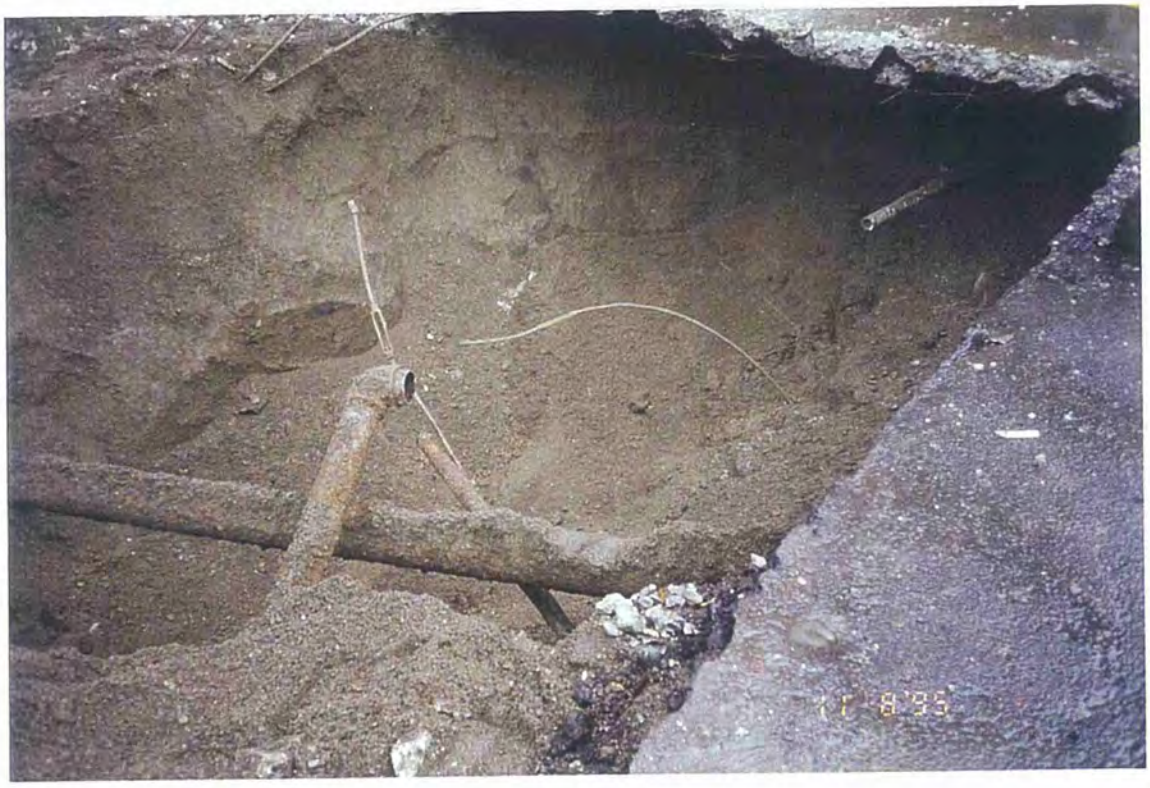
A

Photograph 1: Entry point of product piping into concrete-lined pump room.

Photograph 2: Product piping entering service pit from concrete-lined trench.

Photograph 3: Remote fills in sidewalk along N.W. 20th Avenue (view northwest).

Photograph 4: Removed 1,000-gallon antifreeze UST (AF-2).



Photograph 5: Excavation for 1,000-gallon antifreeze UST (view northwest).

Photograph 6: Removed 5,000-gallon antifreeze UST (AF-1).

Photograph 7: Excavation for 5,000-gallon antifreeze UST (view east).

Photograph 8: Removed 1,000-gallon gear oil UST (GO-1).

Photograph 9: Excavation for 1,000-gallon gear oil UST (view north).

Photograph 10: Removed 1,000-gallon waste oil UST (WO-2).

Photograph 11: Excavation for 1,000-gallon waste oil UST (view southeast).

Photograph 12: Hand auger locations for soil samples RF-1-3', RF-1-6', and RF-2-3' (view south).

Photograph 13: Removed 10,000-gallon motor oil UST (MO-1).

Photograph 14: Removed 20,000-gallon diesel UST (D-2).

Photograph 15: Excavation for 10,000-gallon motor oil UST (view south).

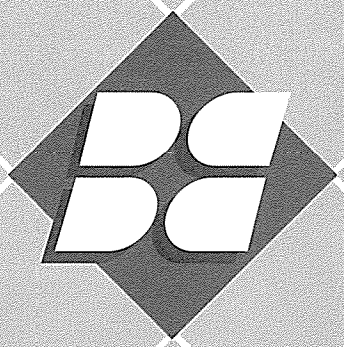
Photograph 16: Excavation for 20,000-gallon diesel UST (view west).

Photograph 17: Removed 5,000-gallon waste oil UST (WO-1).

Photograph 18: 30,000-gallon diesel UST (D-1) just prior to removal (view east).

Photograph 19: Excavation for 5,000-gallon waste oil UST (view south).

Photograph 20: Excavation for 30,000-gallon diesel UST (view west).



NATIONAL ENVIRONMENTAL TESTING, INC.

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Ramon Khu
Blymyer Engineering, Inc.
1829 Clement Avenue
Alameda, CA 95401-1395

Date: 11/17/1995
NET Account No.: 4000
NET Job Number: 95.03776

Project:
Location:

Sample analysis in support of the project referenced above has been completed and results are presented on the following pages. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Sample Number	Sample Description	Matrix Type	Date Taken	Date Received
50482	AF-NE-1 (8')	SOIL	11/08/1995	11/10/1995
50483	GO-W-1 (10')	SOIL	11/09/1995	11/10/1995
50484	RF-1-3' (25'-3')	SOIL	11/09/1995	11/10/1995
50485	RF-1-6.5' (6'-6.5') - HOLD	SOIL	11/09/1995	11/10/1995
50486	RF-2-3' (2.5'-3')	SOIL	11/09/1995	11/10/1995
50487	D30-E-1 (15')	SOIL	11/10/1995	11/10/1995
50488	D20-E-1 (17')	SOIL	11/10/1995	11/10/1995
50489	W05-NW (18')	SOIL	11/10/1995	11/10/1995
50490	W0-S-1 (18')	SOIL	11/10/1995	11/10/1995
50491	W01-E-1- (14')	SOIL	11/10/1995	11/10/1995
50492	MO-S-1 (12')	SOIL	11/10/1995	11/10/1995
50493	D20-W-1 (17')	SOIL	11/10/1995	11/10/1995
50494	RF-3 (3')	SOIL	11/10/1995	11/10/1995
50495	SP-1	SOIL	11/10/1995	11/10/1995
50496	SP-2	SOIL	11/10/1995	11/10/1995
50497	SP-3	SOIL	11/10/1995	11/10/1995
50498	SP-4	SOIL	11/10/1995	11/10/1995
50499	SP-5	SOIL	11/10/1995	11/10/1995
50500	SP-6	SOIL	11/10/1995	11/10/1995
50501	SP-7	SOIL	11/10/1995	11/10/1995

Approved by:

Tabatha Brochu
NET, INC. Project Manager

OCEAN GROUP

ANALYTICAL REPORT

Ramon Khu
Blymyer Engineering, Inc.
1829 Clement Avenue
Alameda, CA 95401-1395

11/17/1995
Job No.: 95.03776

Project Name:
Date Received: 11/10/1995

Sample Number 50482 — Sample Description: AF-NE-1 (8')

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
OAR TPH-HCID (S) PREP	OAR-HCID	-	-		11/10/1995	
OAR TPH-HCID (S)						
Dilution Factor		1	-		11/10/1995	
Gasoline	OAR-HCID	ND	20	mg/Kg	11/10/1995	
Diesel	OAR-HCID	ND	50	mg/Kg	11/10/1995	
Heavy Oil	OAR-HCID	ND	100	mg/Kg	11/10/1995	
Glycols by GC/FID (S)						
Ethylene glycol	GC/FID	ND	10.0	mg/Kg	11/13/1995	

Sample Number 50483 — Sample Description: GO-W-1 (10')

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
OAR TPH-HCID (S) PREP	OAR-HCID	-	-		11/10/1995	
OAR TPH-HCID (S)						
Dilution Factor		1	-		11/10/1995	
Gasoline	OAR-HCID	ND	20	mg/Kg	11/10/1995	
Diesel	OAR-HCID	ND	50	mg/Kg	11/10/1995	
Heavy Oil	OAR-HCID	ND	100	mg/Kg	11/10/1995	

Sample Number 50484 — Sample Description: RF-1-3' (25'-3')

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
OAR TPH-HCID (S) PREP	OAR-HCID	-	-		11/10/1995	
OAR TPH-HCID (S)						
Dilution Factor		1	-		11/10/1995	
Gasoline	OAR-HCID	Gasoline	20	mg/Kg	11/10/1995	
Diesel	OAR-HCID	Diesel	50	mg/Kg	11/10/1995	
Heavy Oil	OAR-HCID	ND	100	mg/Kg	11/10/1995	
OAR TPH-GAS (S)						
Dilution Factor		1	-		11/13/1995	

A sample result of ND indicates the parameter was Not Detected at the reporting limit.

ANALYTICAL REPORT

Ramon Khu
Blymyer Engineering, Inc.
1829 Clement Avenue
Alameda, CA 95401-1395

11/17/1995
Job No.: 95.03776

Project Name:
Date Received: 11/10/1995

Sample Number 50484 — Sample Description: RF-1-3' (25'-3')

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
TPH-Gas	OAR-G	29	10	mg/Kg	11/13/1995	
OAR TPH-DIESEL (S) PREP		-	-		11/14/1995	
OAR TPH-DIESEL (S)						
Dilution Factor		1	-		11/14/1995	
TPH-Diesel	OAR-D	3000	20	mg/Kg	11/14/1995	
Glycols by GC/FID (S)						
Ethylene glycol	GC/FID	73	10.0	mg/Kg	11/13/1995	

Sample Number 50486 — Sample Description: RF-2-3' (2.5'-3')

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
OAR TPH-HCID (S) PREP	OAR-HCID	-	-		11/10/1995	
OAR TPH-HCID (S)						
Dilution Factor		1	-		11/10/1995	
Gasoline	OAR-HCID	Gasoline	20	mg/Kg	11/10/1995	
Diesel	OAR-HCID	Diesel	50	mg/Kg	11/10/1995	
Heavy Oil	OAR-HCID	Oil	100	mg/Kg	11/10/1995	
OAR TPH-GAS (S)						
Dilution Factor		1	-		11/13/1995	
TPH-Gas	OAR-G	27	10	mg/Kg	11/13/1995	
OAR TPH-418.1M (S) PREP		-	-		11/14/1995	
OAR TPH-418.1M (S)	TPH-418.1M	4000	5	mg/Kg	11/15/1995	

Sample Number 50487 — Sample Description: D30-E-1 (15')

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
OAR TPH-HCID (S) PREP	OAR-HCID	-	-		11/10/1995	
OAR TPH-HCID (S)						
Dilution Factor		1	-		11/10/1995	
Gasoline	OAR-HCID	ND	20	mg/Kg	11/10/1995	

A sample result of ND indicates the parameter was Not Detected at the reporting limit.

ANALYTICAL REPORT

Ramon Khu
Blymyer Engineering, Inc.
1829 Clement Avenue
Alameda, CA 95401-1395

11/17/1995
Job No.: 95.03776

Project Name:
Date Received: 11/10/1995

Sample Number 50487 — Sample Description D30-E-1 (15')

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
Diesel	OAR-HCID	ND	50	mg/Kg	11/10/1995	
Heavy Oil	OAR-HCID	ND	100	mg/Kg	11/10/1995	

Sample Number 50488 — Sample Description D20-E-1 (17')

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
OAR TPH-HCID (S) PREP	OAR-HCID	-	-		11/10/1995	
OAR TPH-HCID (S)						
Dilution Factor		1	-		11/10/1995	
Gasoline	OAR-HCID	ND	20	mg/Kg	11/10/1995	
Diesel	OAR-HCID	ND	50	mg/Kg	11/10/1995	
Heavy Oil	OAR-HCID	ND	100	mg/Kg	11/10/1995	

Sample Number 50489 — Sample Description W05-NW (18')

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
OAR TPH-HCID (S) PREP	OAR-HCID	-	-		11/10/1995	
OAR TPH-HCID (S)						
Dilution Factor		1	-		11/10/1995	
Gasoline	OAR-HCID	ND	20	mg/Kg	11/10/1995	
Diesel	OAR-HCID	ND	50	mg/Kg	11/10/1995	
Heavy Oil	OAR-HCID	ND	100	mg/Kg	11/10/1995	

Sample Number 50490 — Sample Description W0-S-1 (18')

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
OAR TPH-HCID (S) PREP	OAR-HCID	-	-		11/10/1995	
OAR TPH-HCID (S)						
Dilution Factor		1	-		11/10/1995	

A sample result of ND indicates the parameter was Not Detected at the reporting limit.

ANALYTICAL REPORT

Ramon Khu
Blymyer Engineering, Inc.
1829 Clement Avenue
Alameda, CA 95401-1395

11/17/1995
Job No.: 95.03776

Project Name:
Date Received: 11/10/1995

Sample Number 50490 — Sample Description: W0-S-1 (18')

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
Gasoline	OAR-HCID	ND	20	mg/Kg	11/10/1995	
Diesel	OAR-HCID	ND	50	mg/Kg	11/10/1995	
Heavy Oil	OAR-HCID	ND	100	mg/Kg	11/10/1995	

Sample Number 50491 — Sample Description: W01-E-1- (14')

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
OAR TPH-HCID (S) PREP	OAR-HCID	-	-		11/10/1995	
OAR TPH-HCID (S)						
Dilution Factor		1	-		11/10/1995	
Gasoline	OAR-HCID	ND	20	mg/Kg	11/10/1995	
Diesel	OAR-HCID	ND	50	mg/Kg	11/10/1995	
Heavy Oil	OAR-HCID	ND	100	mg/Kg	11/10/1995	

Sample Number 50492 — Sample Description: MO-S-1 (12')

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
OAR TPH-HCID (S) PREP	OAR-HCID	-	-		11/10/1995	
OAR TPH-HCID (S)						
Dilution Factor		1	-		11/10/1995	
Gasoline	OAR-HCID	ND	20	mg/Kg	11/10/1995	
Diesel	OAR-HCID	ND	50	mg/Kg	11/10/1995	
Heavy Oil	OAR-HCID	ND	100	mg/Kg	11/10/1995	

Sample Number 50493 — Sample Description: D20-W-1 (17')

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
OAR TPH-HCID (S) PREP	OAR-HCID	-	-		11/10/1995	
OAR TPH-HCID (S)						

A sample result of ND indicates the parameter was Not Detected at the reporting limit.

ANALYTICAL REPORT

Ramon Khu
Blymyer Engineering, Inc.
1829 Clement Avenue
Alameda, CA 95401-1395

11/17/1995
Job No.: 95.03776

Project Name:
Date Received: 11/10/1995

Sample Number 50493 — Sample Description D20-W-1 (17')

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
Dilution Factor		1	-		11/10/1995	
Gasoline	OAR-HCID	ND	20	mg/Kg	11/10/1995	
Diesel	OAR-HCID	ND	50	mg/Kg	11/10/1995	
Heavy Oil	OAR-HCID	ND	100	mg/Kg	11/10/1995	

Sample Number 50494 — Sample Description RF-3 (3')

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
OAR TPH-HCID (S) PREP	OAR-HCID	-	-		11/10/1995	
OAR TPH-HCID (S)						
Dilution Factor		1	-		11/10/1995	
Gasoline	OAR-HCID	ND	20	mg/Kg	11/10/1995	
Diesel	OAR-HCID	ND	50	mg/Kg	11/10/1995	
Heavy Oil	OAR-HCID	ND	100	mg/Kg	11/10/1995	

Sample Number 50495 — Sample Description SP-1

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
OAR TPH-HCID (S) PREP	OAR-HCID	-	-		11/10/1995	
OAR TPH-HCID (S)						
Dilution Factor		1	-		11/10/1995	
Gasoline	OAR-HCID	ND	20	mg/Kg	11/10/1995	
Diesel	OAR-HCID	ND	50	mg/Kg	11/10/1995	
Heavy Oil	OAR-HCID	ND	100	mg/Kg	11/10/1995	

Sample Number 50496 — Sample Description SP-2

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
OAR TPH-HCID (S) PREP	OAR-HCID	-	-		11/10/1995	

A sample result of ND indicates the parameter was Not Detected at the reporting limit.

ANALYTICAL REPORT

Ramon Khu
Blymyer Engineering, Inc.
1829 Clement Avenue
Alameda, CA 95401-1395

11/17/1995
Job No.: 95.03776

Project Name:
Date Received: 11/10/1995

Sample Number 50496 — Sample Description SP-2

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
OAR TPH-HCID (S)						
Dilution Factor		1	-		11/10/1995	
Gasoline	OAR-HCID	ND	20	mg/Kg	11/10/1995	
Diesel	OAR-HCID	Diesel	50	mg/Kg	11/10/1995	
Heavy Oil	OAR-HCID	H. Oil	100	mg/Kg	11/10/1995	
OAR TPH-418.1M (S) PREP		-	-		11/14/1995	
OAR TPH-418.1M (S)	TPH-418.1M	850	5	mg/Kg	11/15/1995	
Glycols by GC/FID (S)						
Ethylene glycol	GC/FID	ND	10.0	mg/Kg	11/13/1995	

Sample Number 50497 — Sample Description SP-3

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
OAR TPH-HCID (S) PREP	OAR-HCID	-	-		11/10/1995	
OAR TPH-HCID (S)						
Dilution Factor		1	-		11/10/1995	
Gasoline	OAR-HCID	ND	20	mg/Kg	11/10/1995	
Diesel	OAR-HCID	ND	50	mg/Kg	11/10/1995	
Heavy Oil	OAR-HCID	ND	100	mg/Kg	11/10/1995	

Sample Number 50498 — Sample Description SP-4

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
OAR TPH-HCID (S) PREP	OAR-HCID	-	-		11/10/1995	
OAR TPH-HCID (S)						
Dilution Factor		1	-		11/10/1995	
Gasoline	OAR-HCID	ND	20	mg/Kg	11/10/1995	
Diesel	OAR-HCID	ND	50	mg/Kg	11/10/1995	
Heavy Oil	OAR-HCID	ND	100	mg/Kg	11/10/1995	

A sample result of ND indicates the parameter was Not Detected at the reporting limit.

ANALYTICAL REPORT

Ramon Khu
Blymyer Engineering, Inc.
1829 Clement Avenue
Alameda, CA 95401-1395

11/17/1995
Job No.: 95.03776

Project Name:
Date Received: 11/10/1995

Sample Number 50499 — Sample Description SP-5

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
OAR TPH-HCID (S) PREP	OAR-HCID	-	-		11/10/1995	
OAR TPH-HCID (S)						
Dilution Factor		1	-		11/10/1995	
Gasoline	OAR-HCID	ND	20	mg/Kg	11/10/1995	
Diesel	OAR-HCID	ND	50	mg/Kg	11/10/1995	
Heavy Oil	OAR-HCID	ND	100	mg/Kg	11/10/1995	

Sample Number 50500 — Sample Description SP-6

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
OAR TPH-HCID (S) PREP	OAR-HCID	-	-		11/10/1995	
OAR TPH-HCID (S)						
Dilution Factor		1	-		11/10/1995	
Gasoline	OAR-HCID	ND	20	mg/Kg	11/10/1995	
Diesel	OAR-HCID	Diesel	50	mg/Kg	11/10/1995	
Heavy Oil	OAR-HCID	ND	100	mg/Kg	11/10/1995	
OAR TPH-DIESEL (S) PREP		-	-		11/14/1995	
OAR TPH-DIESEL (S)						
Dilution Factor		1	-		11/14/1995	
TPH-Diesel	OAR-D	120	20	mg/Kg	11/14/1995	

Sample Number 50501 — Sample Description SP-7

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
OAR TPH-HCID (S) PREP	OAR-HCID	-	-		11/10/1995	
OAR TPH-HCID (S)						
Dilution Factor		1	-		11/10/1995	
Gasoline	OAR-HCID	ND	20	mg/Kg	11/10/1995	
Diesel	OAR-HCID	ND	50	mg/Kg	11/10/1995	
Heavy Oil	OAR-HCID	ND	100	mg/Kg	11/10/1995	

A sample result of ND indicates the parameter was Not Detected at the reporting limit.

ANALYTICAL REPORT

Ramon Khu
Blymyer Engineering, Inc.
1829 Clement Avenue
Alameda, CA 95401-1395

11/17/1995
Job No.: 95.03776

Project Name:
Date Received: 11/10/1995

Sample Number	Sample Description
50501	SP-7

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
Glycols by GC/FID (S)						
Ethylene glycol	GC/FID	11	1.0	mg/Kg	11/13/1995	

A sample result of ND indicates the parameter was Not Detected at the reporting limit.

SURROGATE REPORT

Ramon Khu
Blymyer Engineering, Inc.
1829 Clement Avenue
Alameda, CA 95401-1395

11/17/1995
Job No.: 95.03776

Project Name:
Date Received: 11/10/1995

SURROGATES	METHODS	RESULTS		DATE ANALYZED	FLAG
Sample Number: 50482 — Sample Description: AF-NE-1 (8')					
o-Terphenyl (Surr.)	OAR-HCID	101	%	11/10/1995	
1,2-butanediol (Surr.)	GC/FID	114	%	11/13/1995	
Sample Number: 50483 — Sample Description: GO-W-1 (10')					
o-Terphenyl (Surr.)	OAR-HCID	90	%	11/10/1995	
Sample Number: 50484 — Sample Description: RF-1-3' (25'-3')					
o-Terphenyl (Surr.)	OAR-HCID	MI	%	11/10/1995	
aaa-Trifluorotoluene (Surr.)	OAR-G	128	%	11/13/1995	
4-Bromofluorobenzene (Surr.)	OAR-G	92	%	11/13/1995	
o-Terphenyl (Surr.)	OAR-D	MI	%	11/14/1995	
1,2-butanediol (Surr.)	GC/FID	94	%	11/13/1995	
Sample Number: 50486 — Sample Description: RF-2-3' (2.5'-3')					
o-Terphenyl (Surr.)	OAR-HCID	MI	%	11/10/1995	
aaa-Trifluorotoluene (Surr.)	OAR-G	85	%	11/13/1995	
4-Bromofluorobenzene (Surr.)	OAR-G	82	%	11/13/1995	
Sample Number: 50487 — Sample Description: D30-E-1 (15')					
o-Terphenyl (Surr.)	OAR-HCID	90	%	11/10/1995	
Sample Number: 50488 — Sample Description: D20-E-1 (17')					

Note: Recovery limits for 8240, 8260, 8270, 624, 625 specified in method.
Gasoline, Diesel, HCID limits 50-150%. 8010/8020 limits 70-130%.

SURROGATE REPORT

Ramon Khu
Blymyer Engineering, Inc.
1829 Clement Avenue
Alameda, CA 95401-1395

11/17/1995
Job No.: 95.03776

Project Name:
Date Received: 11/10/1995

SURROGATES	METHODS	RESULTS		DATE ANALYZED	FLAG
Sample Number 50488	Sample Description D20-E-1 (17')				
o-Terphenyl (Surr.)	OAR-HCID	102	%	11/10/1995	
Sample Number 50489	Sample Description W05-NW (18')				
o-Terphenyl (Surr.)	OAR-HCID	99	%	11/10/1995	
Sample Number 50490	Sample Description W0-S-1 (18')				
o-Terphenyl (Surr.)	OAR-HCID	101	%	11/10/1995	
Sample Number 50491	Sample Description W01-E-1- (14')				
o-Terphenyl (Surr.)	OAR-HCID	97	%	11/10/1995	
Sample Number 50492	Sample Description MO-S-1 (12')				
o-Terphenyl (Surr.)	OAR-HCID	104	%	11/10/1995	
Sample Number 50493	Sample Description D20-W-1 (17')				
o-Terphenyl (Surr.)	OAR-HCID	99	%	11/10/1995	
Sample Number 50494	Sample Description RF-3 (3')				
o-Terphenyl (Surr.)	OAR-HCID	95	%	11/10/1995	
Sample Number 50495	Sample Description SP-1				

SURROGATE REPORT

Ramon Khu
Blymyer Engineering, Inc.
1829 Clement Avenue
Alameda, CA 95401-1395

11/17/1995
Job No.: 95.03776

Project Name:
Date Received: 11/10/1995

SURROGATES	METHODS	RESULTS		DATE ANALYZED	FLAG
Sample Number 50495	Sample Description SP-1				
o-Terphenyl (Surr.)	OAR-HCID	98	%	11/10/1995	
Sample Number 50496	Sample Description SP-2				
o-Terphenyl (Surr.)	OAR-HCID	110	%	11/10/1995	
1,2-butanediol (Surr.)	GC/FID	106	%	11/13/1995	
Sample Number 50497	Sample Description SP-3				
o-Terphenyl (Surr.)	OAR-HCID	101	%	11/10/1995	
Sample Number 50498	Sample Description SP-4				
o-Terphenyl (Surr.)	OAR-HCID	98	%	11/10/1995	
Sample Number 50499	Sample Description SP-5				
o-Terphenyl (Surr.)	OAR-HCID	114	%	11/10/1995	
Sample Number 50500	Sample Description SP-6				
o-Terphenyl (Surr.)	OAR-HCID	140	%	11/10/1995	
o-Terphenyl (Surr.)	OAR-D	MI	%	11/14/1995	
Sample Number 50501	Sample Description SP-7				

Note: Recovery limits for 8240, 8260, 8270, 624, 625 specified in method.
Gasoline, Diesel, HCID limits 50-150%. 8010/8020 limits 70-130%.

SURROGATE REPORT

Ramon Khu
Blymyer Engineering, Inc.
1829 Clement Avenue
Alameda, CA 95401-1395

11/17/1995
Job No.: 95.03776

Project Name:
Date Received: 11/10/1995

SURROGATES	METHODS	RESULTS		DATE ANALYZED	FLAG
Sample Number	Sample Description				
50501	SP-7				
o-Terphenyl (Surr.)	OAR-HCID	100	%	11/10/1995	
1,2-butanediol (Surr.)	GC/FID	87	%	11/13/1995	

QUALITY CONTROL REPORT
CONTINUING CALIBRATION VERIFICATION

Blymyer Engineering, Inc.
1829 Clement Avenue
Alameda, CA 95401-1395

Date: 11/17/1995

NET Job Number: 95.03776

Contact: Ramon Khu
Project:

Analyte	CCV True Concentration	Concentration Found	Percent Recovery	Date Analyzed
OAR TPH-GAS (S)				
TPH-Gas	700	727	103.9	11/09/1995
OAR TPH-GAS (S)				
TPH-Gas	700	766	109.4	11/13/1995
OAR TPH-DIESEL (S)				
TPH-Diesel	828	871	105.2	11/14/1995
OAR TPH-DIESEL (S)				
TPH-Diesel	828	907	109.5	11/14/1995
OAR TPH-DIESEL (S)				
TPH-Diesel	828	902	108.9	11/14/1995
OAR TPH-DIESEL (S)				
TPH-Diesel	828	912	110.1	11/14/1995
OAR TPH-418.1M (S)	49.2	50.7	103.0	11/15/1995
OAR TPH-418.1M (S)	49.2	54.1	110.0	11/15/1995
Glycols by GC/FID (S)				
Ethylene glycol	102	116	113.7	11/13/1995

CCV - Continuing Calibration Verification

Note: Recovery limits for 8240, 8260, 8270, 8010, 8020, 624, 625 specified in method.
Gasoline, Diesel, 418.1, 418.1M limits 80-120%. Metals recovery limits 80-120%.

QUALITY CONTROL REPORT
LABORATORY CONTROL STANDARD

Blymyer Engineering, Inc.
1829 Clement Avenue
Alameda, CA 95401-1395

Date: 11/17/1995

NET Job Number: 95.03776

Contact: Ramon Khu
Project:

Analyte	LCS True Concentration	Concentration Found	LCS % Recovery	Date Analyzed
OAR TPH-GAS (S)				
TPH-Gas	48.9	50.9	104.1	11/09/1995
OAR TPH-GAS (S)				
TPH-Gas	48.9	52.0	106.3	11/09/1995
OAR TPH-GAS (S)				
TPH-Gas	55.8	55.0	98.6	11/09/1995
OAR TPH-GAS (S)				
TPH-Gas	48.9	56.5	115.5	11/09/1995
OAR TPH-GAS (S)				
TPH-Gas	350	418	119.4	11/13/1995
OAR TPH-DIESEL (S)				
TPH-Diesel	50	50	92.6	11/14/1995
o-Terphenyl (Surr.)	100	145	145.0	11/14/1995
OAR TPH-418.1M (S)	49.9	59.2	118.6	11/16/1995
Glycols by GC/FID (S)				
Ethylene glycol	100	112	112.0	11/13/1995

LCS - Laboratory Control Standard

Note: Recovery limits for fuels 80-120%. 8010, 8020, 8240, 8260, 8270, 624, 625 specified in method.
Recovery limits for metals analyses 80-120%. 418.1 limits are 90-140%.

QUALITY CONTROL REPORT
MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Blymyer Engineering, Inc.
1829 Clement Avenue
Alameda, CA 95401-1395

Date: 11/17/1995

Job Number: 95.03776

Contact: Ramon Khu
Project:

Analyte	Matrix Spike Result	Sample Result	Spike Amount	Units	Percent Recovery	MSD Result	MSD Spike Amount	Units	Percent Recovery	MS/MSD RPD
OAR TPH-GAS (S)										
TPH-Gas	57.8	ND	55.8	mg/Kg	103.6	58.7	55.8	mg/Kg	105.2	1.5

NOTE: Matrix Spike Samples may not be samples from this job.

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
dil.= Diluted Out

QUALITY CONTROL REPORT
BLANKS

Blymyer Engineering, Inc.
1829 Clement Avenue
Alameda, CA 95401-1395

Date: 11/17/1995

NET Job Number: 95.03776

Contact: Ramon Khu
Project:
Location:

Analyte	Blank Analysis	MDL	Units	Date Analyzed
OAR TPH-GAS (S)				
TPH-Gas	ND	10	mg/Kg	11/09/1995
aaa-Trifluorotoluene (Surr.)	84	-	%	11/09/1995
OAR TPH-GAS (S)				
TPH-Gas	ND	10	mg/Kg	11/13/1995
aaa-Trifluorotoluene (Surr.)	121	-	%	11/13/1995
OAR TPH-DIESEL (S)				
TPH-Diesel	ND	20	mg/Kg	11/14/1995
o-Terphenyl (Surr.)	109	-	%	11/14/1995
OAR TPH-418.1M (S)	ND	5	mg/Kg	11/15/1995
OAR TPH-418.1M (S)	ND	5	mg/Kg	11/16/1995
Glycols by GC/FID (S)				
Ethylene glycol	ND	1.0	mg/Kg	11/13/1995
1,2-butanediol (Surr.)	86		%	11/13/1995

Advisory Control Limits for Blanks:
Metals/Wet Chemistry/ Conventionals/GC - all compounds should be less than the Reporting Limit.
GC/MS - Semi-Volatiles - all compounds should be less than the Reporting Limit except for phthalates which should be less than 5 times the reporting limit.

QUALITY CONTROL REPORT
DUPLICATES

Blymyer Engineering, Inc.
1829 Clement Avenue
Alameda, CA 95401-1395

Date: 11/17/1995

Job Number: 95.03776

Contact: Ramon Khu
Project:

Analyte	Original Analysis	Duplicate Analysis	Units	RPD	Date Analyzed	Flag
OAR TPH-HCID (S)						
Gasoline	Gasoline	Gasoline	mg/Kg		11/10/1995	
Diesel	Diesel	Diesel	mg/Kg		11/10/1995	
Heavy Oil	ND	ND	mg/Kg		11/10/1995	
OAR TPH-HCID (S)						
Gasoline	ND	ND	mg/Kg		11/10/1995	
Diesel	ND	ND	mg/Kg		11/10/1995	
Heavy Oil	ND	ND	mg/Kg		11/10/1995	
OAR TPH-HCID (S)						
Gasoline	ND	ND	mg/Kg		11/10/1995	
Diesel	ND	ND	mg/Kg		11/10/1995	
Heavy Oil	ND	ND	mg/Kg		11/10/1995	
OAR TPH-GAS (S)						
TPH-Gas	ND	ND	mg/Kg		11/09/1995	
OAR TPH-GAS (S)						
TPH-Gas	ND	ND	mg/Kg		11/09/1995	
OAR TPH-GAS (S)						
TPH-Gas	ND	ND	mg/Kg		11/09/1995	
OAR TPH-DIESEL (S)						
TPH-Diesel	22	20	mg/Kg	9.5	11/14/1995	F
OAR TPH-DIESEL (S)						
TPH-Diesel	150	ND	mg/Kg		11/14/1995	F
OAR TPH-418.1M (S)	19400	17700	mg/Kg	9.2	11/15/1995	

NOTE: Duplicates may not be samples from this job.

RPD - Relative Percent Difference

A	This sample does not have a typical gasoline pattern.
B1	This sample does not have a typical diesel pattern.
B	The blank exhibited a positive result greater than the reporting limit for this compound.
C	The sample appears to contain a lighter hydrocarbon than gasoline.
D	The sample appears to extend to a heavier hydrocarbon range than gasoline.
E	The sample appears to extend to a lighter hydrocarbon range than diesel.
F	The sample appears to extend to a heavier hydrocarbon range than diesel.
G	The positive result for gasoline is due to single component comtamination.
H	The gasoline elution pattern for the sample is not typical.
I	The oil pattern for this sample is not typical.
J	The result for this compound is an estimated concentration.
L	The LCS recovery exceeded control limits. See the LCS page of this report.
M	MS and/or MSD percent recovery exceeds control limits.
MR	The MS/MSD RPD is greater than 20%. The sample was re-extracted and re-analyzed with similar results. This is due to a matrix interference, likely a non-homogeneity of the sample.
P	A post digestion spike was analyzed, and recoveries are within control limits.
Q	Detection limits elevated due to sample matrix.
R	The duplicate RPD was greater than 20%. The sample was re-extracted and re-analyzed with similar results. This indicates a matrix interference in the sample, likely a non-homogeneity of the sample.
SR	Surrogate recovery outside control limits. See the surrogate page of the report.
W	The duplicate RPD was greater than 20%. Due to insufficient sample, re-analysis was not possible.
X	Sample was analyzed outside recommended holding times.
Y	The result for this parameter was greater than the TCLP regulatory limit.
Z	The pattern seen for the parameter being analyzed is not typical.

BLYMYER
ENGINEERS, INC.
1829 Clement Avenue
Alameda, CA 94501 (510) 521-3773 FAX (510) 865-2594

95.03776

CHAIN OF CUSTODY RECORD

JOB # 95002 | PROJECT NAME/LOCATION: CF - PTS

SAMPLERS (SIGNATURE):

TURNAROUND TIME: 1 DAY(S)

REMARKS:

DATE	TIME	COMP	GRAB	SAMPLE NAME/LOCATION	# OF CONTAINERS	TPH AS GASOLINE + BTXE (MOD EPA 8015/8020)	TPH AS DIESEL (MOD EPA 8015)	VOC (EPA 624/8240)	SEMI-VOC (EPA 625/8270)	TRPH (EPA 418.1)	BTXE (EPA 8020/602)	TPH - HCID	Ethylene Glycol				HOLD
11-8-95	9:05		X	AF-NE-1 (8')	1							X	X				
11-9-95	8:00		X	GO-W-1 (10')	1							X					
11-9-95	12:10		X	RF-1-3' (2.5-3')	1							X	X				
11-9-95	12:55		X	RF-1-6.5' (6'-6.5')	1												X
11-9-95	13:25		X	RF-2-3' (2.5-3')	1							X					
11-10-95	10:40		X	D30-E-1 (15')	1							X					
11-10-95	10:50		X	D20-E-1 (17')	1							X					
11-10-95	12:00		X	WO5-NW (18')	1							X					
11-10-95	12:25		X	WO-S-1 (18')	1							X					
11-10-95	12:35		X	WO1-E-1 (14')	1							X					
11-10-95	12:55		X	MO-S-1 (12')	1							X					
11-10-95	13:05		X	D20-W-1 (17')	1							X					
11-10-95	13:30		X	RF-3 (3')	1							X					
11-10-95	13:40		X	SP-1	1							X					
11-10-95	13:55		X	SP-2	1							X	X				

REQUESTED BY: Adam Phillips

RESULTS AND INVOICE TO: CF MotorFreight
c/o Blymyer Engineers

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
	11/10/95 1545	

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE / TIME	REMARKS:
	11/10/95 1545	Cindy Richardson		

WHITE: Accompany Sample YELLOW: BEI, After Lab Signs PINK: Original Sampler

95.03776

BLYMYER
ENGINEERS, INC.
1829 Clement Avenue
Alameda, CA 94501 (510) 521-3773 FAX (510) 865-2594

CHAIN OF CUSTODY RECORD

JOB # 95002 | PROJECT NAME/LOCATION: CF-PTS

SAMPLERS (SIGNATURE): Michael S. L

TURNAROUND TIME: 1 DAY(S)

REMARKS:

DATE	TIME	COMP	GRAB	SAMPLE NAME/LOCATION	# OF CONTAINERS	TPH AS GASOLINE + BTXE (MOD EPA 8015/8020)	TPH AS DIESEL (MOD EPA 8015)	VOC (EPA 624/8240)	SEMI-VOC (EPA 625/8270)	TRPH (EPA 418.1)	BTXE (EPA 8020/602)	TPH-HCID	Ethylene Glycol				HOLD
11-10-95	14:05		X	SP-3	1							X					
11-10-95	14:10		X	SP-4	1							X					
11-10-95	14:20		X	SP-5	1							X					
11-10-95	14:25		X	SP-6	1							X					
11-10-95	14:30		X	SP-7	1							X	X				

REQUESTED BY: Adam Phillips

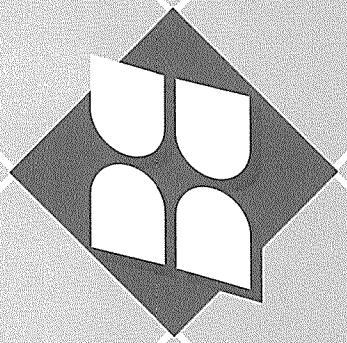
RESULTS AND INVOICE TO: CF Motor Freight c/o Blymyer Engineers

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)
Michael S. L	11/10/95 1545	

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE / TIME	REMARKS:
	11/10/95 1545	Andrea Richards		

RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)

WHITE: Accompany Sample YELLOW: BEI, After Lab Signs PINK: Original Sampler



MATRIX SCORE SHEET

1. Depth to Groundwater		4
< 25 feet	(10)	
25 - 50 feet	(7)	
51 - 100 feet	(4)	
> 100 feet	(1)	
2. Mean Annual Precipitation		5
> 45 inches	(10)	
20 - 45 inches	(5)	
< 20 inches	(1)	
3. Native Soil Type		10
Course sands, gravels	(10)	
Silts, fine sands	(5)	
Clays	(1)	
4. Sensitivity of Uppermost Aquifer		10 (Unknown)
Sole Source	(10)	
Current Potable	(7)	
Future Potable	(4)	
Non-potable	(1)	
5. Potential Receptors		10 (Unknown)
Many, near	(10)	
Medium	(5)	
Few, far	(1)	
TOTAL SCORE	=	39

MATRIX SCORE	Cleanup Level (ppm TPH)	
	Gasoline	Diesel
Level 1: > 40 pts.	40	100
Level 2: 25 - 40 pts.	80	500
Level 3: < 25 pts.	130	1000

MATRIX CHECKLIST

X 1. The release of petroleum has been reported to the DEQ (220).

X 2. The Matrix Score Sheet has been completed for this site, unless the site is cleaned up to the most stringent cleanup level (320).

X 3. The required hydrocarbon identification test (TPH-HCID) has been performed (335(3)), and, if detectable levels were found, the appropriate analytical method or methods have been used to measure the levels of contamination (350).

X 4. A sketch has been made of this site (345(1)) which clearly shows:

X a. The location of all buildings and other key features, both man-made and natural;

X b. The names of adjacent streets and properties;

X c. The location of all excavations including those that were for the removal of tanks and associated piping as well as those that were strictly for the removal of contaminated soils;

X d. The location of all product storage tanks, lines and dispensers, including those that were decommissioned as well as those that remain on the site; and

X e. All soil and water sample locations.

X 5. If any contaminated soil exceeding matrix limits has been left on site, the reason for leaving this soil has been explained and the requirements of 355(4) have been met.

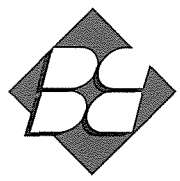
N/A 6. If water was present in the tank pit, the Department was notified, the water was pumped from the pit, and the requirements of 340(4) have been met.

X 7. All soil and/or water samples have been collected, coded, stored and shipped as specified in the rules, and proper chain-of-custody forms have been filled out (345).

N/A 8. If a release from a waste oil tank was discovered, at least one sample has been analyzed by the methods specified in 350(5).

N/A 9. If a tank was decommissioned in place, the Department gave prior approval for a site-specific sampling plan (340(5)).

X 10. A report has been prepared which includes a detailed description of everything that was observed and performed at the site, contains all of the information required by the rules (360), and presents findings and recommendations which are consistent with Departmental regulations.



BLYMYER ENGINEERS, INC.

1829 Clement Avenue • Alameda, California 94501 • (800) 753-3773 • Fax (510) 865-2594
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Oregon

DEPARTMENT OF
ENVIRONMENTAL
QUALITY

NORTHWEST REGION

September 24, 1996

ROBERT WEAVER
CONSOLIDATED FREIGHTWAYS
PO BOX 3010
MENLO PARK CA 94026 3010

RE: Consolidated Freightways
File No. 26-95-0308

Dear Mr. Weaver:

The Department of Environmental Quality has completed its review of the information submitted to date concerning the underground storage tank (UST) decommissioning and cleanup conducted at 2050 NW Quimby Street, Portland, Oregon. The Department has determined that the cleanup appears to have met the requirements of Oregon Administrative Rules (OAR) 340-122-205 through 340-122-360 and that no further action is required at this time.

This determination is a result of our evaluation and judgment based on the regulations and facts as we now understand them, including:

1. One 30,000 gallon diesel UST, one 20,000 gallon diesel UST, one 10,000 gallon motor oil UST, one 5,000 gallon antifreeze UST, one 2,500 gallon waste oil UST, one 1,500 gallon waste oil UST, one 1,000 gallon gear oil UST, and one 1,000 gallon antifreeze UST that had previously stored a non-halogenated, petroleum-based solvent were decommissioned at this location. The tanks were recycled at Schnitzer Steel Products. The residual tank contents were disposed of at Harbor Oil, Inc. in Portland, Oregon by CET Environmental Services, Inc.

2. A soil matrix score sheet was prepared for this site. Based on the available information and the results of the matrix score sheet, it was determined that soil matrix level II cleanup requirements [i.e. residual soil contaminant concentrations of gasoline $\leq$ 80 parts per million (ppm) and of diesel or heavier oils $\leq$ 500 ppm would be applicable to this site]. Gasoline, diesel, new motor oil and ethylene glycol (antifreeze) contamination in soil was discovered during the tank decommissionings.

3. Approximately 477.25 tons of contaminated soil were excavated during the UST decommissionings and treated off site at TPS Technologies by thermal treatment.

4. Groundwater was not encountered in any of the tank excavations. Existing on site groundwater monitoring wells indicate that groundwater has been historically deeper than 50 feet below land surface (bls).

John A. Kitzhaber
Governor

2020 SW Fourth Avenue
Suite 400
Portland, OR 97201-4987
(503) 229-5263 Voice
TTY (503) 229-5471
DEQ-1

5. Supplemental site assessment activities detected soil contamination to a depth no greater than 17 feet below land surface (bls) and a maximum concentration of 19,000 ppm at 10 feet bls utilizing analytical method TPH-D in the vicinity of the remote UST fills along NW 20th Avenue. No ethylene glycol was detected in any of the confirmatory soil samples. However, 73 mg./kg. of ethylene glycol was detected in a soil sample collected at the remote fill for the antifreeze UST at 3 feet bls during a previous investigation. The estimated volume of contaminated soil remaining onsite above the cleanup standards is 170 cubic yards.

The Department's approval to leave a pocket of contamination is based on the site conditions described in the report as they exist today. Should conditions change allowing access to the contamination, you are responsible for further evaluation of the remaining contamination and any cleanup necessary at that time. You are also responsible for notifying potential purchasers of the property about this remaining pocket of contamination.

The Department's determination will not be applicable if new or undisclosed facts show that the cleanup does not comply with the referenced rules. The Department's determination also does not apply to any conditions at the site other than the release of the petroleum product specifically addressed in the report(s).

Please note that pursuant to OAR 340-122-360(2), a copy of your report must be retained until ten (10) years after the first transfer of the property. We recommend that a copy of this information be kept with the permanent facility records.

Your efforts to comply with the cleanup regulations have been appreciated. If you have any questions, please feel free to contact me at (503) 229-5474.

Sincerely,

Steven L. Hooper
UST Cleanup Specialist

cc: Ramon Khu
Blymer Engineers, Inc.
1829 Clement Avenue
Alameda, CA 94501-1395

file

Oregon
Theodore R. Kulongoski, Governor

Department of Environmental Quality
Northwest Region Portland Office
2020 SW 4th Avenue, Suite 400
Portland, OR 97201-4987
(503) 229-5263
Fax: (503) 229-6945
TTY: (503) 229-5471

23 December 2010

STEPHEN NELSON
PROJECT MANAGER
GEODESIGN INC
15575 SW SEQUOIA PARKWAY STE 100
PORTLAND OR 97224

Re: Consolidated Freightways
UST Cleanup File No. 26-89-0305

Dear Mr. Nelson:

The Department of Environmental Quality (DEQ) has completed its review of the report entitled *Report of Environmental Services* (December 3, 2010) which was submitted by GeoDesign, Inc. (GeoDesign) on behalf of Con-Way, Inc. (Con-Way). The report documents August 2010 supplemental site assessment and monitoring well sampling activities performed at the Con-Way facility located at 2050 NW Quimby Street in Portland, Multnomah County, Oregon (site). The work was performed in general accordance with a DEQ-approved work plan dated July 12, 2010. The purpose of the work was to further delineate groundwater impacted by chlorinated volatile organic compounds (VOC) down-gradient of former waste oil underground storage tank (UST) excavations at the site. DEQ has the following comments concerning the investigation report:

1) An interpretation of groundwater flow based on depth-to-water data for site monitoring wells (August 10, 2010 sampling event) was not incorporated into the investigation report. Please provide.

2) Groundwater analytical data for samples collected from borings GP-8 and GP-9 (advanced along the eastern boundary of the site) indicated trichloroethene (TCE) and tetrachloroethene at concentrations roughly equivalent to and/or higher than levels detected in June 2009 borings GP-4 through GP-7. As a result, DEQ considers the lateral delineation of groundwater impacted by chlorinated VOCs to be incomplete.

3) TCE levels in monitoring well MW-4 have increased over the last six documented sampling events, concurrent with an apparent decrease, over the last three events, in TCE concentrations in up-gradient monitoring well MW-4. Although these apparent trends may, in fact, be an artifact of a limited data set and length of time between events, it suggests an unknown source of chlorinated VOCs in groundwater may be present at the site.

4) TCE continues to be detected at concentrations exceeding the generic Risk-Based Concentration standard for urban residential vapor intrusion (27 micrograms per liter (µg/L)). However, under current use scenarios, groundwater containing TCE at a concentration exceeding this standard has

not been identified within 100 feet of residential and/or mixed-use buildings.

5) Based on review of data collected during historic site assessment work, DEQ believes the former waste oil USTs are unlikely to be significant sources of chlorinated VOCs in groundwater. DEQ is agreeable to evaluating site conditions for purposes of determining if closure of the leaking UST incident is appropriate. However, based on mounting evidence of chlorinated VOC impacts of unknown origin to groundwater in the northern portion of the site, DEQ would require that the site be entered into the Environmental Site Cleanup Information (ECSI) database for possible management under a Voluntary Cleanup Agreement. A determination concerning whether to list the site in other databases (i.e., the Confirmed Release List or Inventory) would be made at a later time.

6) DEQ concurs with the previous conclusion of GeoDesign that groundwater in the area of the site has no current or likely future beneficial use as drinking water and the *Soil Leaching to Groundwater* and *Groundwater Ingestion and Inhalation from Tapwater* exposure pathways are incomplete.

In summary, August 2010 supplemental site assessment work performed at the site did not fully delineate the extent of groundwater impacted by chlorinated VOCs. However, an evaluation of historic and current analytical data suggests the former waste oil USTs are not more than minor possible sources of chlorinated VOCs in groundwater. It is likely there is an additional, as-yet unknown source for chlorinated VOCs in groundwater in the northern portion of the site. DEQ would consider an option involving closure of the leaking UST incident and concurrent listing of the site in the ECSI database. Future investigation and/or cleanup related to non-petroleum constituents in site media would be negotiated under a Voluntary Cleanup Agreement. The decision whether to list the site on additional databases would be made at a later time.

DEQ appreciates your cooperation and continued efforts to comply with the UST Cleanup Rules. If you have any questions, please contact me at (503) 229-5024.

Respectfully,

Jeff K. Schatz, R.G.
Project Manager
UST Cleanup Section

cc:

Jeff Sexton
Manager of Environmental Compliance
Con-Way Freight, Inc.
2211 Old Earhart Road
Ann Arbor, MI 48105

(jks: JKS)

Oregon
John A. Kitzhaber, MD, Governor

Department of Environmental Quality
Northwest Region
2020 SW 4th Ave, Suite 400
Portland, OR 97201
(503) 229-5263
FAX (503) 229-6945
TTY 711

October 3, 2012

JEFF SEXTEN
MANAGER, ENVIRONMENAL COMPLIANCE
CON-WAY, INC.
2211 OLD EARHART ROAD STE 100
ANN ARBOR MI 48105-2751

Re: No Further Action Determination
Con-Way, Inc.
File No. 26-89-0305

Dear Mr. Sexten:

The Department of Environmental Quality (DEQ) completed its review of information concerning the underground storage tank (UST) decommissioning and cleanup conducted at the former Con-Way, Inc. (Con-Way) property located at 2050 SW Quimby Street in Portland, Multnomah County, Oregon (site). DEQ determined that the cleanup appears to have met the requirements of Oregon Administrative Rules (OAR) 340-122-0205 through 340-122-0360. No further action is required at this time.

This determination applies only to soil and groundwater contaminated with petroleum hydrocarbons and petroleum-related constituents resulting from a reported October 1989 release from a waste oil UST formerly located south of the site building. This No Further Action determination does not apply to chlorinated volatile organic compounds (VOCs) of unknown origin historically detected in site groundwater.

This determination is a result of our evaluation and judgment based on the regulations and facts as we now understand them:

1. In October 1989, PEMCO decommissioned by removal one 500-gallon waste oil UST on the south side of the site building. Soil samples collected from the ends of the UST were analyzed for Total Petroleum Hydrocarbons (TPH) as non-polar Oil and Grease, metals, and VOCs. TPH as non-polar Oil and Grease was detected in the soil samples at concentrations of 6,200 and 14,000 milligrams per kilogram (mg/kg). In addition, tetrachloroethene (PCE) was detected at concentrations of 0.0076 and 0.025 mg/kg in the samples collected from the fill and drain ends, respectively, of the former UST. Based on these findings, a release of petroleum hydrocarbons was reported and DEQ established UST Cleanup File No. 26-89-0305.

2. In March 1990, Squier Associates advanced soil borings (M1 and M2) to further evaluate subsurface conditions in the area of the former waste oil UST. Soil samples collected at five-foot

intervals from the borings were analyzed for TPH as non-polar Oil and Grease, polychlorinated biphenyls, chlorinated VOCs, metals, and benzene, toluene, ethylbenzene, and total xylenes (BTEX). A soil sample collected from boring M1 at a depth of 10 feet below ground surface (bgs) detected total Oil and Grease (14,000 mg/kg) and minimal concentrations of toluene, total xylenes, PCE and 1,1,1-trichloroethane (1,1,1-TCA). Although groundwater was not encountered to the maximum exploration depth of 35 feet bgs, Squier Associates recommended installation of a monitoring well network.

3. In November 1990, Squier Associates installed four monitoring wells at the site. Monitoring wells were installed up-gradient (MW-1), adjacent to (MW-3) and down-gradient (MW-2 and MW-4) of the former waste oil UST. A total of 17 soil samples and four groundwater samples collected from the wells were analyzed for TPH as Total Oil and Grease, TPH as Non-Polar Oil and Grease, chlorinated VOCs and BTEX. Petroleum hydrocarbons and related constituents were not detected at concentrations exceeding laboratory method reporting limits (MRLs) in the soil samples. TPH as Oil and Grease were detected only in MW-3, installed in the approximate location of March 1990 boring M1. In addition, low levels of PCE and trichloroethene (TCE) were detected in groundwater from monitoring well MW-4.

4. Site monitoring wells were sampled in June 1999, August 2001, October 2006, April 2007, April 2008, June 2009 and August 2010. Chlorinated VOCs including PCE, TCE, 1,1,1-TCA, carbon tetrachloride, chloroform, cis-1,2-dichloroethene, and 1,1-dichloroethane were historically detected in site wells. During the same period, constituents associated with gasoline-, diesel- and oil-range range TPH were not detected at levels exceeding laboratory MRLs. Depth-to-water data from the monitoring wells indicated a northeasterly groundwater flow direction.

5. In November 2006, GeoDesign advanced soil borings in the area of the former waste oil UST (GP-1) and former "waste oil and sludge USTs" in the north-central portion of the southern parking area, for which decommissioning data was unavailable (borings GP-2 and GP-3). A geophysical survey had previously confirmed an absence of USTs in these areas. Analysis of the soil sample collected from boring GP-1 at 14 feet bgs detected gasoline- (2,950 mg/kg), diesel- (451 mg/kg), and oil-range (459 mg/kg) TPH. Gasoline constituents in this soil sample were not detected at concentrations exceeding MRLs or if detected, were below Risk-Based Concentrations (RBCs) for the *Soil Vapor Intrusion into Building* exposure pathway under the most stringent (residential) scenario. Site-specific RBCs for gasoline-range TPH were calculated using constituent analytical data from boring GP-1. The calculation demonstrated that vapor intrusion risks from gasoline-range TPH in boring GP-1 were not unacceptable.

6. In June 2009, at the request of DEQ, GeoDesign advanced borings (GP-4 through GP-7) in the parking lot north of the site building to further evaluate the magnitude and extent of soil and groundwater contamination. Analysis of soil samples from the borings did not reveal detectable levels of gasoline-, diesel- or oil-range TPH. Likewise, grab groundwater samples collected from the borings did not reveal detectable concentrations of constituents associated with these petroleum products. However, TCE was detected in groundwater at concentrations ranging from 2.91 micrograms per liter (µg/L) to 43.60 µg/L. The detected TCE concentrations exceeded RBCs for the *Groundwater Ingestion & Inhalation from Tapwater* exposure pathway under residential, urban residential and occupational worker exposure scenarios.

7. Concurrent with the June 2009 investigation, GeoDesign completed a door-to-door survey of 35 properties located within the area one city block up-gradient and two city blocks down-gradient of the site. GeoDesign received responses for 26 of the surveyed properties. None of the properties responding to the survey reported the presence of domestic-use water wells. Based on this finding, GeoDesign concluded the *Soil Leaching to Groundwater* and *Groundwater Ingestion & Inhalation from Tapwater* exposure pathways were incomplete under current and likely future scenarios.

8. In August 2010, also at the request of DEQ, GeoDesign advanced additional borings (GP-8 and GP-9) along the east property boundary north of the site building to further characterize the extent of groundwater impacted by chlorinated VOCs. As in previous investigations, analysis of groundwater samples from the borings did not reveal detectable levels of constituents associated with gasoline- or diesel-range TPH, confirming that the former USTs did not adversely impact site groundwater. However, TCE was detected in groundwater samples from borings GP-8 and GP-9 at concentrations of 20.2 µg/L and 47.3 µg/L, respectively. The investigation revealed that groundwater impacted with chlorinated VOCs extends east and northeast of the site. Although the source of chlorinated VOCs in groundwater was not determined, the former waste oil USTs were ruled out as being a likely source.

9. The source of chlorinated VOCs historically detected in groundwater from monitoring wells and borings is not known at this time. However, it should be noted that TCE has been detected at concentrations ranging from 4.55 µg/L to 18.79 µg/L in MW-1, located at the up-gradient (southwest) corner of the property. Because chlorinated VOCs were not detected at concentrations exceeding RBCs for the *Groundwater Vapor Intrusion into Building* exposure pathway under the most stringent of exposure scenarios, and because groundwater in the area of the site has no current or likely future beneficial use as drinking water, DEQ did not require further assessment. In the event that new or previously undisclosed information comes to light concerning an on-site source or risks posed by these detections, further assessment under the DEQ's Environmental Cleanup Regulations may be warranted.

Contamination remains on this property. DEQ approves leaving this contamination since the contamination does not threaten human health, safety, and the environment.

Any future work in the contaminated areas of the property, including any sampling, management, and disposal of contaminated soil and/or groundwater, must be performed in accordance with DEQ regulations and policies.

DEQ recommends that monitoring wells be properly decommissioned, since construction deficiencies can develop in monitoring wells, thereby creating a liability and a possible conduit for contaminant migration. Monitoring wells that are not maintained according to Oregon Water Resource Department (WRD) standards must either be repaired or decommissioned in accordance with WRD regulations. Please coordinate with an Oregon WRD Regional Well Inspector regarding proper abandonment procedures and submit a copy of any monitoring well decommissioning reports to DEQ.

DEQ's determination that no further action is necessary will not be applicable if new or undisclosed facts show that the cleanup does not comply with the referenced rules. DEQ's determination also does

not apply to any conditions at the site other than the release of the petroleum product specifically addressed in this letter. Please note that pursuant to OAR 340-122-360(2), copies of relevant reports must be retained until ten years after you transfer your property. We recommend that copies of these reports be kept with your permanent records.

Your efforts to comply with the regulations to ensure that your property has been adequately cleaned up have been appreciated. If you have any questions, please feel free to contact Jeff Schatz at (503) 229-5024.

Sincerely,

James Anderson
Manager
Portland Harbor Section

cc: Steve Nelson
Project Manager
GeoDesign Inc.
15575 SW Sequoia Parkway, Suite 100
Portland, OR 97224

(jks:JKS)

APPENDIX B

LABORATORY ANALYTICAL REPORTS

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Tuesday, April 12, 2022

Tima Carson
True North Geotechnical Services
202 E Evergreen Blvd, Suite B
Vancouver, WA 98660

RE: A2D0201 - Block 290 - 22-0061/1294

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A2D0201, which was received by the laboratory on 4/6/2022 at 8:18:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1 0.9 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darrell Auvil, Client Services Manager

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061/1294**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carson**	**A2D0201 - 04 12 22 0926**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N21-4	A2D0201-01	Soil	04/05/22 13:15	04/06/22 08:18
N24-1	A2D0201-02	Soil	04/05/22 13:30	04/06/22 08:18

Apex Laboratories

Darrell Auvil, Client Services Manager

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Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061/1294**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carson**	**A2D0201 - 04 12 22 0926**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
N21-4 (A2D0201-01)				**Matrix: Soil**		**Batch: 22D0256**		
Gasoline Range Organics	ND	---	27.3	mg/kg dry	1	04/08/22 01:29	NWTPH-HCID	
Diesel Range Organics	ND	---	68.3	mg/kg dry	1	04/08/22 01:29	NWTPH-HCID	
Oil Range Organics	ND	---	137	mg/kg dry	1	04/08/22 01:29	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)			*Recovery: 94 %*	*Limits: 50-150 %*	*1*	*04/08/22 01:29*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*91 %*	*50-150 %*	*1*	*04/08/22 01:29*	*NWTPH-HCID*	
N24-1 (A2D0201-02)				**Matrix: Soil**		**Batch: 22D0256**		
Gasoline Range Organics	ND	---	24.1	mg/kg dry	1	04/08/22 02:10	NWTPH-HCID	
Diesel Range Organics	ND	---	60.2	mg/kg dry	1	04/08/22 02:10	NWTPH-HCID	
Oil Range Organics	ND	---	120	mg/kg dry	1	04/08/22 02:10	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)			*Recovery: 92 %*	*Limits: 50-150 %*	*1*	*04/08/22 02:10*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*91 %*	*50-150 %*	*1*	*04/08/22 02:10*	*NWTPH-HCID*	

Apex Laboratories

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061/1294**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carson**	**A2D0201 - 04 12 22 0926**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
N21-4 (A2D0201-01)				**Matrix: Soil**		**Batch: 22D0232**		
% Solids	**72.8**	---	1.00	%	1	04/08/22 09:37	EPA 8000D	
N24-1 (A2D0201-02)				**Matrix: Soil**		**Batch: 22D0232**		
% Solids	**80.0**	---	1.00	%	1	04/08/22 09:37	EPA 8000D	

Apex Laboratories

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061/1294**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carson**	**A2D0201 - 04 12 22 0926**

QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22D0256 - NWTPH-HCID (Soil)							Soil					
Blank (22D0256-BLK1)			Prepared: 04/07/22 15:36 Analyzed: 04/08/22 01:08									
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		*Recovery:*	*89 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
4-Bromofluorobenzene (Surr)			*91 %*		*50-150 %*			*"*				
Duplicate (22D0256-DUP1)			Prepared: 04/07/22 15:36 Analyzed: 04/08/22 01:49									
QC Source Sample: N21-4 (A2D0201-01)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	25.8	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	64.5	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	129	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery:*	*94 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
4-Bromofluorobenzene (Surr)			*91 %*		*50-150 %*			*"*				

Apex Laboratories

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

ANALYTICAL REPORT

True North Geotechnical Services	Project: Block 290	
202 E Evergreen Blvd, Suite B	Project Number: 22-0061/1294	Report ID:
Vancouver, WA 98660	Project Manager: Tima Carson	A2D0201 - 04 12 22 0926

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22D0232 - Total Solids (Dry Weight)							Soil					
Duplicate (22D0232-DUP1)			Prepared: 04/07/22 09:40		Analyzed: 04/08/22 09:37							
QC Source Sample: Non-SDG (A2C1069-11)												
% Solids	**78.3**	---	1.00	%	1	---	77.9	---	---	0.5	10%	
Duplicate (22D0232-DUP2)			Prepared: 04/07/22 09:40		Analyzed: 04/08/22 09:37							
QC Source Sample: Non-SDG (A2C1069-13)												
% Solids	**78.9**	---	1.00	%	1	---	78.9	---	---	0.1	10%	
Duplicate (22D0232-DUP3)			Prepared: 04/07/22 09:40		Analyzed: 04/08/22 09:37							
QC Source Sample: Non-SDG (A2C1069-15)												
% Solids	**82.2**	---	1.00	%	1	---	81.8	---	---	0.5	10%	
Duplicate (22D0232-DUP4)			Prepared: 04/07/22 19:33		Analyzed: 04/08/22 09:37							
QC Source Sample: Non-SDG (A2D0293-01)												
% Solids	**74.5**	---	1.00	%	1	---	75.0	---	---	0.7	10%	
Duplicate (22D0232-DUP5)			Prepared: 04/07/22 19:33		Analyzed: 04/08/22 09:37							
QC Source Sample: Non-SDG (A2D0298-01)												
% Solids	**64.2**	---	1.00	%	1	---	66.4	---	---	3	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

Apex Laboratories

Darrell Auvil, Client Services Manager

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Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061/1294**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carson**	**A2D0201 - 04 12 22 0926**

SAMPLE PREPARATION INFORMATION

Hydrocarbon Identification Screen by NWTPH-HCID

Prep: NWTPH-HCID (Soil)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22D0256							
A2D0201-01	Soil	NWTPH-HCID	04/05/22 13:15	04/07/22 15:36	10.06g/10mL	10g/10mL	0.99
A2D0201-02	Soil	NWTPH-HCID	04/05/22 13:30	04/07/22 15:36	10.37g/10mL	10g/10mL	0.96

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22D0232							
A2D0201-01	Soil	EPA 8000D	04/05/22 13:15	04/07/22 09:40			NA
A2D0201-02	Soil	EPA 8000D	04/05/22 13:30	04/07/22 09:40			NA

Apex Laboratories

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061/1294**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carson**	**A2D0201 - 04 12 22 0926**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

There are No Qualifiers on Sample or QC Data for this report

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061/1294**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carson**	**A2D0201 - 04 12 22 0926**

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

Apex Laboratories

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

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REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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ANALYTICAL REPORT

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Vancouver, WA 98660	Project Manager: **Tima Carson**	**A2D0201 - 04 12 22 0926**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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ANALYTICAL REPORT

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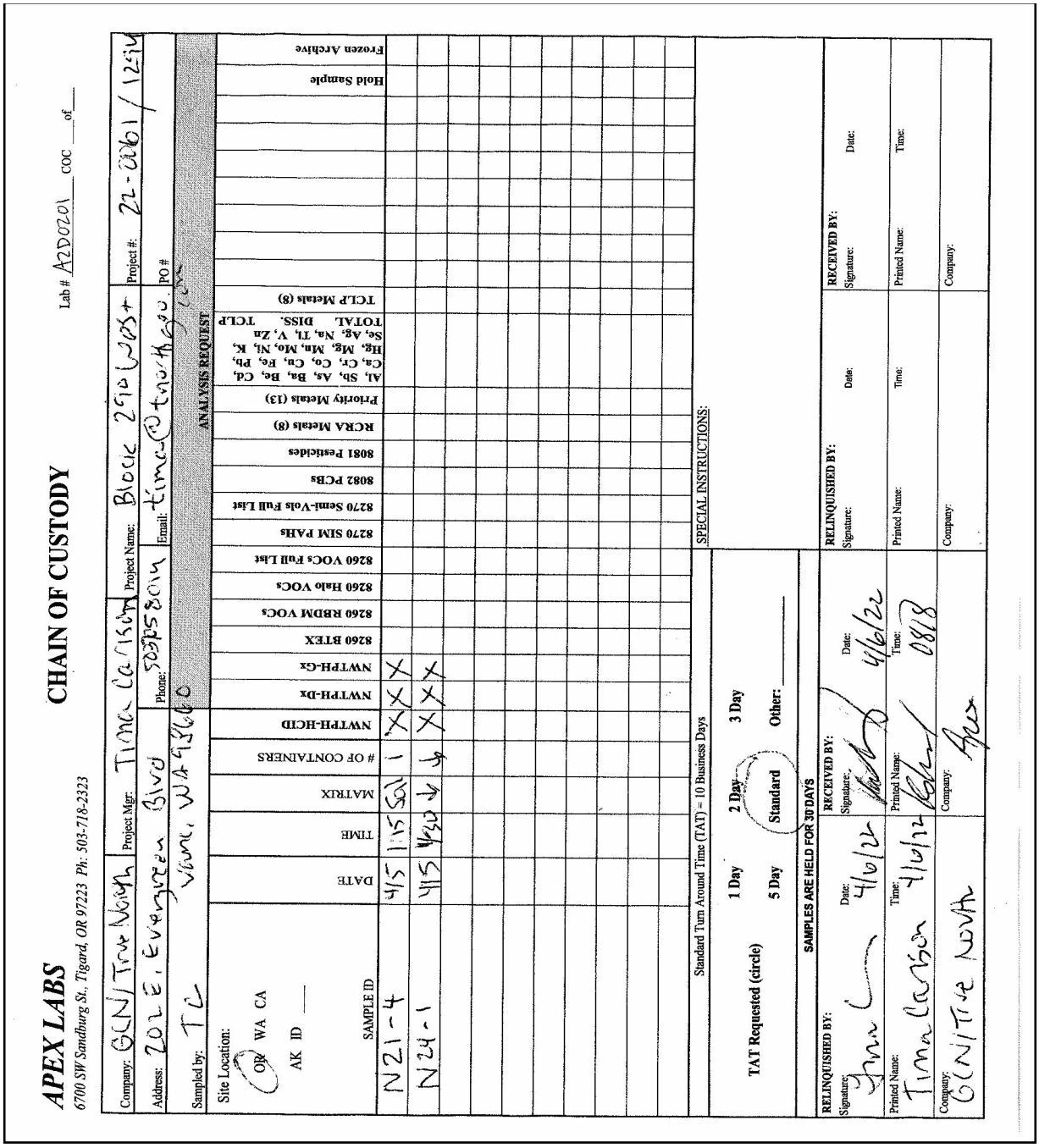

APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # A2D0201 COC ___ of ___

Company: TNG / True North | Project Mgr: Tima Carson | Project Name: Block 290 | Project #: 22-0061 / 1294
Address: 202 E. Evergreen Blvd | Phone: 503.258.8011 | Email: tima@truenorthgeo.com | PO #
Sampled by: TC | Vancouver, WA 98660

Site Location: OR WA CA AK ID ___

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
N21-4	4/5	1155	Soil	1	X	X	X														
N24-1	4/5	1430	↓	4	X	X	X														

SPECIAL INSTRUCTIONS:

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day | 2 Day | 3 Day | 5 Day | Standard | Other: ___

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature:	Signature:	Signature:	Signature:
Date: 4/6/22	Date: 4/6/22	Date:	Date:
Time:	Time: 0818	Time:	Time:
Printed Name:	Printed Name:	Printed Name:	Printed Name:
Company: TNG / True North	Company: Apex	Company:	Company:

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APEX LABS COOLER RECEIPT FORM

Client: GLN / True North Element WO#: A2D0201

Project/Project #: Block 290 West / 22-0061/1294

Delivery Info:

Date/time received: 4/6/22 @ 0818 By: VS

Delivered by: Apex ___ Client X ESS ___ FedEx ___ UPS ___ Swift ___ Senvoy ___ SDS ___ Other ___

Cooler Inspection Date/time inspected: 4/6/22 @ 0818 By: VS

Chain of Custody included? Yes X No ___ Custody seals? Yes ___ No X

Signed/dated by client? Yes X No ___

Signed/dated by Apex? Yes X No ___

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	0.4						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	Y						
Ice type: (Gel/Real/Other)	Real						
Condition:	Good						

Cooler out of temp? (Y/N) Possible reason why: ___

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 4-6-22 @ 1113 By: DSS

All samples intact? Yes X No ___ Comments: ___

Bottle labels/COCs agree? Yes X No ___ Comments: No date and time on containers

COC/container discrepancies form initiated? Yes ___ No X

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: ___

Do VOA vials have visible headspace? Yes ___ No ___ NA X

Comments ___

Water samples: pH checked: Yes ___ No ___ NA X pH appropriate? Yes ___ No ___ NA X

Comments: ___

Additional information: ___

Labeled by: DSS Witness: VS Cooler Inspected by: VS

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ANALYTICAL REPORT

Wednesday, May 18, 2022

Tima Carlson
True North Geotechnical Services
202 E Evergreen Blvd, Suite B
Vancouver, WA 98660

RE: A2D0620 - Block 290 - 22-0061

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A2D0620, which was received by the laboratory on 4/18/2022 at 9:06:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	0.1 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D0620 - 05 18 22 1617**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N24-1-3	A2D0620-01	Soil	04/15/22 10:05	04/18/22 09:06
N24-2-3	A2D0620-02	Soil	04/15/22 10:05	04/18/22 09:06
N25-1-3	A2D0620-03	Soil	04/15/22 10:10	04/18/22 09:06
N25-2-3	A2D0620-04	Soil	04/15/22 10:10	04/18/22 09:06
Composite N24-3	A2D0620-05	Soil	04/15/22 10:05	04/18/22 09:06
Composite N25-3	A2D0620-06	Soil	04/15/22 10:10	04/18/22 09:06

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ANALYTICAL REPORT

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ANALYTICAL CASE NARRATIVE

Work Order: A2D0620

Amended Report Revision 1:

NWTPH-Dx Missing Batch QC

This report supersedes all previous reports.

Analytical batch 22D0860 QC was reported without Blank Spike results. The results are now included in the report.

Mark Zehr
Organics Manager
5/13/2022

Apex Laboratories, LLC
6700 S.W. Sandburg Street
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ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Composite N24-3 (A2D0620-05)				**Matrix: Soil**		**Batch: 22D0721**		
Gasoline Range Organics	ND	---	24.7	mg/kg dry	1	04/20/22 02:54	NWTPH-HCID	
Diesel Range Organics	ND	---	61.7	mg/kg dry	1	04/20/22 02:54	NWTPH-HCID	
Oil Range Organics	DET	---	123	mg/kg dry	1	04/20/22 02:54	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*99 %*	*Limits: 50-150 %*	*1*	*04/20/22 02:54*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*87 %*	*50-150 %*	*1*	*04/20/22 02:54*	*NWTPH-HCID*	
Composite N25-3 (A2D0620-06)				**Matrix: Soil**		**Batch: 22D0721**		
Gasoline Range Organics	ND	---	24.5	mg/kg dry	1	04/20/22 03:17	NWTPH-HCID	
Diesel Range Organics	ND	---	61.3	mg/kg dry	1	04/20/22 03:17	NWTPH-HCID	
Oil Range Organics	ND	---	123	mg/kg dry	1	04/20/22 03:17	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*97 %*	*Limits: 50-150 %*	*1*	*04/20/22 03:17*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*89 %*	*50-150 %*	*1*	*04/20/22 03:17*	*NWTPH-HCID*	

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ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Composite N24-3 (A2D0620-05)				**Matrix: Soil**		**Batch: 22D0860**		
Diesel	ND	---	25.4	mg/kg dry	1	04/22/22 20:38	NWTPH-Dx	
Oil	ND	---	50.7	mg/kg dry	1	04/22/22 20:38	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 64 %*		*Limits: 50-150 %*	*1*	*04/22/22 20:38*	*NWTPH-Dx*	

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ANALYTICAL REPORT

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D0620 - 05 18 22 1617**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Composite N24-3 (A2D0620-05)				**Matrix: Soil**		**Batch: 22D0779**		
% Solids	**78.6**	---	1.00	%	1	04/21/22 09:45	EPA 8000D	
Composite N25-3 (A2D0620-06)				**Matrix: Soil**		**Batch: 22D0779**		
% Solids	**76.5**	---	1.00	%	1	04/21/22 09:45	EPA 8000D	

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ANALYTICAL REPORT

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QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22D0721 - NWTPH-HCID (Soil)							**Soil**					
Blank (22D0721-BLK1)			Prepared: 04/19/22 13:00 Analyzed: 04/19/22 23:33									
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		*Recovery:*	*100 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
4-Bromofluorobenzene (Surr)			*100 %*		*50-150 %*			*"*				
Duplicate (22D0721-DUP1)			Prepared: 04/19/22 13:00 Analyzed: 04/20/22 00:18									
QC Source Sample: Non-SDG (A2D0578-01)												
Gasoline Range Organics	**DET**	---	21.7	mg/kg dry	1	---	ND	---	---		30%	
Diesel Range Organics	**DET**	---	54.4	mg/kg dry	1	---	ND	---	---		30%	
Oil Range Organics	ND	---	109	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery:*	*106 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
4-Bromofluorobenzene (Surr)			*159 %*		*50-150 %*			*"*				S-02

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22D0860 - EPA 3546 (Fuels)							**Soil**					
Blank (22D0860-BLK1)			Prepared: 04/22/22 05:48		Analyzed: 04/22/22 11:15							
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	50.0	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		*Recovery: 84 %*	*Limits: 50-150 %*		*Dilution: 1x*							
LCS (22D0860-BS1)			Prepared: 04/22/22 05:48		Analyzed: 04/22/22 11:35							
NWTPH-Dx												
Diesel	105	---	25.0	mg/kg wet	1	125	---	84	38-132%	---	---	
Surr: o-Terphenyl (Surr)		*Recovery: 88 %*	*Limits: 50-150 %*		*Dilution: 1x*							
Duplicate (22D0860-DUP1)			Prepared: 04/22/22 05:48		Analyzed: 04/22/22 12:17							
QC Source Sample: Non-SDG (A2D0884-01)												
Diesel	ND	---	26.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	---	52.0	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery: 62 %*	*Limits: 50-150 %*		*Dilution: 1x*							
Duplicate (22D0860-DUP2)			Prepared: 04/22/22 11:03		Analyzed: 04/22/22 20:59							
QC Source Sample: Composite N24-3 (A2D0620-05)												
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	---	50.0	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery: 63 %*	*Limits: 50-150 %*		*Dilution: 1x*							

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ANALYTICAL REPORT

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22D0779 - Total Solids (Dry Weight)							**Soil**					
Duplicate (22D0779-DUP1)			Prepared: 04/20/22 12:14		Analyzed: 04/21/22 09:45							
QC Source Sample: Non-SDG (A2D0374-03)												
% Solids	**87.2**	---	1.00	%	1	---	87.0	---	---	0.3	10%	
Duplicate (22D0779-DUP2)			Prepared: 04/20/22 12:14		Analyzed: 04/21/22 09:45							
QC Source Sample: Non-SDG (A2D0663-05)												
% Solids	**85.3**	---	1.00	%	1	---	86.3	---	---	1	10%	
Duplicate (22D0779-DUP3)			Prepared: 04/20/22 12:14		Analyzed: 04/21/22 09:45							
QC Source Sample: Non-SDG (A2D0663-25)												
% Solids	**86.5**	---	1.00	%	1	---	89.5	---	---	3	10%	
Duplicate (22D0779-DUP4)			Prepared: 04/20/22 12:14		Analyzed: 04/21/22 09:45							
QC Source Sample: Non-SDG (A2D0715-01)												
% Solids	**77.8**	---	1.00	%	1	---	77.5	---	---	0.5	10%	
Duplicate (22D0779-DUP5)			Prepared: 04/20/22 19:12		Analyzed: 04/21/22 09:45							
QC Source Sample: Non-SDG (A2D0798-01)												
% Solids	**82.8**	---	1.00	%	1	---	82.4	---	---	0.6	10%	
Duplicate (22D0779-DUP6)			Prepared: 04/20/22 19:12		Analyzed: 04/21/22 09:45							
QC Source Sample: Non-SDG (A2D0801-01)												
% Solids	**81.4**	---	1.00	%	1	---	81.3	---	---	0.1	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D0620 - 05 18 22 1617**

SAMPLE PREPARATION INFORMATION

Hydrocarbon Identification Screen by NWTPH-HCID

Prep: NWTPH-HCID (Soil)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22D0721							
A2D0620-05	Soil	NWTPH-HCID	04/15/22 10:05	04/19/22 13:00	10.31g/10mL	10g/10mL	0.97
A2D0620-06	Soil	NWTPH-HCID	04/15/22 10:10	04/19/22 13:00	10.66g/10mL	10g/10mL	0.94

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3546 (Fuels)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22D0860							
A2D0620-05	Soil	NWTPH-Dx	04/15/22 10:05	04/22/22 11:18	10.03g/5mL	10g/5mL	1.00

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22D0779							
A2D0620-05	Soil	EPA 8000D	04/15/22 10:05	04/20/22 12:14			NA
A2D0620-06	Soil	EPA 8000D	04/15/22 10:10	04/20/22 12:14			NA

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D0620 - 05 18 22 1617**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

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S-02 Surrogate recovery cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D0620 - 05 18 22 1617**

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D0620 - 05 18 22 1617**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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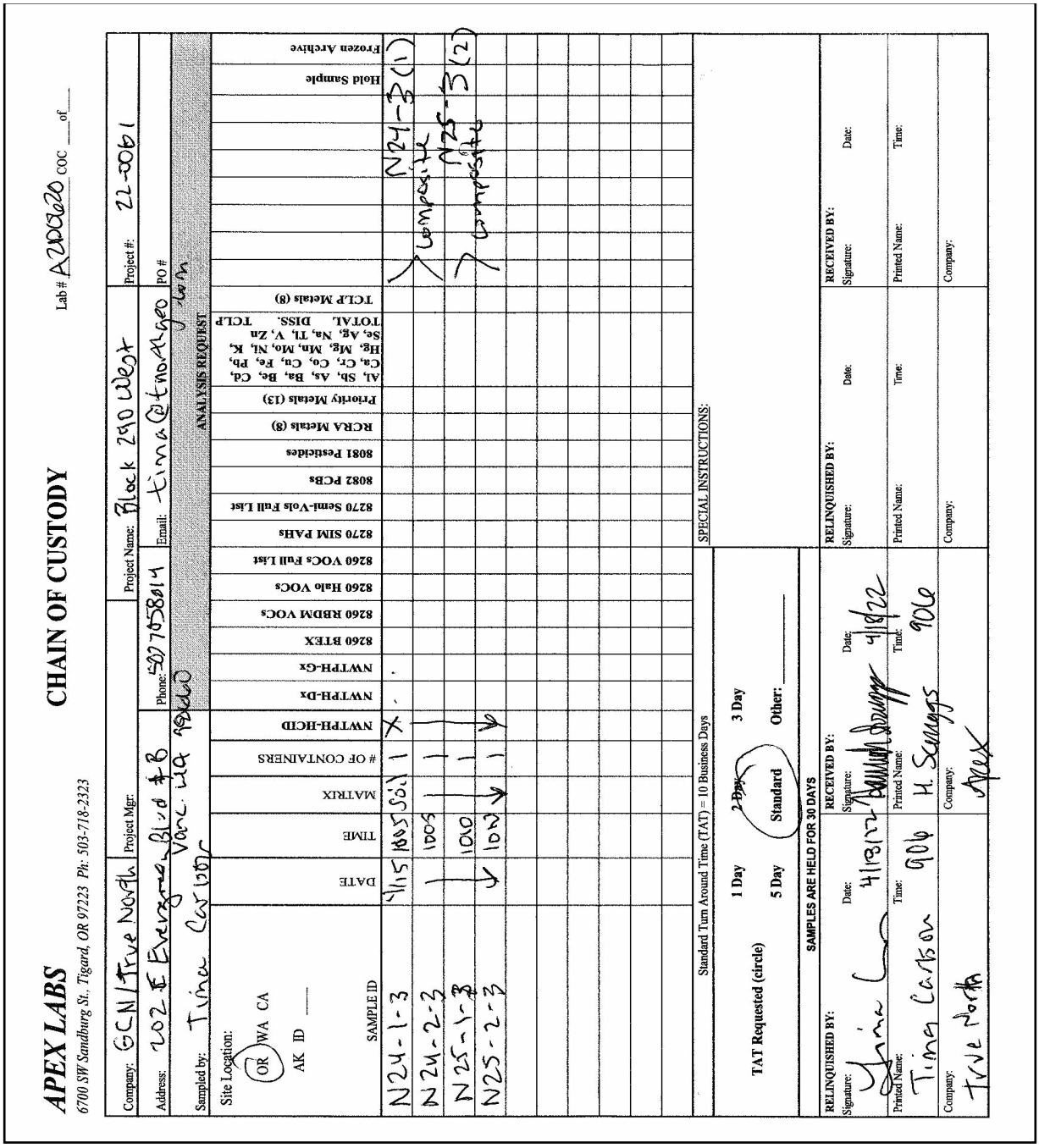

APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # A2D0620 COC ___ of ___

Company: TCN / True North | Project Mgr: | Project Name: Block 290 West | Project #: 22-0061
Address: 202 E Evergreen Blvd #B Vanc. WA 98660 | Phone: 503 705 8014 | Email: tima@tnwgeo.com | PO #
Sampled by: Tima Carlson

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
N24-1-3	4/15	1005	Soil	1	X															N24-3(1)	
N24-2-3		1009		1																1 composite	
N25-1-3		1000		1																N25-3(2)	
N25-2-3	↓	1003	↓	1	↓															1 composite	

Site Location: (OR) WA CA AK ID ____

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day | 2 Day | 3 Day | 5 Day | Standard | Other: _____

SPECIAL INSTRUCTIONS:

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY:	Date:	Time:	RECEIVED BY:	Date:	Time:
Signature:	4/18/22		Signature:	4/18/22	
Printed Name: Tima Carlson		900	Printed Name: H. Scruggs		900
Company: True North			Company: Apex		

RELINQUISHED BY:	Date:	Time:	RECEIVED BY:	Date:	Time:
Signature:			Signature:		
Printed Name:			Printed Name:		
Company:			Company:		

RELINQUISHED BY:	Date:	Time:	RECEIVED BY:	Date:	Time:
Signature:			Signature:		
Printed Name:			Printed Name:		
Company:			Company:		

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ANALYTICAL REPORT

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202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D0620 - 05 18 22 1617**

APEX LABS COOLER RECEIPT FORM

Client: GCN | True North Element WO#: A2 D0620

Project/Project #: Block 290 West | 22-0061

Delivery Info:

Date/time received: 4/18/22 @ 906 By: HAS

Delivered by: Apex____Client X ESS____FedEx____UPS____Swift____Senvoy____SDS____Other____

Cooler Inspection Date/time inspected: 4/18/22 @ 906 By: HAS

Chain of Custody included? Yes X No _____ Custody seals? Yes_____ No X

Signed/dated by client? Yes X No _____

Signed/dated by Apex? Yes X No _____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	0.1						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N) HAS 4/18/22	Y						
Ice type: (Gel/Real/Other)	real						
Condition:	good						

Cooler out of temp? (Y/N) Possible reason why:_____

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 4/18/22 @ 912 By: HAS

All samples intact? Yes X No ___ Comments:_____

Bottle labels/COCs agree? Yes X No ___ Comments: no date or time on containers

COC/container discrepancies form initiated? Yes ___ No X

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: _____

Do VOA vials have visible headspace? Yes ___ No ___ NA X

Comments_____

Water samples: pH checked: Yes___No___NA X pH appropriate? Yes___No___NA X

Comments: _____

Additional information: _____

Labeled by: HAS Witness: VS Cooler Inspected by: HAS

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

Wednesday, May 18, 2022

Tima Carlson
True North Geotechnical Services
202 E Evergreen Blvd, Suite B
Vancouver, WA 98660

RE: A2D0899 - Block 290 - 22-0061

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A2D0899, which was received by the laboratory on 4/22/2022 at 8:50:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	0.1 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

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ORELAP ID: OR100062

ANALYTICAL REPORT

True North Geotechnical Services	Project: Block 290	
202 E Evergreen Blvd, Suite B	Project Number: 22-0061	Report ID:
Vancouver, WA 98660	Project Manager: Tima Carlson	A2D0899 - 05 18 22 1622

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S13-1-5	A2D0899-01	Soil	04/21/22 13:15	04/22/22 08:50
S13-2-5	A2D0899-02	Soil	04/21/22 13:15	04/22/22 08:50
W27-1-5	A2D0899-03	Soil	04/21/22 13:20	04/22/22 08:50
W27-2-5	A2D0899-04	Soil	04/21/22 13:20	04/22/22 08:50
W2-1-10	A2D0899-05	Soil	04/21/22 13:25	04/22/22 08:50
W2-2-10	A2D0899-06	Soil	04/21/22 13:25	04/22/22 08:50
N2-1-4	A2D0899-07	Soil	04/21/22 13:30	04/22/22 08:50
N2-2-4	A2D0899-08	Soil	04/21/22 13:30	04/22/22 08:50
S20-1-10	A2D0899-09	Soil	04/21/22 13:35	04/22/22 08:50
S20-2-10	A2D0899-10	Soil	04/21/22 13:35	04/22/22 08:50
S9-1-5	A2D0899-11	Soil	04/21/22 13:40	04/22/22 08:50
S9-2-5	A2D0899-12	Soil	04/21/22 13:40	04/22/22 08:50
S24-1-10	A2D0899-13	Soil	04/21/22 13:45	04/22/22 08:50
S24-2-10	A2D0899-14	Soil	04/21/22 13:45	04/22/22 08:50
S16-1-11	A2D0899-15	Soil	04/21/22 13:50	04/22/22 08:50
S16-2-11	A2D0899-16	Soil	04/21/22 13:50	04/22/22 08:50
W6-1-10	A2D0899-17	Soil	04/21/22 13:55	04/22/22 08:50
W6-2-10	A2D0899-18	Soil	04/21/22 13:55	04/22/22 08:50
N6-1-5	A2D0899-19	Soil	04/21/22 14:00	04/22/22 08:50
N6-2-5	A2D0899-20	Soil	04/21/22 14:00	04/22/22 08:50
W3-1-5	A2D0899-21	Soil	04/21/22 14:05	04/22/22 08:50
W3-2-5	A2D0899-22	Soil	04/21/22 14:05	04/22/22 08:50
Composite S13-5	A2D0899-23	Soil	04/21/22 13:15	04/22/22 08:50
Comp W27-5	A2D0899-24	Soil	04/21/22 13:20	04/22/22 08:50
Comp W2-10	A2D0899-25	Soil	04/21/22 13:25	04/22/22 08:50
Comp N2-4	A2D0899-26	Soil	04/21/22 13:30	04/22/22 08:50
Comp S20-10	A2D0899-27	Soil	04/21/22 13:35	04/22/22 08:50
Comp S9-5	A2D0899-28	Soil	04/21/22 13:40	04/22/22 08:50
Comp S24-10	A2D0899-29	Soil	04/21/22 13:45	04/22/22 08:50
Comp S16-11	A2D0899-30	Soil	04/21/22 13:50	04/22/22 08:50
Comp W6-10	A2D0899-31	Soil	04/21/22 13:55	04/22/22 08:50
Comp N6-5	A2D0899-32	Soil	04/21/22 14:00	04/22/22 08:50
Comp W3-5	A2D0899-33	Soil	04/21/22 14:05	04/22/22 08:50

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D0899 - 05 18 22 1622**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Composite S13-5 (A2D0899-23)				**Matrix: Soil**		**Batch: 22D1000**		
Gasoline Range Organics	ND	---	30.5	mg/kg dry	1	04/26/22 21:58	NWTPH-HCID	
Diesel Range Organics	ND	---	76.2	mg/kg dry	1	04/26/22 21:58	NWTPH-HCID	
Oil Range Organics	ND	---	152	mg/kg dry	1	04/26/22 21:58	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*86 %*	*Limits: 50-150 %*	*1*	*04/26/22 21:58*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*80 %*	*50-150 %*	*1*	*04/26/22 21:58*	*NWTPH-HCID*	
Comp W27-5 (A2D0899-24)				**Matrix: Soil**		**Batch: 22D1000**		
Gasoline Range Organics	ND	---	25.1	mg/kg dry	1	04/26/22 22:43	NWTPH-HCID	
Diesel Range Organics	ND	---	62.6	mg/kg dry	1	04/26/22 22:43	NWTPH-HCID	
Oil Range Organics	ND	---	125	mg/kg dry	1	04/26/22 22:43	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*88 %*	*Limits: 50-150 %*	*1*	*04/26/22 22:43*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*84 %*	*50-150 %*	*1*	*04/26/22 22:43*	*NWTPH-HCID*	
Comp W2-10 (A2D0899-25)				**Matrix: Soil**		**Batch: 22D1000**		
Gasoline Range Organics	ND	---	25.6	mg/kg dry	1	04/26/22 23:06	NWTPH-HCID	
Diesel Range Organics	ND	---	64.0	mg/kg dry	1	04/26/22 23:06	NWTPH-HCID	
Oil Range Organics	ND	---	128	mg/kg dry	1	04/26/22 23:06	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*90 %*	*Limits: 50-150 %*	*1*	*04/26/22 23:06*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*85 %*	*50-150 %*	*1*	*04/26/22 23:06*	*NWTPH-HCID*	
Comp N2-4 (A2D0899-26)				**Matrix: Soil**		**Batch: 22D1000**		
Gasoline Range Organics	ND	---	26.5	mg/kg dry	1	04/26/22 23:28	NWTPH-HCID	
Diesel Range Organics	ND	---	66.2	mg/kg dry	1	04/26/22 23:28	NWTPH-HCID	
Oil Range Organics	ND	---	132	mg/kg dry	1	04/26/22 23:28	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*83 %*	*Limits: 50-150 %*	*1*	*04/26/22 23:28*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*78 %*	*50-150 %*	*1*	*04/26/22 23:28*	*NWTPH-HCID*	
Comp S20-10 (A2D0899-27)				**Matrix: Soil**		**Batch: 22D1000**		
Gasoline Range Organics	ND	---	26.3	mg/kg dry	1	04/26/22 23:51	NWTPH-HCID	
Diesel Range Organics	ND	---	65.7	mg/kg dry	1	04/26/22 23:51	NWTPH-HCID	
Oil Range Organics	ND	---	131	mg/kg dry	1	04/26/22 23:51	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*87 %*	*Limits: 50-150 %*	*1*	*04/26/22 23:51*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*86 %*	*50-150 %*	*1*	*04/26/22 23:51*	*NWTPH-HCID*	

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D0899 - 05 18 22 1622**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Comp S9-5 (A2D0899-28)				**Matrix: Soil**		**Batch: 22D1000**		
Gasoline Range Organics	ND	---	26.2	mg/kg dry	1	04/27/22 00:13	NWTPH-HCID	
Diesel Range Organics	ND	---	65.5	mg/kg dry	1	04/27/22 00:13	NWTPH-HCID	
Oil Range Organics	ND	---	131	mg/kg dry	1	04/27/22 00:13	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*85 %*	*Limits: 50-150 %*	*1*	*04/27/22 00:13*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*80 %*	*50-150 %*	*1*	*04/27/22 00:13*	*NWTPH-HCID*	
Comp S24-10 (A2D0899-29)				**Matrix: Soil**		**Batch: 22D1000**		
Gasoline Range Organics	ND	---	27.5	mg/kg dry	1	04/27/22 00:35	NWTPH-HCID	
Diesel Range Organics	ND	---	68.7	mg/kg dry	1	04/27/22 00:35	NWTPH-HCID	
Oil Range Organics	ND	---	137	mg/kg dry	1	04/27/22 00:35	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*90 %*	*Limits: 50-150 %*	*1*	*04/27/22 00:35*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*83 %*	*50-150 %*	*1*	*04/27/22 00:35*	*NWTPH-HCID*	
Comp S16-11 (A2D0899-30)				**Matrix: Soil**		**Batch: 22D1000**		
Gasoline Range Organics	ND	---	24.6	mg/kg dry	1	04/27/22 00:58	NWTPH-HCID	
Diesel Range Organics	ND	---	61.6	mg/kg dry	1	04/27/22 00:58	NWTPH-HCID	
Oil Range Organics	ND	---	123	mg/kg dry	1	04/27/22 00:58	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*82 %*	*Limits: 50-150 %*	*1*	*04/27/22 00:58*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*76 %*	*50-150 %*	*1*	*04/27/22 00:58*	*NWTPH-HCID*	
Comp W6-10 (A2D0899-31)				**Matrix: Soil**		**Batch: 22D1000**		
Gasoline Range Organics	ND	---	26.0	mg/kg dry	1	04/27/22 01:20	NWTPH-HCID	
Diesel Range Organics	ND	---	64.9	mg/kg dry	1	04/27/22 01:20	NWTPH-HCID	
Oil Range Organics	ND	---	130	mg/kg dry	1	04/27/22 01:20	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*86 %*	*Limits: 50-150 %*	*1*	*04/27/22 01:20*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*78 %*	*50-150 %*	*1*	*04/27/22 01:20*	*NWTPH-HCID*	
Comp N6-5 (A2D0899-32)				**Matrix: Soil**		**Batch: 22D1000**		
Gasoline Range Organics	ND	---	26.3	mg/kg dry	1	04/27/22 01:43	NWTPH-HCID	
Diesel Range Organics	ND	---	65.8	mg/kg dry	1	04/27/22 01:43	NWTPH-HCID	
Oil Range Organics	ND	---	132	mg/kg dry	1	04/27/22 01:43	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*84 %*	*Limits: 50-150 %*	*1*	*04/27/22 01:43*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*82 %*	*50-150 %*	*1*	*04/27/22 01:43*	*NWTPH-HCID*	

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D0899 - 05 18 22 1622**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Comp W3-5 (A2D0899-33)				**Matrix: Soil**		**Batch: 22D1000**		
Gasoline Range Organics	ND	---	27.5	mg/kg dry	1	04/27/22 02:05	NWTPH-HCID	
Diesel Range Organics	ND	---	68.8	mg/kg dry	1	04/27/22 02:05	NWTPH-HCID	
Oil Range Organics	ND	---	138	mg/kg dry	1	04/27/22 02:05	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*84 %*	*Limits: 50-150 %*	*1*	*04/27/22 02:05*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*78 %*	*50-150 %*	*1*	*04/27/22 02:05*	*NWTPH-HCID*	

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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Composite S13-5 (A2D0899-23)				**Matrix: Soil**		**Batch: 22D0991**		
% Solids	**65.5**	---	1.00	%	1	04/27/22 09:10	EPA 8000D	
Comp W27-5 (A2D0899-24)				**Matrix: Soil**		**Batch: 22D0991**		
% Solids	**74.8**	---	1.00	%	1	04/27/22 09:10	EPA 8000D	
Comp W2-10 (A2D0899-25)				**Matrix: Soil**		**Batch: 22D0991**		
% Solids	**72.5**	---	1.00	%	1	04/27/22 09:10	EPA 8000D	
Comp N2-4 (A2D0899-26)				**Matrix: Soil**		**Batch: 22D0991**		
% Solids	**69.7**	---	1.00	%	1	04/27/22 09:10	EPA 8000D	
Comp S20-10 (A2D0899-27)				**Matrix: Soil**		**Batch: 22D0991**		
% Solids	**72.7**	---	1.00	%	1	04/27/22 09:10	EPA 8000D	
Comp S9-5 (A2D0899-28)				**Matrix: Soil**		**Batch: 22D0991**		
% Solids	**72.5**	---	1.00	%	1	04/27/22 09:10	EPA 8000D	
Comp S24-10 (A2D0899-29)				**Matrix: Soil**		**Batch: 22D0991**		
% Solids	**72.3**	---	1.00	%	1	04/27/22 09:10	EPA 8000D	
Comp S16-11 (A2D0899-30)				**Matrix: Soil**		**Batch: 22D0991**		
% Solids	**77.1**	---	1.00	%	1	04/27/22 09:10	EPA 8000D	
Comp W6-10 (A2D0899-31)				**Matrix: Soil**		**Batch: 22D0991**		
% Solids	**76.3**	---	1.00	%	1	04/27/22 09:10	EPA 8000D	
Comp N6-5 (A2D0899-32)				**Matrix: Soil**		**Batch: 22D0991**		
% Solids	**74.7**	---	1.00	%	1	04/27/22 09:10	EPA 8000D	
Comp W3-5 (A2D0899-33)				**Matrix: Soil**		**Batch: 22D0991**		
% Solids	**72.0**	---	1.00	%	1	04/27/22 09:10	EPA 8000D	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22D1000 - NWTPH-HCID (Soil)							Soil					
Blank (22D1000-BLK1)			Prepared: 04/26/22 13:05 Analyzed: 04/26/22 21:36									
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		*Recovery:*	*84 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
4-Bromofluorobenzene (Surr)			*83 %*		*50-150 %*			*"*				
Duplicate (22D1000-DUP1)			Prepared: 04/26/22 13:05 Analyzed: 04/26/22 22:21									
QC Source Sample: Composite S13-5 (A2D0899-23)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	30.4	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	76.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	152	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery:*	*114 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
4-Bromofluorobenzene (Surr)			*104 %*		*50-150 %*			*"*				
Duplicate (22D1000-DUP2)			Prepared: 04/26/22 13:05 Analyzed: 04/27/22 06:11									
QC Source Sample: Non-SDG (A2D0938-02)												
Gasoline Range Organics	ND	---	26.0	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	65.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	130	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery:*	*90 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
4-Bromofluorobenzene (Surr)			*84 %*		*50-150 %*			*"*				

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D0899 - 05 18 22 1622**

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22D0991 - Total Solids (Dry Weight)							**Soil**					
Duplicate (22D0991-DUP1)			Prepared: 04/26/22 11:15		Analyzed: 04/27/22 09:10							**PRO**
QC Source Sample: Non-SDG (A1K0461-49)												
% Solids	**98.8**	---	1.00	%	1	---	98.9	---	---	0.2	10%	
Duplicate (22D0991-DUP2)			Prepared: 04/26/22 11:15		Analyzed: 04/27/22 09:10							**PRO**
QC Source Sample: Non-SDG (A2D0561-02)												
% Solids	**98.3**	---	1.00	%	1	---	98.5	---	---	0.2	10%	
Duplicate (22D0991-DUP3)			Prepared: 04/26/22 11:15		Analyzed: 04/27/22 09:10							**PRO**
QC Source Sample: Non-SDG (A2D0561-04)												
% Solids	**98.5**	---	1.00	%	1	---	98.7	---	---	0.1	10%	
Duplicate (22D0991-DUP4)			Prepared: 04/26/22 11:15		Analyzed: 04/27/22 09:10							**PRO**
QC Source Sample: Non-SDG (A2D0561-06)												
% Solids	**98.9**	---	1.00	%	1	---	98.9	---	---	0.04	10%	
Duplicate (22D0991-DUP5)			Prepared: 04/26/22 11:15		Analyzed: 04/27/22 09:10							**PRO**
QC Source Sample: Non-SDG (A2D0561-08)												
% Solids	**98.8**	---	1.00	%	1	---	98.8	---	---	0.04	10%	
Duplicate (22D0991-DUP6)			Prepared: 04/26/22 11:15		Analyzed: 04/27/22 09:10							**PRO**
QC Source Sample: Non-SDG (A2D0561-10)												
% Solids	**98.5**	---	1.00	%	1	---	98.6	---	---	0.07	10%	
Duplicate (22D0991-DUP7)			Prepared: 04/26/22 11:15		Analyzed: 04/27/22 09:10							**PRO**
QC Source Sample: Non-SDG (A2D0561-12)												
% Solids	**98.0**	---	1.00	%	1	---	98.1	---	---	0.1	10%	
Duplicate (22D0991-DUP8)			Prepared: 04/26/22 11:15		Analyzed: 04/27/22 09:10							**PRO**
QC Source Sample: Non-SDG (A2D0561-14)												
% Solids	**97.4**	---	1.00	%	1	---	97.6	---	---	0.2	10%	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22D0991 - Total Solids (Dry Weight)							**Soil**					
Duplicate (22D0991-DUP9)			Prepared: 04/26/22 11:15			Analyzed: 04/27/22 09:10						**PRO**
QC Source Sample: Non-SDG (A2D0561-16)												
% Solids	**98.1**	---	1.00	%	1	---	98.2	---	---	0.07	10%	
Duplicate (22D0991-DUPA)			Prepared: 04/26/22 11:15			Analyzed: 04/27/22 09:10						**PRO**
QC Source Sample: Non-SDG (A2D0561-18)												
% Solids	**98.2**	---	1.00	%	1	---	98.3	---	---	0.1	10%	
Duplicate (22D0991-DUPB)			Prepared: 04/26/22 11:15			Analyzed: 04/27/22 09:10						**PRO**
QC Source Sample: Non-SDG (A2D0663-24)												
% Solids	**99.0**	---	1.00	%	1	---	99.0	---	---	0.04	10%	
Duplicate (22D0991-DUPC)			Prepared: 04/26/22 11:15			Analyzed: 04/27/22 09:10						**PRO**
QC Source Sample: Non-SDG (A2D0663-26)												
% Solids	**98.9**	---	1.00	%	1	---	98.9	---	---	0.06	10%	
Duplicate (22D0991-DUPD)			Prepared: 04/26/22 16:50			Analyzed: 04/27/22 09:10						
QC Source Sample: Non-SDG (A2D1022-01)												
% Solids	**91.4**	---	1.00	%	1	---	88.4	---	---	3	10%	
Duplicate (22D0991-DUPE)			Prepared: 04/26/22 16:50			Analyzed: 04/27/22 09:10						
QC Source Sample: Non-SDG (A2D1030-01)												
% Solids	**89.4**	---	1.00	%	1	---	89.4	---	---	0.01	10%	
Duplicate (22D0991-DUPF)			Prepared: 04/26/22 18:58			Analyzed: 04/27/22 09:10						
QC Source Sample: Non-SDG (A2D1031-04)												
% Solids	**82.9**	---	1.00	%	1	---	83.0	---	---	0.02	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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SAMPLE PREPARATION INFORMATION

Hydrocarbon Identification Screen by NWTPH-HCID

Prep: NWTPH-HCID (Soil)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22D1000							
A2D0899-23	Soil	NWTPH-HCID	04/21/22 13:15	04/26/22 13:05	10.01g/10mL	10g/10mL	1.00
A2D0899-24	Soil	NWTPH-HCID	04/21/22 13:20	04/26/22 13:05	10.67g/10mL	10g/10mL	0.94
A2D0899-25	Soil	NWTPH-HCID	04/21/22 13:25	04/26/22 13:05	10.78g/10mL	10g/10mL	0.93
A2D0899-26	Soil	NWTPH-HCID	04/21/22 13:30	04/26/22 13:05	10.84g/10mL	10g/10mL	0.92
A2D0899-27	Soil	NWTPH-HCID	04/21/22 13:35	04/26/22 13:05	10.47g/10mL	10g/10mL	0.96
A2D0899-28	Soil	NWTPH-HCID	04/21/22 13:40	04/26/22 13:05	10.52g/10mL	10g/10mL	0.95
A2D0899-29	Soil	NWTPH-HCID	04/21/22 13:45	04/26/22 13:05	10.07g/10mL	10g/10mL	0.99
A2D0899-30	Soil	NWTPH-HCID	04/21/22 13:50	04/26/22 13:05	10.53g/10mL	10g/10mL	0.95
A2D0899-31	Soil	NWTPH-HCID	04/21/22 13:55	04/26/22 13:05	10.1g/10mL	10g/10mL	0.99
A2D0899-32	Soil	NWTPH-HCID	04/21/22 14:00	04/26/22 13:05	10.17g/10mL	10g/10mL	0.98
A2D0899-33	Soil	NWTPH-HCID	04/21/22 14:05	04/26/22 13:05	10.1g/10mL	10g/10mL	0.99

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22D0991							
A2D0899-23	Soil	EPA 8000D	04/21/22 13:15	04/26/22 11:15			NA
A2D0899-24	Soil	EPA 8000D	04/21/22 13:20	04/26/22 11:15			NA
A2D0899-25	Soil	EPA 8000D	04/21/22 13:25	04/26/22 11:15			NA
A2D0899-26	Soil	EPA 8000D	04/21/22 13:30	04/26/22 11:15			NA
A2D0899-27	Soil	EPA 8000D	04/21/22 13:35	04/26/22 11:15			NA
A2D0899-28	Soil	EPA 8000D	04/21/22 13:40	04/26/22 11:15			NA
A2D0899-29	Soil	EPA 8000D	04/21/22 13:45	04/26/22 11:15			NA
A2D0899-30	Soil	EPA 8000D	04/21/22 13:50	04/26/22 11:15			NA
A2D0899-31	Soil	EPA 8000D	04/21/22 13:55	04/26/22 11:15			NA
A2D0899-32	Soil	EPA 8000D	04/21/22 14:00	04/26/22 11:15			NA
A2D0899-33	Soil	EPA 8000D	04/21/22 14:05	04/26/22 11:15			NA

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D0899 - 05 18 22 1622**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

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PRO Sample has undergone sample processing prior to extraction and analysis.

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

Apex Laboratories

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D0899 - 05 18 22 1622**

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D0899 - 05 18 22 1622**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

Darrell Auvil, Client Services Manager

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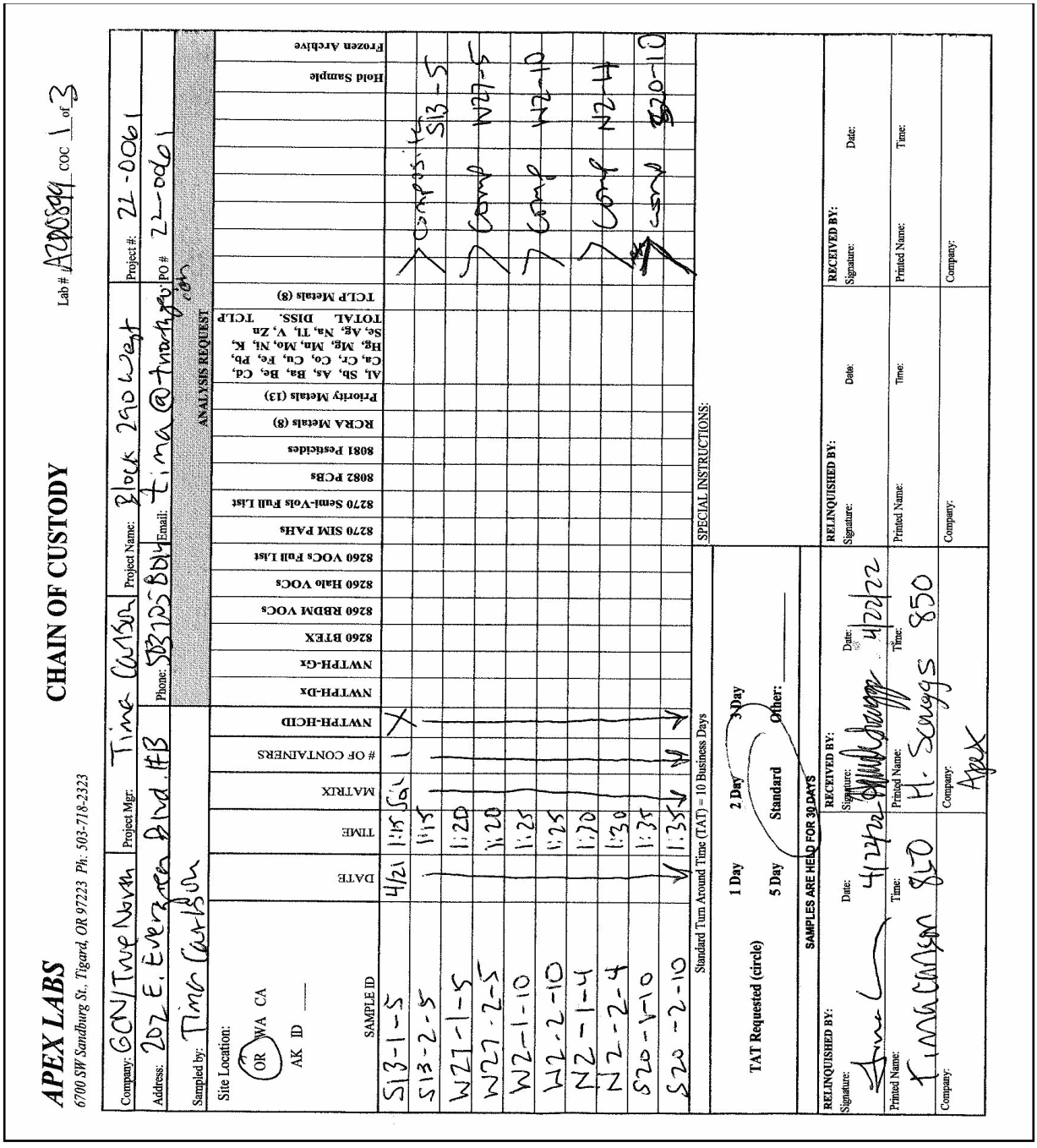
ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D0899 - 05 18 22 1622**



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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
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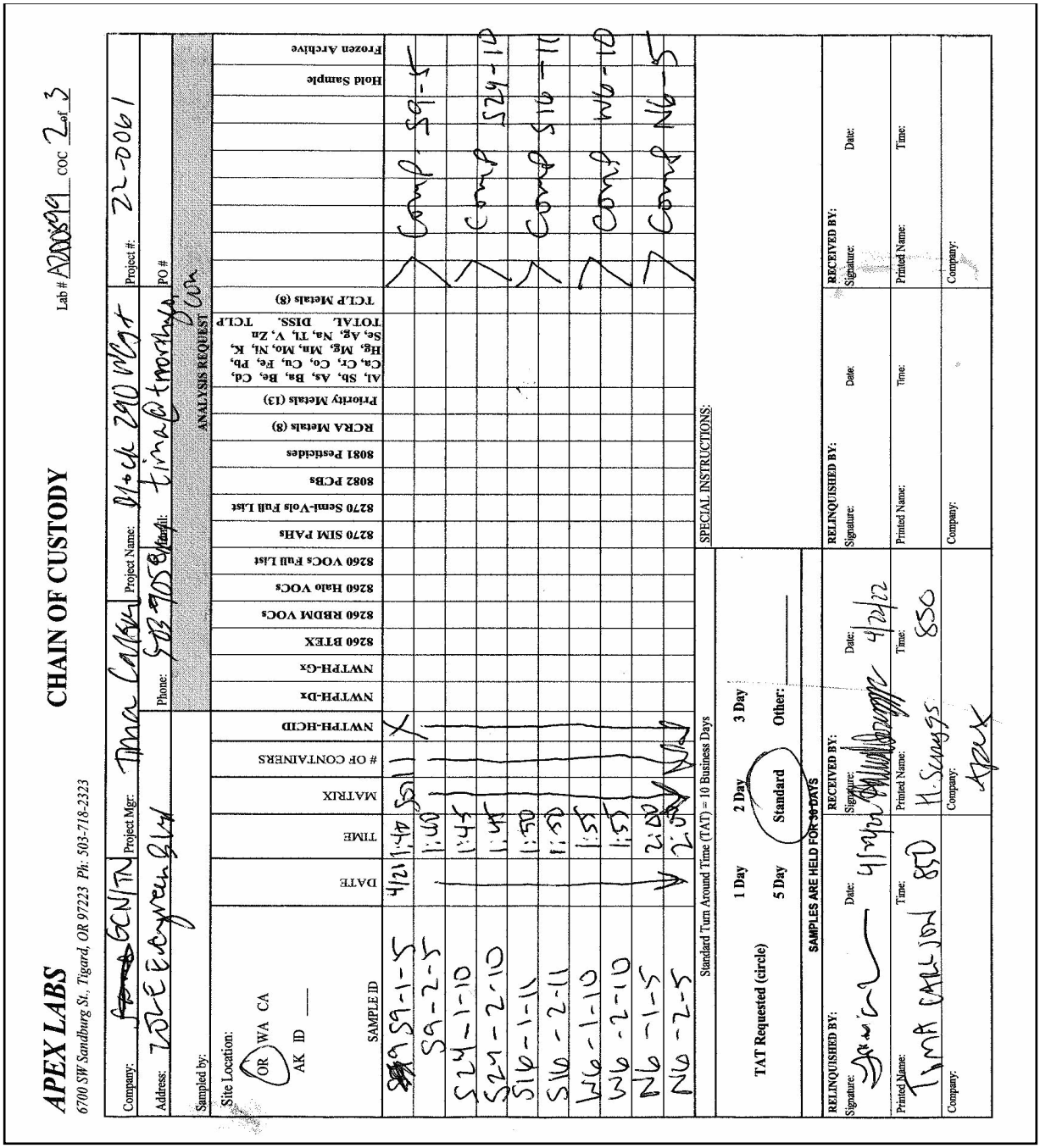
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D0899 - 05 18 22 1622**



APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # A2D0899 COC 2 of 3

Company: True North GCN/TN | Project Mgr: Tima Carlson | Project Name: Block 290 Mixed Use | Project #: 22-0061
Address: 202 E Evergreen Blvd | Phone: 503 805 0516 Email: timac@truenorthgeo.com | PO #
Sampled by: | ANALYSIS REQUEST

Site Location: (OR) WA CA / AK ID ___

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn	TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
~~SB~~ SB-1-5	4/21/22	1:40	SO	1	X															X	Conf. SB-1-10
SB-2-5		1:40																			
S24-1-10		1:42																		X	Conf S24-1-15
S24-2-10		1:44																			
S16-1-11		1:50																		X	Conf S16-1-15
S16-2-11		1:52																			
N16-1-10		1:55																		X	Conf N16-1-15
N16-2-10		1:55																			
N6-1-5		2:00																		X	Conf N6-1-10
N6-2-5		2:05																			

SPECIAL INSTRUCTIONS:

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day | 2 Day | 3 Day | 5 Day | Standard | Other: ___

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY:	Date:	RECEIVED BY:	Date:	RELINQUISHED BY:	Date:	RECEIVED BY:	Date:
Signature:		Signature:		Signature:		Signature:	
Printed Name:	Time:	Printed Name:	Time:	Printed Name:	Time:	Printed Name:	Time:
Company:		Company:		Company:		Company:	

RELINQUISHED BY: Signature: [signature] Date: 4/21/22
Printed Name: Tima Carlson Time: 850
Company:

RECEIVED BY: Signature: [signature] Date: 4/21/22
Printed Name: H. Simms Time: 850
Company: Apex

Apex Laboratories

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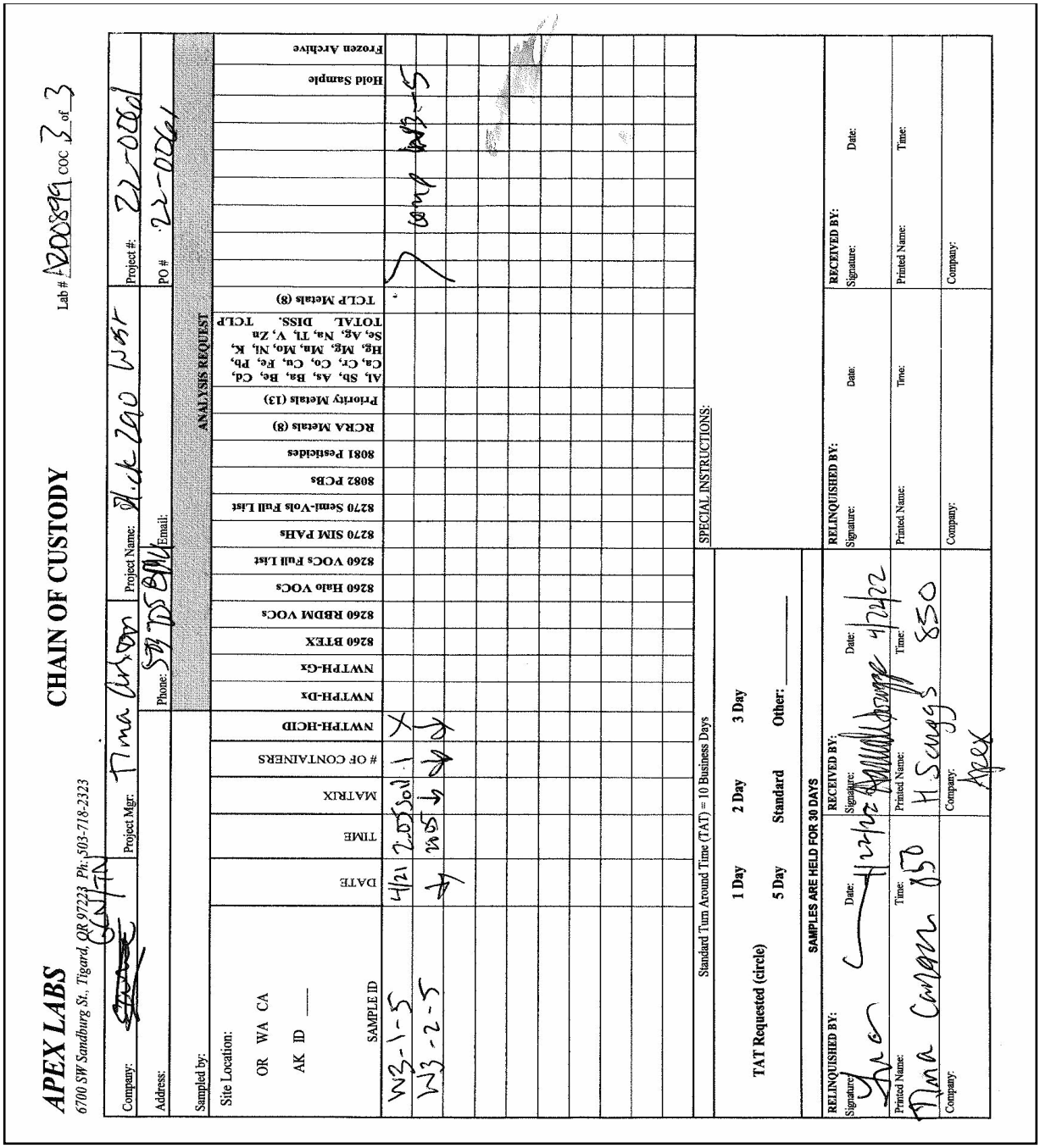
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D0899 - 05 18 22 1622**



APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # A200899 COC 3 of 3

Company: TNGTN | Project Mgr: Tima Carlson | Project Name: Block 290 WSR | Project #: 22-0061

Address: | Phone: 971 205 8911 | Email: | PO # 22-0061

Sampled by:

Site Location: OR WA CA
AK ID ____

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
WS-1-5	4/21	2:05	Soil	1	X																
WS-2-5		2:35																			

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day | 2 Day | 3 Day | 5 Day | Standard | Other: ____

SPECIAL INSTRUCTIONS:

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY: Signature: | Date: | Time: | Printed Name: | Company:

RECEIVED BY: Signature: | Date: 4/22/22 | Time: 8:50 | Printed Name: H Scruggs | Company: Apex

RELINQUISHED BY: Signature: | Date: | Time: | Printed Name: | Company:

RECEIVED BY: Signature: | Date: | Time: | Printed Name: | Company:

RELINQUISHED BY: Signature: | Date: | Time: | Printed Name: | Company:

RECEIVED BY: Signature: | Date: | Time: | Printed Name: | Company:

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D0899 - 05 18 22 1622**

APEX LABS COOLER RECEIPT FORM

Client: GCN | True North Element WO#: A2 D0899

Project/Project #: Block 290 West | 22-0061

Delivery Info:

Date/time received: 4/22/22 @ 850 By: HAS

Delivered by: Apex ___ Client X ESS ___ FedEx ___ UPS ___ Swift ___ Senvoy ___ SDS ___ Other ___

Cooler Inspection Date/time inspected: 4/22/22 @ 850 By: HAS

Chain of Custody included? Yes X No ___ Custody seals? Yes ___ No X

Signed/dated by client? Yes X No ___

Signed/dated by Apex? Yes X No ___

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	0.1						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N) HAS 4/22/22	X (N)						
Ice type: (Gel/Real/Other)	real						
Condition:	good						

Cooler out of temp? (Y/N) Possible reason why: ___

Green dots applied to out of temperature samples? Yes (No)

Out of temperature samples form initiated? Yes (No)

Sample Inspection: Date/time inspected: 4/22/22 @ 959 By: HAS

All samples intact? Yes X No ___ Comments: ___

Bottle labels/COCs agree? Yes X No ___ Comments: NO date or time on containers.

COC/container discrepancies form initiated? Yes ___ No X

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: ___

Do VOA vials have visible headspace? Yes ___ No ___ NA X

Comments ___

Water samples: pH checked: Yes ___ No ___ NA X pH appropriate? Yes ___ No ___ NA X

Comments: ___

Additional information: ___

Labeled by: HAS Witness: AMC Cooler Inspected by: HAS

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Wednesday, May 18, 2022

Tima Carlson
True North Geotechnical Services
202 E Evergreen Blvd, Suite B
Vancouver, WA 98660

RE: A2D1166 - Block 290 - 22-0061

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A2D1166, which was received by the laboratory on 4/29/2022 at 1:41:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler#1	4.4 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D1166 - 05 18 22 1511**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W10-1-15	A2D1166-01	Soil	04/28/22 11:00	04/29/22 13:41
W10-2-15	A2D1166-02	Soil	04/28/22 11:00	04/29/22 13:41
Comp W10-1-15	A2D1166-03	Soil	04/28/22 11:00	04/29/22 13:41
S21-1-16.75	A2D1166-04	Soil	04/28/22 11:00	04/29/22 13:41
S21-2-16.75	A2D1166-05	Soil	04/28/22 11:00	04/29/22 13:41
Comp S21-1-16.75	A2D1166-06	Soil	04/28/22 11:00	04/29/22 13:41
S16-S15-1-16.75	A2D1166-07	Soil	04/28/22 11:00	04/29/22 13:41
S16-S16-2-16.75	A2D1166-08	Soil	04/28/22 11:00	04/29/22 13:41
Comp S16-S15-1-16.75	A2D1166-09	Soil	04/28/22 11:00	04/29/22 13:41
N2-1-4	A2D1166-10	Soil	04/28/22 11:00	04/29/22 13:41
N2-2-4	A2D1166-11	Soil	04/28/22 11:00	04/29/22 13:41
Comp N2-1-4	A2D1166-12	Soil	04/28/22 11:00	04/29/22 13:41
W4-2-16	A2D1166-13	Soil	04/28/22 11:00	04/29/22 13:41
W4-1-16	A2D1166-14	Soil	04/28/22 11:00	04/29/22 13:41
Comp W4-1-16	A2D1166-15	Soil	04/28/22 11:00	04/29/22 13:41
E2-1-3	A2D1166-16	Soil	04/28/22 12:00	04/29/22 13:41
E2-2-3	A2D1166-17	Soil	04/28/22 12:00	04/29/22 13:41
Comp E2-1-3	A2D1166-18	Soil	04/28/22 12:00	04/29/22 13:41
W23-1-16.75	A2D1166-19	Soil	04/28/22 12:00	04/29/22 13:41
Comp W23-2-16.75	A2D1166-20	Soil	04/28/22 12:00	04/29/22 13:41
Comp W23-1-16.75	A2D1166-21	Soil	04/28/22 12:00	04/29/22 13:41
N16-1.5	A2D1166-22	Soil	04/28/22 12:00	04/29/22 13:41
N16-2.5	A2D1166-23	Soil	04/28/22 12:00	04/29/22 13:41
Comp N16-1-5	A2D1166-24	Soil	04/28/22 12:00	04/29/22 13:41
N11-1-7	A2D1166-25	Soil	04/28/22 12:00	04/29/22 13:41
N11-2-7	A2D1166-26	Soil	04/28/22 12:00	04/29/22 13:41
Comp N11-1-5	A2D1166-27	Soil	04/28/22 12:00	04/29/22 13:41
S26-1-16	A2D1166-28	Soil	04/29/22 12:00	04/29/22 13:41
S26-2-16	A2D1166-29	Soil	04/29/22 12:00	04/29/22 13:41
Comp S26	A2D1166-30	Soil	04/29/22 12:00	04/29/22 13:41
W23-1-5	A2D1166-31	Soil	04/29/22 12:00	04/29/22 13:41
W23-2-5	A2D1166-32	Soil	04/29/22 12:00	04/29/22 13:41
Comp W23	A2D1166-33	Soil	04/29/22 12:00	04/29/22 13:41

Apex Laboratories

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
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503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D1166 - 05 18 22 1511**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Comp W10-1-15 (A2D1166-03)				**Matrix: Soil**		**Batch: 22E0104**		
Gasoline Range Organics	ND	---	24.9	mg/kg dry	1	05/03/22 23:16	NWTPH-HCID	
Diesel Range Organics	ND	---	62.4	mg/kg dry	1	05/03/22 23:16	NWTPH-HCID	
Oil Range Organics	ND	---	125	mg/kg dry	1	05/03/22 23:16	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 102 %*		*Limits: 50-150 %*	*1*	*05/03/22 23:16*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*86 %*	*50-150 %*	*1*	*05/03/22 23:16*	*NWTPH-HCID*	
Comp S21-1-16.75 (A2D1166-06)				**Matrix: Soil**		**Batch: 22E0104**		
Gasoline Range Organics	ND	---	24.7	mg/kg dry	1	05/04/22 00:01	NWTPH-HCID	
Diesel Range Organics	ND	---	61.9	mg/kg dry	1	05/04/22 00:01	NWTPH-HCID	
Oil Range Organics	ND	---	124	mg/kg dry	1	05/04/22 00:01	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 95 %*		*Limits: 50-150 %*	*1*	*05/04/22 00:01*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*82 %*	*50-150 %*	*1*	*05/04/22 00:01*	*NWTPH-HCID*	
Comp S16-S15-1-16.75 (A2D1166-09)				**Matrix: Soil**		**Batch: 22E0104**		
Gasoline Range Organics	ND	---	24.1	mg/kg dry	1	05/04/22 00:46	NWTPH-HCID	
Diesel Range Organics	ND	---	60.2	mg/kg dry	1	05/04/22 00:46	NWTPH-HCID	
Oil Range Organics	ND	---	120	mg/kg dry	1	05/04/22 00:46	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 97 %*		*Limits: 50-150 %*	*1*	*05/04/22 00:46*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*87 %*	*50-150 %*	*1*	*05/04/22 00:46*	*NWTPH-HCID*	
Comp N2-1-4 (A2D1166-12)				**Matrix: Soil**		**Batch: 22E0104**		
Gasoline Range Organics	ND	---	22.7	mg/kg dry	1	05/04/22 01:08	NWTPH-HCID	
Diesel Range Organics	ND	---	56.7	mg/kg dry	1	05/04/22 01:08	NWTPH-HCID	
Oil Range Organics	ND	---	113	mg/kg dry	1	05/04/22 01:08	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 91 %*		*Limits: 50-150 %*	*1*	*05/04/22 01:08*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*75 %*	*50-150 %*	*1*	*05/04/22 01:08*	*NWTPH-HCID*	
Comp W4-1-16 (A2D1166-15)				**Matrix: Soil**		**Batch: 22E0104**		
Gasoline Range Organics	ND	---	21.7	mg/kg dry	1	05/04/22 01:30	NWTPH-HCID	
Diesel Range Organics	ND	---	54.2	mg/kg dry	1	05/04/22 01:30	NWTPH-HCID	
Oil Range Organics	ND	---	108	mg/kg dry	1	05/04/22 01:30	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 97 %*		*Limits: 50-150 %*	*1*	*05/04/22 01:30*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*85 %*	*50-150 %*	*1*	*05/04/22 01:30*	*NWTPH-HCID*	

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Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D1166 - 05 18 22 1511**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Comp E2-1-3 (A2D1166-18)				**Matrix: Soil**		**Batch: 22E0104**		
Gasoline Range Organics	ND	---	22.0	mg/kg dry	1	05/04/22 01:53	NWTPH-HCID	
Diesel Range Organics	ND	---	55.1	mg/kg dry	1	05/04/22 01:53	NWTPH-HCID	
Oil Range Organics	ND	---	110	mg/kg dry	1	05/04/22 01:53	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 83 %*		*Limits: 50-150 %*	*1*	*05/04/22 01:53*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*74 %*	*50-150 %*	*1*	*05/04/22 01:53*	*NWTPH-HCID*	
Comp W23-1-16.75 (A2D1166-21)				**Matrix: Soil**		**Batch: 22E0104**		
Gasoline Range Organics	ND	---	23.0	mg/kg dry	1	05/04/22 02:15	NWTPH-HCID	
Diesel Range Organics	ND	---	57.6	mg/kg dry	1	05/04/22 02:15	NWTPH-HCID	
Oil Range Organics	ND	---	115	mg/kg dry	1	05/04/22 02:15	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 92 %*		*Limits: 50-150 %*	*1*	*05/04/22 02:15*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*62 %*	*50-150 %*	*1*	*05/04/22 02:15*	*NWTPH-HCID*	
Comp N16-1-5 (A2D1166-24)				**Matrix: Soil**		**Batch: 22E0104**		
Gasoline Range Organics	ND	---	22.5	mg/kg dry	1	05/04/22 02:38	NWTPH-HCID	
Diesel Range Organics	ND	---	56.2	mg/kg dry	1	05/04/22 02:38	NWTPH-HCID	
Oil Range Organics	ND	---	112	mg/kg dry	1	05/04/22 02:38	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 95 %*		*Limits: 50-150 %*	*1*	*05/04/22 02:38*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*85 %*	*50-150 %*	*1*	*05/04/22 02:38*	*NWTPH-HCID*	
Comp N11-1-5 (A2D1166-27)				**Matrix: Soil**		**Batch: 22E0104**		
Gasoline Range Organics	ND	---	23.6	mg/kg dry	1	05/04/22 03:00	NWTPH-HCID	
Diesel Range Organics	ND	---	59.1	mg/kg dry	1	05/04/22 03:00	NWTPH-HCID	
Oil Range Organics	ND	---	118	mg/kg dry	1	05/04/22 03:00	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 100 %*		*Limits: 50-150 %*	*1*	*05/04/22 03:00*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*93 %*	*50-150 %*	*1*	*05/04/22 03:00*	*NWTPH-HCID*	
Comp S26 (A2D1166-30)				**Matrix: Soil**		**Batch: 22E0104**		
Gasoline Range Organics	ND	---	24.0	mg/kg dry	1	05/04/22 03:22	NWTPH-HCID	
Diesel Range Organics	ND	---	59.9	mg/kg dry	1	05/04/22 03:22	NWTPH-HCID	
Oil Range Organics	ND	---	120	mg/kg dry	1	05/04/22 03:22	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 103 %*		*Limits: 50-150 %*	*1*	*05/04/22 03:22*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*67 %*	*50-150 %*	*1*	*05/04/22 03:22*	*NWTPH-HCID*	

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D1166 - 05 18 22 1511**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Comp W23 (A2D1166-33RE2)				**Matrix: Soil**		**Batch: 22E0139**		
Gasoline Range Organics	ND	---	27.5	mg/kg dry	1	05/05/22 23:55	NWTPH-HCID	
Diesel Range Organics	ND	---	68.7	mg/kg dry	1	05/05/22 23:55	NWTPH-HCID	
Oil Range Organics	ND	---	137	mg/kg dry	1	05/05/22 23:55	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 101 %*		*Limits: 50-150 %*	*1*	*05/05/22 23:55*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*91 %*	*50-150 %*	*1*	*05/05/22 23:55*	*NWTPH-HCID*	

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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Comp W10-1-15 (A2D1166-03)				**Matrix: Soil**		**Batch: 22E0081**		
% Solids	**75.8**	---	1.00	%	1	05/04/22 09:43	EPA 8000D	
Comp S21-1-16.75 (A2D1166-06)				**Matrix: Soil**		**Batch: 22E0081**		
% Solids	**80.4**	---	1.00	%	1	05/04/22 09:43	EPA 8000D	
Comp S16-S15-1-16.75 (A2D1166-09)				**Matrix: Soil**		**Batch: 22E0081**		
% Solids	**81.5**	---	1.00	%	1	05/04/22 09:43	EPA 8000D	
Comp N2-1-4 (A2D1166-12)				**Matrix: Soil**		**Batch: 22E0081**		
% Solids	**82.1**	---	1.00	%	1	05/04/22 09:43	EPA 8000D	
Comp W4-1-16 (A2D1166-15)				**Matrix: Soil**		**Batch: 22E0081**		
% Solids	**88.1**	---	1.00	%	1	05/04/22 09:43	EPA 8000D	
Comp E2-1-3 (A2D1166-18)				**Matrix: Soil**		**Batch: 22E0081**		
% Solids	**88.6**	---	1.00	%	1	05/04/22 09:43	EPA 8000D	
Comp W23-1-16.75 (A2D1166-21)				**Matrix: Soil**		**Batch: 22E0081**		
% Solids	**83.0**	---	1.00	%	1	05/04/22 09:43	EPA 8000D	
Comp N16-1-5 (A2D1166-24)				**Matrix: Soil**		**Batch: 22E0081**		
% Solids	**84.0**	---	1.00	%	1	05/04/22 09:43	EPA 8000D	
Comp N11-1-5 (A2D1166-27)				**Matrix: Soil**		**Batch: 22E0081**		
% Solids	**84.6**	---	1.00	%	1	05/04/22 09:43	EPA 8000D	
Comp S26 (A2D1166-30)				**Matrix: Soil**		**Batch: 22E0081**		
% Solids	**83.4**	---	1.00	%	1	05/04/22 09:43	EPA 8000D	
Comp W23 (A2D1166-33)				**Matrix: Soil**		**Batch: 22E0081**		
% Solids	**71.7**	---	1.00	%	1	05/04/22 09:43	EPA 8000D	

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ANALYTICAL REPORT

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D1166 - 05 18 22 1511**

QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0104 - NWTPH-HCID (Soil)							Soil					
Blank (22E0104-BLK1)			Prepared: 05/03/22 15:19 Analyzed: 05/03/22 22:53									
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		*Recovery:*	*107 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
4-Bromofluorobenzene (Surr)			*101 %*		*50-150 %*			*"*				
Duplicate (22E0104-DUP1)			Prepared: 05/03/22 15:19 Analyzed: 05/03/22 23:38									
QC Source Sample: Comp W10-1-15 (A2D1166-03)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	25.8	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	64.5	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	129	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery:*	*100 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
4-Bromofluorobenzene (Surr)			*87 %*		*50-150 %*			*"*				
Duplicate (22E0104-DUP2)			Prepared: 05/03/22 15:19 Analyzed: 05/04/22 00:23									
QC Source Sample: Comp S21-1-16.75 (A2D1166-06)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	24.0	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	60.1	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	120	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery:*	*102 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
4-Bromofluorobenzene (Surr)			*86 %*		*50-150 %*			*"*				
Batch 22E0139 - NWTPH-HCID (Soil)							Soil					
Blank (22E0139-BLK2)			Prepared: 05/04/22 11:35 Analyzed: 05/05/22 23:33									
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		*Recovery:*	*98 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D1166 - 05 18 22 1511**

QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0139 - NWTPH-HCID (Soil)							**Soil**					
Blank (22E0139-BLK2)				Prepared: 05/04/22 11:35		Analyzed: 05/05/22 23:33						
Surr: 4-Bromofluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 50-150 %*			*Dilution: 1x*					
Duplicate (22E0139-DUP2)				Prepared: 05/04/22 11:35		Analyzed: 05/06/22 00:18						
QC Source Sample: Comp W23 (A2D1166-33RE2)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	26.8	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	67.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	134	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*94 %*	*50-150 %*			*1x*					
4-Bromofluorobenzene (Surr)			*86 %*	*50-150 %*			*"*					

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0081 - Total Solids (Dry Weight)							Soil					
Duplicate (22E0081-DUP1)			Prepared: 05/03/22 09:58		Analyzed: 05/04/22 09:43							PRO
QC Source Sample: Non-SDG (A2D1028-02)												
% Solids	**97.6**	---	1.00	%	1	---	97.6	---	---	0.02	10%	
Duplicate (22E0081-DUP2)			Prepared: 05/03/22 09:58		Analyzed: 05/04/22 09:43							PRO
QC Source Sample: Non-SDG (A2D1028-04)												
% Solids	**97.6**	---	1.00	%	1	---	97.5	---	---	0.01	10%	
Duplicate (22E0081-DUP3)			Prepared: 05/03/22 09:58		Analyzed: 05/04/22 09:43							PRO
QC Source Sample: Non-SDG (A2D1029-02)												
% Solids	**97.3**	---	1.00	%	1	---	98.1	---	---	0.8	10%	
Duplicate (22E0081-DUP4)			Prepared: 05/03/22 13:46		Analyzed: 05/04/22 09:43							
QC Source Sample: Non-SDG (A2E0042-01)												
% Solids	**96.1**	---	1.00	%	1	---	95.3	---	---	0.8	10%	
Duplicate (22E0081-DUP5)			Prepared: 05/03/22 19:13		Analyzed: 05/04/22 09:43							
QC Source Sample: Non-SDG (A2E0092-04)												
% Solids	**89.9**	---	1.00	%	1	---	90.9	---	---	1	10%	
Duplicate (22E0081-DUP6)			Prepared: 05/03/22 19:13		Analyzed: 05/04/22 09:43							
QC Source Sample: Non-SDG (A2E0084-01)												
% Solids	**91.4**	---	1.00	%	1	---	91.9	---	---	0.6	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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SAMPLE PREPARATION INFORMATION

Hydrocarbon Identification Screen by NWTPH-HCID

Prep: NWTPH-HCID (Soil)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22E0104							
A2D1166-03	Soil	NWTPH-HCID	04/28/22 11:00	05/03/22 15:19	10.57g/10mL	10g/10mL	0.95
A2D1166-06	Soil	NWTPH-HCID	04/28/22 11:00	05/03/22 15:19	10.06g/10mL	10g/10mL	0.99
A2D1166-09	Soil	NWTPH-HCID	04/28/22 11:00	05/03/22 15:19	10.2g/10mL	10g/10mL	0.98
A2D1166-12	Soil	NWTPH-HCID	04/28/22 11:00	05/03/22 15:19	10.75g/10mL	10g/10mL	0.93
A2D1166-15	Soil	NWTPH-HCID	04/28/22 11:00	05/03/22 15:19	10.47g/10mL	10g/10mL	0.96
A2D1166-18	Soil	NWTPH-HCID	04/28/22 12:00	05/03/22 15:19	10.25g/10mL	10g/10mL	0.98
A2D1166-21	Soil	NWTPH-HCID	04/28/22 12:00	05/03/22 15:19	10.47g/10mL	10g/10mL	0.96
A2D1166-24	Soil	NWTPH-HCID	04/28/22 12:00	05/03/22 15:19	10.59g/10mL	10g/10mL	0.94
A2D1166-27	Soil	NWTPH-HCID	04/28/22 12:00	05/03/22 15:19	10.01g/10mL	10g/10mL	1.00
A2D1166-30	Soil	NWTPH-HCID	04/29/22 12:00	05/03/22 15:19	10.01g/10mL	10g/10mL	1.00
Batch: 22E0139							
A2D1166-33RE2	Soil	NWTPH-HCID	04/29/22 12:00	05/04/22 11:35	10.15g/10mL	10g/10mL	0.99

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22E0081							
A2D1166-03	Soil	EPA 8000D	04/28/22 11:00	05/03/22 09:58			NA
A2D1166-06	Soil	EPA 8000D	04/28/22 11:00	05/03/22 09:58			NA
A2D1166-09	Soil	EPA 8000D	04/28/22 11:00	05/03/22 09:58			NA
A2D1166-12	Soil	EPA 8000D	04/28/22 11:00	05/03/22 09:58			NA
A2D1166-15	Soil	EPA 8000D	04/28/22 11:00	05/03/22 09:58			NA
A2D1166-18	Soil	EPA 8000D	04/28/22 12:00	05/03/22 09:58			NA
A2D1166-21	Soil	EPA 8000D	04/28/22 12:00	05/03/22 09:58			NA
A2D1166-24	Soil	EPA 8000D	04/28/22 12:00	05/03/22 09:58			NA
A2D1166-27	Soil	EPA 8000D	04/28/22 12:00	05/03/22 09:58			NA
A2D1166-30	Soil	EPA 8000D	04/29/22 12:00	05/03/22 09:58			NA
A2D1166-33	Soil	EPA 8000D	04/29/22 12:00	05/03/22 09:58			NA

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QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

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PRO Sample has undergone sample processing prior to extraction and analysis.

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

Apex Laboratories

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D1166 - 05 18 22 1511**

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D1166 - 05 18 22 1511**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

Darrell Auvil, Client Services Manager

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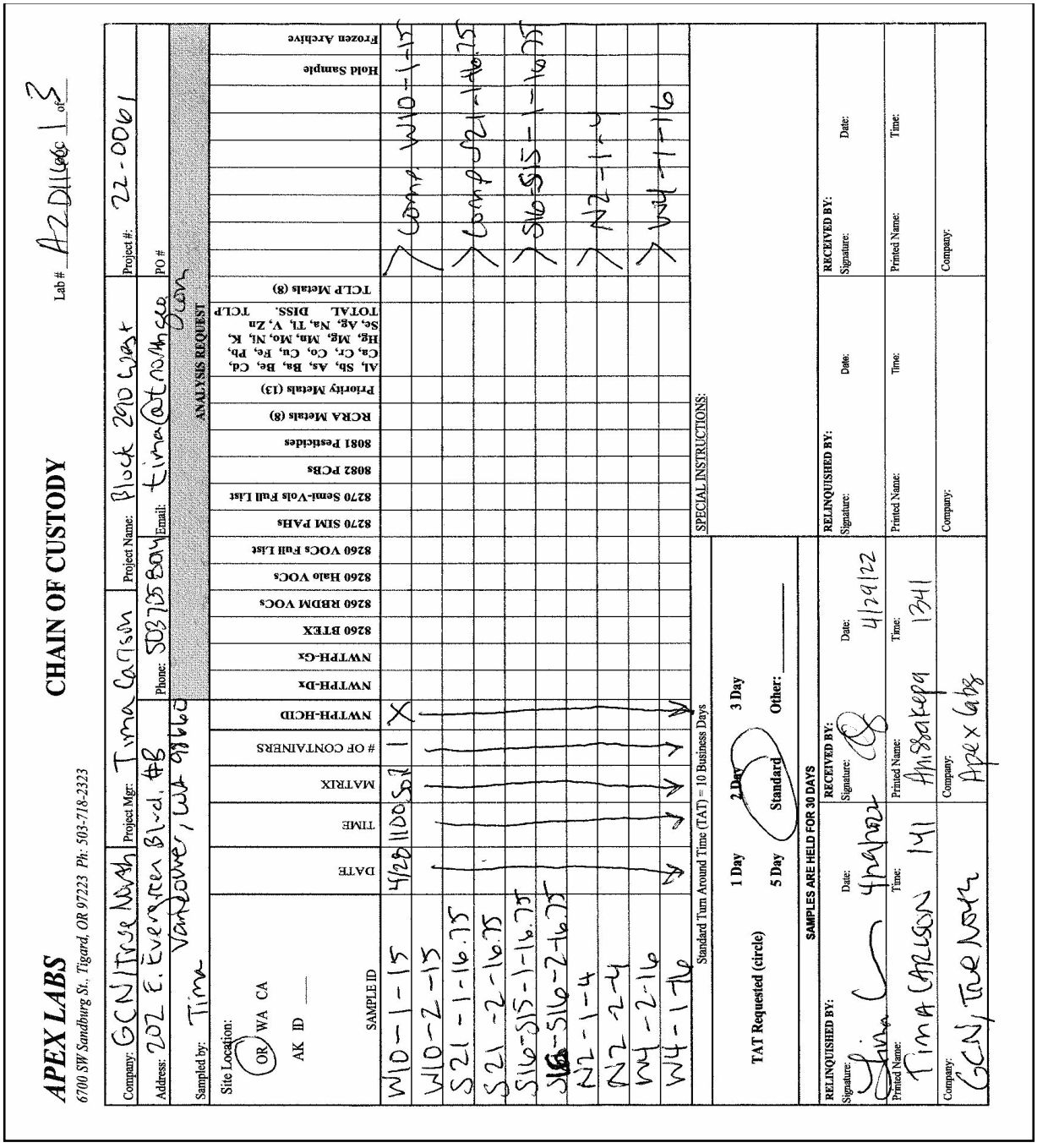
ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D1166 - 05 18 22 1511**



APEX LABS — 6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY — Lab # A2D1166 — 1 of 3

Company: GCN/True North — Project Mgr: Tima Carlson — Project Name: Block 290 East — Project #: 22-0061
Address: 202 E. Evergreen Blvd, #B — Phone: 503 735 8394 — Email: tima@truenorthgeo.com — PO #
Sampled by: Tima — Vancouver, WA 98660
Site Location: (OR) WA CA — AK ID ____

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
W10-1-15	4/28	1100	Soil	1	X																
W10-2-15																					
S21-1-16.75																					
S21-2-16.75																					
S16-S15-1-16.75																					
S16-S16-2-16.75																					
N2-1-4																					
N2-2-4																					
N4-2-16																					
W4-1-16																					

Standard Turn Around Time (TAT) = 10 Business Days

SPECIAL INSTRUCTIONS:

TAT Requested (circle): 1 Day — 2 Day — 3 Day — 5 Day — Standard — Other: ____

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature:	Signature:	Signature:	Signature:
Printed Name:	Printed Name:	Printed Name:	Printed Name:
Date:	Date: 4/29/22	Date:	Date:
Time:	Time: 1341	Time:	Time:
Company: GCN/True North	Company: Apex Labs	Company:	Company:

Apex Laboratories

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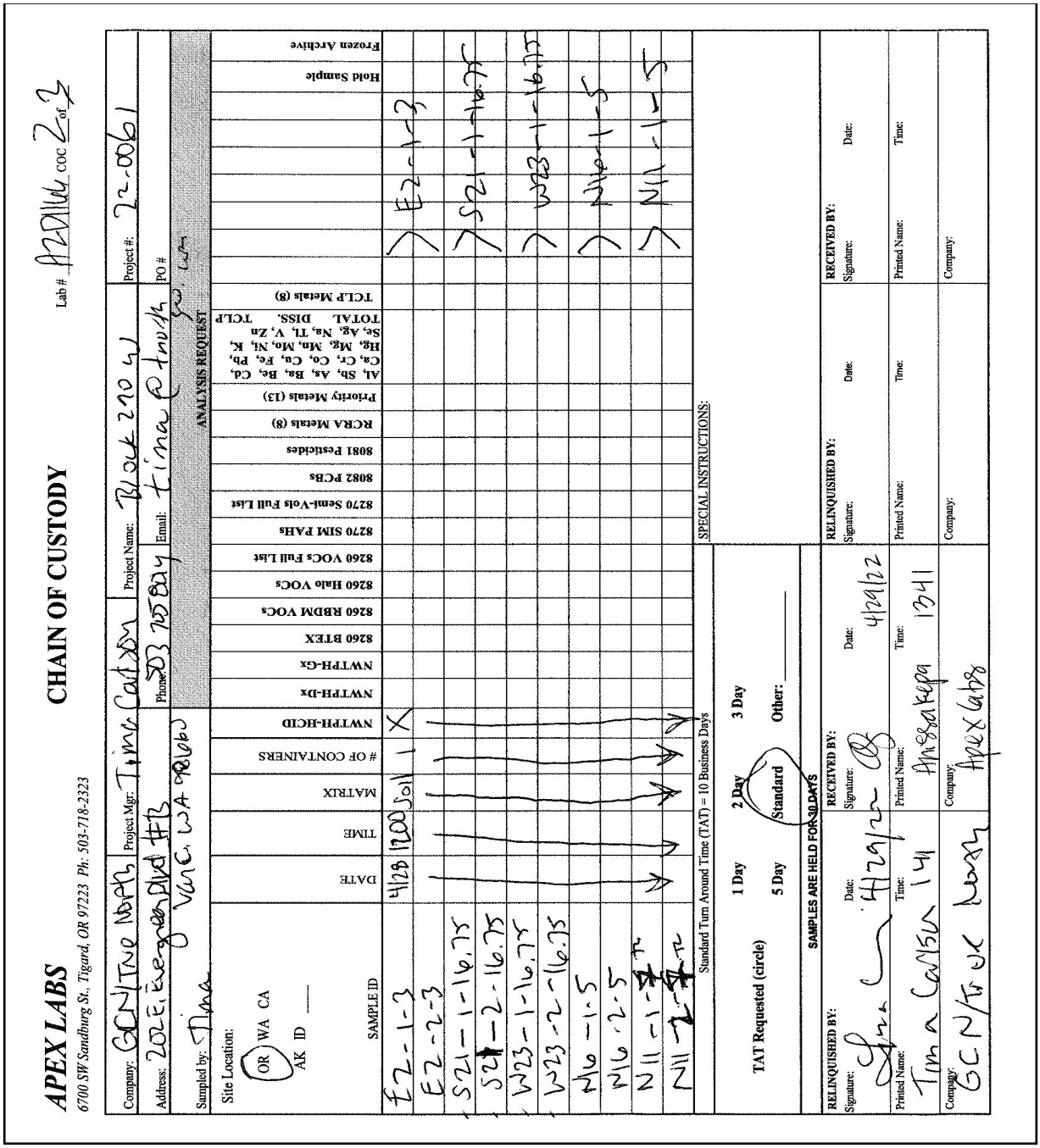
Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D1166 - 05 18 22 1511**



APEX LABS — **CHAIN OF CUSTODY** — Lab # A2D1166 COC 2 of 2

6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

Company: GC N/TNO Morris | Project Mgr: Tima Carlson | Project Name: Block 290 Study | Project #: 22-0061

Address: 2026 Evergreen Blvd #B | Phone: 503 705 8249 | Email: tima@truenorthgeo.com | PO #

Sampled by: Tima — 8 Vancouver, WA 98660

Site Location: (OR) WA CA / AK ID ____

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
EZ-1-3	4/28	1200	Soil	1	X																
EZ-2-3																					
S21-1-16.75																					
S21-2-16.75																					
W23-1-16.75																					
W23-2-16.75																					
N16-1.5																					
N16-2.5																					
N11-1-16.75																					
N11-2-16.75																					

Standard Turn Around Time (TAT) = 10 Business Days

SPECIAL INSTRUCTIONS:

TAT Requested (circle): 1 Day | 2 Day | 3 Day | 5 Day | Standard | Other: ____

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY: Signature: Date: Time: Printed Name: Company:

RECEIVED BY: Signature: Date: Time: Printed Name: Company:

RELINQUISHED BY: Signature: Tima Carlson Date: 4/29/22 Time: 1341 Printed Name: Tima Carlson Company: GC N/TNO Morris

RECEIVED BY: Signature: Date: 4/29/22 Time: 1341 Printed Name: Anastakeya Company: Apex Labs

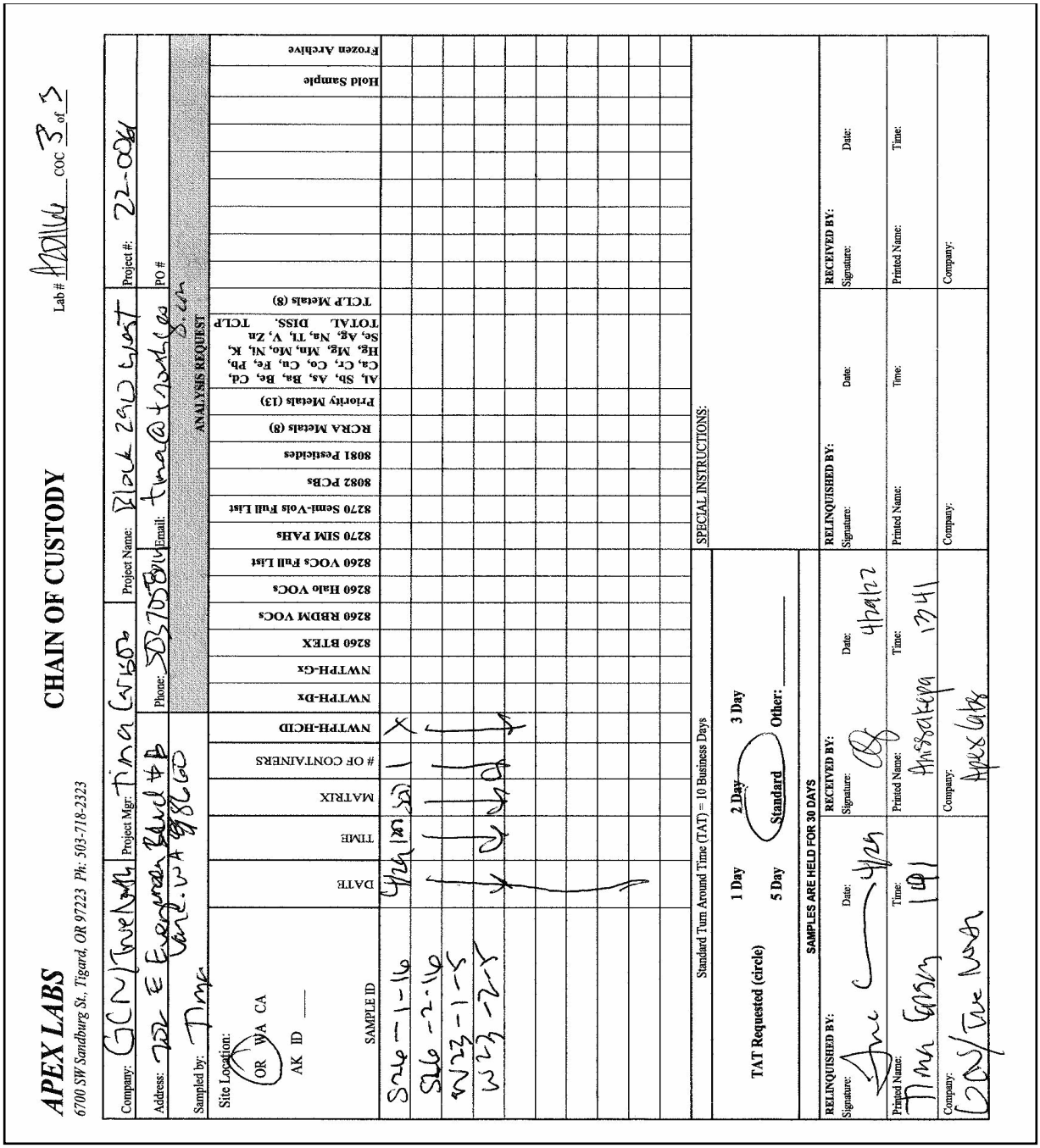
RELINQUISHED BY: Signature: Date: Time: Printed Name: Company:

RECEIVED BY: Signature: Date: Time: Printed Name: Company:

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D1166 - 05 18 22 1511**



APEX LABS — 6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY — Lab # A2D1166 COC 3 of 3

Company: GCN/Tri-Mtn | Project Mgr: Tima Carlson | Phone: 503-705-5098 | Email: tima@tnmcg.com | Project Name: Block 290 East | Project #: 22-0061 | PO #

Address: 202 E Evergreen Blvd #B Vancouver, WA 98660

Sampled by: Tima

Site Location: OR WA CA / AK ID ____

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
SS20-1-110	4/19/22	1300	Soil	1	X																
SS20-2-110																					
SS23-1-5																					
SS23-2-5																					

SPECIAL INSTRUCTIONS:

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day | 2 Day | 3 Day | 5 Day | Standard | Other: ____

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY:	Date:	Time:	RECEIVED BY:	Date:	Time:
Signature:			Signature:	4/19/22	
Printed Name:			Printed Name:	Anastasiya	1241
Company:		1491	Company:	Apex Labs	

RELINQUISHED BY:	Date:	Time:	RECEIVED BY:	Date:	Time:
Signature:			Signature:		
Printed Name:			Printed Name:		
Company:			Company:		

RELINQUISHED BY:	Date:	Time:	RECEIVED BY:	Date:	Time:
Signature:			Signature:		
Printed Name:			Printed Name:		
Company:			Company:		

Apex Laboratories

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Darrell Auvil, Client Services Manager

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2D1166 - 05 18 22 1511**

APEX LABS COOLER RECEIPT FORM

Client: GCN/True North Element WO#: A2 D1166

Project/Project #: Block 290 West #22-0061

Delivery Info:

Date/time received: 4/29/22 @ 1341 By: AKK

Delivered by: Apex____Client X ESS____FedEx____UPS____Swift____Senvoy ___SDS___Other_____

Cooler Inspection Date/time inspected: 4/29/22 @ 1345 By: AKK

Chain of Custody included? Yes X No _____ Custody seals? Yes_____ No X

Signed/dated by client? Yes X No _____

Signed/dated by Apex? Yes X No _____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	4.4						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	N						
Ice type: (Gel/Real/Other)	Real						
Condition:	Good						

Cooler out of temp? (Y/(N)) Possible reason why:_____

Green dots applied to out of temperature samples? Yes/(No)

Out of temperature samples form initiated? Yes/(No)

Sample Inspection: Date/time inspected: 4/30/22 @ 920 By: JS

All samples intact? Yes X No ___ Comments:_____

Bottle labels/COCs agree? Yes ___ No X Comments: W23-1-16.75 & W23-2-16.75 Containers read 51-1-69.75 51 & 51-2-68.75-51

COC/container discrepancies form initiated? Yes ___ No X

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: _____

Do VOA vials have visible headspace? Yes ___ No ___ NA X

Comments_____

Water samples: pH checked: Yes___No___NA X pH appropriate? Yes___No___NA X

Comments: _____

Additional information: matched by process of elimination. S21-1-16.75 & S21-2-16.75 listed on COC twice.

Labeled by:	Witness:	Cooler Inspected by:
JS	MAS	AKK

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503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Wednesday, May 18, 2022

Tima Carlson
True North Geotechnical Services
202 E Evergreen Blvd, Suite B
Vancouver, WA 98660

RE: A2E0190 - Block 290 - 22-0061

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A2E0190, which was received by the laboratory on 5/2/2022 at 3:01:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	5.3 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

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503-718-2323
ORELAP ID: OR100062

ANALYTICAL REPORT

True North Geotechnical Services	Project: Block 290	
202 E Evergreen Blvd, Suite B	Project Number: 22-0061	Report ID:
Vancouver, WA 98660	Project Manager: Tima Carlson	A2E0190 - 05 18 22 1539

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S19/W9-1	A2E0190-01	Soil	05/02/22 09:00	05/02/22 15:01
S19/W9-2	A2E0190-02	Soil	05/02/22 09:00	05/02/22 15:01
S16/W4-1	A2E0190-03	Soil	05/02/22 09:00	05/02/22 15:01
S16/W4-2	A2E0190-04	Soil	05/02/22 09:00	05/02/22 15:01
S11/W6-1	A2E0190-05	Soil	05/02/22 09:00	05/02/22 15:01
S11/W6-2	A2E0190-06	Soil	05/02/22 09:00	05/02/22 15:01
S11+15-1	A2E0190-07	Soil	05/02/22 09:00	05/02/22 15:01
S11+15-2	A2E0190-08	Soil	05/02/22 09:00	05/02/22 15:01
W7-1-15	A2E0190-09	Soil	05/02/22 09:00	05/02/22 15:01
W7-2-15	A2E0190-10	Soil	05/02/22 09:00	05/02/22 15:01
S16/W7-1	A2E0190-11	Soil	05/02/22 11:00	05/02/22 15:01
S16/W7-2	A2E0190-12	Soil	05/02/22 11:00	05/02/22 15:01
S19/W4-1	A2E0190-13	Soil	05/02/22 11:00	05/02/22 15:01
S19/W4-2	A2E0190-14	Soil	05/02/22 11:00	05/02/22 15:01
S20-S21+15-1	A2E0190-15	Soil	05/02/22 11:00	05/02/22 15:01
S20-S21+15-2	A2E0190-16	Soil	05/02/22 11:00	05/02/22 15:01
W13-1-15	A2E0190-17	Soil	05/02/22 11:00	05/02/22 15:01
W13-2-15	A2E0190-18	Soil	05/02/22 11:00	05/02/22 15:01
Comp S19/W9 Subgrade	A2E0190-19	Soil	05/02/22 09:00	05/02/22 15:01
Comp S16/W4 Subgrade	A2E0190-20	Soil	05/02/22 09:00	05/02/22 15:01
Comp S11/W6 No Grade	A2E0190-21	Soil	05/02/22 09:00	05/02/22 15:01
Comp S11+15 Subgrade	A2E0190-22	Soil	05/02/22 09:00	05/02/22 15:01
Comp W7-1-15	A2E0190-23	Soil	05/02/22 09:00	05/02/22 15:01
Comp S16/W7 Subgrade	A2E0190-24	Soil	05/02/22 11:00	05/02/22 15:01
Comp S19/W4 Subgrade	A2E0190-25	Soil	05/02/22 11:00	05/02/22 15:01
Comp S20-S21+15	A2E0190-26	Soil	05/02/22 11:00	05/02/22 15:01
Comp W13+15-1	A2E0190-27	Soil	05/02/22 11:00	05/02/22 15:01

Apex Laboratories

Darrell Auvil, Client Services Manager

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Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0190 - 05 18 22 1539**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Comp S19/W9 Subgrade (A2E0190-19)				**Matrix: Soil**		**Batch: 22E0320**		
Gasoline Range Organics	ND	---	25.3	mg/kg dry	1	05/09/22 23:10	NWTPH-HCID	
Diesel Range Organics	ND	---	63.3	mg/kg dry	1	05/09/22 23:10	NWTPH-HCID	
Oil Range Organics	ND	---	127	mg/kg dry	1	05/09/22 23:10	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*98 %*	*Limits: 50-150 %*	*1*	*05/09/22 23:10*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*86 %*	*50-150 %*	*1*	*05/09/22 23:10*	*NWTPH-HCID*	
Comp S16/W4 Subgrade (A2E0190-20)				**Matrix: Soil**		**Batch: 22E0320**		
Gasoline Range Organics	ND	---	22.3	mg/kg dry	1	05/09/22 23:55	NWTPH-HCID	
Diesel Range Organics	ND	---	55.6	mg/kg dry	1	05/09/22 23:55	NWTPH-HCID	
Oil Range Organics	ND	---	111	mg/kg dry	1	05/09/22 23:55	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*102 %*	*Limits: 50-150 %*	*1*	*05/09/22 23:55*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*96 %*	*50-150 %*	*1*	*05/09/22 23:55*	*NWTPH-HCID*	
Comp S11/W6 No Grade (A2E0190-21)				**Matrix: Soil**		**Batch: 22E0320**		
Gasoline Range Organics	ND	---	23.1	mg/kg dry	1	05/10/22 00:40	NWTPH-HCID	
Diesel Range Organics	ND	---	57.7	mg/kg dry	1	05/10/22 00:40	NWTPH-HCID	
Oil Range Organics	ND	---	115	mg/kg dry	1	05/10/22 00:40	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*108 %*	*Limits: 50-150 %*	*1*	*05/10/22 00:40*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*95 %*	*50-150 %*	*1*	*05/10/22 00:40*	*NWTPH-HCID*	
Comp S11+15 Subgrade (A2E0190-22)				**Matrix: Soil**		**Batch: 22E0320**		
Gasoline Range Organics	ND	---	23.8	mg/kg dry	1	05/10/22 01:02	NWTPH-HCID	
Diesel Range Organics	ND	---	59.5	mg/kg dry	1	05/10/22 01:02	NWTPH-HCID	
Oil Range Organics	ND	---	119	mg/kg dry	1	05/10/22 01:02	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*105 %*	*Limits: 50-150 %*	*1*	*05/10/22 01:02*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*97 %*	*50-150 %*	*1*	*05/10/22 01:02*	*NWTPH-HCID*	
Comp W7-1-15 (A2E0190-23)				**Matrix: Soil**		**Batch: 22E0320**		
Gasoline Range Organics	ND	---	25.3	mg/kg dry	1	05/10/22 01:25	NWTPH-HCID	
Diesel Range Organics	ND	---	63.4	mg/kg dry	1	05/10/22 01:25	NWTPH-HCID	
Oil Range Organics	ND	---	127	mg/kg dry	1	05/10/22 01:25	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*102 %*	*Limits: 50-150 %*	*1*	*05/10/22 01:25*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*86 %*	*50-150 %*	*1*	*05/10/22 01:25*	*NWTPH-HCID*	

Apex Laboratories

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0190 - 05 18 22 1539**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Comp S16/W7 Subgrade (A2E0190-24)				**Matrix: Soil**		**Batch: 22E0320**		
Gasoline Range Organics	ND	---	23.1	mg/kg dry	1	05/10/22 01:47	NWTPH-HCID	
Diesel Range Organics	ND	---	57.8	mg/kg dry	1	05/10/22 01:47	NWTPH-HCID	
Oil Range Organics	ND	---	116	mg/kg dry	1	05/10/22 01:47	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 100 %*		*Limits: 50-150 %*	*1*	*05/10/22 01:47*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*95 %*	*50-150 %*	*1*	*05/10/22 01:47*	*NWTPH-HCID*	
Comp S19/W4 Subgrade (A2E0190-25)				**Matrix: Soil**		**Batch: 22E0320**		
Gasoline Range Organics	ND	---	21.5	mg/kg dry	1	05/10/22 02:10	NWTPH-HCID	
Diesel Range Organics	ND	---	53.8	mg/kg dry	1	05/10/22 02:10	NWTPH-HCID	
Oil Range Organics	ND	---	108	mg/kg dry	1	05/10/22 02:10	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 114 %*		*Limits: 50-150 %*	*1*	*05/10/22 02:10*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*107 %*	*50-150 %*	*1*	*05/10/22 02:10*	*NWTPH-HCID*	
Comp S20-S21+15 (A2E0190-26)				**Matrix: Soil**		**Batch: 22E0320**		
Gasoline Range Organics	ND	---	23.6	mg/kg dry	1	05/10/22 02:32	NWTPH-HCID	
Diesel Range Organics	ND	---	59.0	mg/kg dry	1	05/10/22 02:32	NWTPH-HCID	
Oil Range Organics	ND	---	118	mg/kg dry	1	05/10/22 02:32	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 97 %*		*Limits: 50-150 %*	*1*	*05/10/22 02:32*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*88 %*	*50-150 %*	*1*	*05/10/22 02:32*	*NWTPH-HCID*	
Comp W13+15-1 (A2E0190-27)				**Matrix: Soil**		**Batch: 22E0320**		
Gasoline Range Organics	ND	---	24.2	mg/kg dry	1	05/10/22 02:54	NWTPH-HCID	
Diesel Range Organics	ND	---	60.5	mg/kg dry	1	05/10/22 02:54	NWTPH-HCID	
Oil Range Organics	ND	---	121	mg/kg dry	1	05/10/22 02:54	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 92 %*		*Limits: 50-150 %*	*1*	*05/10/22 02:54*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*84 %*	*50-150 %*	*1*	*05/10/22 02:54*	*NWTPH-HCID*	

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0190 - 05 18 22 1539**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Comp S19/W9 Subgrade (A2E0190-19)				**Matrix: Soil**		**Batch: 22E0288**		
% Solids	**76.4**	---	1.00	%	1	05/10/22 10:22	EPA 8000D	
Comp S16/W4 Subgrade (A2E0190-20)				**Matrix: Soil**		**Batch: 22E0288**		
% Solids	**87.6**	---	1.00	%	1	05/10/22 10:22	EPA 8000D	
Comp S11/W6 No Grade (A2E0190-21)				**Matrix: Soil**		**Batch: 22E0288**		
% Solids	**81.1**	---	1.00	%	1	05/10/22 10:22	EPA 8000D	
Comp S11+15 Subgrade (A2E0190-22)				**Matrix: Soil**		**Batch: 22E0288**		
% Solids	**83.2**	---	1.00	%	1	05/10/22 10:22	EPA 8000D	
Comp W7-1-15 (A2E0190-23)				**Matrix: Soil**		**Batch: 22E0288**		
% Solids	**76.0**	---	1.00	%	1	05/10/22 10:22	EPA 8000D	
Comp S16/W7 Subgrade (A2E0190-24)				**Matrix: Soil**		**Batch: 22E0288**		
% Solids	**82.8**	---	1.00	%	1	05/10/22 10:22	EPA 8000D	
Comp S19/W4 Subgrade (A2E0190-25)				**Matrix: Soil**		**Batch: 22E0288**		
% Solids	**89.8**	---	1.00	%	1	05/10/22 10:22	EPA 8000D	
Comp S20-S21+15 (A2E0190-26)				**Matrix: Soil**		**Batch: 22E0288**		
% Solids	**83.5**	---	1.00	%	1	05/10/22 10:22	EPA 8000D	
Comp W13+15-1 (A2E0190-27)				**Matrix: Soil**		**Batch: 22E0288**		
% Solids	**81.0**	---	1.00	%	1	05/10/22 10:22	EPA 8000D	

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202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0190 - 05 18 22 1539**

QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0320 - NWTPH-HCID (Soil)							Soil					
Blank (22E0320-BLK1)			Prepared: 05/09/22 15:42 Analyzed: 05/09/22 22:48									
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		*Recovery: 102 %*	*Limits: 50-150 %*		*Dilution: 1x*							
4-Bromofluorobenzene (Surr)			*92 %*	*50-150 %*			*"*					
Duplicate (22E0320-DUP1)			Prepared: 05/09/22 15:42 Analyzed: 05/09/22 23:33									
QC Source Sample: Comp S19/W9 Subgrade (A2E0190-19)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	25.3	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	63.2	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	126	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery: 96 %*	*Limits: 50-150 %*		*Dilution: 1x*							
4-Bromofluorobenzene (Surr)			*87 %*	*50-150 %*			*"*					
Duplicate (22E0320-DUP2)			Prepared: 05/09/22 15:42 Analyzed: 05/10/22 00:17									
QC Source Sample: Comp S16/W4 Subgrade (A2E0190-20)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	22.2	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	55.5	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	111	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery: 103 %*	*Limits: 50-150 %*		*Dilution: 1x*							
4-Bromofluorobenzene (Surr)			*97 %*	*50-150 %*			*"*					

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0190 - 05 18 22 1539**

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0288 - Total Solids (Dry Weight)							**Soil**					
Duplicate (22E0288-DUP1)			Prepared: 05/09/22 09:39		Analyzed: 05/10/22 10:22							
QC Source Sample: Non-SDG (A2E0162-01)												
% Solids	**87.1**	---	1.00	%	1	---	85.4	---	---	2	10%	
Duplicate (22E0288-DUP2)			Prepared: 05/09/22 09:39		Analyzed: 05/10/22 10:22							
QC Source Sample: Non-SDG (A2E0162-02)												
% Solids	**72.9**	---	1.00	%	1	---	72.9	---	---	0.01	10%	
Duplicate (22E0288-DUP3)			Prepared: 05/09/22 09:39		Analyzed: 05/10/22 10:22							
QC Source Sample: Non-SDG (A2E0162-03)												
% Solids	**72.3**	---	1.00	%	1	---	73.2	---	---	1	10%	
Duplicate (22E0288-DUP4)			Prepared: 05/09/22 09:39		Analyzed: 05/10/22 10:22							
QC Source Sample: Non-SDG (A2E0162-04)												
% Solids	**82.8**	---	1.00	%	1	---	86.0	---	---	4	10%	
Duplicate (22E0288-DUP5)			Prepared: 05/09/22 09:39		Analyzed: 05/10/22 10:22							
QC Source Sample: Non-SDG (A2E0171-35)												
% Solids	**82.3**	---	1.00	%	1	---	82.4	---	---	0.08	10%	
Duplicate (22E0288-DUP6)			Prepared: 05/09/22 20:59		Analyzed: 05/10/22 10:22							
QC Source Sample: Non-SDG (A2D1061-01)												
% Solids	**82.7**	---	1.00	%	1	---	83.0	---	---	0.3	10%	
Duplicate (22E0288-DUP7)			Prepared: 05/09/22 20:59		Analyzed: 05/10/22 10:22							
QC Source Sample: Non-SDG (A2E0325-02)												
% Solids	**91.1**	---	1.00	%	1	---	88.5	---	---	3	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0190 - 05 18 22 1539**

SAMPLE PREPARATION INFORMATION

Hydrocarbon Identification Screen by NWTPH-HCID

Prep: NWTPH-HCID (Soil)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22E0320							
A2E0190-19	Soil	NWTPH-HCID	05/02/22 09:00	05/09/22 15:42	10.35g/10mL	10g/10mL	0.97
A2E0190-20	Soil	NWTPH-HCID	05/02/22 09:00	05/09/22 15:42	10.26g/10mL	10g/10mL	0.98
A2E0190-21	Soil	NWTPH-HCID	05/02/22 09:00	05/09/22 15:42	10.69g/10mL	10g/10mL	0.94
A2E0190-22	Soil	NWTPH-HCID	05/02/22 09:00	05/09/22 15:42	10.1g/10mL	10g/10mL	0.99
A2E0190-23	Soil	NWTPH-HCID	05/02/22 09:00	05/09/22 15:42	10.39g/10mL	10g/10mL	0.96
A2E0190-24	Soil	NWTPH-HCID	05/02/22 11:00	05/09/22 15:42	10.44g/10mL	10g/10mL	0.96
A2E0190-25	Soil	NWTPH-HCID	05/02/22 11:00	05/09/22 15:42	10.35g/10mL	10g/10mL	0.97
A2E0190-26	Soil	NWTPH-HCID	05/02/22 11:00	05/09/22 15:42	10.15g/10mL	10g/10mL	0.99
A2E0190-27	Soil	NWTPH-HCID	05/02/22 11:00	05/09/22 15:42	10.2g/10mL	10g/10mL	0.98

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22E0288							
A2E0190-19	Soil	EPA 8000D	05/02/22 09:00	05/09/22 09:39			NA
A2E0190-20	Soil	EPA 8000D	05/02/22 09:00	05/09/22 09:39			NA
A2E0190-21	Soil	EPA 8000D	05/02/22 09:00	05/09/22 09:39			NA
A2E0190-22	Soil	EPA 8000D	05/02/22 09:00	05/09/22 09:39			NA
A2E0190-23	Soil	EPA 8000D	05/02/22 09:00	05/09/22 09:39			NA
A2E0190-24	Soil	EPA 8000D	05/02/22 11:00	05/09/22 09:39			NA
A2E0190-25	Soil	EPA 8000D	05/02/22 11:00	05/09/22 09:39			NA
A2E0190-26	Soil	EPA 8000D	05/02/22 11:00	05/09/22 09:39			NA
A2E0190-27	Soil	EPA 8000D	05/02/22 11:00	05/09/22 09:39			NA

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True North Geotechnical Services	Project: **Block 290**	
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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0190 - 05 18 22 1539**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

There are No Qualifiers on Sample or QC Data for this report

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0190 - 05 18 22 1539**

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0190 - 05 18 22 1539**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) -
EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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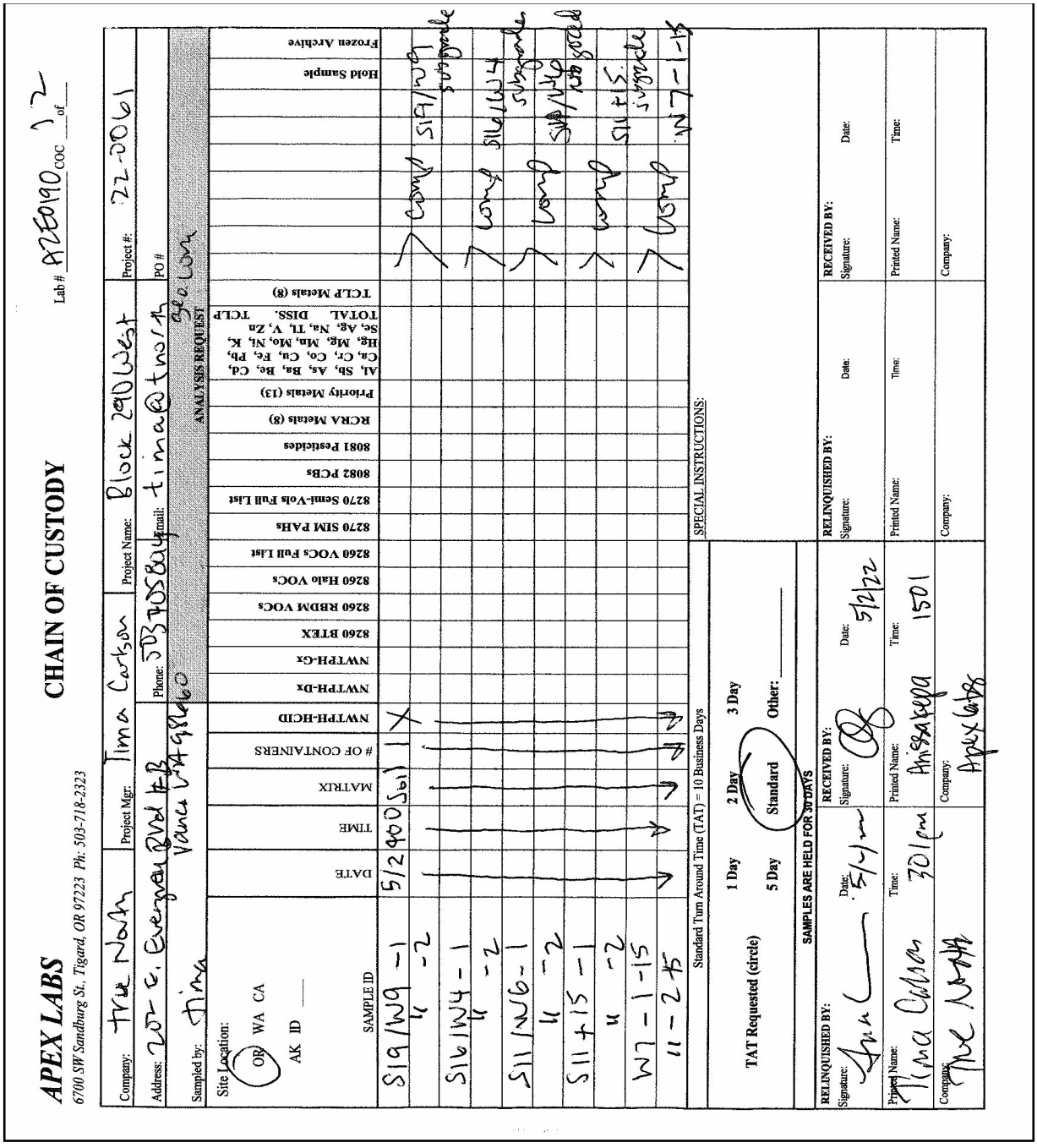
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0190 - 05 18 22 1539**



APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # A2E0190 COC 1 of 2

Company: True North — Project Mgr: Tima Carlson — Project Name: Block 290 West — Project #: 22-0061
Address: 202 E. Evergreen Blvd #B Vancouver WA 98660 — Phone: 503 705 8044 — email: tima@tnoa.com — PO #
Sampled by: Tima

Site Location: (OR) WA CA AK ID ____

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
S19/W9-1 -2	5/2	900	Soil	1	X															X comp	X grab
S16/W4-1 -2																				X comp	X grab
S11/W6-1 -2																				X comp	X grab
S11+15-1 -2																				X comp	X grab
W7-1-15 -2																				X comp	X grab

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day 2 Day 3 Day 5 Day Standard Other: ____

SPECIAL INSTRUCTIONS:

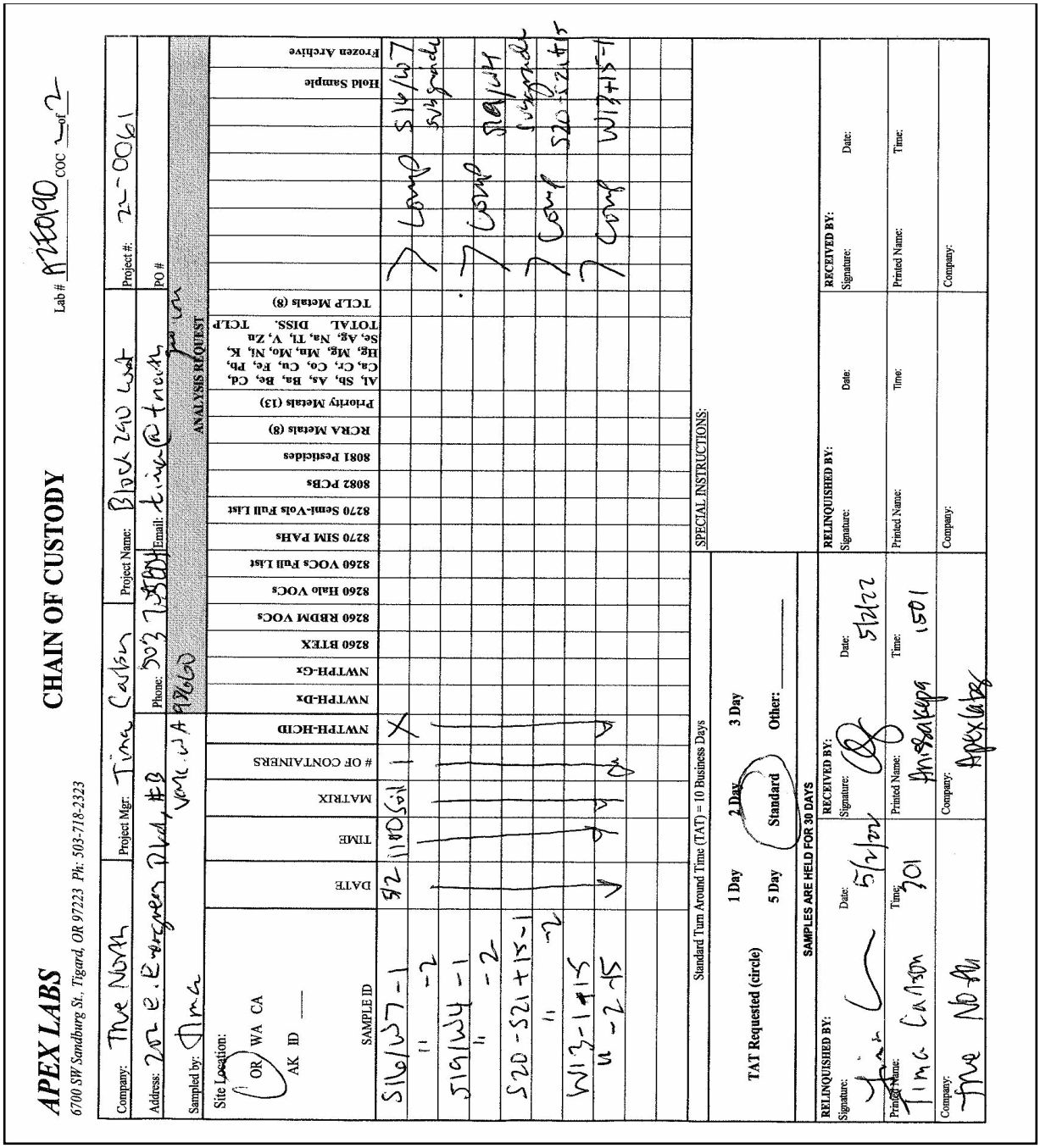
SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY: Signature: Tima Carlson Date: 5/4 Time: 701pm Printed Name: Tima Carlson Company: True North
RECEIVED BY: Signature: Date: 5/4/22 Time: 1501 Printed Name: Amanda Company: Apex Labs
RELINQUISHED BY: Signature: Date: Time: Printed Name: Company:
RECEIVED BY: Signature: Date: Time: Printed Name: Company:

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0190 - 05 18 22 1539**



APEX LABS — 6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # A2E0190 COC 1 of 2

Company: True North — Project Mgr: Tima Carlson — Project Name: Block 290 Lot — Project #: 22-0061
Address: 202 E. Evergreen Blvd, #B Vancouver, WA 98660 — Phone: 503 703 3368 — Email: tima@truenorthgeo.com — PO #
Sampled by: Tima

Site Location: (OR) WA CA / AK ID ___

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
S16/W37-1	5/2	1105	Soil	1	X															7 Comp	S16/W37 subgrade
" -2	"																				
S19/W34-1																				7 Comp	S19/W34 subgrade
" -2																					
S20-S21+15-1																				7 Comp	S20-S21+15 subgrade
" -2																					
W13-1+15																				7 Comp	W13+15-1
" -2.5																					

Standard Turn Around Time (TAT) = 10 Business Days

SPECIAL INSTRUCTIONS:

TAT Requested (circle): 1 Day — 2 Day — 3 Day — 5 Day — Standard — Other: ___

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature:	Signature:	Signature:	Signature:
Date: 5/2/22	Date: 5/2/22	Date:	Date:
Time: 701	Time: 1501	Time:	Time:
Printed Name: Tima Carlson	Printed Name: Anna Kapp	Printed Name:	Printed Name:
Company: True North	Company: Apex Labs	Company:	Company:

Apex Laboratories

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Darrell Auvil, Client Services Manager

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0190 - 05 18 22 1539**

WO# A2E0190

COC/Container Discrepancies

COC Reads		Container Reads/Comments
S19/W9-1	1 container	2 containers provided
S16/W4-1	1 container	2 containers provided & ID on jar reads S16/W4-2
S16/W4-2		W4/S16-2 on container
S19/W4-1	1 container	2 containers provided & ID reads W4/S19-1.
S19/W4-2		ID reads W4/S19-2.
S20-S21+15-1	1 container	2 containers provided & ID on VOA reads S20-21+15.
S11+15-1	1 container	ID on VOA reads Subgrade S11-1 & 2 containers provided, 1 on COC. No date/times on jars.

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0190 - 05 18 22 1539**

APEX LABS COOLER RECEIPT FORM

Client: True North Element WO#: A2E0190

Project/Project #: Block 290 West #22-0061

Delivery Info:

Date/time received: 5/21/22 @ 1501 By: AKK

Delivered by: Apex____Client X ESS____FedEx____UPS____Swift____Senvoy____SDS____Other_____

Cooler Inspection Date/time inspected: 5/21/22 @ 1501 By: AKK

Chain of Custody included? Yes X No _____ Custody seals? Yes_____ No X

Signed/dated by client? Yes X No _____

Signed/dated by Apex? Yes X No _____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	5.3						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	N						
Ice type: (Gel/Real/Other)	Real						
Condition:	Melty						

Cooler out of temp? (Y/N) Possible reason why: _____

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 5/21/22 @ 1658 By: AKK

All samples intact? Yes Y No ___ Comments: _____

Bottle labels/COCs agree? Yes ___ No X Comments: See form

COC/container discrepancies form initiated? Yes X No ___

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: _____

Do VOA vials have visible headspace? Yes ___ No ___ NA X

Comments _____

Water samples: pH checked: Yes___No___NA X pH appropriate? Yes___No___NA X

Comments: _____

Additional information: _____

Labeled by: AKK Witness: DJS Cooler Inspected by: AKK

Apex Laboratories, LLC
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ANALYTICAL REPORT

Wednesday, May 18, 2022

Tima Carlson
True North Geotechnical Services
202 E Evergreen Blvd, Suite B
Vancouver, WA 98660

RE: A2E0249 - Block 290 - 22-0061

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A2E0249, which was received by the laboratory on 5/6/2022 at 12:50:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	0.2 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0249 - 05 18 22 1532**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S11/W4	A2E0249-01	Soil	05/04/22 09:15	05/06/22 12:50
S22/W15	A2E0249-02	Soil	05/04/22 09:15	05/06/22 12:50
S26/W15	A2E0249-03	Soil	05/04/22 09:15	05/06/22 12:50
S16/W15	A2E0249-04	Soil	05/04/22 09:15	05/06/22 12:50
S22/W5	A2E0249-05	Soil	05/04/22 09:15	05/06/22 12:50
W16-13	A2E0249-06	Soil	05/05/22 10:00	05/06/22 12:50
N5-10	A2E0249-07	Soil	05/05/22 10:00	05/06/22 12:50
W23-15	A2E0249-08	Soil	05/05/22 10:00	05/06/22 12:50
N3-13	A2E0249-09	Soil	05/05/22 10:00	05/06/22 12:50
W18-12	A2E0249-10	Soil	05/04/22 09:00	05/06/22 12:50
W5/S26	A2E0249-11	Soil	05/04/22 11:00	05/06/22 12:50
N9-9	A2E0249-12	Soil	05/06/22 08:00	05/06/22 12:50
S26/W2	A2E0249-13	Soil	05/04/22 10:00	05/06/22 12:50
S23/W1	A2E0249-14	Soil	05/04/22 10:00	05/06/22 12:50
N5-13	A2E0249-15	Soil	05/05/22 09:00	05/06/22 12:50
N16-7	A2E0249-16	Soil	05/06/22 09:00	05/06/22 12:50

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0249 - 05 18 22 1532**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
S11/W4 (A2E0249-01)				**Matrix: Soil**		**Batch: 22E0387**		
Gasoline Range Organics	ND	---	22.8	mg/kg dry	1	05/10/22 22:44	NWTPH-HCID	
Diesel Range Organics	ND	---	57.1	mg/kg dry	1	05/10/22 22:44	NWTPH-HCID	
Oil Range Organics	ND	---	114	mg/kg dry	1	05/10/22 22:44	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 103 %*		*Limits: 50-150 %*	*1*	*05/10/22 22:44*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*94 %*	*50-150 %*	*1*	*05/10/22 22:44*	*NWTPH-HCID*	
S22/W15 (A2E0249-02)				**Matrix: Soil**		**Batch: 22E0387**		
Gasoline Range Organics	ND	---	25.0	mg/kg dry	1	05/10/22 23:29	NWTPH-HCID	
Diesel Range Organics	ND	---	62.5	mg/kg dry	1	05/10/22 23:29	NWTPH-HCID	
Oil Range Organics	ND	---	125	mg/kg dry	1	05/10/22 23:29	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 107 %*		*Limits: 50-150 %*	*1*	*05/10/22 23:29*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*100 %*	*50-150 %*	*1*	*05/10/22 23:29*	*NWTPH-HCID*	
S26/W15 (A2E0249-03)				**Matrix: Soil**		**Batch: 22E0387**		
Gasoline Range Organics	ND	---	22.4	mg/kg dry	1	05/11/22 00:14	NWTPH-HCID	
Diesel Range Organics	ND	---	55.9	mg/kg dry	1	05/11/22 00:14	NWTPH-HCID	
Oil Range Organics	ND	---	112	mg/kg dry	1	05/11/22 00:14	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 119 %*		*Limits: 50-150 %*	*1*	*05/11/22 00:14*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*90 %*	*50-150 %*	*1*	*05/11/22 00:14*	*NWTPH-HCID*	
S16/W15 (A2E0249-04)				**Matrix: Soil**		**Batch: 22E0387**		
Gasoline Range Organics	ND	---	27.1	mg/kg dry	1	05/11/22 00:36	NWTPH-HCID	
Diesel Range Organics	ND	---	67.7	mg/kg dry	1	05/11/22 00:36	NWTPH-HCID	
Oil Range Organics	ND	---	135	mg/kg dry	1	05/11/22 00:36	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 93 %*		*Limits: 50-150 %*	*1*	*05/11/22 00:36*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*85 %*	*50-150 %*	*1*	*05/11/22 00:36*	*NWTPH-HCID*	
S22/W5 (A2E0249-05)				**Matrix: Soil**		**Batch: 22E0387**		
Gasoline Range Organics	ND	---	25.0	mg/kg dry	1	05/11/22 00:58	NWTPH-HCID	
Diesel Range Organics	ND	---	62.4	mg/kg dry	1	05/11/22 00:58	NWTPH-HCID	
Oil Range Organics	ND	---	125	mg/kg dry	1	05/11/22 00:58	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 112 %*		*Limits: 50-150 %*	*1*	*05/11/22 00:58*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*101 %*	*50-150 %*	*1*	*05/11/22 00:58*	*NWTPH-HCID*	

Apex Laboratories

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0249 - 05 18 22 1532**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
W16-13 (A2E0249-06)				**Matrix: Soil**		**Batch: 22E0387**		
Gasoline Range Organics	ND	---	24.0	mg/kg dry	1	05/11/22 01:21	NWTPH-HCID	
Diesel Range Organics	ND	---	60.0	mg/kg dry	1	05/11/22 01:21	NWTPH-HCID	
Oil Range Organics	ND	---	120	mg/kg dry	1	05/11/22 01:21	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*99 %*	*Limits: 50-150 %*	*1*	*05/11/22 01:21*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*92 %*	*50-150 %*	*1*	*05/11/22 01:21*	*NWTPH-HCID*	
N5-10 (A2E0249-07)				**Matrix: Soil**		**Batch: 22E0387**		
Gasoline Range Organics	ND	---	26.6	mg/kg dry	1	05/11/22 01:43	NWTPH-HCID	
Diesel Range Organics	ND	---	66.6	mg/kg dry	1	05/11/22 01:43	NWTPH-HCID	
Oil Range Organics	ND	---	133	mg/kg dry	1	05/11/22 01:43	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*91 %*	*Limits: 50-150 %*	*1*	*05/11/22 01:43*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*84 %*	*50-150 %*	*1*	*05/11/22 01:43*	*NWTPH-HCID*	
W23-15 (A2E0249-08)				**Matrix: Soil**		**Batch: 22E0387**		
Gasoline Range Organics	ND	---	22.3	mg/kg dry	1	05/11/22 02:05	NWTPH-HCID	
Diesel Range Organics	ND	---	55.7	mg/kg dry	1	05/11/22 02:05	NWTPH-HCID	
Oil Range Organics	ND	---	111	mg/kg dry	1	05/11/22 02:05	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*123 %*	*Limits: 50-150 %*	*1*	*05/11/22 02:05*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*113 %*	*50-150 %*	*1*	*05/11/22 02:05*	*NWTPH-HCID*	
N3-13 (A2E0249-09)				**Matrix: Soil**		**Batch: 22E0387**		
Gasoline Range Organics	ND	---	21.9	mg/kg dry	1	05/11/22 02:28	NWTPH-HCID	
Diesel Range Organics	ND	---	54.7	mg/kg dry	1	05/11/22 02:28	NWTPH-HCID	
Oil Range Organics	ND	---	109	mg/kg dry	1	05/11/22 02:28	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*121 %*	*Limits: 50-150 %*	*1*	*05/11/22 02:28*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*116 %*	*50-150 %*	*1*	*05/11/22 02:28*	*NWTPH-HCID*	
W18-12 (A2E0249-10)				**Matrix: Soil**		**Batch: 22E0387**		
Gasoline Range Organics	ND	---	26.9	mg/kg dry	1	05/11/22 02:50	NWTPH-HCID	
Diesel Range Organics	ND	---	67.3	mg/kg dry	1	05/11/22 02:50	NWTPH-HCID	
Oil Range Organics	ND	---	135	mg/kg dry	1	05/11/22 02:50	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*103 %*	*Limits: 50-150 %*	*1*	*05/11/22 02:50*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*91 %*	*50-150 %*	*1*	*05/11/22 02:50*	*NWTPH-HCID*	

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Darrell Auvil, Client Services Manager

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0249 - 05 18 22 1532**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
W5/S26 (A2E0249-11)				**Matrix: Soil**		**Batch: 22E0387**		
Gasoline Range Organics	ND	---	24.2	mg/kg dry	1	05/11/22 03:12	NWTPH-HCID	
Diesel Range Organics	ND	---	60.4	mg/kg dry	1	05/11/22 03:12	NWTPH-HCID	
Oil Range Organics	ND	---	121	mg/kg dry	1	05/11/22 03:12	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 109 %*		*Limits: 50-150 %*	*1*	*05/11/22 03:12*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*88 %*	*50-150 %*	*1*	*05/11/22 03:12*	*NWTPH-HCID*	
N9-9 (A2E0249-12)				**Matrix: Soil**		**Batch: 22E0387**		
Gasoline Range Organics	ND	---	25.9	mg/kg dry	1	05/11/22 03:35	NWTPH-HCID	
Diesel Range Organics	ND	---	64.7	mg/kg dry	1	05/11/22 03:35	NWTPH-HCID	
Oil Range Organics	ND	---	129	mg/kg dry	1	05/11/22 03:35	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 87 %*		*Limits: 50-150 %*	*1*	*05/11/22 03:35*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*84 %*	*50-150 %*	*1*	*05/11/22 03:35*	*NWTPH-HCID*	
S26/W2 (A2E0249-13)				**Matrix: Soil**		**Batch: 22E0387**		
Gasoline Range Organics	ND	---	24.0	mg/kg dry	1	05/11/22 03:57	NWTPH-HCID	
Diesel Range Organics	ND	---	59.9	mg/kg dry	1	05/11/22 03:57	NWTPH-HCID	
Oil Range Organics	ND	---	120	mg/kg dry	1	05/11/22 03:57	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 103 %*		*Limits: 50-150 %*	*1*	*05/11/22 03:57*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*83 %*	*50-150 %*	*1*	*05/11/22 03:57*	*NWTPH-HCID*	
S23/W1 (A2E0249-14)				**Matrix: Soil**		**Batch: 22E0387**		
Gasoline Range Organics	ND	---	26.1	mg/kg dry	1	05/11/22 04:19	NWTPH-HCID	
Diesel Range Organics	ND	---	65.3	mg/kg dry	1	05/11/22 04:19	NWTPH-HCID	
Oil Range Organics	ND	---	131	mg/kg dry	1	05/11/22 04:19	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 108 %*		*Limits: 50-150 %*	*1*	*05/11/22 04:19*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*101 %*	*50-150 %*	*1*	*05/11/22 04:19*	*NWTPH-HCID*	
N5-13 (A2E0249-15)				**Matrix: Soil**		**Batch: 22E0387**		
Gasoline Range Organics	ND	---	25.4	mg/kg dry	1	05/11/22 04:42	NWTPH-HCID	
Diesel Range Organics	ND	---	63.5	mg/kg dry	1	05/11/22 04:42	NWTPH-HCID	
Oil Range Organics	ND	---	127	mg/kg dry	1	05/11/22 04:42	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 110 %*		*Limits: 50-150 %*	*1*	*05/11/22 04:42*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*93 %*	*50-150 %*	*1*	*05/11/22 04:42*	*NWTPH-HCID*	

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Darrell Auvil, Client Services Manager

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0249 - 05 18 22 1532**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
N16-7 (A2E0249-16)				**Matrix: Soil**		**Batch: 22E0387**		
Gasoline Range Organics	ND	---	28.1	mg/kg dry	1	05/11/22 05:04	NWTPH-HCID	
Diesel Range Organics	ND	---	70.2	mg/kg dry	1	05/11/22 05:04	NWTPH-HCID	
Oil Range Organics	ND	---	140	mg/kg dry	1	05/11/22 05:04	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*95 %*	*Limits: 50-150 %*	*1*	*05/11/22 05:04*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*75 %*	*50-150 %*	*1*	*05/11/22 05:04*	*NWTPH-HCID*	

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0249 - 05 18 22 1532**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
S11/W4 (A2E0249-01)				**Matrix: Soil**		**Batch: 22E0376**		
% Solids	**86.3**	---	1.00	%	1	05/11/22 10:02	EPA 8000D	
S22/W15 (A2E0249-02)				**Matrix: Soil**		**Batch: 22E0376**		
% Solids	**76.6**	---	1.00	%	1	05/11/22 10:02	EPA 8000D	
S26/W15 (A2E0249-03)				**Matrix: Soil**		**Batch: 22E0376**		
% Solids	**83.2**	---	1.00	%	1	05/11/22 10:02	EPA 8000D	
S16/W15 (A2E0249-04)				**Matrix: Soil**		**Batch: 22E0376**		
% Solids	**71.5**	---	1.00	%	1	05/11/22 10:02	EPA 8000D	
S22/W5 (A2E0249-05)				**Matrix: Soil**		**Batch: 22E0376**		
% Solids	**78.3**	---	1.00	%	1	05/11/22 10:02	EPA 8000D	
W16-13 (A2E0249-06)				**Matrix: Soil**		**Batch: 22E0376**		
% Solids	**82.4**	---	1.00	%	1	05/11/22 10:02	EPA 8000D	
N5-10 (A2E0249-07)				**Matrix: Soil**		**Batch: 22E0376**		
% Solids	**70.0**	---	1.00	%	1	05/11/22 10:02	EPA 8000D	
W23-15 (A2E0249-08)				**Matrix: Soil**		**Batch: 22E0376**		
% Solids	**84.7**	---	1.00	%	1	05/11/22 10:02	EPA 8000D	
N3-13 (A2E0249-09)				**Matrix: Soil**		**Batch: 22E0376**		
% Solids	**85.5**	---	1.00	%	1	05/11/22 10:02	EPA 8000D	
W18-12 (A2E0249-10)				**Matrix: Soil**		**Batch: 22E0376**		
% Solids	**73.7**	---	1.00	%	1	05/11/22 10:02	EPA 8000D	
W5/S26 (A2E0249-11)				**Matrix: Soil**		**Batch: 22E0376**		
% Solids	**81.3**	---	1.00	%	1	05/11/22 10:02	EPA 8000D	
N9-9 (A2E0249-12)				**Matrix: Soil**		**Batch: 22E0376**		
% Solids	**72.5**	---	1.00	%	1	05/11/22 10:02	EPA 8000D	
S26/W2 (A2E0249-13)				**Matrix: Soil**		**Batch: 22E0376**		

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0249 - 05 18 22 1532**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
S26/W2 (A2E0249-13)				**Matrix: Soil**		**Batch: 22E0376**		
% Solids	**80.9**	---	1.00	%	1	05/11/22 10:02	EPA 8000D	
S23/W1 (A2E0249-14)				**Matrix: Soil**		**Batch: 22E0376**		
% Solids	**75.9**	---	1.00	%	1	05/11/22 10:02	EPA 8000D	
N5-13 (A2E0249-15)				**Matrix: Soil**		**Batch: 22E0376**		
% Solids	**76.7**	---	1.00	%	1	05/11/22 10:02	EPA 8000D	
N16-7 (A2E0249-16)				**Matrix: Soil**		**Batch: 22E0376**		
% Solids	**70.7**	---	1.00	%	1	05/11/22 10:02	EPA 8000D	

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ANALYTICAL REPORT

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202 E Evergreen Blvd, Suite B	Project Number: 22-0061	Report ID:
Vancouver, WA 98660	Project Manager: Tima Carlson	A2E0249 - 05 18 22 1532

QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0387 - NWTPH-HCID (Soil)							Soil					
Blank (22E0387-BLK1)			Prepared: 05/10/22 14:30 Analyzed: 05/10/22 22:22									
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		*Recovery:*	*104 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
4-Bromofluorobenzene (Surr)			*96 %*		*50-150 %*			*"*				
Duplicate (22E0387-DUP1)			Prepared: 05/10/22 14:30 Analyzed: 05/10/22 23:07									
QC Source Sample: S11/W4 (A2E0249-01)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	22.8	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	57.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	114	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery:*	*158 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				S-06
4-Bromofluorobenzene (Surr)			*146 %*		*50-150 %*			*"*				
Duplicate (22E0387-DUP2)			Prepared: 05/10/22 14:30 Analyzed: 05/10/22 23:51									
QC Source Sample: S22/W15 (A2E0249-02)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	24.0	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	60.1	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	120	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery:*	*153 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				S-06
4-Bromofluorobenzene (Surr)			*135 %*		*50-150 %*			*"*				

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ANALYTICAL REPORT

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202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0249 - 05 18 22 1532**

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0376 - Total Solids (Dry Weight)							**Soil**					
Duplicate (22E0376-DUP1)			Prepared: 05/10/22 11:37		Analyzed: 05/11/22 10:02							
QC Source Sample: Non-SDG (A2D1019-02)												
% Solids	**81.7**	---	1.00	%	1	---	81.5	---	---	0.2	10%	
Duplicate (22E0376-DUP2)			Prepared: 05/10/22 11:37		Analyzed: 05/11/22 10:02							
QC Source Sample: Non-SDG (A2D1019-04)												
% Solids	**83.2**	---	1.00	%	1	---	83.3	---	---	0.2	10%	
Duplicate (22E0376-DUP3)			Prepared: 05/10/22 11:37		Analyzed: 05/11/22 10:02							
QC Source Sample: Non-SDG (A2D1019-06)												
% Solids	**80.5**	---	1.00	%	1	---	80.6	---	---	0.1	10%	
Duplicate (22E0376-DUP4)			Prepared: 05/10/22 11:37		Analyzed: 05/11/22 10:02							
QC Source Sample: Non-SDG (A2D1019-08)												
% Solids	**75.6**	---	1.00	%	1	---	78.4	---	---	4	10%	
Duplicate (22E0376-DUP5)			Prepared: 05/10/22 11:37		Analyzed: 05/11/22 10:02							
QC Source Sample: Non-SDG (A2E0120-02)												
% Solids	**63.1**	---	1.00	%	1	---	59.9	---	---	5	10%	
Duplicate (22E0376-DUP6)			Prepared: 05/10/22 11:37		Analyzed: 05/11/22 10:02							
QC Source Sample: Non-SDG (A2E0229-01)												
% Solids	**80.5**	---	1.00	%	1	---	82.1	---	---	2	10%	
Duplicate (22E0376-DUP7)			Prepared: 05/10/22 20:09		Analyzed: 05/11/22 10:02							
QC Source Sample: Non-SDG (A2E0384-01)												
% Solids	**66.3**	---	1.00	%	1	---	66.4	---	---	0.2	10%	
Duplicate (22E0376-DUP8)			Prepared: 05/10/22 20:09		Analyzed: 05/11/22 10:02							
QC Source Sample: Non-SDG (A2E0384-02)												
% Solids	**56.6**	---	1.00	%	1	---	61.7	---	---	9	10%	

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0249 - 05 18 22 1532**

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0376 - Total Solids (Dry Weight)							**Soil**					
Duplicate (22E0376-DUP9)			Prepared: 05/10/22 20:09		Analyzed: 05/11/22 10:02							
QC Source Sample: Non-SDG (A2E0384-03)												
% Solids	**66.6**	---	1.00	%	1	---	67.3	---	---	1	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0249 - 05 18 22 1532**

SAMPLE PREPARATION INFORMATION

Hydrocarbon Identification Screen by NWTPH-HCID

Prep: NWTPH-HCID (Soil)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22E0387							
A2E0249-01	Soil	NWTPH-HCID	05/04/22 09:15	05/10/22 14:30	10.15g/10mL	10g/10mL	0.99
A2E0249-02	Soil	NWTPH-HCID	05/04/22 09:15	05/10/22 14:30	10.45g/10mL	10g/10mL	0.96
A2E0249-03	Soil	NWTPH-HCID	05/04/22 09:15	05/10/22 14:30	10.75g/10mL	10g/10mL	0.93
A2E0249-04	Soil	NWTPH-HCID	05/04/22 09:15	05/10/22 14:30	10.34g/10mL	10g/10mL	0.97
A2E0249-05	Soil	NWTPH-HCID	05/04/22 09:15	05/10/22 14:30	10.23g/10mL	10g/10mL	0.98
A2E0249-06	Soil	NWTPH-HCID	05/05/22 10:00	05/10/22 14:30	10.11g/10mL	10g/10mL	0.99
A2E0249-07	Soil	NWTPH-HCID	05/05/22 10:00	05/10/22 14:30	10.72g/10mL	10g/10mL	0.93
A2E0249-08	Soil	NWTPH-HCID	05/05/22 10:00	05/10/22 14:30	10.6g/10mL	10g/10mL	0.94
A2E0249-09	Soil	NWTPH-HCID	05/05/22 10:00	05/10/22 14:30	10.68g/10mL	10g/10mL	0.94
A2E0249-10	Soil	NWTPH-HCID	05/04/22 09:00	05/10/22 14:30	10.08g/10mL	10g/10mL	0.99
A2E0249-11	Soil	NWTPH-HCID	05/04/22 11:00	05/10/22 14:30	10.17g/10mL	10g/10mL	0.98
A2E0249-12	Soil	NWTPH-HCID	05/06/22 08:00	05/10/22 14:30	10.66g/10mL	10g/10mL	0.94
A2E0249-13	Soil	NWTPH-HCID	05/04/22 10:00	05/10/22 14:30	10.32g/10mL	10g/10mL	0.97
A2E0249-14	Soil	NWTPH-HCID	05/04/22 10:00	05/10/22 14:30	10.09g/10mL	10g/10mL	0.99
A2E0249-15	Soil	NWTPH-HCID	05/05/22 09:00	05/10/22 14:30	10.27g/10mL	10g/10mL	0.97
A2E0249-16	Soil	NWTPH-HCID	05/06/22 09:00	05/10/22 14:30	10.08g/10mL	10g/10mL	0.99

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22E0376							
A2E0249-01	Soil	EPA 8000D	05/04/22 09:15	05/10/22 11:37			NA
A2E0249-02	Soil	EPA 8000D	05/04/22 09:15	05/10/22 11:37			NA
A2E0249-03	Soil	EPA 8000D	05/04/22 09:15	05/10/22 11:37			NA
A2E0249-04	Soil	EPA 8000D	05/04/22 09:15	05/10/22 11:37			NA
A2E0249-05	Soil	EPA 8000D	05/04/22 09:15	05/10/22 11:37			NA
A2E0249-06	Soil	EPA 8000D	05/05/22 10:00	05/10/22 11:37			NA
A2E0249-07	Soil	EPA 8000D	05/05/22 10:00	05/10/22 11:37			NA
A2E0249-08	Soil	EPA 8000D	05/05/22 10:00	05/10/22 11:37			NA
A2E0249-09	Soil	EPA 8000D	05/05/22 10:00	05/10/22 11:37			NA
A2E0249-10	Soil	EPA 8000D	05/04/22 09:00	05/10/22 11:37			NA
A2E0249-11	Soil	EPA 8000D	05/04/22 11:00	05/10/22 11:37			NA
A2E0249-12	Soil	EPA 8000D	05/06/22 08:00	05/10/22 11:37			NA
A2E0249-13	Soil	EPA 8000D	05/04/22 10:00	05/10/22 11:37			NA
A2E0249-14	Soil	EPA 8000D	05/04/22 10:00	05/10/22 11:37			NA

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ANALYTICAL REPORT

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0249 - 05 18 22 1532**

SAMPLE PREPARATION INFORMATION

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A2E0249-15	Soil	EPA 8000D	05/05/22 09:00	05/10/22 11:37			NA
A2E0249-16	Soil	EPA 8000D	05/06/22 09:00	05/10/22 11:37			NA

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QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

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S-06 Surrogate recovery is outside of established control limits.

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0249 - 05 18 22 1532**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

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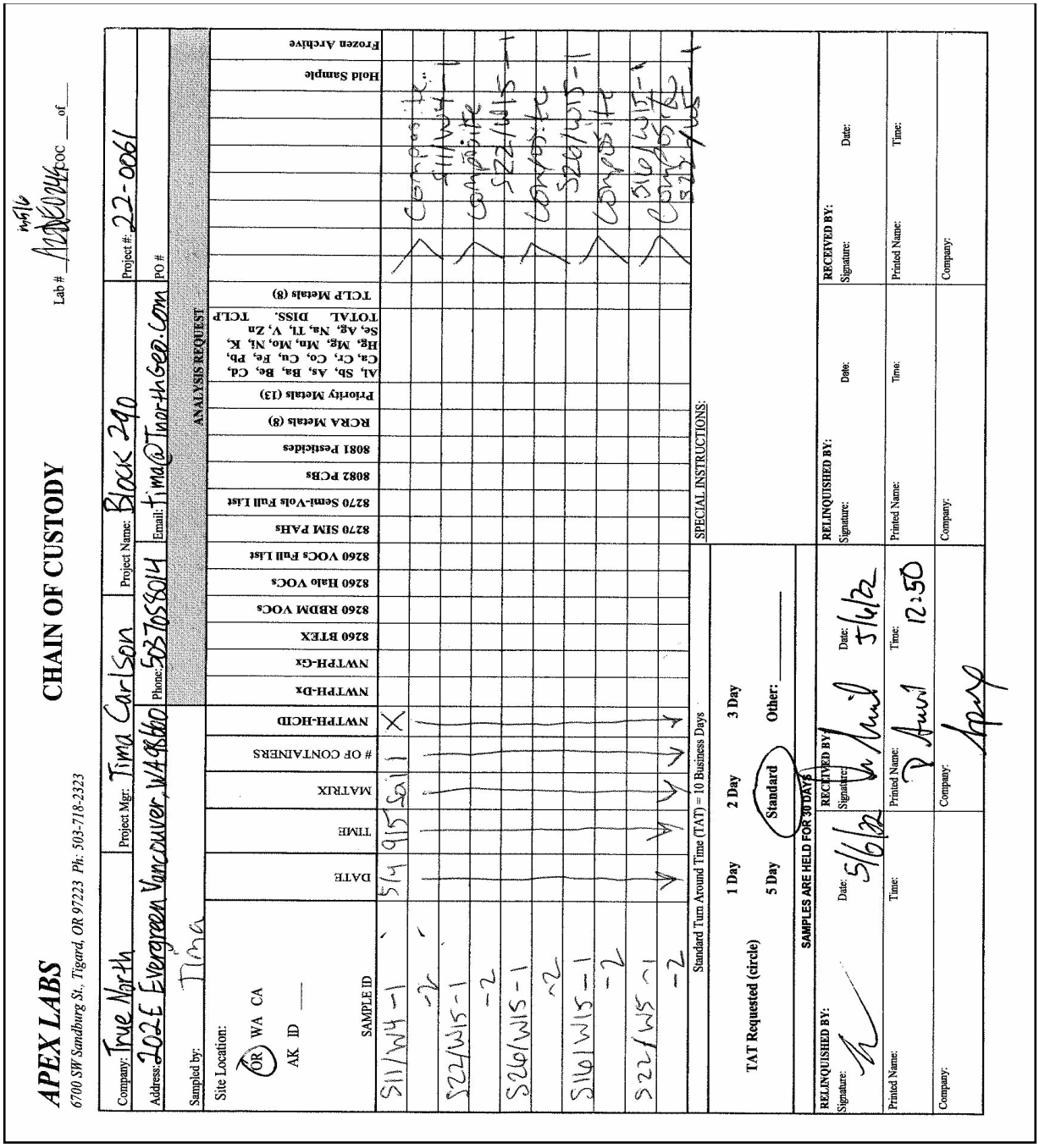

APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # [illegible] COC ___ of ___

Company: True North | Project Mgr: Tima Carlson | Project Name: Block 290 | Project #: 22-0061
Address: 202 E Evergreen Vancouver, WA 98660 | Phone: 5037058014 | Email: tima@Tnorthgeo.com | PO #
Sampled by: Tima

Site Location: (OR) WA CA / AK ID ___

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
S11/W14-1	5/4	915	Soil	1	X															1 Composite: S11/W14-1	
-2	"		"																		
S22/W15-1																				1 Composite: S22/W15-1	
-2																					
S26/W15-1																				1 Composite: S26/W15-1	
-2																					
S16/W15-1																				1 Composite: S16/W15-1	
-2																					
S22/W15-1																				1 Composite: S22/W15-1	
-2																					

SPECIAL INSTRUCTIONS:

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day | 2 Day | 3 Day | 5 Day | Standard | Other: _____

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature:	Signature:	Signature:	Signature:
Date: 5/6/22	Date: 5/6/22	Date:	Date:
Time:	Time: 12:50	Time:	Time:
Printed Name:	Printed Name:	Printed Name:	Printed Name:
Company:	Company:	Company:	Company:

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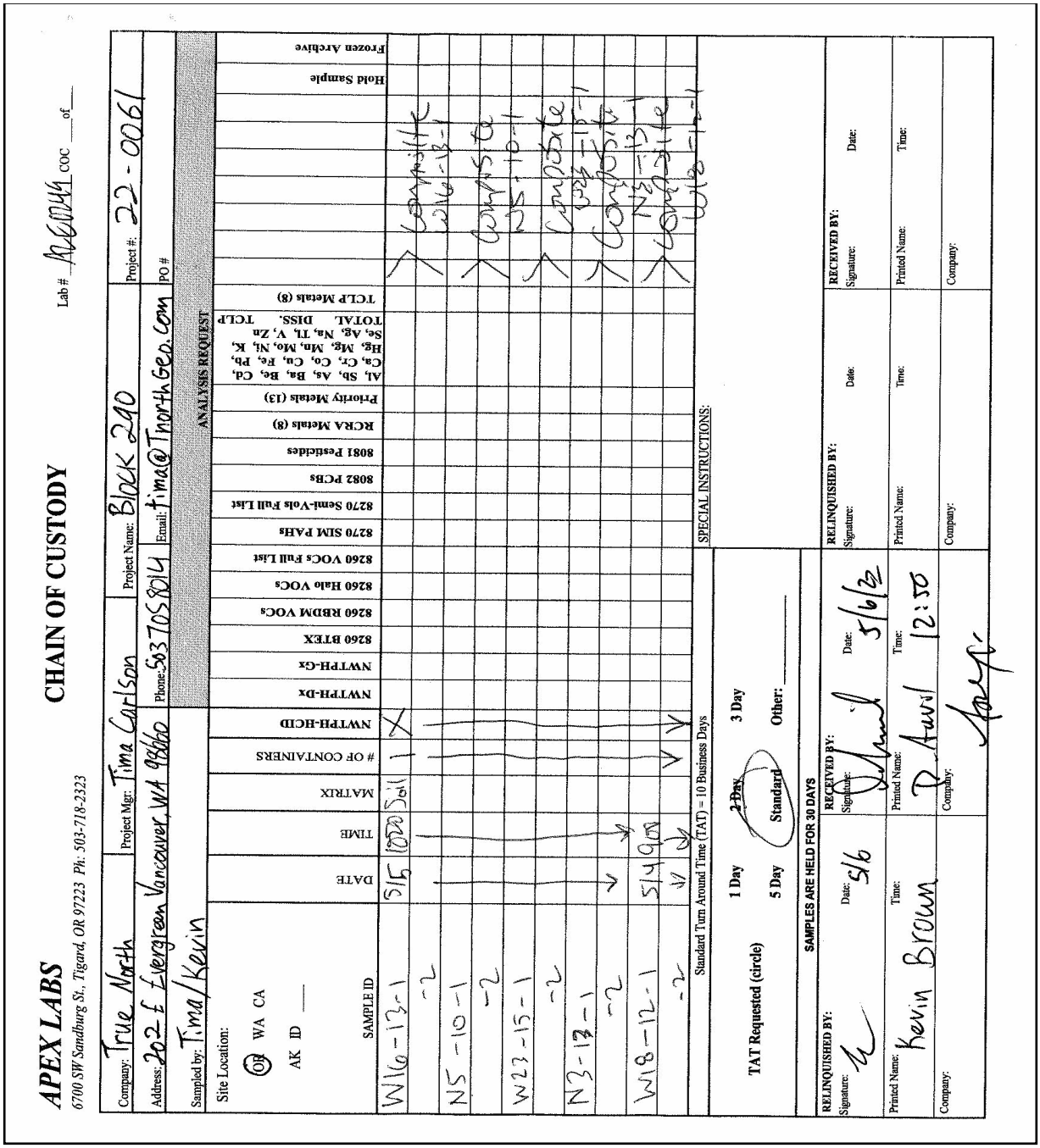
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0249 - 05 18 22 1532**



APEX LABS
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CHAIN OF CUSTODY

Lab # A2E0249 COC ___ of ___

Company: True North | Project Mgr: Tima Carlson | Project Name: Block 290 | Project #: 22-0061
Address: 202 E Evergreen Vancouver, WA 98660 | Phone: 5037058014 | Email: tima@TrueNorthGeo.com | PO #
Sampled by: Tima/Kevin

Site Location: (OR) WA CA / AK ID ___

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
W16-12-1	5/5	1000	Soil	1	X															X	
-2																				X	
N5-10-1																				X	
-2																				X	
W23-15-1																				X	
-2																				X	
N3-13-1																				X	
-2																				X	
W18-12-1	5/4	930																		X	
-2	"	"																		X	

SPECIAL INSTRUCTIONS:

Standard Turn Around Time (TAT) – 10 Business Days

TAT Requested (circle): 1 Day | 2 Day | 3 Day | 5 Day | Standard | Other: ___

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY: Signature: [signature] Date: 5/6 Time: Printed Name: Kevin Brown Company:

RECEIVED BY: Signature: [signature] Date: 5/6/22 Time: 12:50 Printed Name: R. Auvil Company:

RELINQUISHED BY: Signature: Date: Time: Printed Name: Company:

RECEIVED BY: Signature: Date: Time: Printed Name: Company:

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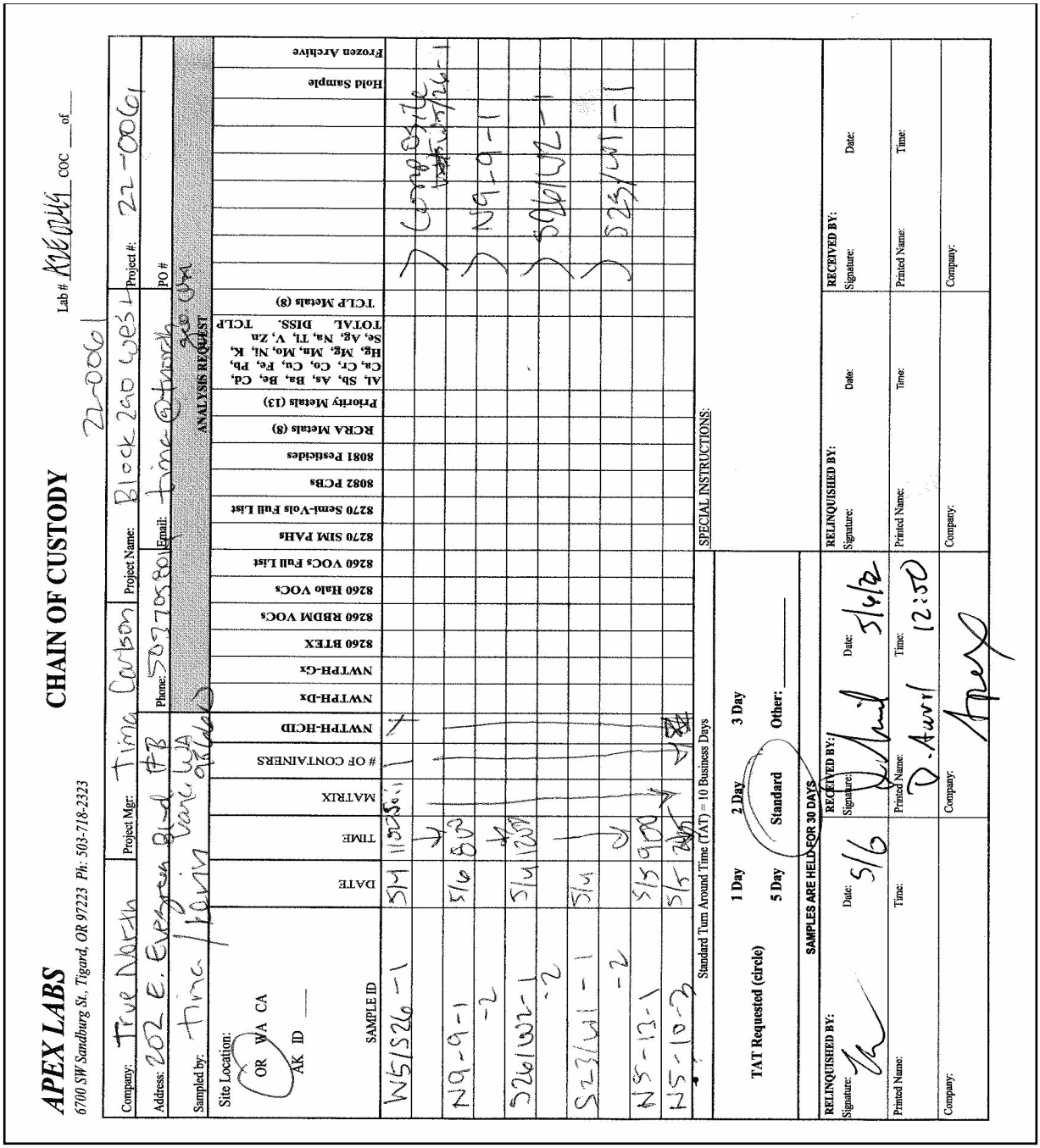
ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0249 - 05 18 22 1532**



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Darrell Auvil, Client Services Manager

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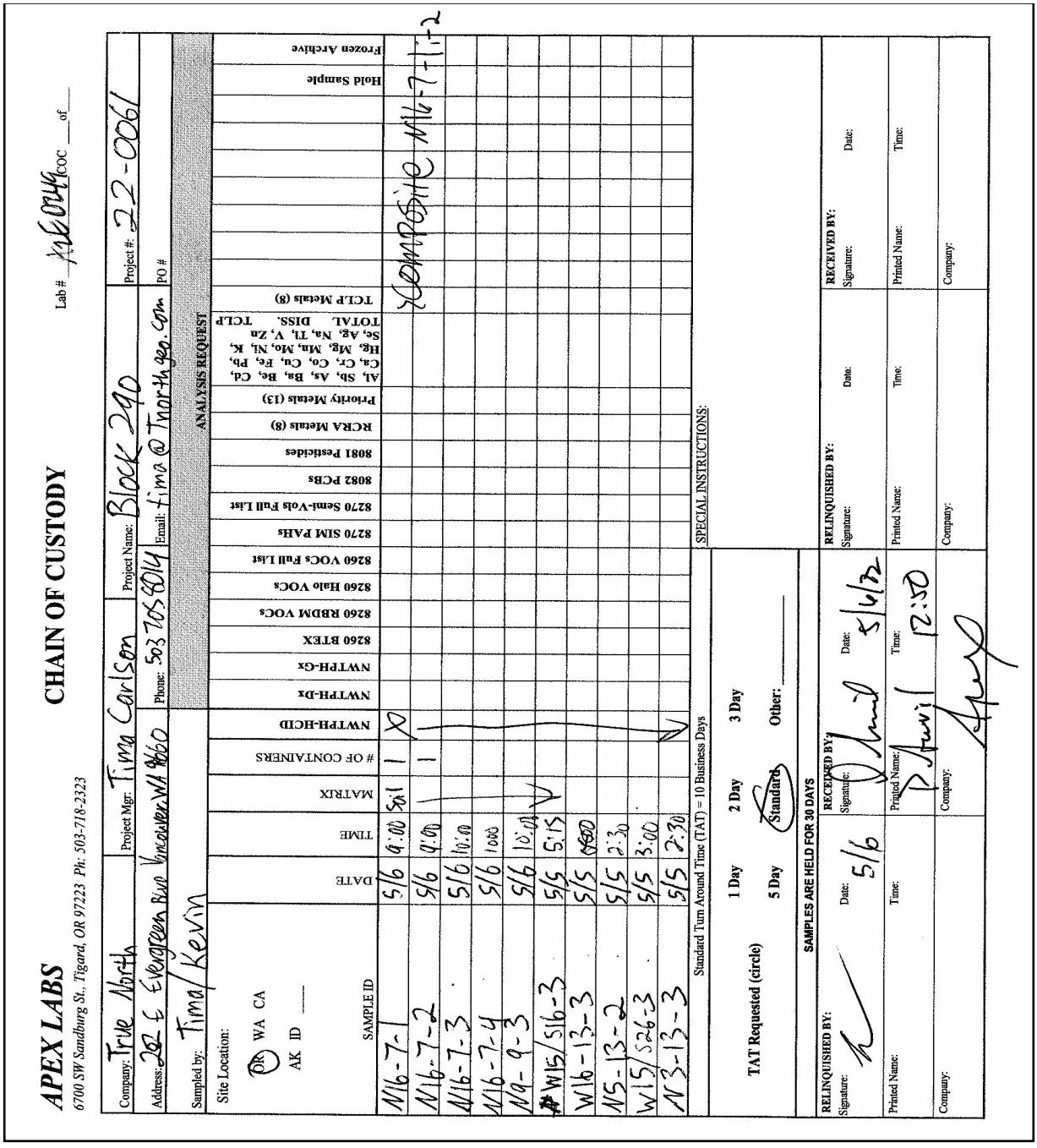
ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0249 - 05 18 22 1532**



APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # XYB0114 COC ___ of ___

Company: True North | Project Mgr: Tima Carlson | Project Name: Block 290 | Project #: 22-0061
Address: 202 E Evergreen Blvd Vancouver WA 98660 | Phone: 503 705 8014 | Email: tima@tnorthgeo.com | PO #
Sampled by: Tima/Kevin

Site Location: (OR) WA CA / AK ID ___

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
W16-7-1	5/6	9:00	Soil	1	X														X (Composite W16-7-1,-2)		
W16-7-2	5/6	9:00		1																	
W16-7-3	5/6	10:00																			
W16-7-4	5/6	1000																			
W9-9-3	5/6	10:00																			
W15/S16-3	5/5	5:15																			
W16-13-3	5/5	0800																			
N5-13-2	5/5	2:30																			
W15/S26-3	5/5	3:00																			
N3-13-3	5/5	2:30																			

Standard Turn Around Time (TAT) = 10 Business Days

SPECIAL INSTRUCTIONS:

TAT Requested (circle): 1 Day | 2 Day | 3 Day | 5 Day | Standard | Other: ___

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature:	Signature:	Signature:	Signature:
Date: 5/6	Date: 5/6/22	Date:	Date:
Time:	Time: 12:30	Time:	Time:
Printed Name:	Printed Name: D Auvil	Printed Name:	Printed Name:
Company:	Company: Apex	Company:	Company:

Apex Laboratories

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0249 - 05 18 22 1532**

APEX LABS COOLER RECEIPT FORM

Client: True North GtC Element WO#: A2 E0249

Project/Project #: Tyler Terrace

Delivery Info:
Date/time received: 5/6/22 @ 12:50 By: D. Auvil
Delivered by: Apex Client(X) ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Date/time inspected: 5/6 @ 1:00pm By: DA.
Chain of Custody included? Yes (✓) No
Custody seals? Yes No (✓)
Signed/dated by client? Yes (✓) No
Signed/dated by Apex? Yes (✓) No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	0.2C						
Received on ice? (Y/N)	Yes						
Temp. blanks? (Y/N)	NO						
Ice type: (Gel/Real/Other)	Real						
Condition:	Cold						

Cooler out of temp? (Y/N) Possible reason why:
Green dots applied to out of temperature samples? Yes/No
Out of temperature samples form initiated? Yes/No
Sample Inspection: Date/time inspected: 5/6/22 @ 1411 By:
All samples intact? Yes (X) No Comments:
Bottle labels/COCs agree? Yes No (X) Comments: IDs in SLG vary on sample IDs, ~~Date~~ times on MeOH VOA varies.
COC/container discrepancies form initiated? Yes No (X)
Containers/volumes received appropriate for analysis? Yes (X) No Comments:
Do VOA vials have visible headspace? Yes No NA (X)
Comments
Water samples: pH checked: Yes No NA (X) pH appropriate? Yes No NA (X)
Comments:

Additional information:

Labeled by: Witness: Cooler Inspected by:

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ANALYTICAL REPORT

Wednesday, May 18, 2022

Tima Carlson
True North Geotechnical Services
202 E Evergreen Blvd, Suite B
Vancouver, WA 98660

RE: A2E0336 - Block 290 - 22-0061

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A2E0336, which was received by the laboratory on 5/10/2022 at 9:46:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	4.8 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0336 - 05 18 22 1530**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N10-16-1	A2E0336-01	Soil	05/09/22 09:08	05/10/22 09:46
N5/W21-1	A2E0336-02	Soil	05/09/22 09:15	05/10/22 09:46
N9/W26-1	A2E0336-03	Soil	05/09/22 09:20	05/10/22 09:46
N2/W16-1	A2E0336-04	Soil	05/09/22 09:25	05/10/22 09:46
N15-10-1	A2E0336-05	Soil	05/09/22 09:30	05/10/22 09:46
N13-10-1	A2E0336-06	Soil	05/09/22 09:35	05/10/22 09:46
N15-13-1	A2E0336-09	Soil	05/09/22 09:50	05/10/22 09:46
N12/W16-15-1	A2E0336-12	Soil	05/09/22 14:05	05/10/22 09:46
W20/N7-1	A2E0336-13	Soil	05/09/22 14:10	05/10/22 09:46
N13-12-1	A2E0336-14	Soil	05/09/22 14:15	05/10/22 09:46
N9-15-1	A2E0336-15	Soil	05/09/22 14:20	05/10/22 09:46
N10/W21-1	A2E0336-16	Soil	05/09/22 14:25	05/10/22 09:46
N9/W28-1	A2E0336-17	Soil	05/09/22 14:25	05/10/22 09:46
N20-12-1	A2E0336-18	Soil	05/09/22 14:30	05/10/22 09:46

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True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0336 - 05 18 22 1530**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
N10-16-1 (A2E0336-01)				**Matrix: Soil**		**Batch: 22E0500**		
Gasoline Range Organics	ND	---	25.0	mg/kg dry	1	05/13/22 00:29	NWTPH-HCID	
Diesel Range Organics	ND	---	62.4	mg/kg dry	1	05/13/22 00:29	NWTPH-HCID	
Oil Range Organics	ND	---	125	mg/kg dry	1	05/13/22 00:29	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*92 %*	*Limits: 50-150 %*	*1*	*05/13/22 00:29*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*75 %*	*50-150 %*	*1*	*05/13/22 00:29*	*NWTPH-HCID*	
N5/W21-1 (A2E0336-02)				**Matrix: Soil**		**Batch: 22E0500**		
Gasoline Range Organics	ND	---	25.5	mg/kg dry	1	05/13/22 01:14	NWTPH-HCID	
Diesel Range Organics	ND	---	63.7	mg/kg dry	1	05/13/22 01:14	NWTPH-HCID	
Oil Range Organics	ND	---	127	mg/kg dry	1	05/13/22 01:14	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*86 %*	*Limits: 50-150 %*	*1*	*05/13/22 01:14*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*77 %*	*50-150 %*	*1*	*05/13/22 01:14*	*NWTPH-HCID*	
N9/W26-1 (A2E0336-03)				**Matrix: Soil**		**Batch: 22E0500**		
Gasoline Range Organics	ND	---	28.0	mg/kg dry	1	05/13/22 01:59	NWTPH-HCID	
Diesel Range Organics	ND	---	69.9	mg/kg dry	1	05/13/22 01:59	NWTPH-HCID	
Oil Range Organics	ND	---	140	mg/kg dry	1	05/13/22 01:59	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*79 %*	*Limits: 50-150 %*	*1*	*05/13/22 01:59*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*76 %*	*50-150 %*	*1*	*05/13/22 01:59*	*NWTPH-HCID*	
N2/W16-1 (A2E0336-04)				**Matrix: Soil**		**Batch: 22E0500**		
Gasoline Range Organics	ND	---	23.7	mg/kg dry	1	05/13/22 02:21	NWTPH-HCID	
Diesel Range Organics	ND	---	59.3	mg/kg dry	1	05/13/22 02:21	NWTPH-HCID	
Oil Range Organics	ND	---	119	mg/kg dry	1	05/13/22 02:21	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*94 %*	*Limits: 50-150 %*	*1*	*05/13/22 02:21*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*81 %*	*50-150 %*	*1*	*05/13/22 02:21*	*NWTPH-HCID*	
N15-10-1 (A2E0336-05)				**Matrix: Soil**		**Batch: 22E0500**		
Gasoline Range Organics	ND	---	27.7	mg/kg dry	1	05/13/22 02:43	NWTPH-HCID	
Diesel Range Organics	ND	---	69.2	mg/kg dry	1	05/13/22 02:43	NWTPH-HCID	
Oil Range Organics	ND	---	138	mg/kg dry	1	05/13/22 02:43	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*86 %*	*Limits: 50-150 %*	*1*	*05/13/22 02:43*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*77 %*	*50-150 %*	*1*	*05/13/22 02:43*	*NWTPH-HCID*	

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0336 - 05 18 22 1530**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
N13-10-1 (A2E0336-06)				**Matrix: Soil**		**Batch: 22E0500**		
Gasoline Range Organics	ND	---	27.5	mg/kg dry	1	05/13/22 03:06	NWTPH-HCID	
Diesel Range Organics	ND	---	68.8	mg/kg dry	1	05/13/22 03:06	NWTPH-HCID	
Oil Range Organics	ND	---	138	mg/kg dry	1	05/13/22 03:06	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*92 %*	*Limits: 50-150 %*	*1*	*05/13/22 03:06*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*85 %*	*50-150 %*	*1*	*05/13/22 03:06*	*NWTPH-HCID*	
N15-13-1 (A2E0336-09)				**Matrix: Soil**		**Batch: 22E0500**		
Gasoline Range Organics	ND	---	26.2	mg/kg dry	1	05/13/22 03:28	NWTPH-HCID	
Diesel Range Organics	ND	---	65.5	mg/kg dry	1	05/13/22 03:28	NWTPH-HCID	
Oil Range Organics	ND	---	131	mg/kg dry	1	05/13/22 03:28	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*89 %*	*Limits: 50-150 %*	*1*	*05/13/22 03:28*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*84 %*	*50-150 %*	*1*	*05/13/22 03:28*	*NWTPH-HCID*	
N12/W16-15-1 (A2E0336-12)				**Matrix: Soil**		**Batch: 22E0500**		
Gasoline Range Organics	ND	---	22.1	mg/kg dry	1	05/13/22 03:50	NWTPH-HCID	
Diesel Range Organics	ND	---	55.4	mg/kg dry	1	05/13/22 03:50	NWTPH-HCID	
Oil Range Organics	ND	---	111	mg/kg dry	1	05/13/22 03:50	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*95 %*	*Limits: 50-150 %*	*1*	*05/13/22 03:50*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*92 %*	*50-150 %*	*1*	*05/13/22 03:50*	*NWTPH-HCID*	
W20/N7-1 (A2E0336-13)				**Matrix: Soil**		**Batch: 22E0500**		
Gasoline Range Organics	ND	---	23.7	mg/kg dry	1	05/13/22 04:13	NWTPH-HCID	
Diesel Range Organics	ND	---	59.1	mg/kg dry	1	05/13/22 04:13	NWTPH-HCID	
Oil Range Organics	ND	---	118	mg/kg dry	1	05/13/22 04:13	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*91 %*	*Limits: 50-150 %*	*1*	*05/13/22 04:13*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*84 %*	*50-150 %*	*1*	*05/13/22 04:13*	*NWTPH-HCID*	
N13-12-1 (A2E0336-14)				**Matrix: Soil**		**Batch: 22E0500**		
Gasoline Range Organics	ND	---	26.5	mg/kg dry	1	05/13/22 04:35	NWTPH-HCID	
Diesel Range Organics	ND	---	66.3	mg/kg dry	1	05/13/22 04:35	NWTPH-HCID	
Oil Range Organics	ND	---	133	mg/kg dry	1	05/13/22 04:35	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*76 %*	*Limits: 50-150 %*	*1*	*05/13/22 04:35*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*77 %*	*50-150 %*	*1*	*05/13/22 04:35*	*NWTPH-HCID*	

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0336 - 05 18 22 1530**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
N9-15-1 (A2E0336-15)				**Matrix: Soil**		**Batch: 22E0500**		
Gasoline Range Organics	ND	---	25.5	mg/kg dry	1	05/13/22 04:57	NWTPH-HCID	
Diesel Range Organics	ND	---	63.8	mg/kg dry	1	05/13/22 04:57	NWTPH-HCID	
Oil Range Organics	ND	---	128	mg/kg dry	1	05/13/22 04:57	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*79 %*	*Limits: 50-150 %*	*1*	*05/13/22 04:57*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*75 %*	*50-150 %*	*1*	*05/13/22 04:57*	*NWTPH-HCID*	
N10/W21-1 (A2E0336-16)				**Matrix: Soil**		**Batch: 22E0500**		
Gasoline Range Organics	ND	---	22.7	mg/kg dry	1	05/13/22 05:19	NWTPH-HCID	
Diesel Range Organics	ND	---	56.9	mg/kg dry	1	05/13/22 05:19	NWTPH-HCID	
Oil Range Organics	ND	---	114	mg/kg dry	1	05/13/22 05:19	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*97 %*	*Limits: 50-150 %*	*1*	*05/13/22 05:19*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*83 %*	*50-150 %*	*1*	*05/13/22 05:19*	*NWTPH-HCID*	
N9/W28-1 (A2E0336-17)				**Matrix: Soil**		**Batch: 22E0500**		
Gasoline Range Organics	ND	---	23.6	mg/kg dry	1	05/13/22 05:42	NWTPH-HCID	
Diesel Range Organics	ND	---	58.9	mg/kg dry	1	05/13/22 05:42	NWTPH-HCID	
Oil Range Organics	ND	---	118	mg/kg dry	1	05/13/22 05:42	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*97 %*	*Limits: 50-150 %*	*1*	*05/13/22 05:42*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*78 %*	*50-150 %*	*1*	*05/13/22 05:42*	*NWTPH-HCID*	
N20-12-1 (A2E0336-18)				**Matrix: Soil**		**Batch: 22E0500**		
Gasoline Range Organics	ND	---	26.0	mg/kg dry	1	05/13/22 06:04	NWTPH-HCID	
Diesel Range Organics	ND	---	65.0	mg/kg dry	1	05/13/22 06:04	NWTPH-HCID	
Oil Range Organics	ND	---	130	mg/kg dry	1	05/13/22 06:04	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*78 %*	*Limits: 50-150 %*	*1*	*05/13/22 06:04*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*73 %*	*50-150 %*	*1*	*05/13/22 06:04*	*NWTPH-HCID*	

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0336 - 05 18 22 1530**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
N10-16-1 (A2E0336-01)				**Matrix: Soil**		**Batch: 22E0474**		
% Solids	**75.5**	---	1.00	%	1	05/13/22 09:57	EPA 8000D	
N5/W21-1 (A2E0336-02)				**Matrix: Soil**		**Batch: 22E0474**		
% Solids	**75.4**	---	1.00	%	1	05/13/22 09:57	EPA 8000D	
N9/W26-1 (A2E0336-03)				**Matrix: Soil**		**Batch: 22E0474**		
% Solids	**71.1**	---	1.00	%	1	05/13/22 09:57	EPA 8000D	
N2/W16-1 (A2E0336-04)				**Matrix: Soil**		**Batch: 22E0474**		
% Solids	**78.9**	---	1.00	%	1	05/13/22 09:57	EPA 8000D	
N15-10-1 (A2E0336-05)				**Matrix: Soil**		**Batch: 22E0474**		
% Solids	**71.6**	---	1.00	%	1	05/13/22 09:57	EPA 8000D	
N13-10-1 (A2E0336-06)				**Matrix: Soil**		**Batch: 22E0474**		
% Solids	**72.3**	---	1.00	%	1	05/13/22 09:57	EPA 8000D	
N15-13-1 (A2E0336-09)				**Matrix: Soil**		**Batch: 22E0474**		
% Solids	**73.5**	---	1.00	%	1	05/13/22 09:57	EPA 8000D	
N12/W16-15-1 (A2E0336-12)				**Matrix: Soil**		**Batch: 22E0474**		
% Solids	**88.6**	---	1.00	%	1	05/13/22 09:57	EPA 8000D	
W20/N7-1 (A2E0336-13)				**Matrix: Soil**		**Batch: 22E0474**		
% Solids	**82.8**	---	1.00	%	1	05/13/22 09:57	EPA 8000D	
N13-12-1 (A2E0336-14)				**Matrix: Soil**		**Batch: 22E0474**		
% Solids	**72.1**	---	1.00	%	1	05/13/22 09:57	EPA 8000D	
N9-15-1 (A2E0336-15)				**Matrix: Soil**		**Batch: 22E0474**		
% Solids	**74.5**	---	1.00	%	1	05/13/22 09:57	EPA 8000D	
N10/W21-1 (A2E0336-16)				**Matrix: Soil**		**Batch: 22E0474**		
% Solids	**82.3**	---	1.00	%	1	05/13/22 09:57	EPA 8000D	
N9/W28-1 (A2E0336-17)				**Matrix: Soil**		**Batch: 22E0474**		

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202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0336 - 05 18 22 1530**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
N9/W28-1 (A2E0336-17)				**Matrix: Soil**		**Batch: 22E0474**		
% Solids	**82.0**	---	1.00	%	1	05/13/22 09:57	EPA 8000D	
N20-12-1 (A2E0336-18)				**Matrix: Soil**		**Batch: 22E0474**		
% Solids	**72.9**	---	1.00	%	1	05/13/22 09:57	EPA 8000D	

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ANALYTICAL REPORT

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QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0500 - NWTPH-HCID (Soil)							Soil					
Blank (22E0500-BLK1)			Prepared: 05/12/22 14:05 Analyzed: 05/13/22 00:07									
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 86 %*	*Limits: 50-150 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*81 %*	*50-150 %*			*"*					
Duplicate (22E0500-DUP1)			Prepared: 05/12/22 14:05 Analyzed: 05/13/22 00:52									
QC Source Sample: N10-16-1 (A2E0336-01)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	24.8	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	61.9	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	124	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 84 %*	*Limits: 50-150 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*78 %*	*50-150 %*			*"*					
Duplicate (22E0500-DUP2)			Prepared: 05/12/22 14:05 Analyzed: 05/13/22 01:36									
QC Source Sample: N5/W21-1 (A2E0336-02)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	25.6	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	63.9	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	128	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 85 %*	*Limits: 50-150 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*80 %*	*50-150 %*			*"*					

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True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0336 - 05 18 22 1530**

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0474 - Total Solids (Dry Weight)							**Soil**					
Duplicate (22E0474-DUP1)			Prepared: 05/12/22 10:24		Analyzed: 05/13/22 09:57							
QC Source Sample: Non-SDG (A2E0268-01)												
% Solids	**78.8**	---	1.00	%	1	---	82.2	---	---	4	10%	
Duplicate (22E0474-DUP2)			Prepared: 05/12/22 10:24		Analyzed: 05/13/22 09:57							
QC Source Sample: Non-SDG (A2E0268-02)												
% Solids	**77.2**	---	1.00	%	1	---	77.3	---	---	0.2	10%	
Duplicate (22E0474-DUP3)			Prepared: 05/12/22 10:24		Analyzed: 05/13/22 09:57							
QC Source Sample: Non-SDG (A2E0275-01)												
% Solids	**82.4**	---	1.00	%	1	---	82.5	---	---	0.09	10%	
Duplicate (22E0474-DUP4)			Prepared: 05/12/22 10:24		Analyzed: 05/13/22 09:57							
QC Source Sample: N10-16-1 (A2E0336-01)												
EPA 8000D												
% Solids	**76.0**	---	1.00	%	1	---	75.5	---	---	0.7	10%	
Duplicate (22E0474-DUP5)			Prepared: 05/12/22 20:09		Analyzed: 05/13/22 09:57							
QC Source Sample: Non-SDG (A2E0435-01)												
% Solids	**97.0**	---	1.00	%	1	---	97.1	---	---	0.1	10%	
Duplicate (22E0474-DUP6)			Prepared: 05/12/22 20:09		Analyzed: 05/13/22 09:57							
QC Source Sample: Non-SDG (A2E0458-01)												
% Solids	**81.6**	---	1.00	%	1	---	81.9	---	---	0.3	10%	
Duplicate (22E0474-DUP7)			Prepared: 05/12/22 20:09		Analyzed: 05/13/22 09:57							
QC Source Sample: Non-SDG (A2E0464-04)												
% Solids	**72.7**	---	1.00	%	1	---	72.0	---	---	1	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0336 - 05 18 22 1530**

SAMPLE PREPARATION INFORMATION

Hydrocarbon Identification Screen by NWTPH-HCID

Prep: NWTPH-HCID (Soil)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22E0500							
A2E0336-01	Soil	NWTPH-HCID	05/09/22 09:08	05/12/22 14:05	10.61g/10mL	10g/10mL	0.94
A2E0336-02	Soil	NWTPH-HCID	05/09/22 09:15	05/12/22 14:05	10.41g/10mL	10g/10mL	0.96
A2E0336-03	Soil	NWTPH-HCID	05/09/22 09:20	05/12/22 14:05	10.06g/10mL	10g/10mL	0.99
A2E0336-04	Soil	NWTPH-HCID	05/09/22 09:25	05/12/22 14:05	10.69g/10mL	10g/10mL	0.94
A2E0336-05	Soil	NWTPH-HCID	05/09/22 09:30	05/12/22 14:05	10.1g/10mL	10g/10mL	0.99
A2E0336-06	Soil	NWTPH-HCID	05/09/22 09:35	05/12/22 14:05	10.06g/10mL	10g/10mL	0.99
A2E0336-09	Soil	NWTPH-HCID	05/09/22 09:50	05/12/22 14:05	10.38g/10mL	10g/10mL	0.96
A2E0336-12	Soil	NWTPH-HCID	05/09/22 14:05	05/12/22 14:05	10.2g/10mL	10g/10mL	0.98
A2E0336-13	Soil	NWTPH-HCID	05/09/22 14:10	05/12/22 14:05	10.21g/10mL	10g/10mL	0.98
A2E0336-14	Soil	NWTPH-HCID	05/09/22 14:15	05/12/22 14:05	10.45g/10mL	10g/10mL	0.96
A2E0336-15	Soil	NWTPH-HCID	05/09/22 14:20	05/12/22 14:05	10.51g/10mL	10g/10mL	0.95
A2E0336-16	Soil	NWTPH-HCID	05/09/22 14:25	05/12/22 14:05	10.69g/10mL	10g/10mL	0.94
A2E0336-17	Soil	NWTPH-HCID	05/09/22 14:25	05/12/22 14:05	10.35g/10mL	10g/10mL	0.97
A2E0336-18	Soil	NWTPH-HCID	05/09/22 14:30	05/12/22 14:05	10.55g/10mL	10g/10mL	0.95

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22E0474							
A2E0336-01	Soil	EPA 8000D	05/09/22 09:08	05/12/22 10:24			NA
A2E0336-02	Soil	EPA 8000D	05/09/22 09:15	05/12/22 10:24			NA
A2E0336-03	Soil	EPA 8000D	05/09/22 09:20	05/12/22 10:24			NA
A2E0336-04	Soil	EPA 8000D	05/09/22 09:25	05/12/22 10:24			NA
A2E0336-05	Soil	EPA 8000D	05/09/22 09:30	05/12/22 10:24			NA
A2E0336-06	Soil	EPA 8000D	05/09/22 09:35	05/12/22 10:24			NA
A2E0336-09	Soil	EPA 8000D	05/09/22 09:50	05/12/22 10:24			NA
A2E0336-12	Soil	EPA 8000D	05/09/22 14:05	05/12/22 10:24			NA
A2E0336-13	Soil	EPA 8000D	05/09/22 14:10	05/12/22 10:24			NA
A2E0336-14	Soil	EPA 8000D	05/09/22 14:15	05/12/22 10:24			NA
A2E0336-15	Soil	EPA 8000D	05/09/22 14:20	05/12/22 10:24			NA
A2E0336-16	Soil	EPA 8000D	05/09/22 14:25	05/12/22 10:24			NA
A2E0336-17	Soil	EPA 8000D	05/09/22 14:25	05/12/22 10:24			NA
A2E0336-18	Soil	EPA 8000D	05/09/22 14:30	05/12/22 10:24			NA

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ANALYTICAL REPORT

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202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0336 - 05 18 22 1530**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

There are No Qualifiers on Sample or QC Data for this report

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0336 - 05 18 22 1530**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

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Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
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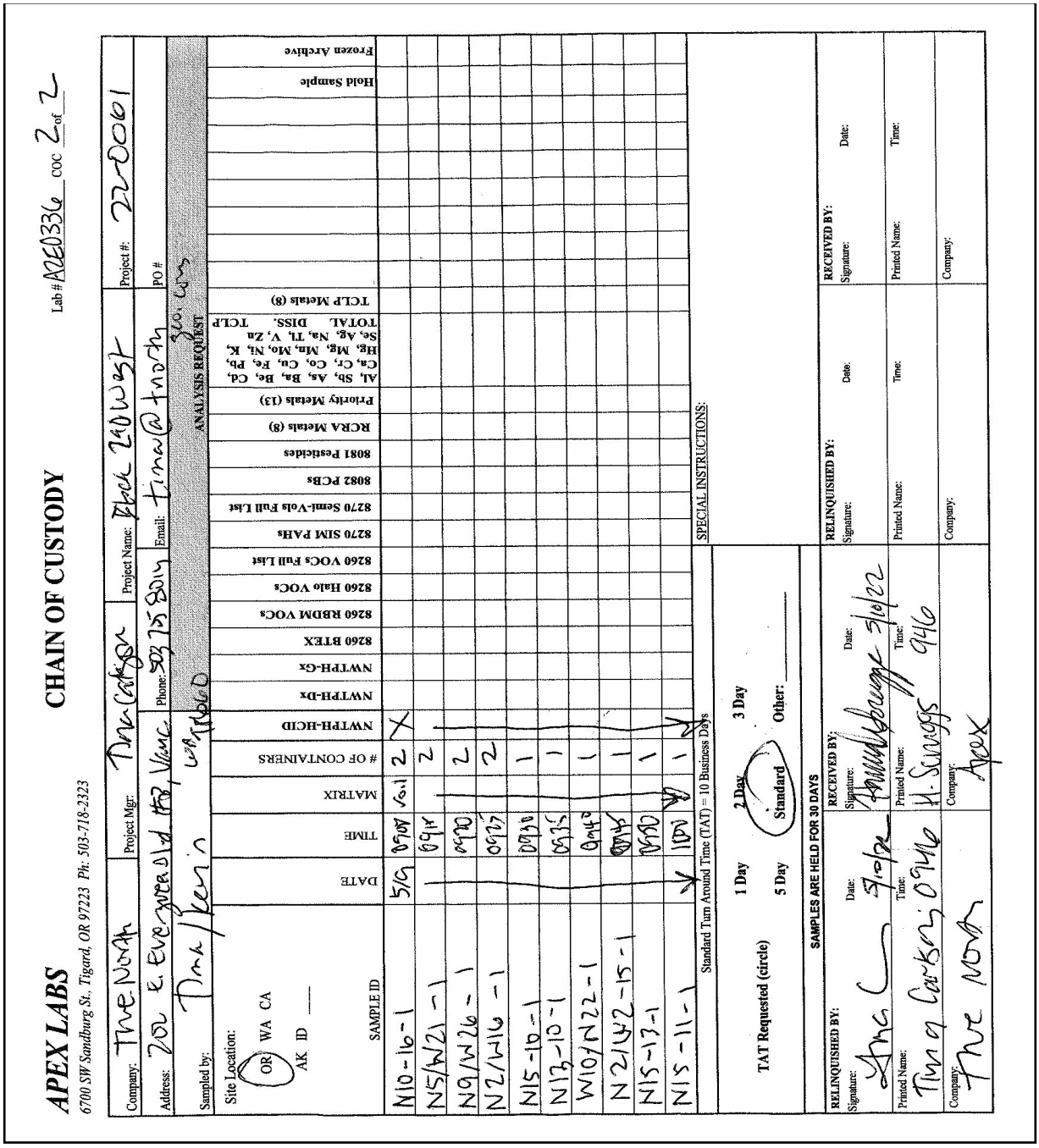
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0336 - 05 18 22 1530**



APEX LABS — **CHAIN OF CUSTODY** — Lab # A2E0336 COC 2 of 2

6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

Company: True North — Project Mgr: Tima Carlson — Project Name: Block 290 West — Project #: 22-0061

Address: 202 E. Evergreen Blvd #B2, Vanc. — Phone: 503 75 8004 — Email: tima@tnenv.com — PO #

Sampled by: Tima/Kevin — ANALYSIS REQUEST

Site Location: (OR) WA CA / AK ID ___

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
N10-16-1	5/6	0907	soil	2	X																
N5/W21-1		0914		2																	
N9/W26-1		0920		2																	
N2/W16-1		0927		2																	
N15-15-1		0930		1																	
N13-10-1		0935		1																	
W10/N22-1		0940		1																	
N21/W2-15-1		0944		1																	
N15-13-1		0950		1																	
N15-11-1		1001	W	1	X																

SPECIAL INSTRUCTIONS:

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day — 2 Day — 3 Day — 5 Day — Standard — Other: ___

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY:	Date:	Time:	RECEIVED BY:	Date:	Time:
Signature:			Signature:		
Printed Name:			Printed Name:		
Company:			Company:		

RELINQUISHED BY:	Date:	Time:	RECEIVED BY:	Date:	Time:
Signature:			Signature:		
Printed Name:			Printed Name:		
Company:			Company:		

RELINQUISHED BY:	Date:	Time:	RECEIVED BY:	Date:	Time:
Signature:	5/6/22	1702	Signature:	5/6/22	1702
Printed Name:	Tima Carlson		Printed Name:	H. Simons	9446
Company:	True North		Company:	Apex	

Apex Laboratories

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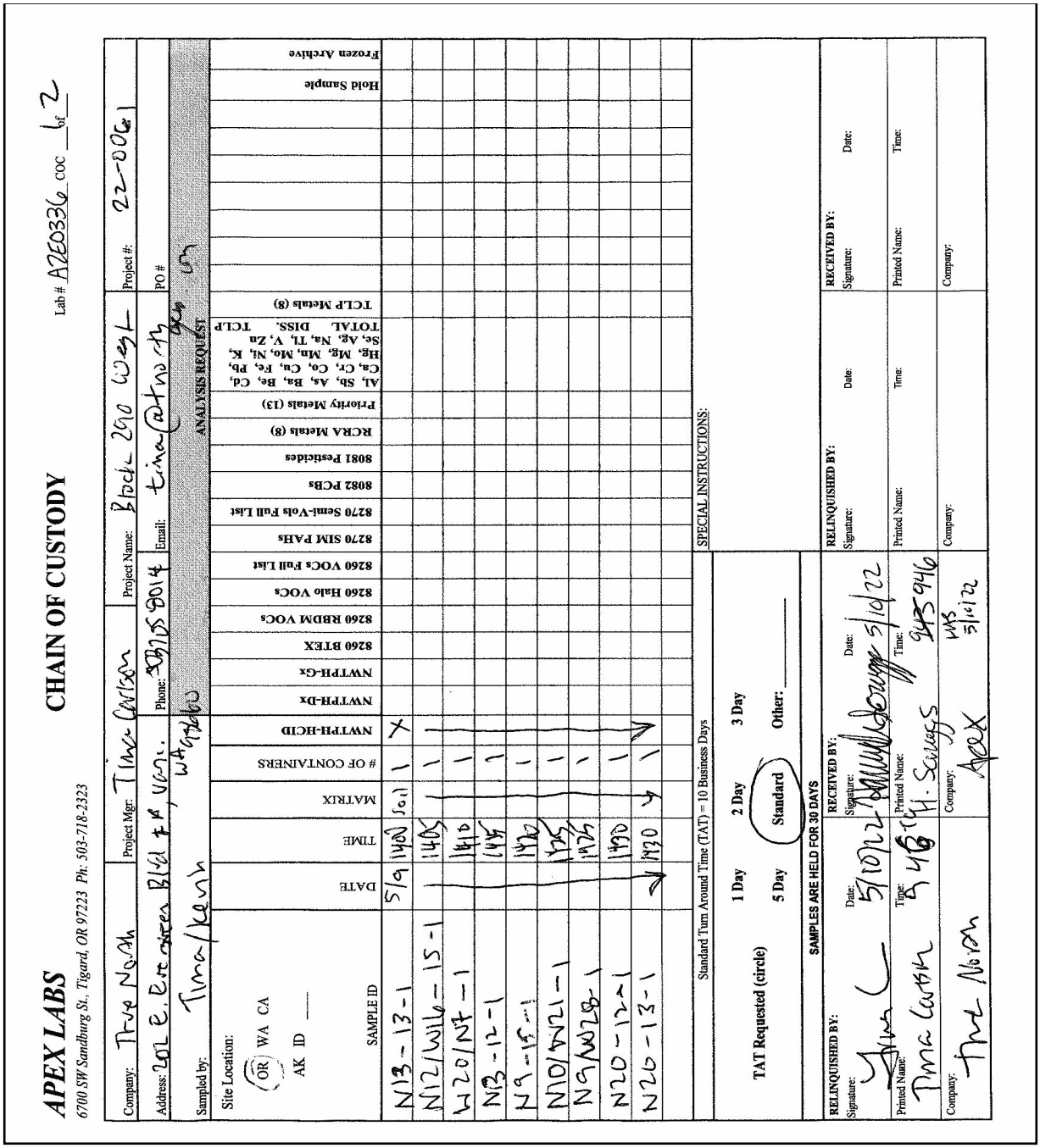
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0336 - 05 18 22 1530**



APEX LABS — CHAIN OF CUSTODY

6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

Lab # A2E0336 COC 1 of 2

Company: True North — Project Mgr: Tima Carlson — Project Name: Block 290 Design — Project #: 22-0061

Address: 202 E. Evergreen Blvd #F, Vanc. WA 98660 — Phone: 503 975 9014 — Email: tima@truenorthgeo.biz — PO #

Sampled by: Tima/Kevin

Site Location: (OR) WA CA AK ID ____

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
N13-13-1	5/9	1400	Soil	1	X																
N12/W16-15-1		1405		1																	
N20/N4-1		1410		1																	
N13-12-1		1415		1																	
N9-15-1		1420		1																	
N10/N21-1		1425		1																	
N9/W28-1		1425		1																	
N20-12-1		1430		1																	
N20-13-1		1420	↓	1	↓																

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day 2 Day 3 Day 5 Day **Standard** Other: ____

SPECIAL INSTRUCTIONS:

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature:	Signature:	Signature:	Signature:
Date: 5/10/22	Date: 5/10/22	Date:	Date:
Time: 1600	Time: 1600	Time:	Time:
Printed Name: Tima Carlson	Printed Name: Hi. Scruggs	Printed Name:	Printed Name:
Company: True North	Company: Apex	Company:	Company:

Apex Laboratories

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Darrell Auvil, Client Services Manager

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0336 - 05 18 22 1530**

WO# A2E0336

COC/Container Discrepancies

COC Reads	Container Reads/Comments
N9/W26-1	1 of 2 jars reads W26/N9-1.
N15-11-1	sample is MeOH VOA only
N13-13-1	Sample is MeOH VOA only
N12/W16-15-1	jar reads W16/N12-15-1
N20-13-1	Sample is MeOH VOA only
N2/W2-15-1 W10/N22-1	1 of 1 jars submerged with water
N9/W26-1 N10-16-1 N5-W21-1	1 of 2 jars submerged with water.
	NO time on all containers
N20-13-1 @ 1430	time of 1005

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0336 - 05 18 22 1530**

APEX LABS COOLER RECEIPT FORM

Client: True North Element WO#: A2 E0336

Project/Project #: Block 290 West / 22-0061

Delivery Info:

Date/time received: 5/10/22 @ 946 By: HAS

Delivered by: Apex____ Client X ESS____ FedEx____ UPS____ Swift___ Senvoy ___ SDS___ Other_____

Cooler Inspection Date/time inspected: 5/10/22 @ 946 By: HAS

Chain of Custody included? Yes X No _____ Custody seals? Yes_____ No X

Signed/dated by client? Yes X No _____

Signed/dated by Apex? Yes X No _____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	4.8						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	N						
Ice type: (Gel/Real/Other)	real						
Condition:	good						

Cooler out of temp? (Y/N) Possible reason why: _____

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 5/10/22 @ 1114 By: HAS

All samples intact? Yes X No ___ Comments: _____

Bottle labels/COCs agree? Yes ___ No X Comments: see discrepancies form

COC/container discrepancies form initiated? Yes X No ___

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: _____

Do VOA vials have visible headspace? Yes ___ No ___ NA X

Comments _____

Water samples: pH checked: Yes___No___NA X pH appropriate? Yes___No___NA X

Comments: _____

Additional information: _____

Labeled by: HAS Witness: DJS Cooler Inspected by: HAS

Apex Laboratories

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

Friday, June 3, 2022

Tima Carlson
True North Geotechnical Services
202 E Evergreen Blvd, Suite B
Vancouver, WA 98660

RE: A2E0589 - Block 290 - 22-0061

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A2E0589, which was received by the laboratory on 5/17/2022 at 10:31:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	1.1 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0589 - 06 03 22 1411**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N15-15-1	A2E0589-01	Soil	05/16/22 08:00	05/17/22 10:31
N9-15-1	A2E0589-02	Soil	05/16/22 08:05	05/17/22 10:31
N9/W28-1	A2E0589-03	Soil	05/16/22 08:10	05/17/22 10:31
N15/W28-1	A2E0589-04	Soil	05/16/22 08:15	05/17/22 10:31
N20-15-1	A2E0589-05	Soil	05/16/22 08:30	05/17/22 10:31
N22-15-1	A2E0589-06	Soil	05/16/22 08:35	05/17/22 10:31
E3-7-1	A2E0589-07	Soil	05/16/22 08:40	05/17/22 10:31
E5-7-1	A2E0589-08	Soil	05/16/22 08:45	05/17/22 10:31
W18/N13-15-1	A2E0589-09	Soil	05/16/22 08:50	05/17/22 10:31
N20/W28-1	A2E0589-10	Soil	05/16/22 08:50	05/17/22 10:31
N19/E6-1	A2E0589-11	Soil	05/17/22 09:00	05/17/22 10:31
N17/W18-1	A2E0589-12	Soil	05/17/22 09:00	05/17/22 10:31
N13/E9-1	A2E0589-13	Soil	05/17/22 09:00	05/17/22 10:31
N20/W12-1	A2E0589-14	Soil	05/17/22 09:00	05/17/22 10:31
N13/E1-1	A2E0589-15	Soil	05/17/22 09:00	05/17/22 10:31
N13/W13-1	A2E0589-16	Soil	05/17/22 09:00	05/17/22 10:31
N19/E1-1	A2E0589-17	Soil	05/17/22 09:00	05/17/22 10:31

Apex Laboratories

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0589 - 06 03 22 1411**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
N15-15-1 (A2E0589-01)				**Matrix: Soil**		**Batch: 22E0764**		X
Gasoline Range Organics	ND	---	23.9	mg/kg dry	1	05/19/22 22:31	NWTPH-HCID	
Diesel Range Organics	ND	---	59.7	mg/kg dry	1	05/19/22 22:31	NWTPH-HCID	
Oil Range Organics	ND	---	119	mg/kg dry	1	05/19/22 22:31	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*148 %*	*Limits: 50-150 %*	*1*	*05/19/22 22:31*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*118 %*	*50-150 %*	*1*	*05/19/22 22:31*	*NWTPH-HCID*	
N9-15-1 (A2E0589-02)				**Matrix: Soil**		**Batch: 22E0764**		X
Gasoline Range Organics	ND	---	24.8	mg/kg dry	1	05/19/22 22:53	NWTPH-HCID	
Diesel Range Organics	ND	---	62.0	mg/kg dry	1	05/19/22 22:53	NWTPH-HCID	
Oil Range Organics	ND	---	124	mg/kg dry	1	05/19/22 22:53	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*119 %*	*Limits: 50-150 %*	*1*	*05/19/22 22:53*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*83 %*	*50-150 %*	*1*	*05/19/22 22:53*	*NWTPH-HCID*	
N9/W28-1 (A2E0589-03)				**Matrix: Soil**		**Batch: 22E0764**		X
Gasoline Range Organics	ND	---	25.9	mg/kg dry	1	05/19/22 23:16	NWTPH-HCID	
Diesel Range Organics	ND	---	64.7	mg/kg dry	1	05/19/22 23:16	NWTPH-HCID	
Oil Range Organics	ND	---	129	mg/kg dry	1	05/19/22 23:16	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*98 %*	*Limits: 50-150 %*	*1*	*05/19/22 23:16*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*61 %*	*50-150 %*	*1*	*05/19/22 23:16*	*NWTPH-HCID*	
N15/W28-1 (A2E0589-04)				**Matrix: Soil**		**Batch: 22E0764**		X
Gasoline Range Organics	ND	---	23.8	mg/kg dry	1	05/19/22 23:38	NWTPH-HCID	
Diesel Range Organics	ND	---	59.5	mg/kg dry	1	05/19/22 23:38	NWTPH-HCID	
Oil Range Organics	ND	---	119	mg/kg dry	1	05/19/22 23:38	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*106 %*	*Limits: 50-150 %*	*1*	*05/19/22 23:38*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*77 %*	*50-150 %*	*1*	*05/19/22 23:38*	*NWTPH-HCID*	
N20-15-1 (A2E0589-05)				**Matrix: Soil**		**Batch: 22E0764**		X
Gasoline Range Organics	ND	---	26.7	mg/kg dry	1	05/20/22 00:01	NWTPH-HCID	
Diesel Range Organics	ND	---	66.8	mg/kg dry	1	05/20/22 00:01	NWTPH-HCID	
Oil Range Organics	ND	---	134	mg/kg dry	1	05/20/22 00:01	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*119 %*	*Limits: 50-150 %*	*1*	*05/20/22 00:01*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*110 %*	*50-150 %*	*1*	*05/20/22 00:01*	*NWTPH-HCID*	

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0589 - 06 03 22 1411**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
N22-15-1 (A2E0589-06)				**Matrix: Soil**		**Batch: 22E0764**		X
Gasoline Range Organics	ND	---	28.0	mg/kg dry	1	05/20/22 00:23	NWTPH-HCID	
Diesel Range Organics	ND	---	70.0	mg/kg dry	1	05/20/22 00:23	NWTPH-HCID	
Oil Range Organics	ND	---	140	mg/kg dry	1	05/20/22 00:23	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 90 %*		*Limits: 50-150 %*	*1*	*05/20/22 00:23*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*78 %*	*50-150 %*	*1*	*05/20/22 00:23*	*NWTPH-HCID*	
E3-7-1 (A2E0589-07)				**Matrix: Soil**		**Batch: 22E0764**		X
Gasoline Range Organics	ND	---	30.1	mg/kg dry	1	05/20/22 00:45	NWTPH-HCID	
Diesel Range Organics	ND	---	75.1	mg/kg dry	1	05/20/22 00:45	NWTPH-HCID	
Oil Range Organics	ND	---	150	mg/kg dry	1	05/20/22 00:45	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 89 %*		*Limits: 50-150 %*	*1*	*05/20/22 00:45*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*75 %*	*50-150 %*	*1*	*05/20/22 00:45*	*NWTPH-HCID*	
E5-7-1 (A2E0589-08)				**Matrix: Soil**		**Batch: 22E0764**		X
Gasoline Range Organics	ND	---	24.0	mg/kg dry	1	05/20/22 04:52	NWTPH-HCID	
Diesel Range Organics	ND	---	59.9	mg/kg dry	1	05/20/22 04:52	NWTPH-HCID	
Oil Range Organics	DET	---	120	mg/kg dry	1	05/20/22 04:52	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 103 %*		*Limits: 50-150 %*	*1*	*05/20/22 04:52*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*96 %*	*50-150 %*	*1*	*05/20/22 04:52*	*NWTPH-HCID*	
W18/N13-15-1 (A2E0589-09)				**Matrix: Soil**		**Batch: 22E0764**		X
Gasoline Range Organics	ND	---	24.9	mg/kg dry	1	05/20/22 01:08	NWTPH-HCID	
Diesel Range Organics	ND	---	62.3	mg/kg dry	1	05/20/22 01:08	NWTPH-HCID	
Oil Range Organics	ND	---	125	mg/kg dry	1	05/20/22 01:08	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 119 %*		*Limits: 50-150 %*	*1*	*05/20/22 01:08*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*94 %*	*50-150 %*	*1*	*05/20/22 01:08*	*NWTPH-HCID*	
N20/W28-1 (A2E0589-10)				**Matrix: Soil**		**Batch: 22E0764**		X
Gasoline Range Organics	ND	---	24.2	mg/kg dry	1	05/20/22 01:30	NWTPH-HCID	
Diesel Range Organics	ND	---	60.4	mg/kg dry	1	05/20/22 01:30	NWTPH-HCID	
Oil Range Organics	ND	---	121	mg/kg dry	1	05/20/22 01:30	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 114 %*		*Limits: 50-150 %*	*1*	*05/20/22 01:30*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*99 %*	*50-150 %*	*1*	*05/20/22 01:30*	*NWTPH-HCID*	

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ORELAP ID: OR100062

ANALYTICAL REPORT

True North Geotechnical Services	Project: Block 290	
202 E Evergreen Blvd, Suite B	Project Number: 22-0061	Report ID:
Vancouver, WA 98660	Project Manager: Tima Carlson	A2E0589 - 06 03 22 1411

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
N19/E6-1 (A2E0589-11)				**Matrix: Soil**		**Batch: 22E0764**		
Gasoline Range Organics	ND	---	27.0	mg/kg dry	1	05/20/22 01:53	NWTPH-HCID	
Diesel Range Organics	ND	---	67.5	mg/kg dry	1	05/20/22 01:53	NWTPH-HCID	
Oil Range Organics	ND	---	135	mg/kg dry	1	05/20/22 01:53	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 83 %*		*Limits: 50-150 %*	*1*	*05/20/22 01:53*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*65 %*	*50-150 %*	*1*	*05/20/22 01:53*	*NWTPH-HCID*	
N17/W18-1 (A2E0589-12)				**Matrix: Soil**		**Batch: 22E0764**		
Gasoline Range Organics	ND	---	23.9	mg/kg dry	1	05/20/22 02:15	NWTPH-HCID	
Diesel Range Organics	ND	---	59.7	mg/kg dry	1	05/20/22 02:15	NWTPH-HCID	
Oil Range Organics	ND	---	119	mg/kg dry	1	05/20/22 02:15	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 127 %*		*Limits: 50-150 %*	*1*	*05/20/22 02:15*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*91 %*	*50-150 %*	*1*	*05/20/22 02:15*	*NWTPH-HCID*	
N13/E9-1 (A2E0589-13)				**Matrix: Soil**		**Batch: 22E0764**		
Gasoline Range Organics	ND	---	24.4	mg/kg dry	1	05/20/22 02:38	NWTPH-HCID	
Diesel Range Organics	ND	---	61.1	mg/kg dry	1	05/20/22 02:38	NWTPH-HCID	
Oil Range Organics	ND	---	122	mg/kg dry	1	05/20/22 02:38	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 112 %*		*Limits: 50-150 %*	*1*	*05/20/22 02:38*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*106 %*	*50-150 %*	*1*	*05/20/22 02:38*	*NWTPH-HCID*	
N20/W12-1 (A2E0589-14)				**Matrix: Soil**		**Batch: 22E0764**		
Gasoline Range Organics	ND	---	22.3	mg/kg dry	1	05/20/22 03:00	NWTPH-HCID	
Diesel Range Organics	ND	---	55.7	mg/kg dry	1	05/20/22 03:00	NWTPH-HCID	
Oil Range Organics	ND	---	111	mg/kg dry	1	05/20/22 03:00	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 111 %*		*Limits: 50-150 %*	*1*	*05/20/22 03:00*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*101 %*	*50-150 %*	*1*	*05/20/22 03:00*	*NWTPH-HCID*	
N13/E1-1 (A2E0589-15)				**Matrix: Soil**		**Batch: 22E0764**		**X**
Gasoline Range Organics	ND	---	25.0	mg/kg dry	1	05/20/22 03:22	NWTPH-HCID	
Diesel Range Organics	ND	---	62.5	mg/kg dry	1	05/20/22 03:22	NWTPH-HCID	
Oil Range Organics	ND	---	125	mg/kg dry	1	05/20/22 03:22	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 110 %*		*Limits: 50-150 %*	*1*	*05/20/22 03:22*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*97 %*	*50-150 %*	*1*	*05/20/22 03:22*	*NWTPH-HCID*	

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0589 - 06 03 22 1411**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
N13/W13-1 (A2E0589-16)				**Matrix: Soil**		**Batch: 22E0764**		X
Gasoline Range Organics	ND	---	25.8	mg/kg dry	1	05/20/22 03:45	NWTPH-HCID	
Diesel Range Organics	ND	---	64.6	mg/kg dry	1	05/20/22 03:45	NWTPH-HCID	
Oil Range Organics	ND	---	129	mg/kg dry	1	05/20/22 03:45	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*123 %*	*Limits: 50-150 %*	*1*	*05/20/22 03:45*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*110 %*	*50-150 %*	*1*	*05/20/22 03:45*	*NWTPH-HCID*	
N19/E1-1 (A2E0589-17)				**Matrix: Soil**		**Batch: 22E0764**		X
Gasoline Range Organics	ND	---	26.8	mg/kg dry	1	05/20/22 04:07	NWTPH-HCID	
Diesel Range Organics	ND	---	66.9	mg/kg dry	1	05/20/22 04:07	NWTPH-HCID	
Oil Range Organics	ND	---	134	mg/kg dry	1	05/20/22 04:07	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*90 %*	*Limits: 50-150 %*	*1*	*05/20/22 04:07*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*62 %*	*50-150 %*	*1*	*05/20/22 04:07*	*NWTPH-HCID*	

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ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
E5-7-1 (A2E0589-08)				**Matrix: Soil**		**Batch: 22E0952**		
Diesel	ND	---	25.0	mg/kg dry	1	05/26/22 00:01	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	05/26/22 00:01	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 86 %*		*Limits: 50-150 %*	*1*	*05/26/22 00:01*	*NWTPH-Dx*	

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ANALYTICAL REPORT

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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
N15-15-1 (A2E0589-01)				**Matrix: Soil**		**Batch: 22E0754**		X
% Solids	**80.8**	---	1.00	%	1	05/20/22 10:33	EPA 8000D	
N9-15-1 (A2E0589-02)				**Matrix: Soil**		**Batch: 22E0754**		X
% Solids	**79.6**	---	1.00	%	1	05/20/22 10:33	EPA 8000D	
N9/W28-1 (A2E0589-03)				**Matrix: Soil**		**Batch: 22E0754**		X
% Solids	**74.8**	---	1.00	%	1	05/20/22 10:33	EPA 8000D	
N15/W28-1 (A2E0589-04)				**Matrix: Soil**		**Batch: 22E0754**		X
% Solids	**82.6**	---	1.00	%	1	05/20/22 10:33	EPA 8000D	
N20-15-1 (A2E0589-05)				**Matrix: Soil**		**Batch: 22E0754**		X
% Solids	**74.1**	---	1.00	%	1	05/20/22 10:33	EPA 8000D	
N22-15-1 (A2E0589-06)				**Matrix: Soil**		**Batch: 22E0754**		X
% Solids	**70.5**	---	1.00	%	1	05/20/22 10:33	EPA 8000D	
E3-7-1 (A2E0589-07)				**Matrix: Soil**		**Batch: 22E0754**		X
% Solids	**66.3**	---	1.00	%	1	05/20/22 10:33	EPA 8000D	
E5-7-1 (A2E0589-08)				**Matrix: Soil**		**Batch: 22E0754**		X
% Solids	**80.5**	---	1.00	%	1	05/20/22 10:33	EPA 8000D	
W18/N13-15-1 (A2E0589-09)				**Matrix: Soil**		**Batch: 22E0754**		X
% Solids	**79.9**	---	1.00	%	1	05/20/22 10:33	EPA 8000D	
N20/W28-1 (A2E0589-10)				**Matrix: Soil**		**Batch: 22E0754**		X
% Solids	**76.7**	---	1.00	%	1	05/20/22 10:33	EPA 8000D	
N19/E6-1 (A2E0589-11)				**Matrix: Soil**		**Batch: 22E0754**		
% Solids	**70.9**	---	1.00	%	1	05/20/22 10:33	EPA 8000D	
N17/W18-1 (A2E0589-12)				**Matrix: Soil**		**Batch: 22E0754**		
% Solids	**82.9**	---	1.00	%	1	05/20/22 10:33	EPA 8000D	
N13/E9-1 (A2E0589-13)				**Matrix: Soil**		**Batch: 22E0754**		

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ANALYTICAL REPORT

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0589 - 06 03 22 1411**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
N13/E9-1 (A2E0589-13)				**Matrix: Soil**		**Batch: 22E0754**		
% Solids	**76.0**	---	1.00	%	1	05/20/22 10:33	EPA 8000D	
N20/W12-1 (A2E0589-14)				**Matrix: Soil**		**Batch: 22E0754**		
% Solids	**82.6**	---	1.00	%	1	05/20/22 10:33	EPA 8000D	
N13/E1-1 (A2E0589-15)				**Matrix: Soil**		**Batch: 22E0754**		X
% Solids	**73.8**	---	1.00	%	1	05/20/22 10:33	EPA 8000D	
N13/W13-1 (A2E0589-16)				**Matrix: Soil**		**Batch: 22E0754**		X
% Solids	**72.0**	---	1.00	%	1	05/20/22 10:33	EPA 8000D	
N19/E1-1 (A2E0589-17)				**Matrix: Soil**		**Batch: 22E0754**		X
% Solids	**69.4**	---	1.00	%	1	05/20/22 10:33	EPA 8000D	

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ANALYTICAL REPORT

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202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0589 - 06 03 22 1411**

QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0764 - NWTPH-HCID (Soil)							**Soil**					
Blank (22E0764-BLK1)			Prepared: 05/19/22 14:32 Analyzed: 05/19/22 22:08									
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		*Recovery:*	*109 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
4-Bromofluorobenzene (Surr)			*104 %*		*50-150 %*			*"*				
Duplicate (22E0764-DUP1)			Prepared: 05/19/22 14:32 Analyzed: 05/20/22 05:37									
QC Source Sample: Non-SDG (A2E0580-01)												
Gasoline Range Organics	ND	---	22.9	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	57.4	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	**DET**	---	115	mg/kg dry	1	---	ND	---	---		30%	
Surr: o-Terphenyl (Surr)		*Recovery:*	*127 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
4-Bromofluorobenzene (Surr)			*120 %*		*50-150 %*			*"*				
Duplicate (22E0764-DUP2)			Prepared: 05/19/22 14:32 Analyzed: 05/20/22 04:30									
QC Source Sample: N19/E1-1 (A2E0589-17)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	28.0	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	70.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	140	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery:*	*96 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
4-Bromofluorobenzene (Surr)			*82 %*		*50-150 %*			*"*				

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0589 - 06 03 22 1411**

QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0952 - EPA 3546 (Fuels)							**Soil**					
Blank (22E0952-BLK1)			Prepared: 05/25/22 12:57		Analyzed: 05/25/22 21:38							
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	50.0	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		*Recovery: 91 %*	*Limits: 50-150 %*		*Dilution: 1x*							
LCS (22E0952-BS1)			Prepared: 05/25/22 12:57		Analyzed: 05/25/22 21:59							
NWTPH-Dx												
Diesel	124	---	20.0	mg/kg wet	1	125	---	99	38-132%	---	---	
Surr: o-Terphenyl (Surr)		*Recovery: 98 %*	*Limits: 50-150 %*		*Dilution: 1x*							
Duplicate (22E0952-DUP1)			Prepared: 05/25/22 12:57		Analyzed: 05/25/22 22:40							
QC Source Sample: Non-SDG (A2E0537-04)												
Diesel	ND	---	25.0	mg/kg dry	1	---	17.4	---	---	***	30%	
Oil	ND	---	50.0	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery: 99 %*	*Limits: 50-150 %*		*Dilution: 1x*							
Duplicate (22E0952-DUP2)			Prepared: 05/25/22 12:57		Analyzed: 05/25/22 23:00							
QC Source Sample: Non-SDG (A2E0760-17)												
Diesel	ND	---	28.5	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	---	57.0	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery: 68 %*	*Limits: 50-150 %*		*Dilution: 1x*							

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ANALYTICAL REPORT

True North Geotechnical Services	Project: Block 290	
202 E Evergreen Blvd, Suite B	Project Number: 22-0061	Report ID:
Vancouver, WA 98660	Project Manager: Tima Carlson	A2E0589 - 06 03 22 1411

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0754 - Total Solids (Dry Weight)							Soil					
Duplicate (22E0754-DUP1)			Prepared: 05/19/22 11:31		Analyzed: 05/20/22 10:33							PRO
QC Source Sample: Non-SDG (A2E0421-02)												
% Solids	98.0	---	1.00	%	1	---	98.0	---	---	0.07	10%	
Duplicate (22E0754-DUP2)			Prepared: 05/19/22 11:31		Analyzed: 05/20/22 10:33							PRO
QC Source Sample: Non-SDG (A2E0421-04)												
% Solids	97.9	---	1.00	%	1	---	97.9	---	---	0.02	10%	
Duplicate (22E0754-DUP3)			Prepared: 05/19/22 11:31		Analyzed: 05/20/22 10:33							PRO
QC Source Sample: Non-SDG (A2E0421-06)												
% Solids	97.6	---	1.00	%	1	---	97.7	---	---	0.03	10%	
Duplicate (22E0754-DUP4)			Prepared: 05/19/22 11:31		Analyzed: 05/20/22 10:33							PRO
QC Source Sample: Non-SDG (A2E0421-08)												
% Solids	98.0	---	1.00	%	1	---	98.0	---	---	0.03	10%	
Duplicate (22E0754-DUP5)			Prepared: 05/19/22 11:31		Analyzed: 05/20/22 10:33							PRO
QC Source Sample: Non-SDG (A2E0421-10)												
% Solids	97.7	---	1.00	%	1	---	97.8	---	---	0.06	10%	
Duplicate (22E0754-DUP6)			Prepared: 05/19/22 11:31		Analyzed: 05/20/22 10:33							PRO
QC Source Sample: Non-SDG (A2E0421-12)												
% Solids	97.2	---	1.00	%	1	---	97.3	---	---	0.03	10%	
Duplicate (22E0754-DUP7)			Prepared: 05/19/22 20:30		Analyzed: 05/20/22 10:33							
QC Source Sample: Non-SDG (A2E0700-01)												
% Solids	86.2	---	1.00	%	1	---	86.5	---	---	0.3	10%	
Duplicate (22E0754-DUP8)			Prepared: 05/19/22 20:30		Analyzed: 05/20/22 10:33							
QC Source Sample: Non-SDG (A2E0730-01)												
% Solids	77.9	---	1.00	%	1	---	77.7	---	---	0.3	10%	

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0589 - 06 03 22 1411**

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0754 - Total Solids (Dry Weight)							**Soil**					
Duplicate (22E0754-DUP9)			Prepared: 05/19/22 20:30		Analyzed: 05/20/22 10:33							
QC Source Sample: Non-SDG (A2E0731-02)												
% Solids	**74.8**	---	1.00	%	1	---	74.2	---	---	0.9	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

Apex Laboratories

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0589 - 06 03 22 1411**

SAMPLE PREPARATION INFORMATION

Hydrocarbon Identification Screen by NWTPH-HCID

Prep: NWTPH-HCID (Soil)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22E0764							
A2E0589-01	Soil	NWTPH-HCID	05/16/22 08:00	05/19/22 14:32	10.36g/10mL	10g/10mL	0.97
A2E0589-02	Soil	NWTPH-HCID	05/16/22 08:05	05/19/22 14:32	10.14g/10mL	10g/10mL	0.99
A2E0589-03	Soil	NWTPH-HCID	05/16/22 08:10	05/19/22 14:32	10.32g/10mL	10g/10mL	0.97
A2E0589-04	Soil	NWTPH-HCID	05/16/22 08:15	05/19/22 14:32	10.16g/10mL	10g/10mL	0.98
A2E0589-05	Soil	NWTPH-HCID	05/16/22 08:30	05/19/22 14:32	10.1g/10mL	10g/10mL	0.99
A2E0589-06	Soil	NWTPH-HCID	05/16/22 08:35	05/19/22 14:32	10.13g/10mL	10g/10mL	0.99
A2E0589-07	Soil	NWTPH-HCID	05/16/22 08:40	05/19/22 14:32	10.03g/10mL	10g/10mL	1.00
A2E0589-08	Soil	NWTPH-HCID	05/16/22 08:45	05/19/22 14:32	10.36g/10mL	10g/10mL	0.97
A2E0589-09	Soil	NWTPH-HCID	05/16/22 08:50	05/19/22 14:32	10.04g/10mL	10g/10mL	1.00
A2E0589-10	Soil	NWTPH-HCID	05/16/22 08:50	05/19/22 14:32	10.78g/10mL	10g/10mL	0.93
A2E0589-11	Soil	NWTPH-HCID	05/17/22 09:00	05/19/22 14:32	10.44g/10mL	10g/10mL	0.96
A2E0589-12	Soil	NWTPH-HCID	05/17/22 09:00	05/19/22 14:32	10.11g/10mL	10g/10mL	0.99
A2E0589-13	Soil	NWTPH-HCID	05/17/22 09:00	05/19/22 14:32	10.78g/10mL	10g/10mL	0.93
A2E0589-14	Soil	NWTPH-HCID	05/17/22 09:00	05/19/22 14:32	10.86g/10mL	10g/10mL	0.92
A2E0589-15	Soil	NWTPH-HCID	05/17/22 09:00	05/19/22 14:32	10.84g/10mL	10g/10mL	0.92
A2E0589-16	Soil	NWTPH-HCID	05/17/22 09:00	05/19/22 14:32	10.75g/10mL	10g/10mL	0.93
A2E0589-17	Soil	NWTPH-HCID	05/17/22 09:00	05/19/22 14:32	10.77g/10mL	10g/10mL	0.93

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3546 (Fuels)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22E0952							
A2E0589-08	Soil	NWTPH-Dx	05/16/22 08:45	05/25/22 12:56	10.01g/5mL	10g/5mL	1.00

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22E0754							
A2E0589-01	Soil	EPA 8000D	05/16/22 08:00	05/19/22 11:31			NA
A2E0589-02	Soil	EPA 8000D	05/16/22 08:05	05/19/22 11:31			NA
A2E0589-03	Soil	EPA 8000D	05/16/22 08:10	05/19/22 11:31			NA
A2E0589-04	Soil	EPA 8000D	05/16/22 08:15	05/19/22 11:31			NA
A2E0589-05	Soil	EPA 8000D	05/16/22 08:30	05/19/22 11:31			NA
A2E0589-06	Soil	EPA 8000D	05/16/22 08:35	05/19/22 11:31			NA

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0589 - 06 03 22 1411**

SAMPLE PREPARATION INFORMATION

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A2E0589-07	Soil	EPA 8000D	05/16/22 08:40	05/19/22 11:31			NA
A2E0589-08	Soil	EPA 8000D	05/16/22 08:45	05/19/22 11:31			NA
A2E0589-09	Soil	EPA 8000D	05/16/22 08:50	05/19/22 11:31			NA
A2E0589-10	Soil	EPA 8000D	05/16/22 08:50	05/19/22 11:31			NA
A2E0589-11	Soil	EPA 8000D	05/17/22 09:00	05/19/22 11:31			NA
A2E0589-12	Soil	EPA 8000D	05/17/22 09:00	05/19/22 11:31			NA
A2E0589-13	Soil	EPA 8000D	05/17/22 09:00	05/19/22 11:31			NA
A2E0589-14	Soil	EPA 8000D	05/17/22 09:00	05/19/22 11:31			NA
A2E0589-15	Soil	EPA 8000D	05/17/22 09:00	05/19/22 11:31			NA
A2E0589-16	Soil	EPA 8000D	05/17/22 09:00	05/19/22 11:31			NA
A2E0589-17	Soil	EPA 8000D	05/17/22 09:00	05/19/22 11:31			NA

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True North Geotechnical Services	Project: **Block 290**	
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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0589 - 06 03 22 1411**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

PRO	Sample has undergone sample processing prior to extraction and analysis.
X	See Case Narrative.

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0589 - 06 03 22 1411**

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

Apex Laboratories

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True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0589 - 06 03 22 1411**

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0589 - 06 03 22 1411**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

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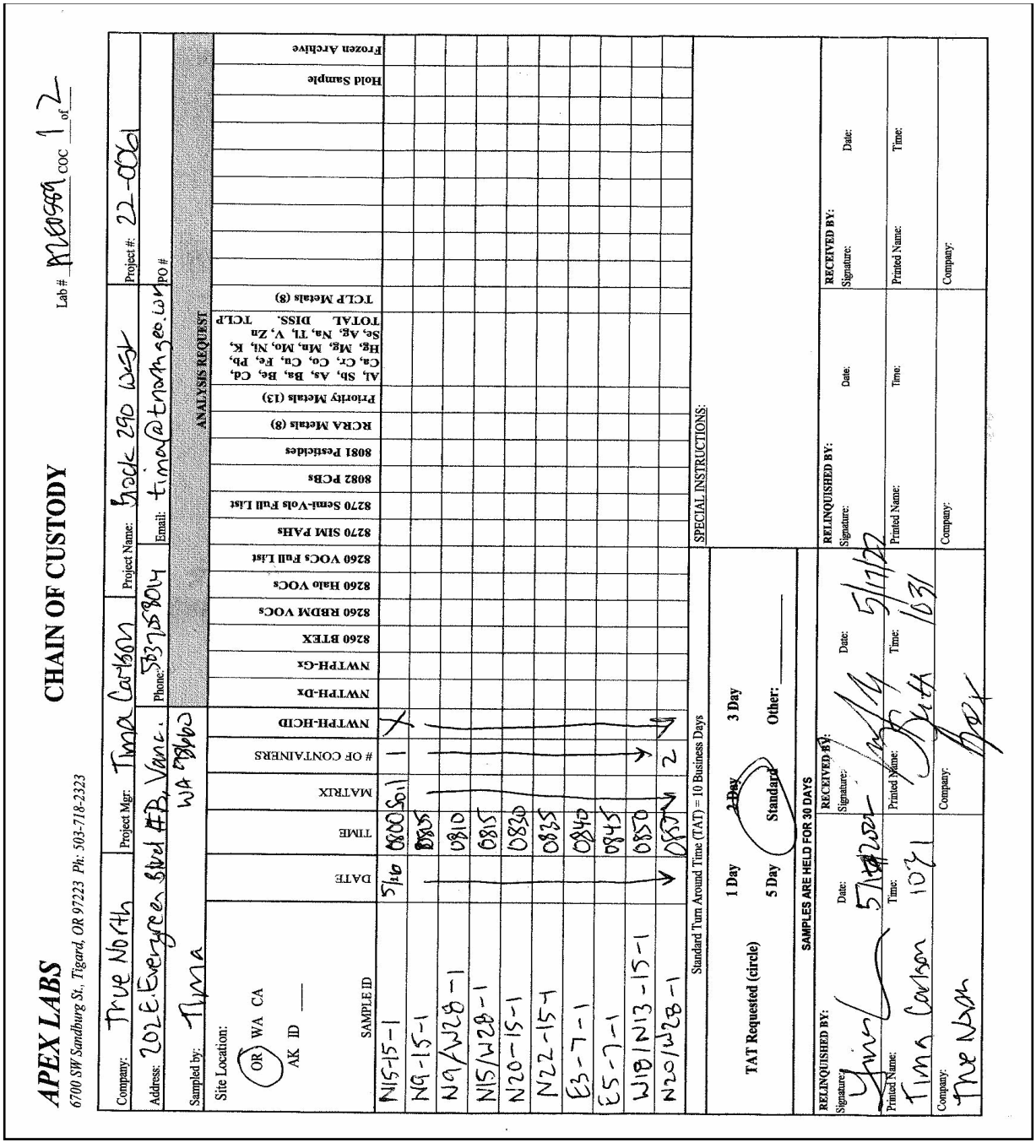
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0589 - 06 03 22 1411**



APEX LABS — 6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY — Lab # M60999 COC 1 of 2

Company: True North | Project Mgr: Tima Carlson | Project Name: Block 290 West | Project #: 22-0061
Address: 202 E. Evergreen Blvd #B, Vancouver WA 98660 | Phone: 5037058014 | Email: tima@truenorthgeo.com | PO #
Sampled by: Tima

Site Location: (OR) WA CA / AK ID ___

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
N15-15-1	5/6	0800	Soil	1	X																
N9-15-1		0805																			
N9/W28-1		0810																			
N15/W28-1		0815																			
N20-15-1		0830																			
N22-15-1		0835																			
E3-7-1		0840																			
E5-7-1		0845																			
W18/N13-15-1		0850																			
N20/W28-1	↓	0857	↓	2	↓																

Standard Turn Around Time (TAT) = 10 Business Days

SPECIAL INSTRUCTIONS:

TAT Requested (circle): 1 Day | 2 Day | 3 Day | 5 Day | Standard | Other: ___

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY: Signature: | Date: | Time: | Printed Name: | Company:
RECEIVED BY: Signature: | Date: 5/6/22 | Time: 1031 | Printed Name: | Company:
RELINQUISHED BY: Signature: | Date: | Time: | Printed Name: | Company:
RECEIVED BY: Signature: | Date: | Time: | Printed Name: | Company:

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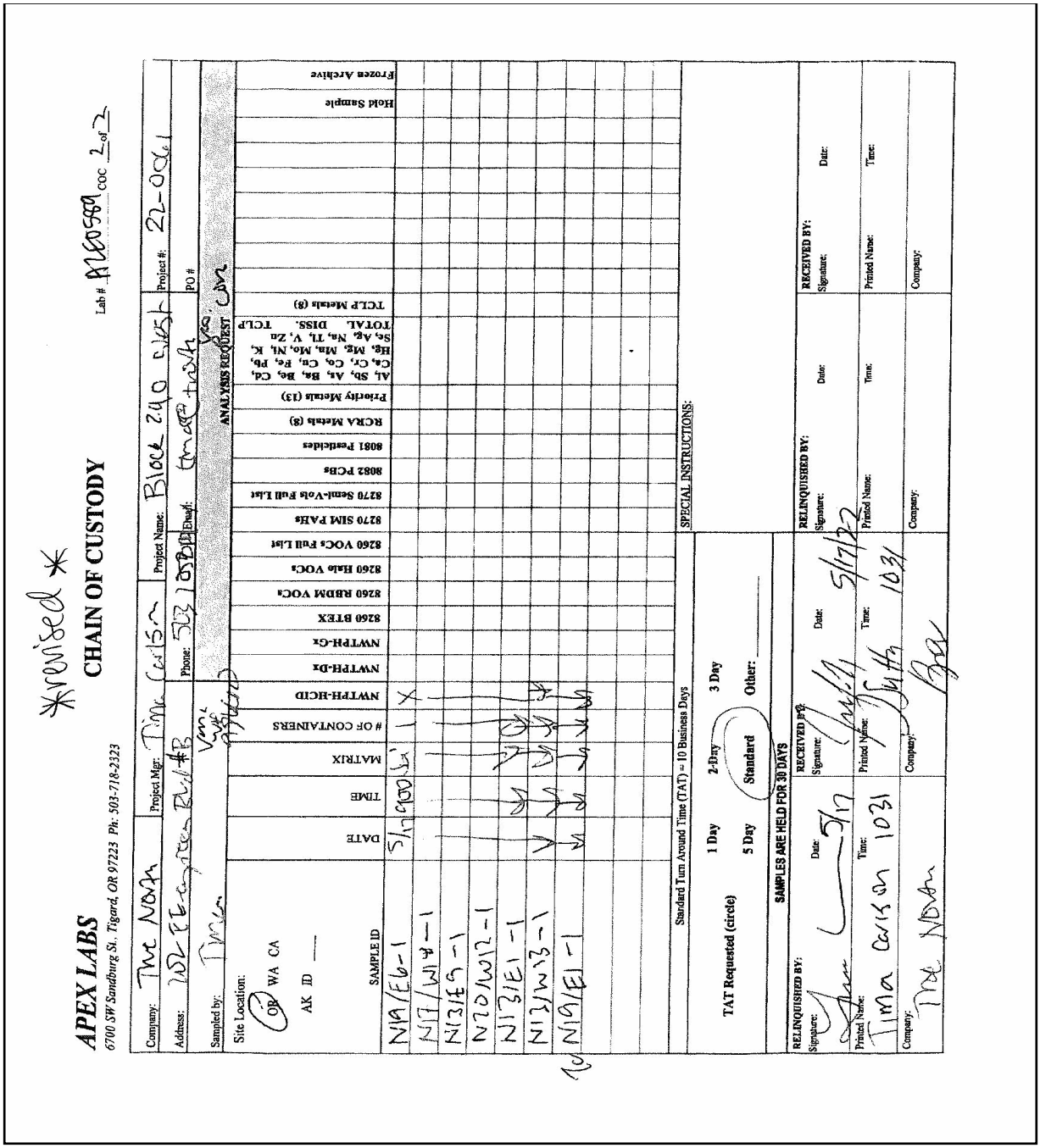
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0589 - 06 03 22 1411**



Apex Laboratories

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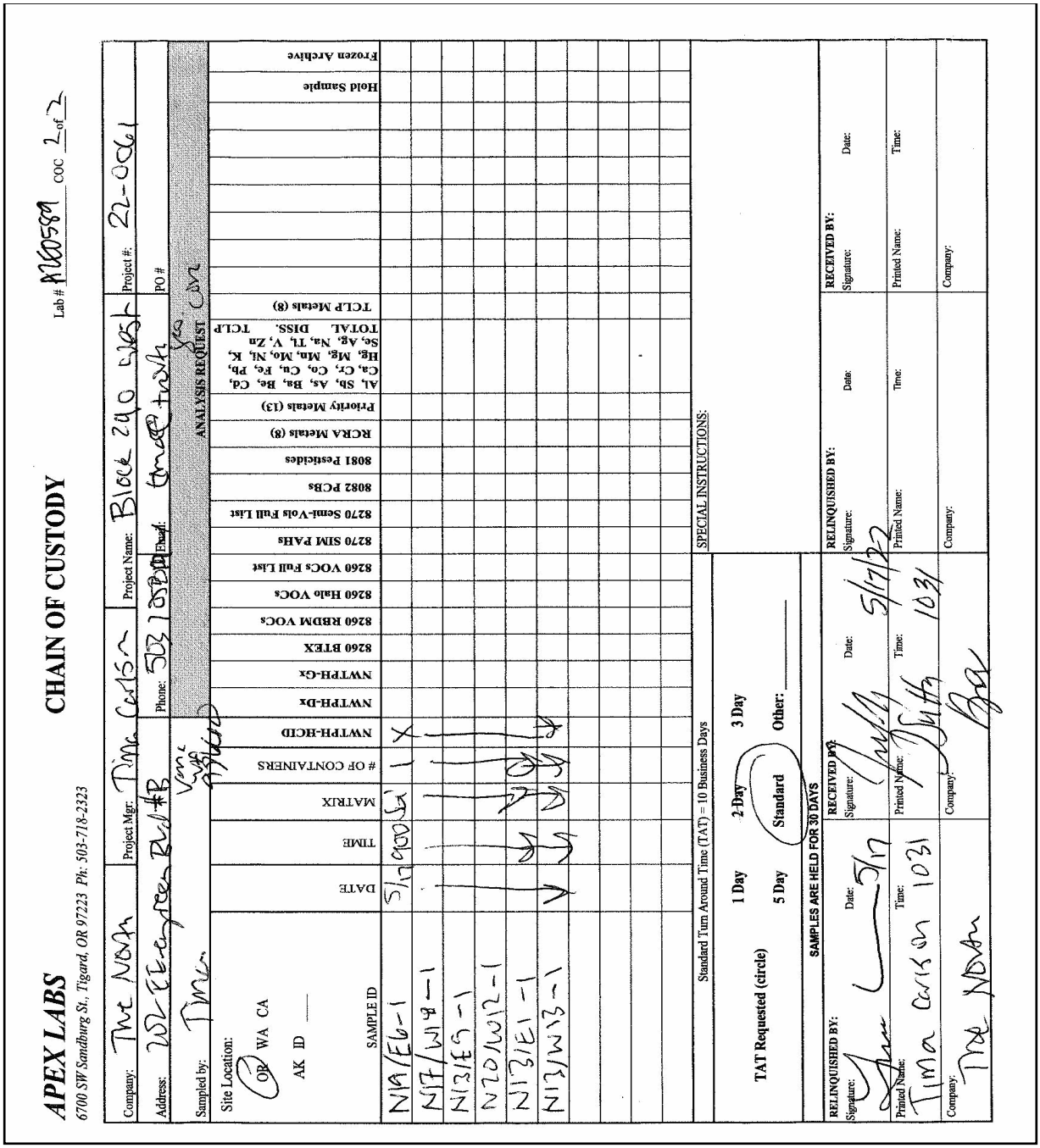
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0589 - 06 03 22 1411**



CHAIN OF CUSTODY

APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

Lab # A2E0589 COC 2 of 2

Company: True North — Project Mgr: Tima Carlson — Project Name: Block 290 — Project #: 22-0061
Address: 202 E Evergreen Blvd #B — Phone: 503 1 0880 — Email: tima@truenorthgeo.com — PO #
Sampled by: Tima — ANALYSIS REQUEST

Site Location: OR WA CA AK ID ____

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
N1A/E6-1	5/17	0930	Soil	1	X																
N17/W18-1																					
N13/E5-1																					
N7D/W12-1																					
N13/E1-1																					
N13/W13-1	V	V	V	V	V																

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day 2 Day 3 Day 5 Day Standard Other: ____

SPECIAL INSTRUCTIONS:

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY: Signature:	Date: 5/17	RECEIVED BY: Signature:	Date:	RELINQUISHED BY: Signature:	Date:	RECEIVED BY: Signature:	Date:
Printed Name:	Time: 1031	Printed Name:	Time:	Printed Name:	Time:	Printed Name:	Time:
Company: Tima Carlson		Company:		Company:		Company:	

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0589 - 06 03 22 1411**

Container Comments Form

WO# A2E0589

[redacted]

COC Reads	Container Reads/Comments
N15-15-1	Samples were submerged in melted ice in cooler. Sample may have been compromised, but no standing water is visible inside jar. Yellow dots stickers added to indicate potential contamination.
N9-15-1	
N9 W28-1	
N15 W28-1	
N20 15-1	
~~ES~~ HAS 5/17/22	
E5-7-1	
W18 N13-15-1	
N20 W28-1 (1 of 2 jars)	
N13 E1-1	
N22-15-1	Samples were submerged in melted ice in cooler. Jars had visible standing water inside. Jars were decanted and labeled with red dot stickers to indicate decanting.
~~ES 5~~	
E3-7-1	
N20 W28-1 (1 of 2 jars)	
N13 W13-1	
N19 E1-1	

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0589 - 06 03 22 1411**

APEX LABS COOLER RECEIPT FORM

Client: True North Element WO#: A2 E0589

Project/Project #: Block 290 West 22-0061

Delivery Info:

Date/time received: 5/17/22@ 1031 By: JS

Delivered by: Apex___ Client X ESS___ FedEx___ UPS___ Swift___ Senvoy___ SDS___ Other___

Cooler Inspection Date/time inspected: 5/17/22@ 1034 By: JS

Chain of Custody included? Yes X No___ Custody seals? Yes___ No X

Signed/dated by client? Yes X No___

Signed/dated by Apex? Yes X No___

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	1.1						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	Y						
Ice type: (Gel/Real/Other)	Real/gel						
Condition:	good						

Cooler out of temp? (Y/N) Possible reason why:

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 5/17/22@ 1412 By: HAS

All samples intact? Yes X No___ Comments: See "container comments form."

Bottle labels/COCs agree? Yes___ No X Comments: sample N19|E1-1 not listed on COC. No time on all containers.

COC/container discrepancies form initiated? Yes___ No X

Containers/volumes received appropriate for analysis? Yes X No___ Comments: AKK 5/17/22

Do VOA vials have visible headspace? Yes___ No___ NA X

Comments

Water samples: pH checked: Yes___No___NA X pH appropriate? Yes___No___NA X

Comments:

HAS 5/17/22

Additional information: All samples ~~ESS~~ EXCEPT N19|C6-1, N17|W18-1, N13|E9-1, and N20|W12-1 submerged in melted ice in cooler, and jars filled with cooler water.

Labeled by: AKK 5/17/22 HAS Witness: AKK Cooler Inspected by: HAS

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6700 S.W. Sandburg Street
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ORELAP ID: **OR100062**

ANALYTICAL REPORT

Thursday, May 26, 2022

Tima Carlson
True North Geotechnical Services
202 E Evergreen Blvd, Suite B
Vancouver, WA 98660

RE: A2E0784 - Block 290 - 22-0061

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A2E0784, which was received by the laboratory on 5/20/2022 at 3:20:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	5.8 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0784 - 05 26 22 1505**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N22/E13-1	A2E0784-01	Soil	05/18/22 10:00	05/20/22 15:20
N23/E2-1	A2E0784-02	Soil	05/18/22 10:05	05/20/22 15:20
E11-3-1	A2E0784-03	Soil	05/18/22 11:00	05/20/22 15:20
N17/E13-1	A2E0784-04	Soil	05/18/22 11:05	05/20/22 15:20
E16-3-1	A2E0784-05	Soil	05/18/22 11:10	05/20/22 15:20
N18/E1-1	A2E0784-06	Soil	05/18/22 11:15	05/20/22 15:20
N22/E1-1	A2E0784-07	Soil	05/20/22 11:00	05/20/22 15:20
N22-13-1	A2E0784-08	Soil	05/20/22 11:05	05/20/22 15:20
N25-13-1	A2E0784-09	Soil	05/20/22 10:45	05/20/22 15:20
N25/E1-1	A2E0784-10	Soil	05/20/22 10:50	05/20/22 15:20
N22/E6-1	A2E0784-11	Soil	05/20/22 10:00	05/20/22 15:20
E7-9-1	A2E0784-12	Soil	05/20/22 10:05	05/20/22 15:20
E2-11-1	A2E0784-13	Soil	05/20/22 10:10	05/20/22 15:20
E2/N26-1	A2E0784-14	Soil	05/20/22 10:15	05/20/22 15:20
E7/N26-1	A2E0784-15	Soil	05/20/22 10:30	05/20/22 15:20

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0784 - 05 26 22 1505**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
N22/E13-1 (A2E0784-01)				**Matrix: Soil**		**Batch: 22E0913**		
Gasoline Range Organics	ND	---	23.1	mg/kg dry	1	05/24/22 22:05	NWTPH-HCID	
Diesel Range Organics	ND	---	57.8	mg/kg dry	1	05/24/22 22:05	NWTPH-HCID	
Oil Range Organics	ND	---	116	mg/kg dry	1	05/24/22 22:05	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*127 %*	*Limits: 50-150 %*	*1*	*05/24/22 22:05*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*109 %*	*50-150 %*	*1*	*05/24/22 22:05*	*NWTPH-HCID*	
N23/E2-1 (A2E0784-02)				**Matrix: Soil**		**Batch: 22E0913**		
Gasoline Range Organics	ND	---	25.8	mg/kg dry	1	05/24/22 22:51	NWTPH-HCID	
Diesel Range Organics	ND	---	64.5	mg/kg dry	1	05/24/22 22:51	NWTPH-HCID	
Oil Range Organics	ND	---	129	mg/kg dry	1	05/24/22 22:51	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*114 %*	*Limits: 50-150 %*	*1*	*05/24/22 22:51*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*92 %*	*50-150 %*	*1*	*05/24/22 22:51*	*NWTPH-HCID*	
E11-3-1 (A2E0784-03)				**Matrix: Soil**		**Batch: 22E0913**		
Gasoline Range Organics	ND	---	22.8	mg/kg dry	1	05/25/22 04:27	NWTPH-HCID	
Diesel Range Organics	ND	---	57.1	mg/kg dry	1	05/25/22 04:27	NWTPH-HCID	
Oil Range Organics	ND	---	114	mg/kg dry	1	05/25/22 04:27	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*111 %*	*Limits: 50-150 %*	*1*	*05/25/22 04:27*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*82 %*	*50-150 %*	*1*	*05/25/22 04:27*	*NWTPH-HCID*	
N17/E13-1 (A2E0784-04)				**Matrix: Soil**		**Batch: 22E0913**		
Gasoline Range Organics	ND	---	25.5	mg/kg dry	1	05/24/22 23:13	NWTPH-HCID	
Diesel Range Organics	ND	---	63.8	mg/kg dry	1	05/24/22 23:13	NWTPH-HCID	
Oil Range Organics	ND	---	128	mg/kg dry	1	05/24/22 23:13	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*111 %*	*Limits: 50-150 %*	*1*	*05/24/22 23:13*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*84 %*	*50-150 %*	*1*	*05/24/22 23:13*	*NWTPH-HCID*	
E16-3-1 (A2E0784-05)				**Matrix: Soil**		**Batch: 22E0913**		
Gasoline Range Organics	ND	---	22.8	mg/kg dry	1	05/24/22 23:35	NWTPH-HCID	
Diesel Range Organics	ND	---	57.0	mg/kg dry	1	05/24/22 23:35	NWTPH-HCID	
Oil Range Organics	ND	---	114	mg/kg dry	1	05/24/22 23:35	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*114 %*	*Limits: 50-150 %*	*1*	*05/24/22 23:35*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*106 %*	*50-150 %*	*1*	*05/24/22 23:35*	*NWTPH-HCID*	

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0784 - 05 26 22 1505**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
N18/E1-1 (A2E0784-06)				**Matrix: Soil**		**Batch: 22E0913**		
Gasoline Range Organics	ND	---	25.7	mg/kg dry	1	05/24/22 23:58	NWTPH-HCID	
Diesel Range Organics	ND	---	64.3	mg/kg dry	1	05/24/22 23:58	NWTPH-HCID	
Oil Range Organics	ND	---	129	mg/kg dry	1	05/24/22 23:58	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 109 %*		*Limits: 50-150 %*	*1*	*05/24/22 23:58*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*68 %*	*50-150 %*	*1*	*05/24/22 23:58*	*NWTPH-HCID*	
N22/E1-1 (A2E0784-07)				**Matrix: Soil**		**Batch: 22E0913**		
Gasoline Range Organics	ND	---	25.5	mg/kg dry	1	05/25/22 00:20	NWTPH-HCID	
Diesel Range Organics	ND	---	63.6	mg/kg dry	1	05/25/22 00:20	NWTPH-HCID	
Oil Range Organics	ND	---	127	mg/kg dry	1	05/25/22 00:20	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 115 %*		*Limits: 50-150 %*	*1*	*05/25/22 00:20*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*76 %*	*50-150 %*	*1*	*05/25/22 00:20*	*NWTPH-HCID*	
N22-13-1 (A2E0784-08)				**Matrix: Soil**		**Batch: 22E0913**		
Gasoline Range Organics	ND	---	23.3	mg/kg dry	1	05/25/22 00:43	NWTPH-HCID	
Diesel Range Organics	ND	---	58.4	mg/kg dry	1	05/25/22 00:43	NWTPH-HCID	
Oil Range Organics	ND	---	117	mg/kg dry	1	05/25/22 00:43	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 125 %*		*Limits: 50-150 %*	*1*	*05/25/22 00:43*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*99 %*	*50-150 %*	*1*	*05/25/22 00:43*	*NWTPH-HCID*	
N25-13-1 (A2E0784-09)				**Matrix: Soil**		**Batch: 22E0913**		
Gasoline Range Organics	ND	---	26.9	mg/kg dry	1	05/25/22 01:05	NWTPH-HCID	
Diesel Range Organics	ND	---	67.3	mg/kg dry	1	05/25/22 01:05	NWTPH-HCID	
Oil Range Organics	ND	---	135	mg/kg dry	1	05/25/22 01:05	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 102 %*		*Limits: 50-150 %*	*1*	*05/25/22 01:05*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*76 %*	*50-150 %*	*1*	*05/25/22 01:05*	*NWTPH-HCID*	
N25/E1-1 (A2E0784-10)				**Matrix: Soil**		**Batch: 22E0913**		
Gasoline Range Organics	ND	---	25.5	mg/kg dry	1	05/25/22 01:28	NWTPH-HCID	
Diesel Range Organics	ND	---	63.7	mg/kg dry	1	05/25/22 01:28	NWTPH-HCID	
Oil Range Organics	ND	---	127	mg/kg dry	1	05/25/22 01:28	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 99 %*		*Limits: 50-150 %*	*1*	*05/25/22 01:28*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*79 %*	*50-150 %*	*1*	*05/25/22 01:28*	*NWTPH-HCID*	

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Darrell Auvil, Client Services Manager

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0784 - 05 26 22 1505**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
N22/E6-1 (A2E0784-11)				**Matrix: Soil**		**Batch: 22E0913**		
Gasoline Range Organics	ND	---	24.5	mg/kg dry	1	05/25/22 01:50	NWTPH-HCID	
Diesel Range Organics	ND	---	61.1	mg/kg dry	1	05/25/22 01:50	NWTPH-HCID	
Oil Range Organics	ND	---	122	mg/kg dry	1	05/25/22 01:50	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 115 %*		*Limits: 50-150 %*	*1*	*05/25/22 01:50*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*81 %*	*50-150 %*	*1*	*05/25/22 01:50*	*NWTPH-HCID*	
E7-9-1 (A2E0784-12)				**Matrix: Soil**		**Batch: 22E0913**		
Gasoline Range Organics	ND	---	25.3	mg/kg dry	1	05/25/22 02:13	NWTPH-HCID	
Diesel Range Organics	ND	---	63.3	mg/kg dry	1	05/25/22 02:13	NWTPH-HCID	
Oil Range Organics	ND	---	127	mg/kg dry	1	05/25/22 02:13	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 100 %*		*Limits: 50-150 %*	*1*	*05/25/22 02:13*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*78 %*	*50-150 %*	*1*	*05/25/22 02:13*	*NWTPH-HCID*	
E2-11-1 (A2E0784-13)				**Matrix: Soil**		**Batch: 22E0913**		
Gasoline Range Organics	ND	---	23.9	mg/kg dry	1	05/25/22 02:35	NWTPH-HCID	
Diesel Range Organics	ND	---	59.8	mg/kg dry	1	05/25/22 02:35	NWTPH-HCID	
Oil Range Organics	ND	---	120	mg/kg dry	1	05/25/22 02:35	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 143 %*		*Limits: 50-150 %*	*1*	*05/25/22 02:35*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*124 %*	*50-150 %*	*1*	*05/25/22 02:35*	*NWTPH-HCID*	
E2/N26-1 (A2E0784-14)				**Matrix: Soil**		**Batch: 22E0913**		
Gasoline Range Organics	ND	---	26.5	mg/kg dry	1	05/25/22 02:57	NWTPH-HCID	
Diesel Range Organics	ND	---	66.3	mg/kg dry	1	05/25/22 02:57	NWTPH-HCID	
Oil Range Organics	ND	---	133	mg/kg dry	1	05/25/22 02:57	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 125 %*		*Limits: 50-150 %*	*1*	*05/25/22 02:57*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*104 %*	*50-150 %*	*1*	*05/25/22 02:57*	*NWTPH-HCID*	
E7/N26-1 (A2E0784-15)				**Matrix: Soil**		**Batch: 22E0913**		
Gasoline Range Organics	ND	---	24.3	mg/kg dry	1	05/25/22 04:49	NWTPH-HCID	
Diesel Range Organics	ND	---	60.7	mg/kg dry	1	05/25/22 04:49	NWTPH-HCID	
Oil Range Organics	ND	---	121	mg/kg dry	1	05/25/22 04:49	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 102 %*		*Limits: 50-150 %*	*1*	*05/25/22 04:49*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*97 %*	*50-150 %*	*1*	*05/25/22 04:49*	*NWTPH-HCID*	

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0784 - 05 26 22 1505**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
N22/E13-1 (A2E0784-01)				**Matrix: Soil**		**Batch: 22E0898**		
% Solids	**83.8**	---	1.00	%	1	05/25/22 10:44	EPA 8000D	
N23/E2-1 (A2E0784-02)				**Matrix: Soil**		**Batch: 22E0898**		
% Solids	**76.9**	---	1.00	%	1	05/25/22 10:44	EPA 8000D	
E11-3-1 (A2E0784-03)				**Matrix: Soil**		**Batch: 22E0898**		
% Solids	**81.2**	---	1.00	%	1	05/25/22 10:44	EPA 8000D	
N17/E13-1 (A2E0784-04)				**Matrix: Soil**		**Batch: 22E0898**		
% Solids	**76.0**	---	1.00	%	1	05/25/22 10:44	EPA 8000D	
E16-3-1 (A2E0784-05)				**Matrix: Soil**		**Batch: 22E0898**		
% Solids	**81.1**	---	1.00	%	1	05/25/22 10:44	EPA 8000D	
N18/E1-1 (A2E0784-06)				**Matrix: Soil**		**Batch: 22E0898**		
% Solids	**73.8**	---	1.00	%	1	05/25/22 10:44	EPA 8000D	
N22/E1-1 (A2E0784-07)				**Matrix: Soil**		**Batch: 22E0898**		
% Solids	**75.8**	---	1.00	%	1	05/25/22 10:44	EPA 8000D	
N22-13-1 (A2E0784-08)				**Matrix: Soil**		**Batch: 22E0898**		
% Solids	**81.6**	---	1.00	%	1	05/25/22 10:44	EPA 8000D	
N25-13-1 (A2E0784-09)				**Matrix: Soil**		**Batch: 22E0898**		
% Solids	**73.7**	---	1.00	%	1	05/25/22 10:44	EPA 8000D	
N25/E1-1 (A2E0784-10)				**Matrix: Soil**		**Batch: 22E0898**		
% Solids	**73.4**	---	1.00	%	1	05/25/22 10:44	EPA 8000D	
N22/E6-1 (A2E0784-11)				**Matrix: Soil**		**Batch: 22E0898**		
% Solids	**78.8**	---	1.00	%	1	05/25/22 10:44	EPA 8000D	
E7-9-1 (A2E0784-12)				**Matrix: Soil**		**Batch: 22E0898**		
% Solids	**78.6**	---	1.00	%	1	05/25/22 10:44	EPA 8000D	
E2-11-1 (A2E0784-13)				**Matrix: Soil**		**Batch: 22E0898**		

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0784 - 05 26 22 1505**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
E2-11-1 (A2E0784-13)				**Matrix: Soil**		**Batch: 22E0898**		
% Solids	**81.3**	---	1.00	%	1	05/25/22 10:44	EPA 8000D	
E2/N26-1 (A2E0784-14)				**Matrix: Soil**		**Batch: 22E0898**		
% Solids	**74.9**	---	1.00	%	1	05/25/22 10:44	EPA 8000D	
E7/N26-1 (A2E0784-15)				**Matrix: Soil**		**Batch: 22E0898**		
% Solids	**78.9**	---	1.00	%	1	05/25/22 10:44	EPA 8000D	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0913 - NWTPH-HCID (Soil)							Soil					
Blank (22E0913-BLK1)			Prepared: 05/24/22 15:54 Analyzed: 05/24/22 21:43									
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		*Recovery:*	*120 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
4-Bromofluorobenzene (Surr)			*106 %*		*50-150 %*			*"*				
Duplicate (22E0913-DUP1)			Prepared: 05/24/22 15:54 Analyzed: 05/25/22 03:42									
QC Source Sample: Non-SDG (A2E0783-01)												
Gasoline Range Organics	ND	---	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	62.6	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	125	mg/kg dry	1	---	ND	---	---	---	**30%**	
Surr: o-Terphenyl (Surr)		*Recovery:*	*100 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
4-Bromofluorobenzene (Surr)			*100 %*		*50-150 %*			*"*				
Duplicate (22E0913-DUP2)			Prepared: 05/24/22 15:54 Analyzed: 05/24/22 22:28									
QC Source Sample: N22/E13-1 (A2E0784-01)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	23.6	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	58.9	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	118	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery:*	*140 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
4-Bromofluorobenzene (Surr)			*113 %*		*50-150 %*			*"*				

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Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0784 - 05 26 22 1505**

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0898 - Total Solids (Dry Weight)							**Soil**					
Duplicate (22E0898-DUP1)			Prepared: 05/24/22 12:26		Analyzed: 05/25/22 10:44							
QC Source Sample: Non-SDG (A2E0537-04)												
% Solids	**91.0**	---	1.00	%	1	---	89.6	---	---	2	10%	
Duplicate (22E0898-DUP2)			Prepared: 05/24/22 12:26		Analyzed: 05/25/22 10:44							
QC Source Sample: Non-SDG (A2E0642-01)												
% Solids	**71.8**	---	1.00	%	1	---	71.2	---	---	0.9	10%	
Duplicate (22E0898-DUP3)			Prepared: 05/24/22 12:26		Analyzed: 05/25/22 10:44							
QC Source Sample: Non-SDG (A2E0681-01)												
% Solids	**85.8**	---	1.00	%	1	---	88.2	---	---	3	10%	
Duplicate (22E0898-DUP4)			Prepared: 05/24/22 12:26		Analyzed: 05/25/22 10:44							
QC Source Sample: Non-SDG (A2E0681-02)												
% Solids	**86.5**	---	1.00	%	1	---	84.2	---	---	3	10%	
Duplicate (22E0898-DUP5)			Prepared: 05/24/22 12:26		Analyzed: 05/25/22 10:44							
QC Source Sample: Non-SDG (A2E0749-07)												
% Solids	**76.4**	---	1.00	%	1	---	74.6	---	---	2	10%	
Duplicate (22E0898-DUP6)			Prepared: 05/24/22 19:42		Analyzed: 05/25/22 10:44							
QC Source Sample: Non-SDG (A2E0831-01)												
% Solids	**86.5**	---	1.00	%	1	---	86.9	---	---	0.4	10%	
Duplicate (22E0898-DUP7)			Prepared: 05/24/22 19:42		Analyzed: 05/25/22 10:44							
QC Source Sample: Non-SDG (A2E0865-02)												
% Solids	**77.8**	---	1.00	%	1	---	79.2	---	---	2	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0784 - 05 26 22 1505**

SAMPLE PREPARATION INFORMATION

Hydrocarbon Identification Screen by NWTPH-HCID

Prep: NWTPH-HCID (Soil)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22E0913							
A2E0784-01	Soil	NWTPH-HCID	05/18/22 10:00	05/24/22 15:54	10.33g/10mL	10g/10mL	0.97
A2E0784-02	Soil	NWTPH-HCID	05/18/22 10:05	05/24/22 15:54	10.08g/10mL	10g/10mL	0.99
A2E0784-03	Soil	NWTPH-HCID	05/18/22 11:00	05/24/22 15:54	10.78g/10mL	10g/10mL	0.93
A2E0784-04	Soil	NWTPH-HCID	05/18/22 11:05	05/24/22 15:54	10.31g/10mL	10g/10mL	0.97
A2E0784-05	Soil	NWTPH-HCID	05/18/22 11:10	05/24/22 15:54	10.82g/10mL	10g/10mL	0.92
A2E0784-06	Soil	NWTPH-HCID	05/18/22 11:15	05/24/22 15:54	10.54g/10mL	10g/10mL	0.95
A2E0784-07	Soil	NWTPH-HCID	05/20/22 11:00	05/24/22 15:54	10.36g/10mL	10g/10mL	0.97
A2E0784-08	Soil	NWTPH-HCID	05/20/22 11:05	05/24/22 15:54	10.5g/10mL	10g/10mL	0.95
A2E0784-09	Soil	NWTPH-HCID	05/20/22 10:45	05/24/22 15:54	10.08g/10mL	10g/10mL	0.99
A2E0784-10	Soil	NWTPH-HCID	05/20/22 10:50	05/24/22 15:54	10.68g/10mL	10g/10mL	0.94
A2E0784-11	Soil	NWTPH-HCID	05/20/22 10:00	05/24/22 15:54	10.38g/10mL	10g/10mL	0.96
A2E0784-12	Soil	NWTPH-HCID	05/20/22 10:05	05/24/22 15:54	10.05g/10mL	10g/10mL	1.00
A2E0784-13	Soil	NWTPH-HCID	05/20/22 10:10	05/24/22 15:54	10.28g/10mL	10g/10mL	0.97
A2E0784-14	Soil	NWTPH-HCID	05/20/22 10:15	05/24/22 15:54	10.08g/10mL	10g/10mL	0.99
A2E0784-15	Soil	NWTPH-HCID	05/20/22 10:30	05/24/22 15:54	10.43g/10mL	10g/10mL	0.96

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22E0898							
A2E0784-01	Soil	EPA 8000D	05/18/22 10:00	05/24/22 12:26			NA
A2E0784-02	Soil	EPA 8000D	05/18/22 10:05	05/24/22 12:26			NA
A2E0784-03	Soil	EPA 8000D	05/18/22 11:00	05/24/22 12:26			NA
A2E0784-04	Soil	EPA 8000D	05/18/22 11:05	05/24/22 12:26			NA
A2E0784-05	Soil	EPA 8000D	05/18/22 11:10	05/24/22 12:26			NA
A2E0784-06	Soil	EPA 8000D	05/18/22 11:15	05/24/22 12:26			NA
A2E0784-07	Soil	EPA 8000D	05/20/22 11:00	05/24/22 12:26			NA
A2E0784-08	Soil	EPA 8000D	05/20/22 11:05	05/24/22 12:26			NA
A2E0784-09	Soil	EPA 8000D	05/20/22 10:45	05/24/22 12:26			NA
A2E0784-10	Soil	EPA 8000D	05/20/22 10:50	05/24/22 12:26			NA
A2E0784-11	Soil	EPA 8000D	05/20/22 10:00	05/24/22 12:26			NA
A2E0784-12	Soil	EPA 8000D	05/20/22 10:05	05/24/22 12:26			NA
A2E0784-13	Soil	EPA 8000D	05/20/22 10:10	05/24/22 12:26			NA
A2E0784-14	Soil	EPA 8000D	05/20/22 10:15	05/24/22 12:26			NA
A2E0784-15	Soil	EPA 8000D	05/20/22 10:30	05/24/22 12:26			NA

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Darrell Auvil, Client Services Manager

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6700 S.W. Sandburg Street
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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0784 - 05 26 22 1505**

SAMPLE PREPARATION INFORMATION

Percent Dry Weight

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0784 - 05 26 22 1505**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

There are No Qualifiers on Sample or QC Data for this report

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True North Geotechnical Services	Project: **Block 290**	
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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

Apex Laboratories

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True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0784 - 05 26 22 1505**

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0784 - 05 26 22 1505**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

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Darrell Auvil, Client Services Manager

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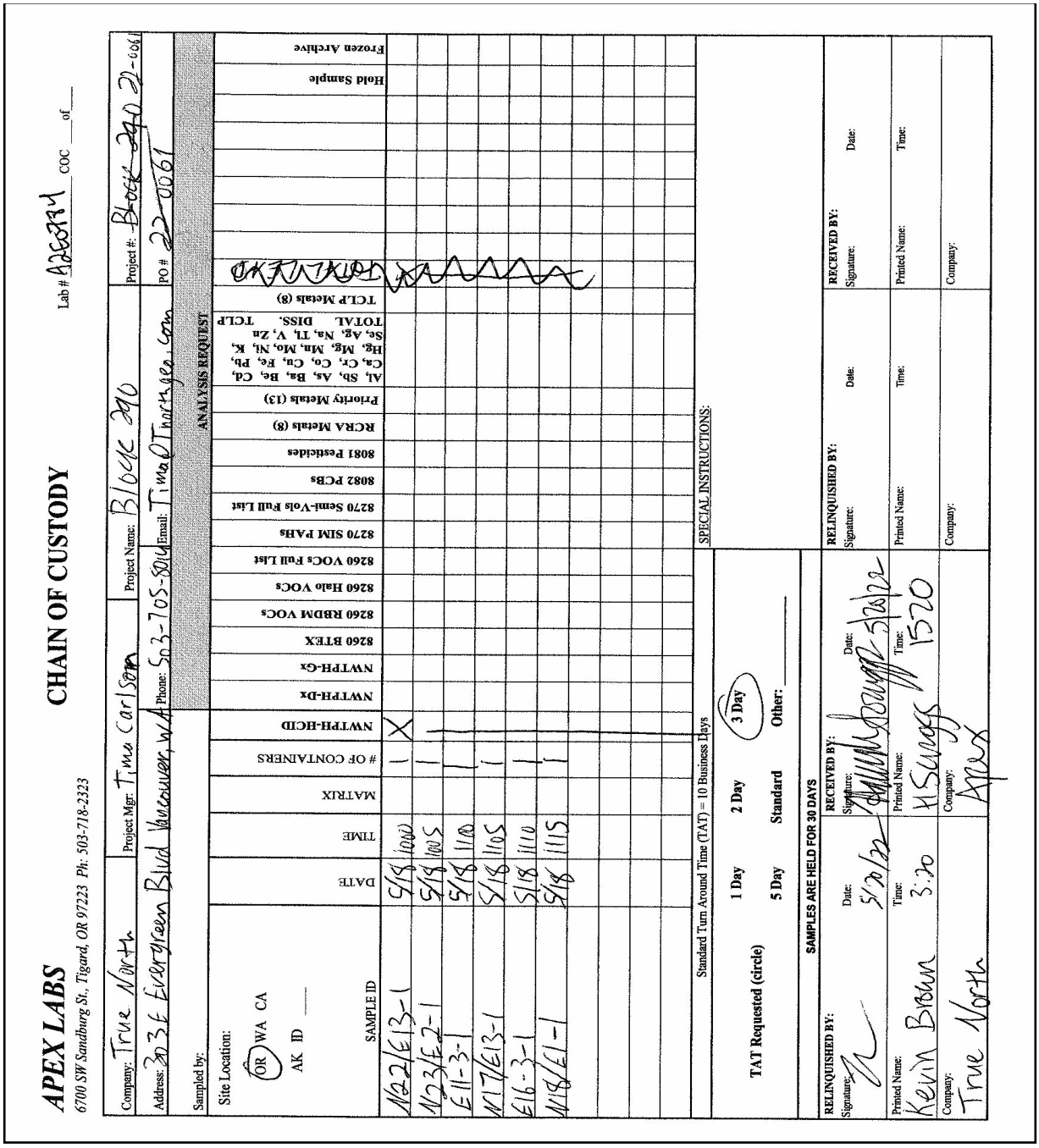
ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0784 - 05 26 22 1505**



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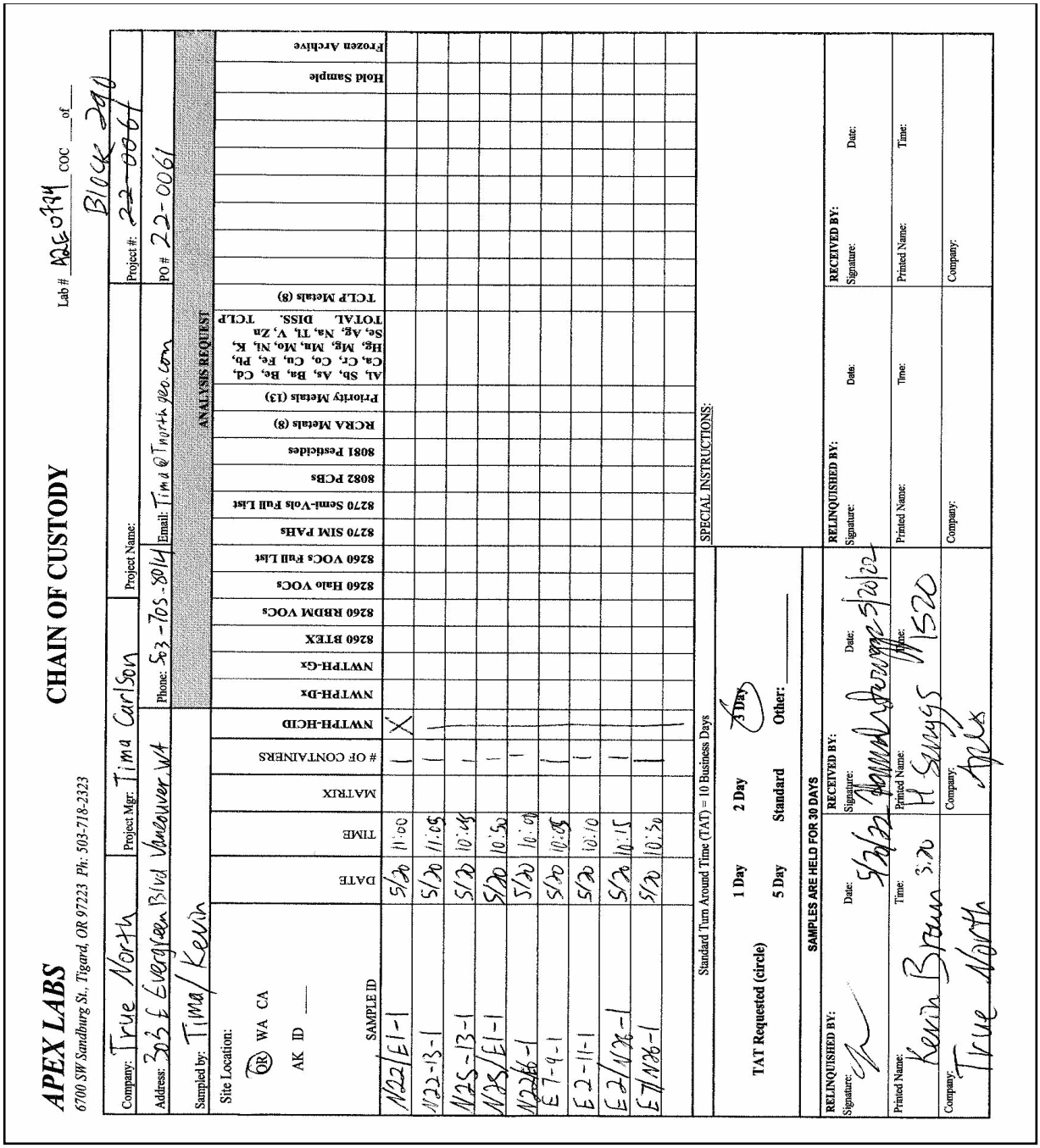

APEX LABS — **CHAIN OF CUSTODY**

6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

Lab # A2E0784 COC ___ of ___

Company: True North — Project Mgr: Tima Carlson — Project Name: Block 290 — Project #: 22-0061

Address: 202 E Evergreen Blvd Vancouver WA — Phone: 503-705-5814 — Email: Tima@TrueNorthgeo.com — PO # 22-0061

Sampled by: Tima/Kevin

Site Location: (OR) WA CA — AK ID ___

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
1122/E1-1	5/20	11:00		1	X																
1122-13-1	5/20	11:05		1																	
1125-13-1	5/20	10:45		1																	
1125/E1-1	5/20	10:50		1																	
1122B6-1	5/20	10:00		1																	
E7-9-1	5/20	10:05		1																	
E2-11-1	5/20	10:10		1																	
E2/1126-1	5/20	10:15		1																	
E7/1126-1	5/20	10:20		1																	

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day — 2 Day — 3 Day — 5 Day — Standard — Other: ___

SPECIAL INSTRUCTIONS:

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY:	Date:	Time:	RECEIVED BY:	Date:	Time:
Signature:	5/20/22		Signature:	5/20/22	1520
Printed Name: Kevin Braun		3:20	Printed Name: H Suggs		
Company: True North			Company: Apex		

RELINQUISHED BY:	Date:	Time:	RECEIVED BY:	Date:	Time:
Signature:			Signature:		
Printed Name:			Printed Name:		
Company:			Company:		

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Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2E0784 - 05 26 22 1505**

APEX LABS COOLER RECEIPT FORM

Client: True North Element WO#: A2E0784

Project/Project #: Block 290 | 22-0061

Delivery Info:
Date/time received: 5/20/22 @ 1520 By: HAS
Delivered by: Apex___ Client X ESS___ FedEx___ UPS___ Swift___ Senvoy ___ SDS___ Other_____
Cooler Inspection Date/time inspected: 5/20/22 @ 1520 By: HAS
Chain of Custody included? Yes X No _____ Custody seals? Yes_____ No X
Signed/dated by client? Yes X No _____
Signed/dated by Apex? Yes X No _____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	5-8						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	Y						
Ice type: (Gel/Real/Other)	real						
Condition:	good						

Cooler out of temp? (Y/N) Possible reason why:
Green dots applied to out of temperature samples? Yes/No
Out of temperature samples form initiated? Yes/No
Sample Inspection: Date/time inspected: 5/20/22 @ 18:05 By: KAM
All samples intact? Yes X No ___ Comments:
Bottle labels/COCs agree? Yes X No ___ Comments: no time on containers.
COC/container discrepancies form initiated? Yes ___ No X
Containers/volumes received appropriate for analysis? Yes X No ___ Comments:
Do VOA vials have visible headspace? Yes ___ No ___ NA X
Comments
Water samples: pH checked: Yes___No___NA X pH appropriate? Yes___No___NA X
Comments:
Additional information:

Labeled by: KAM Witness: DSS Cooler Inspected by: KAM

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Apex Laboratories, LLC
6700 S.W. Sandburg Street
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ORELAP ID: **OR100062**

ANALYTICAL REPORT

Monday, June 27, 2022

Tima Carlson
True North Geotechnical Services
202 E Evergreen Blvd, Suite B
Vancouver, WA 98660

RE: A2F0051 - Block 290 - 22-0061

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A2F0051, which was received by the laboratory on 6/2/2022 at 10:48:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler#1	3.3 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0051 - 06 27 22 1455**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
E21-10-1	A2F0051-01	Soil	06/02/22 09:00	06/02/22 10:48
E26-6-1	A2F0051-02	Soil	06/02/22 09:10	06/02/22 10:48
E18-10-1	A2F0051-03	Soil	06/02/22 09:15	06/02/22 10:48
S2-5-1	A2F0051-04	Soil	06/02/22 09:20	06/02/22 10:48
S7-8-1	A2F0051-05	Soil	06/02/22 09:25	06/02/22 10:48

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ANALYTICAL REPORT

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0051 - 06 27 22 1455**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
E21-10-1 (A2F0051-01)				**Matrix: Soil**		**Batch: 22F0197**		
Gasoline Range Organics	ND	---	24.8	mg/kg dry	1	06/06/22 22:48	NWTPH-HCID	
Diesel Range Organics	ND	---	62.1	mg/kg dry	1	06/06/22 22:48	NWTPH-HCID	
Oil Range Organics	ND	---	124	mg/kg dry	1	06/06/22 22:48	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 108 %*		*Limits: 50-150 %*	*1*	*06/06/22 22:48*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*76 %*	*50-150 %*	*1*	*06/06/22 22:48*	*NWTPH-HCID*	
E26-6-1 (A2F0051-02)				**Matrix: Soil**		**Batch: 22F0197**		
Gasoline Range Organics	ND	---	26.1	mg/kg dry	1	06/06/22 23:11	NWTPH-HCID	
Diesel Range Organics	ND	---	65.3	mg/kg dry	1	06/06/22 23:11	NWTPH-HCID	
Oil Range Organics	ND	---	131	mg/kg dry	1	06/06/22 23:11	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 115 %*		*Limits: 50-150 %*	*1*	*06/06/22 23:11*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*87 %*	*50-150 %*	*1*	*06/06/22 23:11*	*NWTPH-HCID*	
E18-10-1 (A2F0051-03)				**Matrix: Soil**		**Batch: 22F0197**		
Gasoline Range Organics	ND	---	25.4	mg/kg dry	1	06/06/22 23:34	NWTPH-HCID	
Diesel Range Organics	ND	---	63.5	mg/kg dry	1	06/06/22 23:34	NWTPH-HCID	
Oil Range Organics	ND	---	127	mg/kg dry	1	06/06/22 23:34	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 125 %*		*Limits: 50-150 %*	*1*	*06/06/22 23:34*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*86 %*	*50-150 %*	*1*	*06/06/22 23:34*	*NWTPH-HCID*	
S2-5-1 (A2F0051-04)				**Matrix: Soil**		**Batch: 22F0197**		
Gasoline Range Organics	ND	---	26.8	mg/kg dry	1	06/06/22 23:56	NWTPH-HCID	
Diesel Range Organics	ND	---	67.1	mg/kg dry	1	06/06/22 23:56	NWTPH-HCID	
Oil Range Organics	ND	---	134	mg/kg dry	1	06/06/22 23:56	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 117 %*		*Limits: 50-150 %*	*1*	*06/06/22 23:56*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*81 %*	*50-150 %*	*1*	*06/06/22 23:56*	*NWTPH-HCID*	
S7-8-1 (A2F0051-05)				**Matrix: Soil**		**Batch: 22F0197**		
Gasoline Range Organics	ND	---	22.9	mg/kg dry	1	06/07/22 00:19	NWTPH-HCID	
Diesel Range Organics	ND	---	57.2	mg/kg dry	1	06/07/22 00:19	NWTPH-HCID	
Oil Range Organics	ND	---	114	mg/kg dry	1	06/07/22 00:19	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 124 %*		*Limits: 50-150 %*	*1*	*06/07/22 00:19*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*91 %*	*50-150 %*	*1*	*06/07/22 00:19*	*NWTPH-HCID*	

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0051 - 06 27 22 1455**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
E21-10-1 (A2F0051-01)				**Matrix: Soil**		**Batch: 22F0098**		
% Solids	**73.7**	---	1.00	%	1	06/03/22 06:24	EPA 8000D	
E26-6-1 (A2F0051-02)				**Matrix: Soil**		**Batch: 22F0098**		
% Solids	**75.7**	---	1.00	%	1	06/03/22 06:24	EPA 8000D	
E18-10-1 (A2F0051-03)				**Matrix: Soil**		**Batch: 22F0098**		
% Solids	**75.8**	---	1.00	%	1	06/03/22 06:24	EPA 8000D	
S2-5-1 (A2F0051-04)				**Matrix: Soil**		**Batch: 22F0098**		
% Solids	**71.6**	---	1.00	%	1	06/03/22 06:24	EPA 8000D	
S7-8-1 (A2F0051-05)				**Matrix: Soil**		**Batch: 22F0098**		
% Solids	**83.9**	---	1.00	%	1	06/03/22 06:24	EPA 8000D	

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202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0051 - 06 27 22 1455**

QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22F0197 - NWTPH-HCID (Soil)							Soil					
Blank (22F0197-BLK1)			Prepared: 06/06/22 14:25 Analyzed: 06/06/22 21:41									
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		*Recovery: 119 %*	*Limits: 50-150 %*		*Dilution: 1x*							
4-Bromofluorobenzene (Surr)		*101 %*	*50-150 %*		*"*							
Duplicate (22F0197-DUP1)			Prepared: 06/06/22 14:25 Analyzed: 06/06/22 22:26									
QC Source Sample: Non-SDG (A2F0036-03)												
Gasoline Range Organics	ND	---	27.9	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	69.8	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	140	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery: 117 %*	*Limits: 50-150 %*		*Dilution: 1x*							
4-Bromofluorobenzene (Surr)		*90 %*	*50-150 %*		*"*							
Duplicate (22F0197-DUP2)			Prepared: 06/06/22 14:25 Analyzed: 06/07/22 04:04									
QC Source Sample: Non-SDG (A2F0054-09)												
Gasoline Range Organics	ND	---	21.8	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	54.5	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	109	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery: 124 %*	*Limits: 50-150 %*		*Dilution: 1x*							
4-Bromofluorobenzene (Surr)		*92 %*	*50-150 %*		*"*							

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True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0051 - 06 27 22 1455**

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22F0098 - Total Solids (Dry Weight)							**Soil**					
Duplicate (22F0098-DUP1)			Prepared: 06/02/22 12:40		Analyzed: 06/03/22 06:24							
QC Source Sample: Non-SDG (A2D0394-01)												
% Solids	**77.5**	---	1.00	%	1	---	76.9	---	---	0.8	10%	
Duplicate (22F0098-DUP2)			Prepared: 06/02/22 12:40		Analyzed: 06/03/22 06:24							
QC Source Sample: Non-SDG (A2D0394-02)												
% Solids	**77.0**	---	1.00	%	1	---	77.5	---	---	0.7	10%	
Duplicate (22F0098-DUP3)			Prepared: 06/02/22 12:40		Analyzed: 06/03/22 06:24							
QC Source Sample: Non-SDG (A2D0394-03)												
% Solids	**78.1**	---	1.00	%	1	---	78.4	---	---	0.4	10%	
Duplicate (22F0098-DUP4)			Prepared: 06/02/22 12:40		Analyzed: 06/03/22 06:24							
QC Source Sample: Non-SDG (A2D0394-04)												
% Solids	**74.5**	---	1.00	%	1	---	74.6	---	---	0.2	10%	
Duplicate (22F0098-DUP5)			Prepared: 06/02/22 12:40		Analyzed: 06/03/22 06:24							
QC Source Sample: Non-SDG (A2D0394-05)												
% Solids	**81.4**	---	1.00	%	1	---	81.4	---	---	0.05	10%	
Duplicate (22F0098-DUP6)			Prepared: 06/02/22 12:40		Analyzed: 06/03/22 06:24							
QC Source Sample: Non-SDG (A2D0394-06)												
% Solids	**91.0**	---	1.00	%	1	---	91.0	---	---	0.01	10%	
Duplicate (22F0098-DUP7)			Prepared: 06/02/22 12:40		Analyzed: 06/03/22 06:24							
QC Source Sample: Non-SDG (A2D0394-07)												
% Solids	**78.0**	---	1.00	%	1	---	78.1	---	---	0.2	10%	
Duplicate (22F0098-DUP8)			Prepared: 06/02/22 19:30		Analyzed: 06/03/22 06:24							
QC Source Sample: Non-SDG (A2F0065-01)												
% Solids	**79.3**	---	1.00	%	1	---	76.0	---	---	4	10%	

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0051 - 06 27 22 1455**

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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SAMPLE PREPARATION INFORMATION

Hydrocarbon Identification Screen by NWTPH-HCID

Prep: NWTPH-HCID (Soil)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22F0197							
A2F0051-01	Soil	NWTPH-HCID	06/02/22 09:00	06/06/22 14:25	10.93g/10mL	10g/10mL	0.92
A2F0051-02	Soil	NWTPH-HCID	06/02/22 09:10	06/06/22 14:25	10.12g/10mL	10g/10mL	0.99
A2F0051-03	Soil	NWTPH-HCID	06/02/22 09:15	06/06/22 14:25	10.39g/10mL	10g/10mL	0.96
A2F0051-04	Soil	NWTPH-HCID	06/02/22 09:20	06/06/22 14:25	10.4g/10mL	10g/10mL	0.96
A2F0051-05	Soil	NWTPH-HCID	06/02/22 09:25	06/06/22 14:25	10.41g/10mL	10g/10mL	0.96

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22F0098							
A2F0051-01	Soil	EPA 8000D	06/02/22 09:00	06/02/22 12:40			NA
A2F0051-02	Soil	EPA 8000D	06/02/22 09:10	06/02/22 12:40			NA
A2F0051-03	Soil	EPA 8000D	06/02/22 09:15	06/02/22 12:40			NA
A2F0051-04	Soil	EPA 8000D	06/02/22 09:20	06/02/22 12:40			NA
A2F0051-05	Soil	EPA 8000D	06/02/22 09:25	06/02/22 12:40			NA

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0051 - 06 27 22 1455**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

There are No Qualifiers on Sample or QC Data for this report

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0051 - 06 27 22 1455**

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0051 - 06 27 22 1455**

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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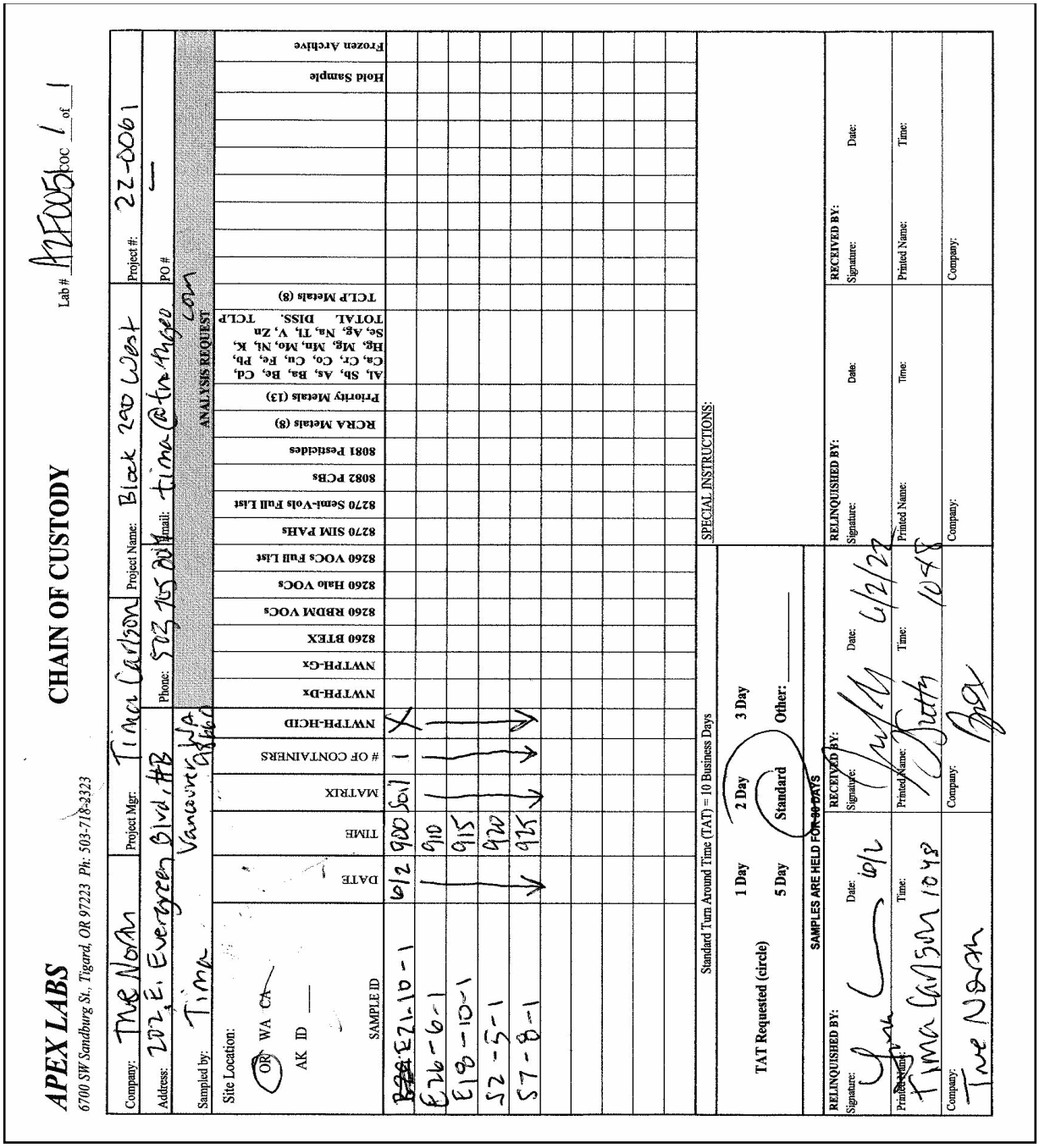
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0051 - 06 27 22 1455**



APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # A2F0051 doc 1 of 1

Company: TNE North — Project Mgr: Tima Carlson — Project Name: Block 290 West — Project #: 22-0061
Address: 202 E. Evergreen Blvd, #B — Phone: 503.705.2698 — Email: tima@truenorthgeo.com — PO #
Sampled by: Tima — Vancouver, WA
Site Location: (OR) WA CA — AK ID ___

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
~~B22~~ E27-10-1	6/2	900	Soil	1	X																
E26-6-1		910																			
E18-10-1		915																			
S2-5-1		920																			
S7-8-1	↓	925	↓	↓	↓																

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day, 2 Day, 3 Day, 5 Day, Standard, Other: ___

SAMPLES ARE HELD FOR ~~90~~ 60 DAYS

SPECIAL INSTRUCTIONS:

RELINQUISHED BY:	Date:	RECEIVED BY:	Date:
Signature:	6/2	Signature:	6/2/22
Printed Name:	Time:	Printed Name:	Time: 1048
Company: TNE North		Company:	

RELINQUISHED BY:	Date:	RECEIVED BY:	Date:
Signature:		Signature:	
Printed Name:	Time:	Printed Name:	Time:
Company:		Company:	

RELINQUISHED BY:	Date:	RECEIVED BY:	Date:
Signature:		Signature:	
Printed Name:	Time:	Printed Name:	Time:
Company:		Company:	

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0051 - 06 27 22 1455**

APEX LABS COOLER RECEIPT FORM

Client: True North Element WO#: A2 F0051

Project/Project #: Block 290 West 22-0061

Delivery Info:

Date/time received: 6/2/22 @ 1048 By: JS

Delivered by: Apex ___ Client X ESS ___ FedEx ___ UPS ___ Swift ___ Senvoy ___ SDS ___ Other ___

Cooler Inspection Date/time inspected: 6/2/22 @ 1055 By: JS

Chain of Custody included? Yes X No ___ Custody seals? Yes ___ No X

Signed/dated by client? Yes X No ___

Signed/dated by Apex? Yes X No ___

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	3.3						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	N						
Ice type: (Gel/Real/Other)	Real						
Condition:	good						

Cooler out of temp? (Y/N) Possible reason why: ___

Green dots applied to out of temperature samples? Yes (No)

Out of temperature samples form initiated? Yes (No)

Sample Inspection: Date/time inspected: 6/2/22 @ 1130 By: JS

All samples intact? Yes X No ___ Comments: ___

Bottle labels/COCs agree? Yes X No ___ Comments: ___

COC/container discrepancies form initiated? Yes ___ No X

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: ___

Do VOA vials have visible headspace? Yes ___ No ___ NA X

Comments ___

Water samples: pH checked: Yes ___ No ___ NA X pH appropriate? Yes ___ No ___ NA X

Comments: ___

Additional information: ___

Labeled by: JS Witness: VT Cooler Inspected by: JS

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Monday, June 20, 2022

Tima Carlson
True North Geotechnical Services
202 E Evergreen Blvd, Suite B
Vancouver, WA 98660

RE: A2F0369 - Block 290 - 22-0061

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A2F0369, which was received by the laboratory on 6/10/2022 at 12:21:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	1.8 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0369 - 06 20 22 1421**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S5-12	A2F0369-01	Soil	06/07/22 09:00	06/10/22 12:21
S7-12	A2F0369-02	Soil	06/07/22 09:15	06/10/22 12:21
E5-14	A2F0369-03	Soil	06/07/22 09:20	06/10/22 12:21
S3-12	A2F0369-04	Soil	06/07/22 09:25	06/10/22 12:21
S1-12	A2F0369-05	Soil	06/07/22 09:30	06/10/22 12:21
E19/N23-Subgrade-1	A2F0369-06	Soil	06/09/22 08:30	06/10/22 12:21
E23/S1-Subgrade-1	A2F0369-07	Soil	06/09/22 08:35	06/10/22 12:21
E24/N22-Subgrade-1	A2F0369-08	Soil	06/09/22 08:30	06/10/22 12:21

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0369 - 06 20 22 1421**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
S5-12 (A2F0369-01)				**Matrix: Soil**		**Batch: 22F0452**		
Gasoline Range Organics	ND	---	21.3	mg/kg dry	1	06/13/22 21:20	NWTPH-HCID	
Diesel Range Organics	ND	---	53.3	mg/kg dry	1	06/13/22 21:20	NWTPH-HCID	
Oil Range Organics	ND	---	107	mg/kg dry	1	06/13/22 21:20	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 101 %*		*Limits: 50-150 %*	*1*	*06/13/22 21:20*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*111 %*	*50-150 %*	*1*	*06/13/22 21:20*	*NWTPH-HCID*	
S7-12 (A2F0369-02)				**Matrix: Soil**		**Batch: 22F0452**		
Gasoline Range Organics	ND	---	24.4	mg/kg dry	1	06/13/22 22:05	NWTPH-HCID	
Diesel Range Organics	ND	---	61.1	mg/kg dry	1	06/13/22 22:05	NWTPH-HCID	
Oil Range Organics	ND	---	122	mg/kg dry	1	06/13/22 22:05	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 96 %*		*Limits: 50-150 %*	*1*	*06/13/22 22:05*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*95 %*	*50-150 %*	*1*	*06/13/22 22:05*	*NWTPH-HCID*	
E5-14 (A2F0369-03)				**Matrix: Soil**		**Batch: 22F0452**		
Gasoline Range Organics	ND	---	27.2	mg/kg dry	1	06/13/22 22:28	NWTPH-HCID	
Diesel Range Organics	ND	---	68.1	mg/kg dry	1	06/13/22 22:28	NWTPH-HCID	
Oil Range Organics	ND	---	136	mg/kg dry	1	06/13/22 22:28	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 98 %*		*Limits: 50-150 %*	*1*	*06/13/22 22:28*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*108 %*	*50-150 %*	*1*	*06/13/22 22:28*	*NWTPH-HCID*	
S3-12 (A2F0369-04)				**Matrix: Soil**		**Batch: 22F0452**		
Gasoline Range Organics	ND	---	22.9	mg/kg dry	1	06/13/22 22:51	NWTPH-HCID	
Diesel Range Organics	ND	---	57.1	mg/kg dry	1	06/13/22 22:51	NWTPH-HCID	
Oil Range Organics	ND	---	114	mg/kg dry	1	06/13/22 22:51	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 100 %*		*Limits: 50-150 %*	*1*	*06/13/22 22:51*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*100 %*	*50-150 %*	*1*	*06/13/22 22:51*	*NWTPH-HCID*	
S1-12 (A2F0369-05)				**Matrix: Soil**		**Batch: 22F0452**		
Gasoline Range Organics	ND	---	24.8	mg/kg dry	1	06/13/22 23:13	NWTPH-HCID	
Diesel Range Organics	ND	---	62.0	mg/kg dry	1	06/13/22 23:13	NWTPH-HCID	
Oil Range Organics	ND	---	124	mg/kg dry	1	06/13/22 23:13	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 100 %*		*Limits: 50-150 %*	*1*	*06/13/22 23:13*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*100 %*	*50-150 %*	*1*	*06/13/22 23:13*	*NWTPH-HCID*	

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0369 - 06 20 22 1421**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
E19/N23-Subgrade-1 (A2F0369-06)				**Matrix: Soil**		**Batch: 22F0452**		
Gasoline Range Organics	ND	---	22.9	mg/kg dry	1	06/13/22 23:36	NWTPH-HCID	
Diesel Range Organics	ND	---	57.4	mg/kg dry	1	06/13/22 23:36	NWTPH-HCID	
Oil Range Organics	ND	---	115	mg/kg dry	1	06/13/22 23:36	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 98 %*		*Limits: 50-150 %*	*1*	*06/13/22 23:36*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*100 %*	*50-150 %*	*1*	*06/13/22 23:36*	*NWTPH-HCID*	
E23/S1-Subgrade-1 (A2F0369-07)				**Matrix: Soil**		**Batch: 22F0452**		
Gasoline Range Organics	ND	---	23.2	mg/kg dry	1	06/13/22 23:59	NWTPH-HCID	
Diesel Range Organics	ND	---	58.1	mg/kg dry	1	06/13/22 23:59	NWTPH-HCID	
Oil Range Organics	ND	---	116	mg/kg dry	1	06/13/22 23:59	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 104 %*		*Limits: 50-150 %*	*1*	*06/13/22 23:59*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*114 %*	*50-150 %*	*1*	*06/13/22 23:59*	*NWTPH-HCID*	
E24/N22-Subgrade-1 (A2F0369-08)				**Matrix: Soil**		**Batch: 22F0452**		
Gasoline Range Organics	ND	---	23.4	mg/kg dry	1	06/14/22 00:21	NWTPH-HCID	
Diesel Range Organics	ND	---	58.6	mg/kg dry	1	06/14/22 00:21	NWTPH-HCID	
Oil Range Organics	ND	---	117	mg/kg dry	1	06/14/22 00:21	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 102 %*		*Limits: 50-150 %*	*1*	*06/14/22 00:21*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*95 %*	*50-150 %*	*1*	*06/14/22 00:21*	*NWTPH-HCID*	

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0369 - 06 20 22 1421**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
S5-12 (A2F0369-01)				**Matrix: Soil**		**Batch: 22F0418**		
% Solids	**91.8**	---	1.00	%	1	06/13/22 06:08	EPA 8000D	
S7-12 (A2F0369-02)				**Matrix: Soil**		**Batch: 22F0418**		
% Solids	**80.8**	---	1.00	%	1	06/13/22 06:08	EPA 8000D	
E5-14 (A2F0369-03)				**Matrix: Soil**		**Batch: 22F0418**		
% Solids	**71.7**	---	1.00	%	1	06/13/22 06:08	EPA 8000D	
S3-12 (A2F0369-04)				**Matrix: Soil**		**Batch: 22F0418**		
% Solids	**80.7**	---	1.00	%	1	06/13/22 06:08	EPA 8000D	
S1-12 (A2F0369-05)				**Matrix: Soil**		**Batch: 22F0418**		
% Solids	**74.7**	---	1.00	%	1	06/13/22 06:08	EPA 8000D	
E19/N23-Subgrade-1 (A2F0369-06)				**Matrix: Soil**		**Batch: 22F0418**		
% Solids	**84.5**	---	1.00	%	1	06/13/22 06:08	EPA 8000D	
E23/S1-Subgrade-1 (A2F0369-07)				**Matrix: Soil**		**Batch: 22F0418**		
% Solids	**84.2**	---	1.00	%	1	06/13/22 06:08	EPA 8000D	
E24/N22-Subgrade-1 (A2F0369-08)				**Matrix: Soil**		**Batch: 22F0418**		
% Solids	**82.8**	---	1.00	%	1	06/13/22 06:08	EPA 8000D	

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ANALYTICAL REPORT

True North Geotechnical Services	Project: Block 290	
202 E Evergreen Blvd, Suite B	Project Number: 22-0061	Report ID:
Vancouver, WA 98660	Project Manager: Tima Carlson	A2F0369 - 06 20 22 1421

QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22F0452 - NWTPH-HCID (Soil)							Soil					
Blank (22F0452-BLK1)			Prepared: 06/13/22 12:30 Analyzed: 06/13/22 20:58									
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 96 %*	*Limits: 50-150 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*109 %*	*50-150 %*			*"*					
Duplicate (22F0452-DUP1)			Prepared: 06/13/22 12:30 Analyzed: 06/13/22 21:43									
QC Source Sample: S5-12 (A2F0369-01)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	21.1	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	52.8	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	106	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 104 %*	*Limits: 50-150 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*111 %*	*50-150 %*			*"*					
Duplicate (22F0452-DUP2)			Prepared: 06/13/22 12:30 Analyzed: 06/14/22 02:59									
QC Source Sample: Non-SDG (A2F0372-04)												
Gasoline Range Organics	ND	---	24.6	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	61.6	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	123	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 97 %*	*Limits: 50-150 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*106 %*	*50-150 %*			*"*					

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503-718-2323
ORELAP ID: OR100062

ANALYTICAL REPORT

True North Geotechnical Services	Project: Block 290	
202 E Evergreen Blvd, Suite B	Project Number: 22-0061	Report ID:
Vancouver, WA 98660	Project Manager: Tima Carlson	A2F0369 - 06 20 22 1421

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22F0418 - Total Solids (Dry Weight)							Soil					
Duplicate (22F0418-DUP1)			Prepared: 06/11/22 12:15		Analyzed: 06/13/22 06:08							
QC Source Sample: Non-SDG (A2F0335-01)												
% Solids	**75.5**	---	1.00	%	1	---	75.5	---	---	0.002	10%	
Duplicate (22F0418-DUP2)			Prepared: 06/11/22 12:15		Analyzed: 06/13/22 06:08							
QC Source Sample: Non-SDG (A2F0335-02)												
% Solids	**79.2**	---	1.00	%	1	---	78.4	---	---	1	10%	
Duplicate (22F0418-DUP3)			Prepared: 06/11/22 12:15		Analyzed: 06/13/22 06:08							
QC Source Sample: Non-SDG (A2F0335-03)												
% Solids	**78.6**	---	1.00	%	1	---	78.7	---	---	0.07	10%	
Duplicate (22F0418-DUP4)			Prepared: 06/11/22 12:15		Analyzed: 06/13/22 06:08							
QC Source Sample: Non-SDG (A2F0335-04)												
% Solids	**90.5**	---	1.00	%	1	---	91.1	---	---	0.7	10%	
Duplicate (22F0418-DUP5)			Prepared: 06/11/22 12:15		Analyzed: 06/13/22 06:08							
QC Source Sample: Non-SDG (A2F0335-05)												
% Solids	**72.3**	---	1.00	%	1	---	72.3	---	---	0.02	10%	
Duplicate (22F0418-DUP6)			Prepared: 06/11/22 12:15		Analyzed: 06/13/22 06:08							
QC Source Sample: Non-SDG (A2F0335-06)												
% Solids	**72.4**	---	1.00	%	1	---	72.3	---	---	0.2	10%	
Duplicate (22F0418-DUP7)			Prepared: 06/11/22 12:15		Analyzed: 06/13/22 06:08							
QC Source Sample: Non-SDG (A2F0335-07)												
% Solids	**80.5**	---	1.00	%	1	---	80.2	---	---	0.3	10%	
Duplicate (22F0418-DUP8)			Prepared: 06/11/22 12:15		Analyzed: 06/13/22 06:08							
QC Source Sample: Non-SDG (A2F0335-08)												
% Solids	**75.1**	---	1.00	%	1	---	75.4	---	---	0.4	10%	

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0369 - 06 20 22 1421**

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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ANALYTICAL REPORT

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202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0369 - 06 20 22 1421**

SAMPLE PREPARATION INFORMATION

Hydrocarbon Identification Screen by NWTPH-HCID

Prep: NWTPH-HCID (Soil)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22F0452							
A2F0369-01	Soil	NWTPH-HCID	06/07/22 09:00	06/13/22 12:30	10.22g/10mL	10g/10mL	0.98
A2F0369-02	Soil	NWTPH-HCID	06/07/22 09:15	06/13/22 12:30	10.13g/10mL	10g/10mL	0.99
A2F0369-03	Soil	NWTPH-HCID	06/07/22 09:20	06/13/22 12:30	10.24g/10mL	10g/10mL	0.98
A2F0369-04	Soil	NWTPH-HCID	06/07/22 09:25	06/13/22 12:30	10.85g/10mL	10g/10mL	0.92
A2F0369-05	Soil	NWTPH-HCID	06/07/22 09:30	06/13/22 12:30	10.79g/10mL	10g/10mL	0.93
A2F0369-06	Soil	NWTPH-HCID	06/09/22 08:30	06/13/22 12:30	10.31g/10mL	10g/10mL	0.97
A2F0369-07	Soil	NWTPH-HCID	06/09/22 08:35	06/13/22 12:30	10.22g/10mL	10g/10mL	0.98
A2F0369-08	Soil	NWTPH-HCID	06/09/22 08:30	06/13/22 12:30	10.3g/10mL	10g/10mL	0.97

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22F0418							
A2F0369-01	Soil	EPA 8000D	06/07/22 09:00	06/11/22 12:15			NA
A2F0369-02	Soil	EPA 8000D	06/07/22 09:15	06/11/22 12:15			NA
A2F0369-03	Soil	EPA 8000D	06/07/22 09:20	06/11/22 12:15			NA
A2F0369-04	Soil	EPA 8000D	06/07/22 09:25	06/11/22 12:15			NA
A2F0369-05	Soil	EPA 8000D	06/07/22 09:30	06/11/22 12:15			NA
A2F0369-06	Soil	EPA 8000D	06/09/22 08:30	06/11/22 12:15			NA
A2F0369-07	Soil	EPA 8000D	06/09/22 08:35	06/11/22 12:15			NA
A2F0369-08	Soil	EPA 8000D	06/09/22 08:30	06/11/22 12:15			NA

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0369 - 06 20 22 1421**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

There are No Qualifiers on Sample or QC Data for this report

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0369 - 06 20 22 1421**

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

Apex Laboratories

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REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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ANALYTICAL REPORT

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LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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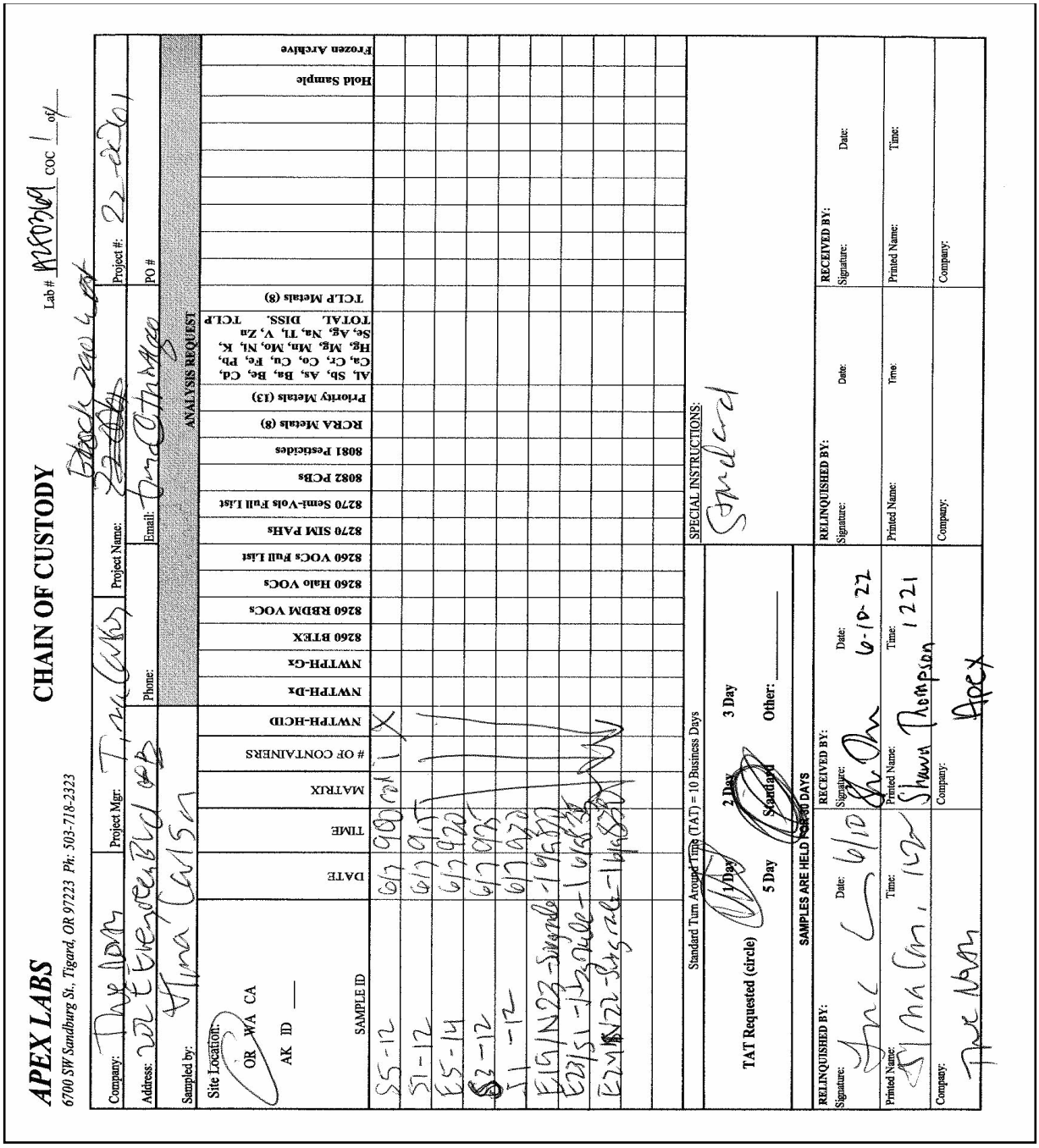

APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # A2F0369 COC 1 of 1

Company: True North | Project Mgr: Tima Carlson | Project Name: Block 290 | Project #: 22-0061
Address: 202 E Evergreen Blvd #B | Phone: | Email: tcarlson@truenorthgeo.com | PO #
Sampled by: Tima Carlson

Site Location: OR WA CA
AK ID —

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
SS-12	6/7	900	Soil	1	X																
S1-12	6/7	915																			
ES-14	6/7	920																			
S3-12	6/7	925																			
S1-12	6/7	930																			
EB/IN23-Sample-1	6/7	935																			
EB/S1-12-Sample-1	6/7	940																			
EB/IN22-Sample-1	6/7	945																			

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day | 2 Day | 3 Day | 5 Day | Standard | Other: _____

SAMPLES ARE HELD FOR 30 DAYS

SPECIAL INSTRUCTIONS: Standard

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature:	Signature:	Signature:	Signature:
Date:	Date: 6/10	Date:	Date:
Time:	Time: 1700	Time:	Time:
Printed Name:	Printed Name: Shawn Thompson	Printed Name:	Printed Name:
Company:	Company: Apex	Company:	Company:

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0369 - 06 20 22 1421**

APEX LABS COOLER RECEIPT FORM

Client: True North Element WO#: A2 F0369

Project/Project #: Block 290 West # 22-0061

Delivery Info:

Date/time received: 6-10-22 @ 1221 By: SAT

Delivered by: Apex X Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Date/time inspected: 6-10-22 @ 1316 By: SAT

Chain of Custody included? Yes X No Custody seals? Yes No X

Signed/dated by client? Yes X No

Signed/dated by Apex? Yes X No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	1.8						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	Y						
Ice type: (Gel/Real/Other)	Real						
Condition:	Good						

Cooler out of temp? (Y/N) Possible reason why:

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 6/10/22 @ 1402 By: AKK

All samples intact? Yes X No Comments:

Bottle labels/COCs agree? Yes No X Comments: S5-12 + S7-12 + E5-14 + S3-14 + S1-12 date on containers read 6/7.

COC/container discrepancies form initiated? Yes No X

Containers/volumes received appropriate for analysis? Yes Y No Comments: S5-12 → S1-12 received >48hr VOCs extraction hold time

Do VOA vials have visible headspace? Yes No NA Y

Comments

Water samples: pH checked: Yes No NA Y pH appropriate? Yes No NA X

Comments:

Additional information:

Labeled by: AKK Witness: DJS Cooler Inspected by: AKK

Apex Laboratories, LLC
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ANALYTICAL REPORT

Tuesday, June 28, 2022

Tima Carlson
True North Geotechnical Services
202 E Evergreen Blvd, Suite B
Vancouver, WA 98660

RE: A2F0526 - Block 290 - 22-0061

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A2F0526, which was received by the laboratory on 6/15/2022 at 2:25:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	3.9 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0526 - 06 28 22 1706**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N5/W26-Subgrade-1	A2F0526-01	Soil	06/13/22 14:30	06/15/22 14:25
N18/E18-Subgrade-1	A2F0526-02	Soil	06/13/22 14:35	06/15/22 14:25
N19/E7-Subgrade-1	A2F0526-03	Soil	06/13/22 14:40	06/15/22 14:25
N5/W24-Subgrade-1	A2F0526-04	Soil	06/13/22 14:45	06/15/22 14:25
E29/S6-Subgrade-1	A2F0526-05	Soil	06/13/22 14:50	06/15/22 14:25
N5/W13-Subgrade-1	A2F0526-06	Soil	06/13/22 14:55	06/15/22 14:25
N9/W13-Subgrade-1	A2F0526-07	Soil	06/13/22 15:00	06/15/22 14:25
N19/E10-Subgrade-1	A2F0526-08	Soil	06/13/22 15:05	06/15/22 14:25
N18/E5-Subgrade-1	A2F0526-09	Soil	06/13/22 15:10	06/15/22 14:25
N17/E9-Subgrade-1	A2F0526-10	Soil	06/13/22 15:15	06/15/22 14:25
E25/S6-Subgrade-1	A2F0526-11	Soil	06/13/22 15:20	06/15/22 14:25
N5/W16-Subgrade-1	A2F0526-12	Soil	06/13/22 15:25	06/15/22 14:25

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ANALYTICAL REPORT

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0526 - 06 28 22 1706**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
N5/W26-Subgrade-1 (A2F0526-01)				**Matrix: Soil**		**Batch: 22F0612**		
Gasoline Range Organics	ND	---	24.1	mg/kg dry	1	06/17/22 01:10	NWTPH-HCID	
Diesel Range Organics	ND	---	60.3	mg/kg dry	1	06/17/22 01:10	NWTPH-HCID	
Oil Range Organics	ND	---	121	mg/kg dry	1	06/17/22 01:10	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 99 %*		*Limits: 50-150 %*	*1*	*06/17/22 01:10*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*87 %*	*50-150 %*	*1*	*06/17/22 01:10*	*NWTPH-HCID*	
N18/E18-Subgrade-1 (A2F0526-02)				**Matrix: Soil**		**Batch: 22F0612**		
Gasoline Range Organics	ND	---	27.2	mg/kg dry	1	06/17/22 01:32	NWTPH-HCID	
Diesel Range Organics	ND	---	68.0	mg/kg dry	1	06/17/22 01:32	NWTPH-HCID	
Oil Range Organics	ND	---	136	mg/kg dry	1	06/17/22 01:32	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 108 %*		*Limits: 50-150 %*	*1*	*06/17/22 01:32*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*125 %*	*50-150 %*	*1*	*06/17/22 01:32*	*NWTPH-HCID*	
N19/E7-Subgrade-1 (A2F0526-03)				**Matrix: Soil**		**Batch: 22F0612**		
Gasoline Range Organics	ND	---	23.7	mg/kg dry	1	06/17/22 01:54	NWTPH-HCID	
Diesel Range Organics	ND	---	59.2	mg/kg dry	1	06/17/22 01:54	NWTPH-HCID	
Oil Range Organics	ND	---	118	mg/kg dry	1	06/17/22 01:54	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 72 %*		*Limits: 50-150 %*	*1*	*06/17/22 01:54*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*77 %*	*50-150 %*	*1*	*06/17/22 01:54*	*NWTPH-HCID*	
N5/W24-Subgrade-1 (A2F0526-04)				**Matrix: Soil**		**Batch: 22F0612**		
Gasoline Range Organics	ND	---	24.7	mg/kg dry	1	06/17/22 02:17	NWTPH-HCID	
Diesel Range Organics	ND	---	61.7	mg/kg dry	1	06/17/22 02:17	NWTPH-HCID	
Oil Range Organics	ND	---	123	mg/kg dry	1	06/17/22 02:17	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 106 %*		*Limits: 50-150 %*	*1*	*06/17/22 02:17*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*111 %*	*50-150 %*	*1*	*06/17/22 02:17*	*NWTPH-HCID*	
E29/S6-Subgrade-1 (A2F0526-05)				**Matrix: Soil**		**Batch: 22F0612**		
Gasoline Range Organics	ND	---	21.8	mg/kg dry	1	06/17/22 02:39	NWTPH-HCID	
Diesel Range Organics	ND	---	54.6	mg/kg dry	1	06/17/22 02:39	NWTPH-HCID	
Oil Range Organics	ND	---	109	mg/kg dry	1	06/17/22 02:39	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 93 %*		*Limits: 50-150 %*	*1*	*06/17/22 02:39*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*98 %*	*50-150 %*	*1*	*06/17/22 02:39*	*NWTPH-HCID*	

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0526 - 06 28 22 1706**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
N5/W13-Subgrade-1 (A2F0526-06)				**Matrix: Soil**		**Batch: 22F0675**		
Gasoline Range Organics	ND	---	23.9	mg/kg dry	1	06/17/22 20:49	NWTPH-HCID	
Diesel Range Organics	ND	---	59.8	mg/kg dry	1	06/17/22 20:49	NWTPH-HCID	
Oil Range Organics	ND	---	120	mg/kg dry	1	06/17/22 20:49	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 100 %*		*Limits: 50-150 %*	*1*	*06/17/22 20:49*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*110 %*	*50-150 %*	*1*	*06/17/22 20:49*	*NWTPH-HCID*	
N9/W13-Subgrade-1 (A2F0526-07)				**Matrix: Soil**		**Batch: 22F0675**		
Gasoline Range Organics	ND	---	23.8	mg/kg dry	1	06/17/22 21:34	NWTPH-HCID	
Diesel Range Organics	ND	---	59.6	mg/kg dry	1	06/17/22 21:34	NWTPH-HCID	
Oil Range Organics	ND	---	119	mg/kg dry	1	06/17/22 21:34	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 99 %*		*Limits: 50-150 %*	*1*	*06/17/22 21:34*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*104 %*	*50-150 %*	*1*	*06/17/22 21:34*	*NWTPH-HCID*	
N19/E10-Subgrade-1 (A2F0526-08)				**Matrix: Soil**		**Batch: 22F0675**		
Gasoline Range Organics	ND	---	23.3	mg/kg dry	1	06/17/22 21:56	NWTPH-HCID	
Diesel Range Organics	ND	---	58.2	mg/kg dry	1	06/17/22 21:56	NWTPH-HCID	
Oil Range Organics	ND	---	116	mg/kg dry	1	06/17/22 21:56	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 97 %*		*Limits: 50-150 %*	*1*	*06/17/22 21:56*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*104 %*	*50-150 %*	*1*	*06/17/22 21:56*	*NWTPH-HCID*	
N18/E5-Subgrade-1 (A2F0526-09)				**Matrix: Soil**		**Batch: 22F0675**		
Gasoline Range Organics	ND	---	25.4	mg/kg dry	1	06/17/22 22:19	NWTPH-HCID	
Diesel Range Organics	ND	---	63.6	mg/kg dry	1	06/17/22 22:19	NWTPH-HCID	
Oil Range Organics	ND	---	127	mg/kg dry	1	06/17/22 22:19	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 102 %*		*Limits: 50-150 %*	*1*	*06/17/22 22:19*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*99 %*	*50-150 %*	*1*	*06/17/22 22:19*	*NWTPH-HCID*	
N17/E9-Subgrade-1 (A2F0526-10)				**Matrix: Soil**		**Batch: 22F0675**		
Gasoline Range Organics	ND	---	23.9	mg/kg dry	1	06/17/22 22:41	NWTPH-HCID	
Diesel Range Organics	ND	---	59.7	mg/kg dry	1	06/17/22 22:41	NWTPH-HCID	
Oil Range Organics	ND	---	119	mg/kg dry	1	06/17/22 22:41	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery: 105 %*		*Limits: 50-150 %*	*1*	*06/17/22 22:41*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*104 %*	*50-150 %*	*1*	*06/17/22 22:41*	*NWTPH-HCID*	

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0526 - 06 28 22 1706**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
E25/S6-Subgrade-1 (A2F0526-11)				**Matrix: Soil**		**Batch: 22F0675**		
Gasoline Range Organics	ND	---	22.4	mg/kg dry	1	06/17/22 23:03	NWTPH-HCID	
Diesel Range Organics	ND	---	56.0	mg/kg dry	1	06/17/22 23:03	NWTPH-HCID	
Oil Range Organics	ND	---	112	mg/kg dry	1	06/17/22 23:03	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*101 %*	*Limits: 50-150 %*	*1*	*06/17/22 23:03*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*109 %*	*50-150 %*	*1*	*06/17/22 23:03*	*NWTPH-HCID*	
N5/W16-Subgrade-1 (A2F0526-12)				**Matrix: Soil**		**Batch: 22F0675**		
Gasoline Range Organics	ND	---	24.0	mg/kg dry	1	06/17/22 23:26	NWTPH-HCID	
Diesel Range Organics	ND	---	60.1	mg/kg dry	1	06/17/22 23:26	NWTPH-HCID	
Oil Range Organics	ND	---	120	mg/kg dry	1	06/17/22 23:26	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*105 %*	*Limits: 50-150 %*	*1*	*06/17/22 23:26*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*101 %*	*50-150 %*	*1*	*06/17/22 23:26*	*NWTPH-HCID*	

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Darrell Auvil, Client Services Manager

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0526 - 06 28 22 1706**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
N5/W26-Subgrade-1 (A2F0526-01)				**Matrix: Soil**		**Batch: 22F0622**		
% Solids	**77.2**	---	1.00	%	1	06/17/22 05:58	EPA 8000D	
N18/E18-Subgrade-1 (A2F0526-02)				**Matrix: Soil**		**Batch: 22F0622**		
% Solids	**70.6**	---	1.00	%	1	06/17/22 05:58	EPA 8000D	
N19/E7-Subgrade-1 (A2F0526-03)				**Matrix: Soil**		**Batch: 22F0622**		
% Solids	**81.1**	---	1.00	%	1	06/17/22 05:58	EPA 8000D	
N5/W24-Subgrade-1 (A2F0526-04)				**Matrix: Soil**		**Batch: 22F0622**		
% Solids	**77.4**	---	1.00	%	1	06/17/22 05:58	EPA 8000D	
E29/S6-Subgrade-1 (A2F0526-05)				**Matrix: Soil**		**Batch: 22F0622**		
% Solids	**87.4**	---	1.00	%	1	06/17/22 05:58	EPA 8000D	
N5/W13-Subgrade-1 (A2F0526-06)				**Matrix: Soil**		**Batch: 22F0622**		
% Solids	**78.5**	---	1.00	%	1	06/17/22 05:58	EPA 8000D	
N9/W13-Subgrade-1 (A2F0526-07)				**Matrix: Soil**		**Batch: 22F0622**		
% Solids	**78.9**	---	1.00	%	1	06/17/22 05:58	EPA 8000D	
N19/E10-Subgrade-1 (A2F0526-08)				**Matrix: Soil**		**Batch: 22F0622**		
% Solids	**81.4**	---	1.00	%	1	06/17/22 05:58	EPA 8000D	
N18/E5-Subgrade-1 (A2F0526-09)				**Matrix: Soil**		**Batch: 22F0622**		
% Solids	**74.0**	---	1.00	%	1	06/17/22 05:58	EPA 8000D	
N17/E9-Subgrade-1 (A2F0526-10)				**Matrix: Soil**		**Batch: 22F0622**		
% Solids	**80.9**	---	1.00	%	1	06/17/22 05:58	EPA 8000D	
E25/S6-Subgrade-1 (A2F0526-11)				**Matrix: Soil**		**Batch: 22F0622**		
% Solids	**87.4**	---	1.00	%	1	06/17/22 05:58	EPA 8000D	
N5/W16-Subgrade-1 (A2F0526-12)				**Matrix: Soil**		**Batch: 22F0622**		
% Solids	**79.1**	---	1.00	%	1	06/17/22 05:58	EPA 8000D	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22F0612 - NWTPH-HCID (Soil)							Soil					
Blank (22F0612-BLK1)			Prepared: 06/16/22 14:04 Analyzed: 06/16/22 21:26									
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		*Recovery: 100 %*	*Limits: 50-150 %*		*Dilution: 1x*							
4-Bromofluorobenzene (Surr)			*109 %*	*50-150 %*			*"*					
Duplicate (22F0612-DUP1)			Prepared: 06/16/22 14:04 Analyzed: 06/16/22 22:11									
QC Source Sample: Non-SDG (A2F0480-04)												
Gasoline Range Organics	ND	---	21.7	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	54.4	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	109	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery: 97 %*	*Limits: 50-150 %*		*Dilution: 1x*							
4-Bromofluorobenzene (Surr)			*104 %*	*50-150 %*			*"*					
Duplicate (22F0612-DUP2)			Prepared: 06/16/22 18:33 Analyzed: 06/17/22 03:46									
QC Source Sample: Non-SDG (A2F0595-02)												
Gasoline Range Organics	ND	---	24.0	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	**DET**	---	59.9	mg/kg dry	1	---	ND	---	---		30%	
Oil Range Organics	ND	---	120	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery: 121 %*	*Limits: 50-150 %*		*Dilution: 1x*							
4-Bromofluorobenzene (Surr)			*114 %*	*50-150 %*			*"*					
Batch 22F0675 - NWTPH-HCID (Soil)							Soil					
Blank (22F0675-BLK1)			Prepared: 06/17/22 16:57 Analyzed: 06/17/22 20:26									
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		*Recovery: 100 %*	*Limits: 50-150 %*		*Dilution: 1x*							
4-Bromofluorobenzene (Surr)			*113 %*	*50-150 %*			*"*					

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QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22F0675 - NWTPH-HCID (Soil)							Soil					
Duplicate (22F0675-DUP1)			Prepared: 06/17/22 16:57 Analyzed: 06/17/22 21:11									
QC Source Sample: N5/W13-Subgrade-1 (A2F0526-06)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	23.5	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	58.8	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	118	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 93 %*	*Limits: 50-150 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*101 %*	*50-150 %*			*"*					
Duplicate (22F0675-DUP2)			Prepared: 06/17/22 16:57 Analyzed: 06/18/22 00:56									
QC Source Sample: Non-SDG (A2F0614-02)												
Gasoline Range Organics	ND	---	26.0	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	65.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	130	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 100 %*	*Limits: 50-150 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*60 %*	*50-150 %*			*"*					

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ANALYTICAL REPORT

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22F0622 - Total Solids (Dry Weight)							**Soil**					
Duplicate (22F0622-DUP1)			Prepared: 06/16/22 16:43		Analyzed: 06/17/22 05:58							
QC Source Sample: Non-SDG (A2F0506-09)												
% Solids	**81.8**	---	1.00	%	1	---	81.5	---	---	0.4	10%	
Duplicate (22F0622-DUP2)			Prepared: 06/16/22 16:43		Analyzed: 06/17/22 05:58							
QC Source Sample: Non-SDG (A2F0506-10)												
% Solids	**72.2**	---	1.00	%	1	---	76.2	---	---	5	10%	
Duplicate (22F0622-DUP3)			Prepared: 06/16/22 16:43		Analyzed: 06/17/22 05:58							
QC Source Sample: Non-SDG (A2F0523-01)												
% Solids	**72.3**	---	1.00	%	1	---	72.0	---	---	0.5	10%	
Duplicate (22F0622-DUP4)			Prepared: 06/16/22 16:43		Analyzed: 06/17/22 05:58							
QC Source Sample: N5/W26-Subgrade-1 (A2F0526-01)												
EPA 8000D												
% Solids	**75.9**	---	1.00	%	1	---	77.2	---	---	2	10%	
Duplicate (22F0622-DUP5)			Prepared: 06/16/22 18:02		Analyzed: 06/17/22 05:58							
QC Source Sample: N18/E18-Subgrade-1 (A2F0526-02)												
EPA 8000D												
% Solids	**68.4**	---	1.00	%	1	---	70.6	---	---	3	10%	
Duplicate (22F0622-DUP6)			Prepared: 06/16/22 19:06		Analyzed: 06/17/22 05:58							
QC Source Sample: N19/E7-Subgrade-1 (A2F0526-03)												
EPA 8000D												
% Solids	**81.4**	---	1.00	%	1	---	81.1	---	---	0.3	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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SAMPLE PREPARATION INFORMATION

Hydrocarbon Identification Screen by NWTPH-HCID

Prep: NWTPH-HCID (Soil)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22F0612							
A2F0526-01	Soil	NWTPH-HCID	06/13/22 14:30	06/16/22 14:04	10.73g/10mL	10g/10mL	0.93
A2F0526-02	Soil	NWTPH-HCID	06/13/22 14:35	06/16/22 14:04	10.41g/10mL	10g/10mL	0.96
A2F0526-03	Soil	NWTPH-HCID	06/13/22 14:40	06/16/22 14:04	10.41g/10mL	10g/10mL	0.96
A2F0526-04	Soil	NWTPH-HCID	06/13/22 14:45	06/16/22 14:04	10.48g/10mL	10g/10mL	0.95
A2F0526-05	Soil	NWTPH-HCID	06/13/22 14:50	06/16/22 14:04	10.48g/10mL	10g/10mL	0.95
Batch: 22F0675							
A2F0526-06	Soil	NWTPH-HCID	06/13/22 14:55	06/17/22 16:57	10.66g/10mL	10g/10mL	0.94
A2F0526-07	Soil	NWTPH-HCID	06/13/22 15:00	06/17/22 16:57	10.63g/10mL	10g/10mL	0.94
A2F0526-08	Soil	NWTPH-HCID	06/13/22 15:05	06/17/22 16:57	10.55g/10mL	10g/10mL	0.95
A2F0526-09	Soil	NWTPH-HCID	06/13/22 15:10	06/17/22 16:57	10.62g/10mL	10g/10mL	0.94
A2F0526-10	Soil	NWTPH-HCID	06/13/22 15:15	06/17/22 16:57	10.35g/10mL	10g/10mL	0.97
A2F0526-11	Soil	NWTPH-HCID	06/13/22 15:20	06/17/22 16:57	10.22g/10mL	10g/10mL	0.98
A2F0526-12	Soil	NWTPH-HCID	06/13/22 15:25	06/17/22 16:57	10.52g/10mL	10g/10mL	0.95

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22F0622							
A2F0526-01	Soil	EPA 8000D	06/13/22 14:30	06/16/22 16:43			NA
A2F0526-02	Soil	EPA 8000D	06/13/22 14:35	06/16/22 16:43			NA
A2F0526-03	Soil	EPA 8000D	06/13/22 14:40	06/16/22 16:43			NA
A2F0526-04	Soil	EPA 8000D	06/13/22 14:45	06/16/22 16:43			NA
A2F0526-05	Soil	EPA 8000D	06/13/22 14:50	06/16/22 16:43			NA
A2F0526-06	Soil	EPA 8000D	06/13/22 14:55	06/16/22 16:43			NA
A2F0526-07	Soil	EPA 8000D	06/13/22 15:00	06/16/22 16:43			NA
A2F0526-08	Soil	EPA 8000D	06/13/22 15:05	06/16/22 16:43			NA
A2F0526-09	Soil	EPA 8000D	06/13/22 15:10	06/16/22 16:43			NA
A2F0526-10	Soil	EPA 8000D	06/13/22 15:15	06/16/22 16:43			NA
A2F0526-11	Soil	EPA 8000D	06/13/22 15:20	06/16/22 16:43			NA
A2F0526-12	Soil	EPA 8000D	06/13/22 15:25	06/16/22 16:43			NA

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ANALYTICAL REPORT

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202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0526 - 06 28 22 1706**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

There are No Qualifiers on Sample or QC Data for this report

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

Darrell Auvil, Client Services Manager

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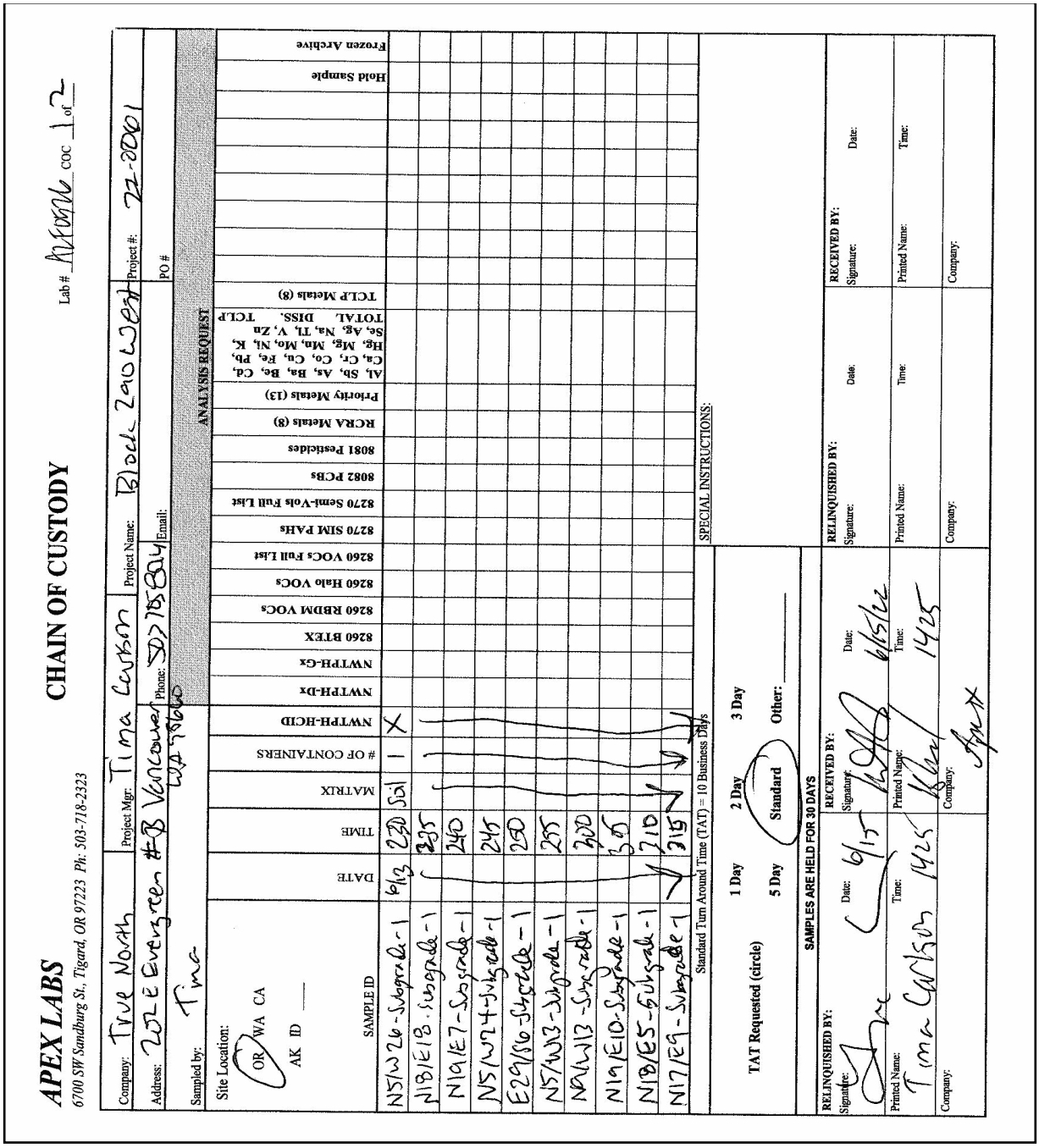
Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0526 - 06 28 22 1706**



APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # AFOSZ6 COC 1 of 2

Company: True North | Project Mgr: Tima Carlson | Project Name: Block 290 West | Project #: 22-0061
Address: 202 E Evergreen #B Vancouver WA 98660 | Phone: 503 785 8904 | Email: | PO #
Sampled by: Tima

Site Location: OR WA CA AK ID ___

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
N5/W26-Subgrade-1	6/13	230	Soil	1	X																
N18/E18-Subgrade-1		235																			
N19/E7-Subgrade-1		240																			
N5/W74-Subgrade-1		245																			
E29/S6-Subgrade-1		250																			
N5/W3-Subgrade-1		255																			
N6/W13-Subgrade-1		300																			
N19/E10-Subgrade-1		305																			
N18/E5-Subgrade-1		310																			
N17/E9-Subgrade-1		315																			

Standard Turn Around Time (TAT) = 10 Business Days

SPECIAL INSTRUCTIONS:

TAT Requested (circle): 1 Day | 2 Day | 3 Day | 5 Day | Standard | Other: ___

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY:	Date:	RECEIVED BY:	Date:	RELINQUISHED BY:	Date:	RECEIVED BY:	Date:
Signature:		Signature:		Signature:		Signature:	
Printed Name:	Time:	Printed Name:	Time:	Printed Name:	Time:	Printed Name:	Time:
Company:		Company:		Company:		Company:	

RELINQUISHED BY: Signature: Tima Carlson | Date: 6/15 | RECEIVED BY: Signature: | Date: 6/15/22
Printed Name: Tima Carlson | Time: 1425 | Printed Name: | Time: 1425
Company: | Company:

Apex Laboratories

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Darrell Auvil, Client Services Manager

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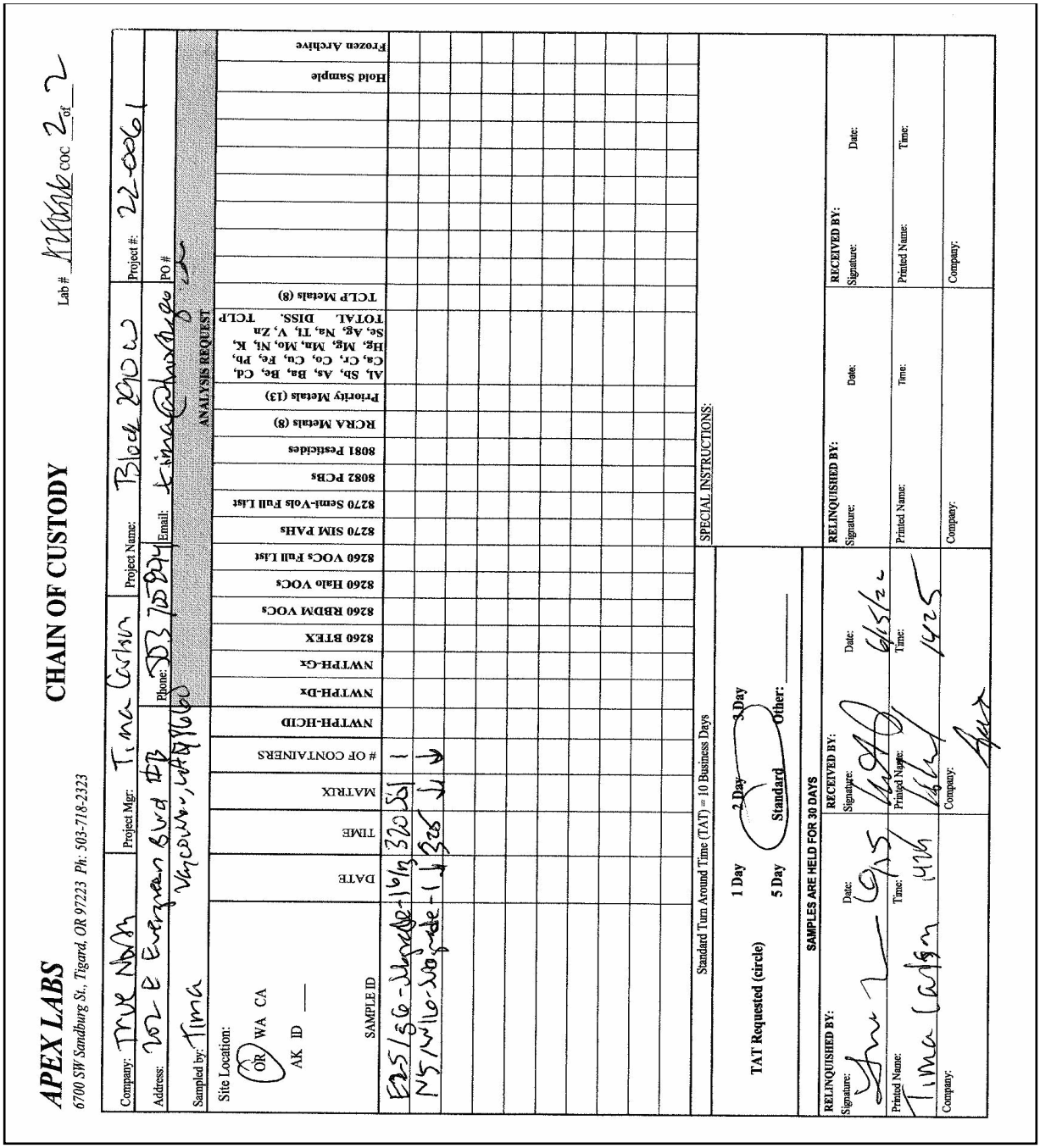
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0526 - 06 28 22 1706**



APEX LABS — **CHAIN OF CUSTODY** — Lab # _____ COC 2 of 2

6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

Company: True North — Project Mgr: Tima Carlson — Project Name: Block 290 — Project #: 22-0061

Address: 202 E Evergreen Blvd #B Vancouver, WA 98660 — Phone: 503 705 5934 — Email: tima@truenorthgeo.biz — PO #

Sampled by: Tima

Site Location: (OR) WA CA AK ID ___

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS
B25/S6-Undisturbed	6/16/22	3:20	SO	1
N5/W10-Undisturbed-1.5'	6/16/22	4:25	SO	1

ANALYSIS REQUEST

NWTPH-HCID | NWTPH-Dx | NWTPH-Gx | 8260 BTEX | 8260 RBDM VOCs | 8260 Halo VOCs | 8260 VOCs Full List | 8270 SIM PAHs | 8270 Semi-Vols Full List | 8082 PCBs | 8081 Pesticides | RCRA Metals (8) | Priority Metals (13) | Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP | TCLP Metals (8) | Hold Sample | Frozen Archive

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day 2 Day 3 Day 5 Day Standard Other: _____

SPECIAL INSTRUCTIONS:

SAMPLES ARE HELD FOR 30 DAYS

	RELINQUISHED BY:	RECEIVED BY:	Date:	Time:
Signature:				
Printed Name:				
Company:				

	RELINQUISHED BY:	RECEIVED BY:	Date:	Time:
Signature:				
Printed Name:				
Company:				

	RELINQUISHED BY:	RECEIVED BY:	Date:	Time:
Signature:				
Printed Name:				
Company:				

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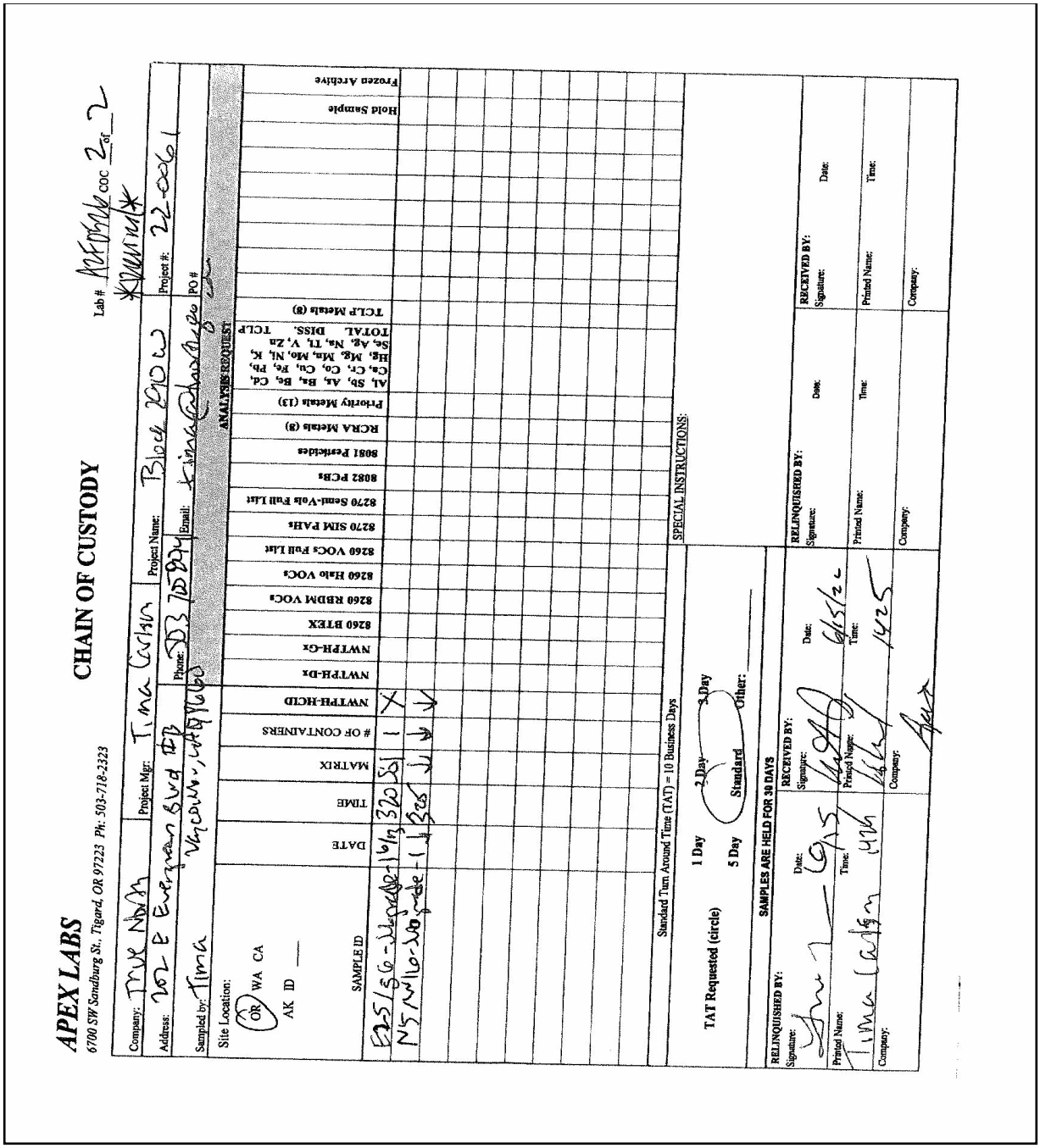

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True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0526 - 06 28 22 1706**

WO# A2F0526

COC/Container Discrepancies

COC Reads	Container Reads/Comments
N19/E7 - Subgrade - 1	N17/E9 - Subgrade - 1
N18/E5 - Subgrade - 1	N8/E15 - Subgrade - 1
N17/E9 - Subgrade - 1	N19/E7 - Subgrade - 1
	No time on conts.

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0526 - 06 28 22 1706**

APEX LABS COOLER RECEIPT FORM

Client: True North Element WO#: A2 F0526

Project/Project #: Block 290 West / 22-0061

Delivery Info:

Date/time received: 6/15/22 @ 1427 By: KMS

Delivered by: Apex____Client X ESS____FedEx____UPS____Swift____Senvoy ____SDS____Other_____

Cooler Inspection Date/time inspected: 6/15/22 @ 1427 By: KMS

Chain of Custody included? Yes X No _____ Custody seals? Yes_____ No X

Signed/dated by client? Yes X No _____

Signed/dated by Apex? Yes X No _____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	3.9						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	Y						
Ice type: (Gel/Real/Other)	Real						
Condition:	Good						

Cooler out of temp? (Y/N) Possible reason why:_____

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 6/15/22 @ 1445 By: KS

All samples intact? Yes X No ___ Comments:_____

Bottle labels/COCs agree? Yes ___ No X Comments: No time on Conts.

COC/container discrepancies form initiated? Yes X No ~~X~~ n 6/15

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: _____

Do VOA vials have visible headspace? Yes ___ No ___ NA X

Comments_____

Water samples: pH checked: Yes___No___NA X pH appropriate? Yes___No___NA X

Comments: _____

Additional information:_____

Labeled by: KS Witness: DDS Cooler Inspected by: KS

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Apex Laboratories, LLC
6700 S.W. Sandburg Street
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ORELAP ID: **OR100062**

ANALYTICAL REPORT

Monday, June 27, 2022

Tima Carlson
True North Geotechnical Services
202 E Evergreen Blvd, Suite B
Vancouver, WA 98660

RE: A2F0693 - Block 290 - 22-0061

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A2F0693, which was received by the laboratory on 6/21/2022 at 10:19:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	3.9 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0693 - 06 27 22 1647**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
E24/S1-Subgrade-1	A2F0693-01	Soil	06/20/22 10:00	06/21/22 10:19
E24/S4-Subgrade-1	A2F0693-02	Soil	06/20/22 10:05	06/21/22 10:19
S4-Subgrade-1	A2F0693-03	Soil	06/20/22 10:10	06/21/22 10:19
S1.5-15-1	A2F0693-04	Soil	06/20/22 10:15	06/21/22 10:19
S1.5-Subgrade-1	A2F0693-05	Soil	06/20/22 10:20	06/21/22 10:19
E24/S1-15-1	A2F0693-06	Soil	06/20/22 10:25	06/21/22 10:19
S4-15-1	A2F0693-07	Soil	06/20/22 10:30	06/21/22 10:19

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0693 - 06 27 22 1647**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
E24/S1-Subgrade-1 (A2F0693-01RE1)				**Matrix: Soil**		**Batch: 22F0904**		
Gasoline Range Organics	ND	---	23.0	mg/kg dry	1	06/24/22 23:46	NWTPH-HCID	
Diesel Range Organics	ND	---	57.5	mg/kg dry	1	06/24/22 23:46	NWTPH-HCID	
Oil Range Organics	ND	---	115	mg/kg dry	1	06/24/22 23:46	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*91 %*	*Limits: 50-150 %*	*1*	*06/24/22 23:46*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*101 %*	*50-150 %*	*1*	*06/24/22 23:46*	*NWTPH-HCID*	
E24/S4-Subgrade-1 (A2F0693-02)				**Matrix: Soil**		**Batch: 22F0868**		
Gasoline Range Organics	ND	---	23.9	mg/kg dry	1	06/23/22 22:52	NWTPH-HCID	
Diesel Range Organics	ND	---	59.6	mg/kg dry	1	06/23/22 22:52	NWTPH-HCID	
Oil Range Organics	ND	---	119	mg/kg dry	1	06/23/22 22:52	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*91 %*	*Limits: 50-150 %*	*1*	*06/23/22 22:52*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*96 %*	*50-150 %*	*1*	*06/23/22 22:52*	*NWTPH-HCID*	
S4-Subgrade-1 (A2F0693-03)				**Matrix: Soil**		**Batch: 22F0868**		
Gasoline Range Organics	ND	---	26.2	mg/kg dry	1	06/23/22 23:39	NWTPH-HCID	
Diesel Range Organics	ND	---	65.5	mg/kg dry	1	06/23/22 23:39	NWTPH-HCID	
Oil Range Organics	ND	---	131	mg/kg dry	1	06/23/22 23:39	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*95 %*	*Limits: 50-150 %*	*1*	*06/23/22 23:39*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*85 %*	*50-150 %*	*1*	*06/23/22 23:39*	*NWTPH-HCID*	
S1.5-15-1 (A2F0693-04)				**Matrix: Soil**		**Batch: 22F0868**		
Gasoline Range Organics	ND	---	23.5	mg/kg dry	1	06/24/22 00:02	NWTPH-HCID	
Diesel Range Organics	ND	---	58.7	mg/kg dry	1	06/24/22 00:02	NWTPH-HCID	
Oil Range Organics	ND	---	117	mg/kg dry	1	06/24/22 00:02	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*89 %*	*Limits: 50-150 %*	*1*	*06/24/22 00:02*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*92 %*	*50-150 %*	*1*	*06/24/22 00:02*	*NWTPH-HCID*	
S1.5-Subgrade-1 (A2F0693-05)				**Matrix: Soil**		**Batch: 22F0868**		
Gasoline Range Organics	ND	---	24.0	mg/kg dry	1	06/24/22 00:26	NWTPH-HCID	
Diesel Range Organics	ND	---	60.1	mg/kg dry	1	06/24/22 00:26	NWTPH-HCID	
Oil Range Organics	ND	---	120	mg/kg dry	1	06/24/22 00:26	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*82 %*	*Limits: 50-150 %*	*1*	*06/24/22 00:26*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*80 %*	*50-150 %*	*1*	*06/24/22 00:26*	*NWTPH-HCID*	

Apex Laboratories

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503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0693 - 06 27 22 1647**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
E24/S1-15-1 (A2F0693-06)				**Matrix: Soil**		**Batch: 22F0868**		
Gasoline Range Organics	ND	---	23.1	mg/kg dry	1	06/24/22 00:49	NWTPH-HCID	
Diesel Range Organics	ND	---	57.6	mg/kg dry	1	06/24/22 00:49	NWTPH-HCID	
Oil Range Organics	ND	---	115	mg/kg dry	1	06/24/22 00:49	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*85 %*	*Limits: 50-150 %*	*1*	*06/24/22 00:49*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*89 %*	*50-150 %*	*1*	*06/24/22 00:49*	*NWTPH-HCID*	
S4-15-1 (A2F0693-07)				**Matrix: Soil**		**Batch: 22F0868**		
Gasoline Range Organics	ND	---	25.7	mg/kg dry	1	06/24/22 01:13	NWTPH-HCID	
Diesel Range Organics	ND	---	64.1	mg/kg dry	1	06/24/22 01:13	NWTPH-HCID	
Oil Range Organics	ND	---	128	mg/kg dry	1	06/24/22 01:13	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*89 %*	*Limits: 50-150 %*	*1*	*06/24/22 01:13*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*74 %*	*50-150 %*	*1*	*06/24/22 01:13*	*NWTPH-HCID*	

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0693 - 06 27 22 1647**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
E24/S1-Subgrade-1 (A2F0693-01)				**Matrix: Soil**		**Batch: 22F0752**		
% Solids	**83.8**	---	1.00	%	1	06/22/22 05:51	EPA 8000D	
E24/S4-Subgrade-1 (A2F0693-02)				**Matrix: Soil**		**Batch: 22F0752**		
% Solids	**81.6**	---	1.00	%	1	06/22/22 05:51	EPA 8000D	
S4-Subgrade-1 (A2F0693-03)				**Matrix: Soil**		**Batch: 22F0752**		
% Solids	**73.9**	---	1.00	%	1	06/22/22 05:51	EPA 8000D	
S1.5-15-1 (A2F0693-04)				**Matrix: Soil**		**Batch: 22F0752**		
% Solids	**80.9**	---	1.00	%	1	06/22/22 05:51	EPA 8000D	
S1.5-Subgrade-1 (A2F0693-05)				**Matrix: Soil**		**Batch: 22F0752**		
% Solids	**83.0**	---	1.00	%	1	06/22/22 05:51	EPA 8000D	
E24/S1-15-1 (A2F0693-06)				**Matrix: Soil**		**Batch: 22F0752**		
% Solids	**84.4**	---	1.00	%	1	06/22/22 05:51	EPA 8000D	
S4-15-1 (A2F0693-07)				**Matrix: Soil**		**Batch: 22F0752**		
% Solids	**75.1**	---	1.00	%	1	06/22/22 05:51	EPA 8000D	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22F0868 - NWTPH-HCID (Soil)							Soil					
Blank (22F0868-BLK1)			Prepared: 06/23/22 15:57 Analyzed: 06/23/22 22:28									
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 95 %*	*Limits: 50-150 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*102 %*	*50-150 %*			*"*					
Duplicate (22F0868-DUP1)			Prepared: 06/23/22 15:57 Analyzed: 06/23/22 23:15									
QC Source Sample: E24/S4-Subgrade-1 (A2F0693-02)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	23.3	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	58.3	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	117	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 92 %*	*Limits: 50-150 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*91 %*	*50-150 %*			*"*					
Duplicate (22F0868-DUP2)			Prepared: 06/23/22 15:57 Analyzed: 06/24/22 08:18									
QC Source Sample: Non-SDG (A2F0717-02)												
Gasoline Range Organics	ND	---	25.2	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	62.9	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	126	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 83 %*	*Limits: 50-150 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*47 %*	*50-150 %*			*"*					S-06
Batch 22F0869 - NWTPH-HCID (Soil)							Soil					
Blank (22F0869-BLK1)			Prepared: 06/23/22 15:59 Analyzed: 06/24/22 11:22									
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 90 %*	*Limits: 50-150 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*92 %*	*50-150 %*			*"*					

Apex Laboratories

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0693 - 06 27 22 1647**

QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22F0869 - NWTPH-HCID (Soil)							**Soil**					
Duplicate (22F0869-DUP1)				Prepared: 06/23/22 15:59		Analyzed: 06/24/22 12:08						
QC Source Sample: E24/S1-Subgrade-1 (A2F0693-01)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	22.6	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	56.4	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	113	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 89 %*		*Limits: 50-150 %*			*Dilution: 1x*				
4-Bromofluorobenzene (Surr)			*37 %*		*50-150 %*			*"*				S-06

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202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0693 - 06 27 22 1647**

QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22F0904 - NWTPH-HCID (Soil)							Soil					
Blank (22F0904-BLK1)			Prepared: 06/24/22 12:55 Analyzed: 06/24/22 23:24									
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 98 %*	*Limits: 50-150 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*112 %*	*50-150 %*			*"*					
Duplicate (22F0904-DUP1)			Prepared: 06/24/22 12:55 Analyzed: 06/25/22 00:09									
QC Source Sample: E24/S1-Subgrade-1 (A2F0693-01RE1)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	22.4	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	55.9	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	112	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 84 %*	*Limits: 50-150 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*94 %*	*50-150 %*			*"*					

Apex Laboratories

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503-718-2323
ORELAP ID: OR100062

ANALYTICAL REPORT

True North Geotechnical Services	Project: Block 290	
202 E Evergreen Blvd, Suite B	Project Number: 22-0061	Report ID:
Vancouver, WA 98660	Project Manager: Tima Carlson	A2F0693 - 06 27 22 1647

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22F0752 - Total Solids (Dry Weight)							Soil					
Duplicate (22F0752-DUP1)			Prepared: 06/21/22 12:52		Analyzed: 06/22/22 05:51							
QC Source Sample: Non-SDG (A2F0534-01)												
% Solids	**85.7**	---	1.00	%	1	---	84.8	---	---	1	10%	
Duplicate (22F0752-DUP2)			Prepared: 06/21/22 12:52		Analyzed: 06/22/22 05:51							
QC Source Sample: Non-SDG (A2F0534-02)												
% Solids	**84.2**	---	1.00	%	1	---	81.9	---	---	3	10%	
Duplicate (22F0752-DUP3)			Prepared: 06/21/22 20:05		Analyzed: 06/22/22 05:51							
QC Source Sample: Non-SDG (A2F0719-01)												
% Solids	**73.9**	---	1.00	%	1	---	73.9	---	---	0.04	10%	
Duplicate (22F0752-DUP4)			Prepared: 06/21/22 20:05		Analyzed: 06/22/22 05:51							
QC Source Sample: Non-SDG (A2F0719-02)												
% Solids	**74.1**	---	1.00	%	1	---	73.9	---	---	0.3	10%	
Duplicate (22F0752-DUP5)			Prepared: 06/21/22 20:05		Analyzed: 06/22/22 05:51							
QC Source Sample: Non-SDG (A2F0720-01)												
% Solids	**92.4**	---	1.00	%	1	---	92.1	---	---	0.4	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0693 - 06 27 22 1647**

SAMPLE PREPARATION INFORMATION

Hydrocarbon Identification Screen by NWTPH-HCID

Prep: NWTPH-HCID (Soil)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22F0868							
A2F0693-02	Soil	NWTPH-HCID	06/20/22 10:05	06/23/22 15:57	10.27g/10mL	10g/10mL	0.97
A2F0693-03	Soil	NWTPH-HCID	06/20/22 10:10	06/23/22 15:57	10.33g/10mL	10g/10mL	0.97
A2F0693-04	Soil	NWTPH-HCID	06/20/22 10:15	06/23/22 15:57	10.52g/10mL	10g/10mL	0.95
A2F0693-05	Soil	NWTPH-HCID	06/20/22 10:20	06/23/22 15:57	10.03g/10mL	10g/10mL	1.00
A2F0693-06	Soil	NWTPH-HCID	06/20/22 10:25	06/23/22 15:57	10.28g/10mL	10g/10mL	0.97
A2F0693-07	Soil	NWTPH-HCID	06/20/22 10:30	06/23/22 15:57	10.38g/10mL	10g/10mL	0.96
Batch: 22F0904							
A2F0693-01RE1	Soil	NWTPH-HCID	06/20/22 10:00	06/24/22 12:55	10.37g/10mL	10g/10mL	0.96

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22F0752							
A2F0693-01	Soil	EPA 8000D	06/20/22 10:00	06/21/22 12:52			NA
A2F0693-02	Soil	EPA 8000D	06/20/22 10:05	06/21/22 12:52			NA
A2F0693-03	Soil	EPA 8000D	06/20/22 10:10	06/21/22 12:52			NA
A2F0693-04	Soil	EPA 8000D	06/20/22 10:15	06/21/22 12:52			NA
A2F0693-05	Soil	EPA 8000D	06/20/22 10:20	06/21/22 12:52			NA
A2F0693-06	Soil	EPA 8000D	06/20/22 10:25	06/21/22 12:52			NA
A2F0693-07	Soil	EPA 8000D	06/20/22 10:30	06/21/22 12:52			NA

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0693 - 06 27 22 1647**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

S-06 Surrogate recovery is outside of established control limits.

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0693 - 06 27 22 1647**

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

Apex Laboratories

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503-718-2323
ORELAP ID: **OR100062**

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0693 - 06 27 22 1647**

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

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Darrell Auvil, Client Services Manager

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503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0693 - 06 27 22 1647**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

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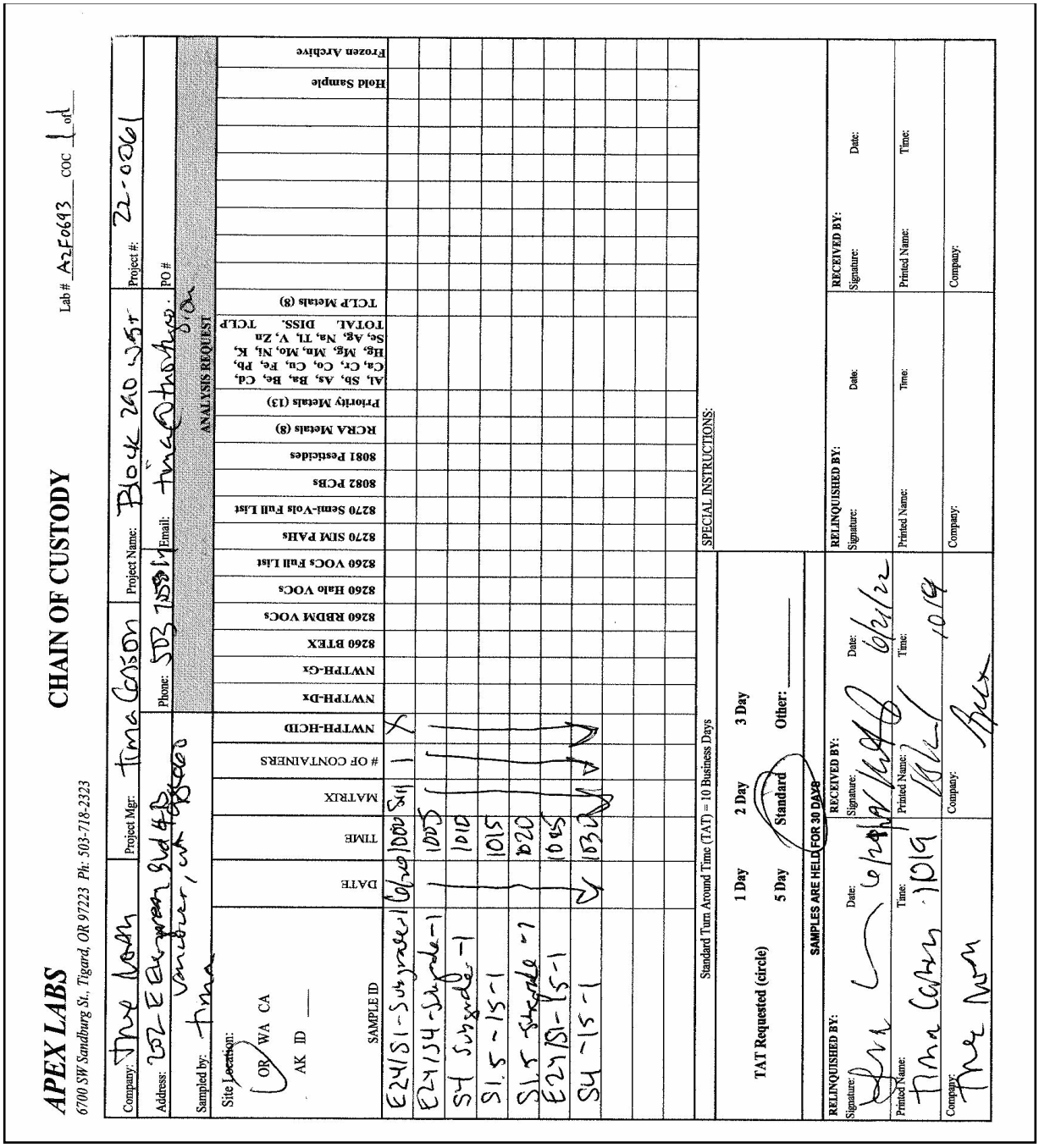
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0693 - 06 27 22 1647**



APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # A2F0693 COC 1 of 1

Company: True North | Project Mgr: Tima Carlson | Project Name: Block 290 | Project #: 22-0061
Address: 202 E Evergreen Blvd #B Vancouver, WA 98660 | Phone: 503 7859 | Email: tima@truenorthgeo.biz | PO #
Sampled by: Tima
Site Location: OR WA CA AK ID

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
E24151-Surface-1	6/26/22	1000	Soil	1	X																
E24154-Surface-1		1005																			
S4 Surface-1		1010																			
S1.5-15-1		1015																			
S1.5 Surface-1		820																			
E24151-15-1		1045																			
S4-15-1		1020																			

SPECIAL INSTRUCTIONS:

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day | 2 Day | 3 Day | 5 Day | Standard | Other: ____

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature:	Signature:	Signature:	Signature:
Date: 6/26/22	Date: 6/27/22	Date:	Date:
Time: 1019	Time: 1019	Time:	Time:
Printed Name: Tima Carlson	Printed Name:	Printed Name:	Printed Name:
Company: True North	Company: Apex	Company:	Company:

Apex Laboratories

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503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2F0693 - 06 27 22 1647**

APEX LABS COOLER RECEIPT FORM

Client: True North Element WO#: A2F0693

Project/Project #: Block 290 West / 22-0061

Delivery Info:

Date/time received: 6/21/22 @ 1019 By: KMO

Delivered by: Apex____Client X ESS____FedEx____UPS____Swift___Senvoy ___SDS___Other_____

Cooler Inspection Date/time inspected: 6/21/22 @ 1023 By: KMO

Chain of Custody included? Yes X No _____ Custody seals? Yes_____ No X

Signed/dated by client? Yes X No _____

Signed/dated by Apex? Yes X No _____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	3.9						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	N						
Ice type: (Gel/Real/Other)	Real						
Condition:	Good						

Cooler out of temp? (Y/N) Possible reason why: _____

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 6-21-22 @ 1012 By: DJS

All samples intact? Yes X No ___ Comments: _____

Bottle labels/COCs agree? Yes X No ___ Comments: No Times on containers

COC/container discrepancies form initiated? Yes ___ No X

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: _____

Do VOA vials have visible headspace? Yes ___ No ___ NA X

Comments _____

Water samples: pH checked: Yes___No___NA X pH appropriate? Yes___No___NA X

Comments: _____

Additional information: _____

Labeled by: DJS Witness: [signature] Cooler Inspected by: DJS

Apex Laboratories

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Monday, October 10, 2022

Tima Carlson
True North Geotechnical Services
202 E Evergreen Blvd, Suite B
Vancouver, WA 98660

RE: A2J0182 - Block 290 - 22-0061

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A2J0182, which was received by the laboratory on 10/5/2022 at 1:30:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: cobrien@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	3.2 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

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Cameron O'Brien For Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2J0182 - 10 10 22 1644**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SE Crnr+5-2.5+1	A2J0182-01	Soil	10/05/22 12:10	10/05/22 13:30
W26+3-4-1	A2J0182-02	Soil	10/05/22 12:15	10/05/22 13:30
W Ctr+3-3-1	A2J0182-03	Soil	10/05/22 12:20	10/05/22 13:30
S Ctr+5-3.5-1	A2J0182-04	Soil	10/05/22 12:25	10/05/22 13:30
NW Corner+3-4-1	A2J0182-05	Soil	10/05/22 12:30	10/05/22 13:30
N1+3-4-1	A2J0182-06	Soil	10/05/22 12:35	10/05/22 13:30
SW Crnr+3-5-1	A2J0182-07	Soil	10/05/22 12:40	10/05/22 13:30

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Cameron O'Brien For Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2J0182 - 10 10 22 1644**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
SE Crnr+5-2.5+1 (A2J0182-01)				**Matrix: Soil**		**Batch: 22J0285**		
Gasoline Range Organics	ND	---	24.5	mg/kg dry	1	10/08/22 02:16	NWTPH-HCID	
Diesel Range Organics	ND	---	61.3	mg/kg dry	1	10/08/22 02:16	NWTPH-HCID	
Oil Range Organics	ND	---	123	mg/kg dry	1	10/08/22 02:16	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*95 %*	*Limits: 50-150 %*	*1*	*10/08/22 02:16*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*90 %*	*50-150 %*	*1*	*10/08/22 02:16*	*NWTPH-HCID*	
W26+3-4-1 (A2J0182-02)				**Matrix: Soil**		**Batch: 22J0285**		
Gasoline Range Organics	ND	---	27.4	mg/kg dry	1	10/08/22 03:02	NWTPH-HCID	
Diesel Range Organics	ND	---	68.5	mg/kg dry	1	10/08/22 03:02	NWTPH-HCID	
Oil Range Organics	ND	---	137	mg/kg dry	1	10/08/22 03:02	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*85 %*	*Limits: 50-150 %*	*1*	*10/08/22 03:02*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*78 %*	*50-150 %*	*1*	*10/08/22 03:02*	*NWTPH-HCID*	
W Ctr+3-3-1 (A2J0182-03)				**Matrix: Soil**		**Batch: 22J0285**		
Gasoline Range Organics	ND	---	23.3	mg/kg dry	1	10/08/22 03:26	NWTPH-HCID	
Diesel Range Organics	ND	---	58.3	mg/kg dry	1	10/08/22 03:26	NWTPH-HCID	
Oil Range Organics	ND	---	117	mg/kg dry	1	10/08/22 03:26	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*77 %*	*Limits: 50-150 %*	*1*	*10/08/22 03:26*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*78 %*	*50-150 %*	*1*	*10/08/22 03:26*	*NWTPH-HCID*	
S Ctr+5-3.5-1 (A2J0182-04)				**Matrix: Soil**		**Batch: 22J0285**		
Gasoline Range Organics	ND	---	23.4	mg/kg dry	1	10/08/22 03:49	NWTPH-HCID	
Diesel Range Organics	ND	---	58.6	mg/kg dry	1	10/08/22 03:49	NWTPH-HCID	
Oil Range Organics	ND	---	117	mg/kg dry	1	10/08/22 03:49	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*85 %*	*Limits: 50-150 %*	*1*	*10/08/22 03:49*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*81 %*	*50-150 %*	*1*	*10/08/22 03:49*	*NWTPH-HCID*	
NW Corner+3-4-1 (A2J0182-05)				**Matrix: Soil**		**Batch: 22J0285**		
Gasoline Range Organics	ND	---	26.5	mg/kg dry	1	10/08/22 04:12	NWTPH-HCID	
Diesel Range Organics	ND	---	66.2	mg/kg dry	1	10/08/22 04:12	NWTPH-HCID	
Oil Range Organics	ND	---	132	mg/kg dry	1	10/08/22 04:12	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*86 %*	*Limits: 50-150 %*	*1*	*10/08/22 04:12*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*77 %*	*50-150 %*	*1*	*10/08/22 04:12*	*NWTPH-HCID*	
N1+3-4-1 (A2J0182-06)				**Matrix: Soil**		**Batch: 22J0285**		
Gasoline Range Organics	ND	---	25.4	mg/kg dry	1	10/08/22 04:35	NWTPH-HCID	
Diesel Range Organics	ND	---	63.5	mg/kg dry	1	10/08/22 04:35	NWTPH-HCID	

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2J0182 - 10 10 22 1644**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
N1+3-4-1 (A2J0182-06)				**Matrix: Soil**		**Batch: 22J0285**		
Oil Range Organics	ND	---	127	mg/kg dry	1	10/08/22 04:35	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*82 %*	*Limits: 50-150 %*	*1*	*10/08/22 04:35*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*71 %*	*50-150 %*	*1*	*10/08/22 04:35*	*NWTPH-HCID*	
SW Crnr+3-5-1 (A2J0182-07)				**Matrix: Soil**		**Batch: 22J0285**		
Gasoline Range Organics	ND	---	21.9	mg/kg dry	1	10/08/22 04:59	NWTPH-HCID	
Diesel Range Organics	ND	---	54.8	mg/kg dry	1	10/08/22 04:59	NWTPH-HCID	
Oil Range Organics	ND	---	110	mg/kg dry	1	10/08/22 04:59	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*84 %*	*Limits: 50-150 %*	*1*	*10/08/22 04:59*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*76 %*	*50-150 %*	*1*	*10/08/22 04:59*	*NWTPH-HCID*	

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202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2J0182 - 10 10 22 1644**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
SE Crnr+5-2.5+1 (A2J0182-01)				**Matrix: Soil**		**Batch: 22J0284**		
% Solids	**76.0**	---	1.00	%	1	10/08/22 10:18	EPA 8000D	
W26+3-4-1 (A2J0182-02)				**Matrix: Soil**		**Batch: 22J0284**		
% Solids	**72.7**	---	1.00	%	1	10/08/22 10:18	EPA 8000D	
W Ctr+3-3-1 (A2J0182-03)				**Matrix: Soil**		**Batch: 22J0284**		
% Solids	**82.6**	---	1.00	%	1	10/08/22 10:18	EPA 8000D	
S Ctr+5-3.5-1 (A2J0182-04)				**Matrix: Soil**		**Batch: 22J0284**		
% Solids	**82.0**	---	1.00	%	1	10/08/22 10:18	EPA 8000D	
NW Corner+3-4-1 (A2J0182-05)				**Matrix: Soil**		**Batch: 22J0284**		
% Solids	**74.1**	---	1.00	%	1	10/08/22 10:18	EPA 8000D	
N1+3-4-1 (A2J0182-06)				**Matrix: Soil**		**Batch: 22J0284**		
% Solids	**77.4**	---	1.00	%	1	10/08/22 10:18	EPA 8000D	
SW Crnr+3-5-1 (A2J0182-07)				**Matrix: Soil**		**Batch: 22J0284**		
% Solids	**89.9**	---	1.00	%	1	10/08/22 10:18	EPA 8000D	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22J0285 - NWTPH-HCID (Soil)							Soil					
Blank (22J0285-BLK1)		Prepared: 10/07/22 13:24 Analyzed: 10/08/22 01:52										
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 83 %*	*Limits: 50-150 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*77 %*	*50-150 %*			*"*					
Duplicate (22J0285-DUP1)		Prepared: 10/07/22 13:24 Analyzed: 10/08/22 02:39										
QC Source Sample: SE Crnr+5-2.5+1 (A2J0182-01)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	24.2	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	60.5	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	121	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 83 %*	*Limits: 50-150 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*78 %*	*50-150 %*			*"*					

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2J0182 - 10 10 22 1644**

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22J0284 - Total Solids (Dry Weight)												**Soil**
Duplicate (22J0284-DUP1)		Prepared: 10/07/22 13:22		Analyzed: 10/08/22 10:18								
QC Source Sample: SE Crnr+5-2.5+1 (A2J0182-01)												
EPA 8000D												
% Solids	**76.7**	---	1.00	%	1	---	76.0	---	---	0.8	10%	
Duplicate (22J0284-DUP2)		Prepared: 10/07/22 13:22		Analyzed: 10/08/22 10:18								
QC Source Sample: W26+3-4-1 (A2J0182-02)												
EPA 8000D												
% Solids	**73.5**	---	1.00	%	1	---	72.7	---	---	1	10%	
Duplicate (22J0284-DUP3)		Prepared: 10/07/22 13:22		Analyzed: 10/08/22 10:18								
QC Source Sample: W Ctr+3-3-1 (A2J0182-03)												
EPA 8000D												
% Solids	**82.1**	---	1.00	%	1	---	82.6	---	---	0.7	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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SAMPLE PREPARATION INFORMATION

Hydrocarbon Identification Screen by NWTPH-HCID

Prep: NWTPH-HCID (Soil)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22J0285							
A2J0182-01	Soil	NWTPH-HCID	10/05/22 12:10	10/07/22 13:24	10.73g/10mL	10g/10mL	0.93
A2J0182-02	Soil	NWTPH-HCID	10/05/22 12:15	10/07/22 13:24	10.03g/10mL	10g/10mL	1.00
A2J0182-03	Soil	NWTPH-HCID	10/05/22 12:20	10/07/22 13:24	10.39g/10mL	10g/10mL	0.96
A2J0182-04	Soil	NWTPH-HCID	10/05/22 12:25	10/07/22 13:24	10.41g/10mL	10g/10mL	0.96
A2J0182-05	Soil	NWTPH-HCID	10/05/22 12:30	10/07/22 13:24	10.2g/10mL	10g/10mL	0.98
A2J0182-06	Soil	NWTPH-HCID	10/05/22 12:35	10/07/22 13:24	10.17g/10mL	10g/10mL	0.98
A2J0182-07	Soil	NWTPH-HCID	10/05/22 12:40	10/07/22 13:24	10.14g/10mL	10g/10mL	0.99

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22J0284							
A2J0182-01	Soil	EPA 8000D	10/05/22 12:10	10/07/22 13:22			NA
A2J0182-02	Soil	EPA 8000D	10/05/22 12:15	10/07/22 13:22			NA
A2J0182-03	Soil	EPA 8000D	10/05/22 12:20	10/07/22 13:22			NA
A2J0182-04	Soil	EPA 8000D	10/05/22 12:25	10/07/22 13:22			NA
A2J0182-05	Soil	EPA 8000D	10/05/22 12:30	10/07/22 13:22			NA
A2J0182-06	Soil	EPA 8000D	10/05/22 12:35	10/07/22 13:22			NA
A2J0182-07	Soil	EPA 8000D	10/05/22 12:40	10/07/22 13:22			NA

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ANALYTICAL REPORT

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202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2J0182 - 10 10 22 1644**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

There are No Qualifiers on Sample or QC Data for this report

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported.

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) are not included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation)
EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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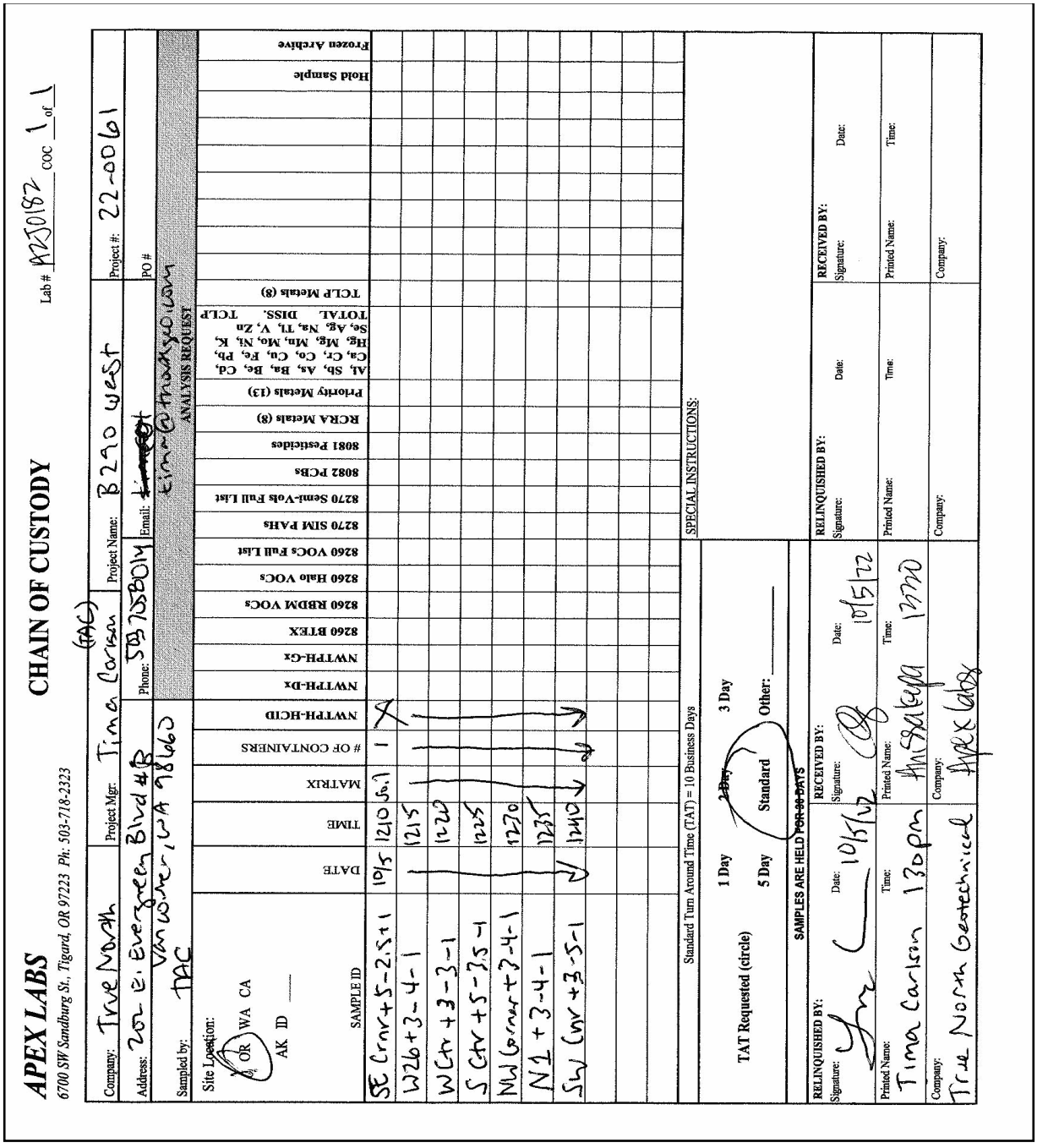
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2J0182 - 10 10 22 1644**



APEX LABS — 6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # A2J0182 COC 1 of 1

Company: True North (PAC) | Project Mgr: Tima Carlson | Project Name: B290 West | Project #: 22-0061
Address: 202 E. Evergreen Blvd #B, Vancouver, WA 98660 | Phone: 503.705.8014 | Email: ~~tima@~~tncarlson.com | PO #
Sampled by: TAC

Site Location: OR WA CA AK ID ____

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn	TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
SE Corner +5-2.5-1	10/5	1210	Soil	1	X																	
W26+3-4-1		1215		1																		
W Cor +3-3-1		1220		1																		
S Cor +5-2.5-1		1225		1																		
NW Corner +3-4-1		1230		1																		
N1 + 3-4-1		1235		1																		
S1/4 Cor +3-5-1		1240		1																		

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day ~~2 Day~~ 3 Day | 5 Day Standard Other: ____

SAMPLES ARE HELD FOR 30 DAYS

SPECIAL INSTRUCTIONS:

RELINQUISHED BY:	Date:	Time:	RECEIVED BY:	Date:	Time:
Signature:	10/5/22		Signature:		
Printed Name:		1730	Printed Name:		1730
Company:	True North Geotechnical		Company:	Apex Labs	

RELINQUISHED BY:	Date:	Time:	RECEIVED BY:	Date:	Time:
Signature:			Signature:		
Printed Name:			Printed Name:		
Company:			Company:		

RELINQUISHED BY:	Date:	Time:	RECEIVED BY:	Date:	Time:
Signature:			Signature:		
Printed Name:			Printed Name:		
Company:			Company:		

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Cameron O'Brien For Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2J0182 - 10 10 22 1644**

APEX LABS COOLER RECEIPT FORM

Client: True North Element WO#: A2 J0182

Project/Project #: B290 West #22-0061

Delivery Info:

Date/time received: 10/5/22 @ 1330 By: AKK

Delivered by: Apex____Client X ESS____FedEx____UPS____Swift____Senvoy ___SDS___Other_____

Cooler Inspection Date/time inspected: 10/5/22 @ 1330 By: AKK

Chain of Custody included? Yes X No _____ Custody seals? Yes_____ No X

Signed/dated by client? Yes X No _____

Signed/dated by Apex? Yes X No _____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	3.2						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	N						
Ice type: (Gel/Real/Other)	Real						
Condition (In/Out):	In						

Cooler out of temp? (Y/N) Possible reason why:_____

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 10/6/22 @ 1930 By: AKK

All samples intact? Yes X No ___ Comments:_____

Bottle labels/COCs agree? Yes X No ___ Comments: _____

COC/container discrepancies form initiated? Yes ___ No X

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: _____

Do VOA vials have visible headspace? Yes ___ No ___ NA X

Comments_____

Water samples: pH checked: Yes___No___NA X pH appropriate? Yes___No___NA X

Comments: _____

Additional information: _____

Labeled by: AKK Witness: AKAM Cooler Inspected by: JKM

Form Y-003 R-00

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Apex Laboratories, LLC
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ORELAP ID: **OR100062**

ANALYTICAL REPORT

Monday, November 14, 2022

Tima Carlson
True North Geotechnical Services
202 E Evergreen Blvd, Suite B
Vancouver, WA 98660

RE: A2J0959 - Block 290 - 22-0061

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A2J0959, which was received by the laboratory on 10/28/2022 at 2:28:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	3.2 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2J0959 - 11 14 22 1016**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TN S-1	A2J0959-01	Soil	10/28/22 11:30	10/28/22 14:28
TN S-2	A2J0959-02	Soil	10/28/22 11:30	10/28/22 14:28
TN S-3	A2J0959-03	Soil	10/28/22 11:30	10/28/22 14:28
TN S-4	A2J0959-04	Soil	10/28/22 11:30	10/28/22 14:28

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Darrell Auvil, Client Services Manager

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503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2J0959 - 11 14 22 1016**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
TN S-1 (A2J0959-01)				**Matrix: Soil**		**Batch: 22K0033**		
Gasoline Range Organics	ND	---	25.0	mg/kg dry	1	11/02/22 03:41	NWTPH-HCID	
Diesel Range Organics	ND	---	62.4	mg/kg dry	1	11/02/22 03:41	NWTPH-HCID	
Oil Range Organics	ND	---	125	mg/kg dry	1	11/02/22 03:41	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*83 %*	*Limits: 50-150 %*	*1*	*11/02/22 03:41*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*80 %*	*50-150 %*	*1*	*11/02/22 03:41*	*NWTPH-HCID*	
TN S-2 (A2J0959-02)				**Matrix: Soil**		**Batch: 22K0033**		
Gasoline Range Organics	ND	---	24.1	mg/kg dry	1	11/02/22 05:37	NWTPH-HCID	
Diesel Range Organics	ND	---	60.3	mg/kg dry	1	11/02/22 05:37	NWTPH-HCID	
Oil Range Organics	ND	---	121	mg/kg dry	1	11/02/22 05:37	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*74 %*	*Limits: 50-150 %*	*1*	*11/02/22 05:37*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*80 %*	*50-150 %*	*1*	*11/02/22 05:37*	*NWTPH-HCID*	
TN S-3 (A2J0959-03)				**Matrix: Soil**		**Batch: 22K0033**		
Gasoline Range Organics	ND	---	24.4	mg/kg dry	1	11/02/22 06:00	NWTPH-HCID	
Diesel Range Organics	**DET**	---	61.0	mg/kg dry	1	11/02/22 06:00	NWTPH-HCID	F-11
Oil Range Organics	**DET**	---	122	mg/kg dry	1	11/02/22 06:00	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*71 %*	*Limits: 50-150 %*	*1*	*11/02/22 06:00*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*75 %*	*50-150 %*	*1*	*11/02/22 06:00*	*NWTPH-HCID*	
TN S-4 (A2J0959-04)				**Matrix: Soil**		**Batch: 22K0033**		
Gasoline Range Organics	ND	---	26.5	mg/kg dry	1	11/02/22 04:27	NWTPH-HCID	
Diesel Range Organics	ND	---	66.4	mg/kg dry	1	11/02/22 04:27	NWTPH-HCID	
Oil Range Organics	ND	---	133	mg/kg dry	1	11/02/22 04:27	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*74 %*	*Limits: 50-150 %*	*1*	*11/02/22 04:27*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*70 %*	*50-150 %*	*1*	*11/02/22 04:27*	*NWTPH-HCID*	

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2J0959 - 11 14 22 1016**

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
TN S-3 (A2J0959-03)				**Matrix: Soil**		**Batch: 22K0368**		
Diesel	ND	---	480	mg/kg dry	20	11/10/22 22:44	NWTPH-Dx	
Oil	**4190**	---	961	mg/kg dry	20	11/10/22 22:44	NWTPH-Dx	**Q-42**
Surrogate: o-Terphenyl (Surr)			*Recovery: %*	*Limits: 50-150 %*	*20*	*11/10/22 22:44*	*NWTPH-Dx*	*S-01*

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2J0959 - 11 14 22 1016**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
TN S-1 (A2J0959-01)				**Matrix: Soil**		**Batch: 22J1162**		
% Solids	**76.9**	---	1.00	%	1	10/29/22 12:23	EPA 8000D	
TN S-2 (A2J0959-02)				**Matrix: Soil**		**Batch: 22J1162**		
% Solids	**76.5**	---	1.00	%	1	10/29/22 12:23	EPA 8000D	
TN S-3 (A2J0959-03)				**Matrix: Soil**		**Batch: 22J1162**		
% Solids	**80.9**	---	1.00	%	1	10/29/22 12:23	EPA 8000D	
TN S-4 (A2J0959-04)				**Matrix: Soil**		**Batch: 22J1162**		
% Solids	**74.7**	---	1.00	%	1	10/29/22 12:23	EPA 8000D	

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2J0959 - 11 14 22 1016**

QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22K0033 - NWTPH-HCID (Soil)							Soil					
Blank (22K0033-BLK1)			Prepared: 11/01/22 13:46 Analyzed: 11/02/22 01:45									
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		*Recovery:*	*78 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
4-Bromofluorobenzene (Surr)			*81 %*		*50-150 %*			*"*				
Duplicate (22K0033-DUP1)			Prepared: 11/01/22 13:46 Analyzed: 11/02/22 04:04									
QC Source Sample: TN S-1 (A2J0959-01)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	25.5	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	63.7	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	127	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery:*	*83 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
4-Bromofluorobenzene (Surr)			*77 %*		*50-150 %*			*"*				

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2J0959 - 11 14 22 1016**

QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22K0368 - EPA 3546 (Fuels)							**Soil**					
Blank (22K0368-BLK1)			Prepared: 11/10/22 05:06		Analyzed: 11/10/22 21:58							
NWTPH-Dx												
Diesel	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	36.4	mg/kg wet	1	---	---	---	---	---	---	
Mineral Oil	ND	---	36.4	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 77 %*		*Limits: 50-150 %*			*Dilution: 1x*				
LCS (22K0368-BS1)			Prepared: 11/10/22 05:06		Analyzed: 11/10/22 22:21							
NWTPH-Dx												
Diesel	110	---	20.0	mg/kg wet	1	125	---	88	38-132%	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 83 %*		*Limits: 50-150 %*			*Dilution: 1x*				
Duplicate (22K0368-DUP1)			Prepared: 11/10/22 05:06		Analyzed: 11/11/22 08:44							
QC Source Sample: Non-SDG (A2K0428-01)												
Diesel	**143**	---	23.0	mg/kg dry	1	---	62.0	---	---	**79**	**30%**	Q-05
Oil	ND	---	46.0	mg/kg dry	1	---	ND	---	---	---	30%	
Mineral Oil	ND	---	46.0	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 51 %*		*Limits: 50-150 %*			*Dilution: 1x*				
Duplicate (22K0368-DUP2)			Prepared: 11/10/22 07:24		Analyzed: 11/10/22 23:08							
QC Source Sample: TN S-3 (A2J0959-03)												
NWTPH-Dx												
Diesel	ND	---	485	mg/kg dry	20	---	ND	---	---	---	30%	
Oil	**1200**	---	969	mg/kg dry	20	---	4190	---	---	**111**	**30%**	Q-17
Mineral Oil	ND	---	969	mg/kg dry	20	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*Recovery: %*		*Limits: 50-150 %*			*Dilution: 20x*				S-01

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ANALYTICAL REPORT

True North Geotechnical Services	Project: Block 290	
202 E Evergreen Blvd, Suite B	Project Number: 22-0061	Report ID:
Vancouver, WA 98660	Project Manager: Tima Carlson	A2J0959 - 11 14 22 1016

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22J1162 - Total Solids (Dry Weight)							**Soil**					
Duplicate (22J1162-DUP1)			Prepared: 10/28/22 12:55		Analyzed: 10/29/22 12:23							**PRO**
QC Source Sample: Non-SDG (A2J0762-02)												
% Solids	**98.3**	---	1.00	%	1	---	98.3	---	---	0.01	10%	
Duplicate (22J1162-DUP2)			Prepared: 10/28/22 12:55		Analyzed: 10/29/22 12:23							**PRO**
QC Source Sample: Non-SDG (A2J0762-04)												
% Solids	**98.0**	---	1.00	%	1	---	98.1	---	---	0.07	10%	
Duplicate (22J1162-DUP3)			Prepared: 10/28/22 12:55		Analyzed: 10/29/22 12:23							**PRO**
QC Source Sample: Non-SDG (A2J0762-06)												
% Solids	**98.0**	---	1.00	%	1	---	98.1	---	---	0.03	10%	
Duplicate (22J1162-DUP4)			Prepared: 10/28/22 12:55		Analyzed: 10/29/22 12:23							
QC Source Sample: Non-SDG (A2J0861-01)												
% Solids	**82.3**	---	1.00	%	1	---	80.6	---	---	2	10%	
Duplicate (22J1162-DUP5)			Prepared: 10/28/22 12:55		Analyzed: 10/29/22 12:23							
QC Source Sample: Non-SDG (A2J0861-03)												
% Solids	**75.3**	---	1.00	%	1	---	80.4	---	---	7	10%	
Duplicate (22J1162-DUP6)			Prepared: 10/28/22 12:55		Analyzed: 10/29/22 12:23							
QC Source Sample: Non-SDG (A2J0861-05)												
% Solids	**72.8**	---	1.00	%	1	---	81.1	---	---	**11**	**10%**	Q-04
Duplicate (22J1162-DUP7)			Prepared: 10/28/22 19:38		Analyzed: 10/29/22 12:23							
QC Source Sample: Non-SDG (A2J0957-02)												
% Solids	**90.9**	---	1.00	%	1	---	91.5	---	---	0.6	10%	
Duplicate (22J1162-DUP8)			Prepared: 10/28/22 19:38		Analyzed: 10/29/22 12:23							
QC Source Sample: Non-SDG (A2J0968-01)												
% Solids	**91.3**	---	1.00	%	1	---	91.5	---	---	0.2	10%	

Apex Laboratories

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ORELAP ID: OR100062

ANALYTICAL REPORT

True North Geotechnical Services	Project: Block 290	
202 E Evergreen Blvd, Suite B	Project Number: 22-0061	Report ID:
Vancouver, WA 98660	Project Manager: Tima Carlson	A2J0959 - 11 14 22 1016

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22J1162 - Total Solids (Dry Weight)							Soil					
Duplicate (22J1162-DUP9)			Prepared: 10/28/22 19:38		Analyzed: 10/29/22 12:23							
QC Source Sample: Non-SDG (A2J0968-02)												
% Solids	**90.4**	---	1.00	%	1	---	90.3	---	---	0.1	10%	
Duplicate (22J1162-DUPA)			Prepared: 10/28/22 19:38		Analyzed: 10/29/22 12:23							
QC Source Sample: Non-SDG (A2J0971-01)												
% Solids	**92.5**	---	1.00	%	1	---	92.7	---	---	0.1	10%	
Duplicate (22J1162-DUPB)			Prepared: 10/28/22 19:38		Analyzed: 10/29/22 12:23							
QC Source Sample: Non-SDG (A2J0971-02)												
% Solids	**92.3**	---	1.00	%	1	---	92.3	---	---	0.07	10%	
Duplicate (22J1162-DUPC)			Prepared: 10/28/22 19:38		Analyzed: 10/29/22 12:23							
QC Source Sample: Non-SDG (A2J0971-03)												
% Solids	**92.5**	---	1.00	%	1	---	92.4	---	---	0.01	10%	
Duplicate (22J1162-DUPD)			Prepared: 10/28/22 19:38		Analyzed: 10/29/22 12:23							
QC Source Sample: Non-SDG (A2J0971-04)												
% Solids	**92.4**	---	1.00	%	1	---	92.4	---	---	0.03	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Darrell Auvil, Client Services Manager

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Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2J0959 - 11 14 22 1016**

SAMPLE PREPARATION INFORMATION

Hydrocarbon Identification Screen by NWTPH-HCID

Prep: NWTPH-HCID (Soil)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22K0033							
A2J0959-01	Soil	NWTPH-HCID	10/28/22 11:30	11/01/22 13:46	10.42g/10mL	10g/10mL	0.96
A2J0959-02	Soil	NWTPH-HCID	10/28/22 11:30	11/01/22 13:46	10.84g/10mL	10g/10mL	0.92
A2J0959-03	Soil	NWTPH-HCID	10/28/22 11:30	11/01/22 13:46	10.13g/10mL	10g/10mL	0.99
A2J0959-04	Soil	NWTPH-HCID	10/28/22 11:30	11/01/22 13:46	10.08g/10mL	10g/10mL	0.99

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3546 (Fuels)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22K0368							
A2J0959-03	Soil	NWTPH-Dx	10/28/22 11:30	11/10/22 07:24	10.29g/5mL	10g/5mL	0.97

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22J1162							
A2J0959-01	Soil	EPA 8000D	10/28/22 11:30	10/28/22 19:38			NA
A2J0959-02	Soil	EPA 8000D	10/28/22 11:30	10/28/22 19:38			NA
A2J0959-03	Soil	EPA 8000D	10/28/22 11:30	10/28/22 19:38			NA
A2J0959-04	Soil	EPA 8000D	10/28/22 11:30	10/28/22 19:38			NA

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QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

F-11	The hydrocarbon pattern indicates possible weathered diesel, mineral oil, or a contribution from a related component.
PRO	Sample has undergone sample processing prior to extraction and analysis.
Q-04	Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
Q-05	Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
Q-17	RPD between original and duplicate sample is outside of established control limits.
Q-42	Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits. (Refer to the QC Section of Analytical Report.)
S-01	Surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference.

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2J0959 - 11 14 22 1016**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

Darrell Auvil, Client Services Manager

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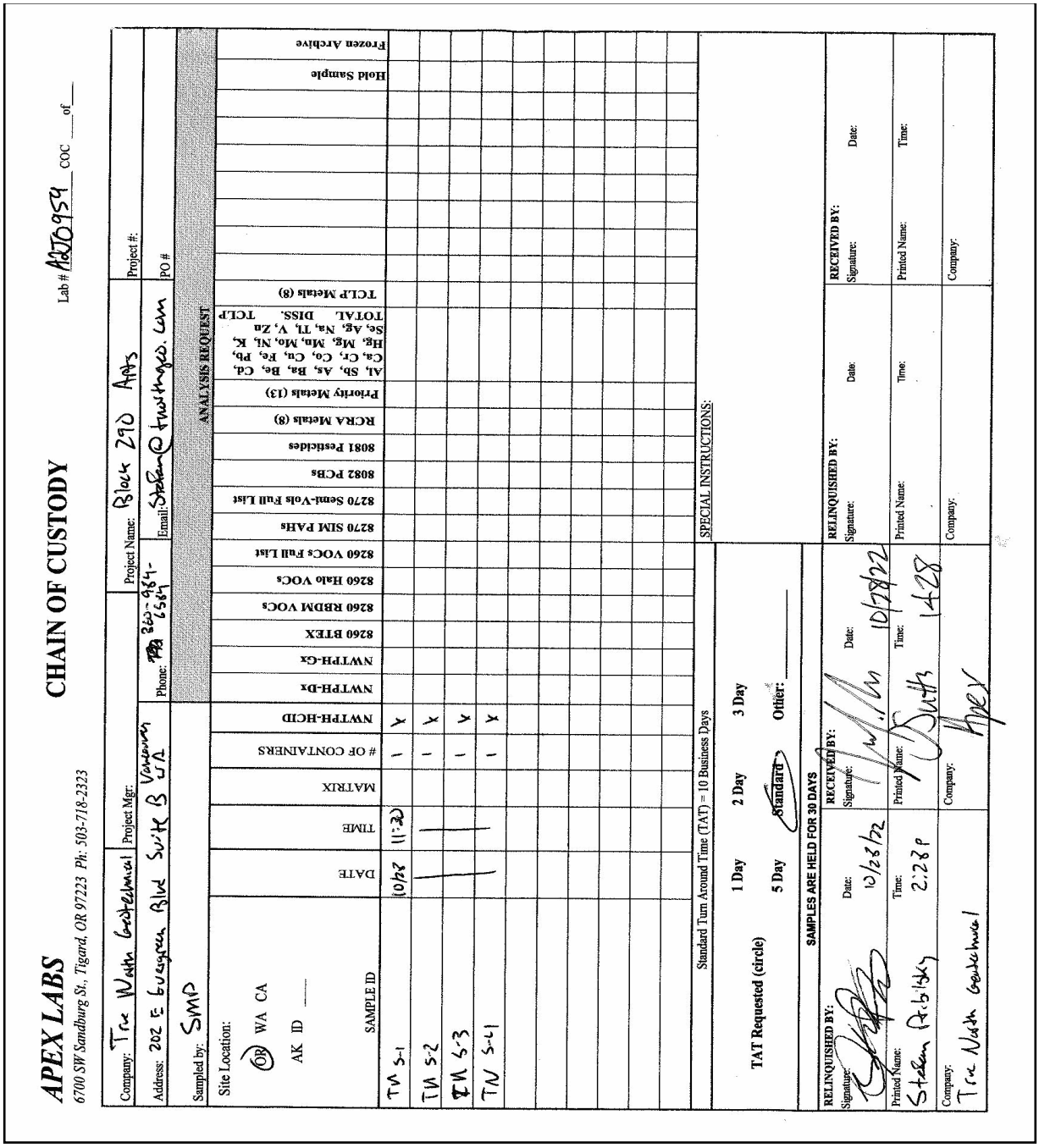

APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # A2J0959 COC ___ of ___

Company: True North Geotechnical | Project Mgr: | Phone: 360-980-6584 | Project Name: Block 290 APTS | Project #:
Address: 202 E Evergreen Blvd Suite B Vancouver WA | Email: Steven@truenwgeo.com | PO #
Sampled by: SMP

Site Location: (OR) WA CA AK ID ____

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TCLP TOTAL DISS.	TCLP Metals (8)	Hold Sample	Frozen Archive
TW S-1	10/27	11:30		1	X																
TW S-2				1	X																
TW S-3				1	X																
TW S-4				1	X																

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day 2 Day 3 Day 5 Day Standard Other: ____

SPECIAL INSTRUCTIONS:

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY:	Date:	Time:	RECEIVED BY:	Date:	Time:
Signature:	10/28/22	2:28 P	Signature:	10/28/22	1428
Printed Name: Steven Pribyl			Printed Name:		
Company: True North Geotechnical			Company:		

RELINQUISHED BY:	Date:	Time:	RECEIVED BY:	Date:	Time:
Signature:			Signature:		
Printed Name:			Printed Name:		
Company:			Company:		

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APEX LABS COOLER RECEIPT FORM

Client: True North Geotechnical Element WO#: A2J0959

Project/Project #: Block 290 Apts

Delivery Info:

Date/time received: 10/28/22@ 1428 By: JS

Delivered by: Apex____Client__X__ESS____FedEx____UPS____Swift____Senvoy____SDS____Other_____

Cooler Inspection Date/time inspected: 10/28/22@ 1430 By: JS

Chain of Custody included? Yes __X__ No _____ Custody seals? Yes_____ No__X__

Signed/dated by client? Yes __X__ No _____

Signed/dated by Apex? Yes __X__ No _____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	3.2						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	N						
Ice type: (Gel/Real/Other)	real						
Condition (In/Out):	good						

Cooler out of temp? (Y/N) Possible reason why:_____

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 10/28/22 @ 15:30 By: ZAM

All samples intact? Yes __X__ No ___ Comments:_____

Bottle labels/COCs agree? Yes __X__ No ___ Comments: no time on containers.

COC/container discrepancies form initiated? Yes ___ No __X__

Containers/volumes received appropriate for analysis? Yes__X__ No ___ Comments: _____

Do VOA vials have visible headspace? Yes ___ No ___ NA __X__

Comments_____

Water samples: pH checked: Yes___No___NA__X__ pH appropriate? Yes___No___NA__X__

Comments: _____

Additional information: _____

Labeled by: ZAM Witness: AUK Cooler Inspected by: JS

Form Y-003 R-00 -

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Apex Laboratories, LLC
6700 S.W. Sandburg Street
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ORELAP ID: **OR100062**

ANALYTICAL REPORT

Thursday, November 10, 2022

Tima Carlson
True North Geotechnical Services
202 E Evergreen Blvd, Suite B
Vancouver, WA 98660

RE: A2K0185 - Block 290 - 22-0061

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A2K0185, which was received by the laboratory on 11/4/2022 at 12:35:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	3.4 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0185 - 11 10 22 1052**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B290 S1	**A2K0185-01**	**Soil**	**11/02/22 12:00**	**11/04/22 12:35**
B290 S2	**A2K0185-02**	**Soil**	**11/02/22 12:00**	**11/04/22 12:35**

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0185 - 11 10 22 1052**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B290 S1 (A2K0185-01)				**Matrix: Soil**		**Batch: 22K0237**		
Gasoline Range Organics	ND	---	25.9	mg/kg dry	1	11/08/22 00:12	NWTPH-HCID	
Diesel Range Organics	ND	---	64.7	mg/kg dry	1	11/08/22 00:12	NWTPH-HCID	
Oil Range Organics	ND	---	129	mg/kg dry	1	11/08/22 00:12	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*83 %*	*Limits: 50-150 %*	*1*	*11/08/22 00:12*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*85 %*	*50-150 %*	*1*	*11/08/22 00:12*	*NWTPH-HCID*	
B290 S2 (A2K0185-02)				**Matrix: Soil**		**Batch: 22K0237**		
Gasoline Range Organics	ND	---	27.6	mg/kg dry	1	11/08/22 01:21	NWTPH-HCID	
Diesel Range Organics	ND	---	68.9	mg/kg dry	1	11/08/22 01:21	NWTPH-HCID	
Oil Range Organics	ND	---	138	mg/kg dry	1	11/08/22 01:21	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*81 %*	*Limits: 50-150 %*	*1*	*11/08/22 01:21*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*84 %*	*50-150 %*	*1*	*11/08/22 01:21*	*NWTPH-HCID*	

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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B290 S1 (A2K0185-01)				**Matrix: Soil**		**Batch: 22K0199**		
% Solids	**72.3**	---	1.00	%	1	11/07/22 09:44	EPA 8000D	
B290 S2 (A2K0185-02)				**Matrix: Soil**		**Batch: 22K0199**		
% Solids	**70.9**	---	1.00	%	1	11/07/22 09:44	EPA 8000D	

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0185 - 11 10 22 1052**

QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22K0237 - NWTPH-HCID (Soil)							Soil					
Blank (22K0237-BLK1)			Prepared: 11/07/22 12:06 Analyzed: 11/07/22 23:03									
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 93 %*	*Limits: 50-150 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*92 %*	*50-150 %*			*"*					
Duplicate (22K0237-DUP1)			Prepared: 11/07/22 12:06 Analyzed: 11/07/22 23:49									
QC Source Sample: Non-SDG (A2K0184-01)												
Gasoline Range Organics	ND	---	26.4	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	66.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	132	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 86 %*	*Limits: 50-150 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*87 %*	*50-150 %*			*"*					

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22K0199 - Total Solids (Dry Weight)							**Soil**					
Duplicate (22K0199-DUP1)			Prepared: 11/05/22 12:06			Analyzed: 11/07/22 09:44						**PRO**
QC Source Sample: Non-SDG (A2J0962-02)												
% Solids	**98.2**	---	1.00	%	1	---	98.2	---	---	0.05	10%	
Duplicate (22K0199-DUP2)			Prepared: 11/05/22 12:06			Analyzed: 11/07/22 09:44						**PRO**
QC Source Sample: Non-SDG (A2J0962-04)												
% Solids	**98.2**	---	1.00	%	1	---	98.2	---	---	0.02	10%	
Duplicate (22K0199-DUP3)			Prepared: 11/05/22 12:06			Analyzed: 11/07/22 09:44						**PRO**
QC Source Sample: Non-SDG (A2J0962-06)												
% Solids	**98.0**	---	1.00	%	1	---	98.1	---	---	0.06	10%	
Duplicate (22K0199-DUP4)			Prepared: 11/05/22 12:06			Analyzed: 11/07/22 09:44						**PRO**
QC Source Sample: Non-SDG (A2J0967-22)												
% Solids	**97.1**	---	1.00	%	1	---	97.1	---	---	0.06	10%	
Duplicate (22K0199-DUP5)			Prepared: 11/05/22 12:06			Analyzed: 11/07/22 09:44						**PRO**
QC Source Sample: Non-SDG (A2J0967-24)												
% Solids	**97.3**	---	1.00	%	1	---	97.3	---	---	0.07	10%	
Duplicate (22K0199-DUP6)			Prepared: 11/05/22 12:06			Analyzed: 11/07/22 09:44						**PRO**
QC Source Sample: Non-SDG (A2J0967-26)												
% Solids	**97.9**	---	1.00	%	1	---	97.9	---	---	0.01	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0185 - 11 10 22 1052**

SAMPLE PREPARATION INFORMATION

Hydrocarbon Identification Screen by NWTPH-HCID

Prep: NWTPH-HCID (Soil)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22K0237							
A2K0185-01	Soil	NWTPH-HCID	11/02/22 12:00	11/07/22 12:06	10.69g/10mL	10g/10mL	0.94
A2K0185-02	Soil	NWTPH-HCID	11/02/22 12:00	11/07/22 12:06	10.24g/10mL	10g/10mL	0.98

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22K0199							
A2K0185-01	Soil	EPA 8000D	11/02/22 12:00	11/05/22 12:07			NA
A2K0185-02	Soil	EPA 8000D	11/02/22 12:00	11/05/22 12:07			NA

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0185 - 11 10 22 1052**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

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PRO Sample has undergone sample processing prior to extraction and analysis.

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ANALYTICAL REPORT

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0185 - 11 10 22 1052**

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0185 - 11 10 22 1052**

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0185 - 11 10 22 1052**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

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Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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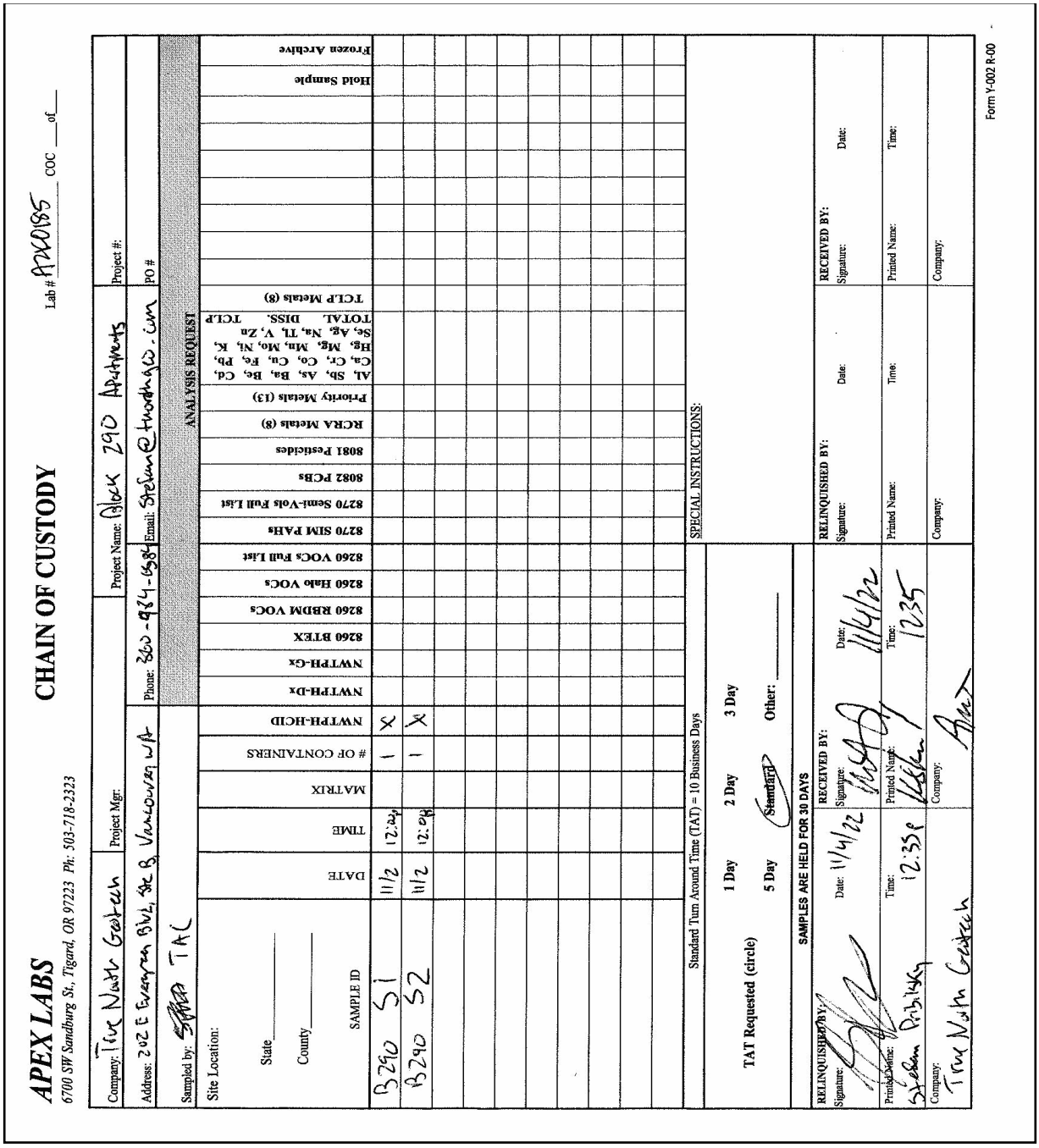

APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # A2K0185 COC ___ of ___

Company: True North Geotech | Project Mgr: | Project Name: Block 290 Apartments | Project #:
Address: 202 E Evergreen Blvd, Ste B, Vancouver WA | Phone: 360-984-6984 | Email: Stefan@truenwgs.com | PO #
Sampled by: SHAW TAC

ANALYSIS REQUEST

Site Location: State / County	SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
	B290 S1	11/2	12:20		1	X															
	B290 S2	11/2	12:30		1	X															

Standard Turn Around Time (TAT) = 10 Business Days
TAT Requested (circle): 1 Day 2 Day 3 Day 5 Day Standard Other: ___
SAMPLES ARE HELD FOR 30 DAYS

SPECIAL INSTRUCTIONS:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature:	Signature:	Signature:	Signature:
Printed Name:	Printed Name:	Printed Name:	Printed Name:
Company:	Company:	Company:	Company:
Date: 11/4/22	Date: 11/4/22	Date:	Date:
Time: 12:35	Time: 12:35	Time:	Time:

Form Y-002 R-00

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ANALYTICAL REPORT

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0185 - 11 10 22 1052**

APEX LABS COOLER RECEIPT FORM

Client: True North Geotech Element WO#: A2 K0185

Project/Project #: Block 290 Apartments.

Delivery Info:

Date/time received: 11/4/22 @ 1235 By: LS

Delivered by: Apex___Client X ESS___FedEx___UPS___Swift___Senvoy___SDS___Other___

Cooler Inspection Date/time inspected: 11/4/22 @ 1235 By: LS

Chain of Custody included? Yes X No ___ Custody seals? Yes___ No X

Signed/dated by client? Yes X No ___

Signed/dated by Apex? Yes X No ___

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	3.4						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	N						
Ice type: (Gel/Real/Other)	Real						
Condition (In/Out):	In						

Cooler out of temp? (Y/N) Possible reason why: ___

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 11/4/22 @ 1240 By: AMC

All samples intact? Yes X No ___ Comments: ___

Bottle labels/COCs agree? Yes X No ___ Comments: No time on containers

COC/container discrepancies form initiated? Yes ___ No X

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: Received >48hr VOCs H.T.

Do VOA vials have visible headspace? Yes ___ No ___ NA X

Comments ___

Water samples: pH checked: Yes___No___NA X pH appropriate? Yes___No___NA X

Comments: ___

Additional information: ___

Labeled by: AMC Witness: LS Cooler Inspected by: AMC

Form Y-003 R-00

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ANALYTICAL REPORT

Tuesday, November 15, 2022

Tima Carlson
True North Geotechnical Services
202 E Evergreen Blvd, Suite B
Vancouver, WA 98660

RE: A2K0528 - Block 290 - 22-0061

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A2K0528, which was received by the laboratory on 11/14/2022 at 10:42:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler#1	4.8 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0528 - 11 15 22 1458**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Utility Trench Hot Spot	**A2K0528-01**	**Soil**	**11/11/22 05:30**	**11/14/22 10:42**
Utility Trench (E+15')	**A2K0528-02**	**Soil**	**11/14/22 08:00**	**11/14/22 10:42**
Utility Trench (SE+20')	**A2K0528-03**	**Soil**	**11/14/22 08:08**	**11/14/22 10:42**

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0528 - 11 15 22 1458**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Utility Trench Hot Spot (A2K0528-01)				**Matrix: Soil**		**Batch: 22K0537**		
Gasoline Range Organics	ND	---	25.0	mg/kg dry	1	11/15/22 08:38	NWTPH-HCID	
Diesel Range Organics	ND	---	62.5	mg/kg dry	1	11/15/22 08:38	NWTPH-HCID	
Oil Range Organics	ND	---	125	mg/kg dry	1	11/15/22 08:38	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*74 %*	*Limits: 50-150 %*	*1*	*11/15/22 08:38*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*55 %*	*50-150 %*	*1*	*11/15/22 08:38*	*NWTPH-HCID*	
Utility Trench (E+15') (A2K0528-02)				**Matrix: Soil**		**Batch: 22K0537**		
Gasoline Range Organics	ND	---	24.6	mg/kg dry	1	11/15/22 09:24	NWTPH-HCID	
Diesel Range Organics	ND	---	61.5	mg/kg dry	1	11/15/22 09:24	NWTPH-HCID	
Oil Range Organics	ND	---	123	mg/kg dry	1	11/15/22 09:24	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*83 %*	*Limits: 50-150 %*	*1*	*11/15/22 09:24*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*80 %*	*50-150 %*	*1*	*11/15/22 09:24*	*NWTPH-HCID*	
Utility Trench (SE+20') (A2K0528-03)				**Matrix: Soil**		**Batch: 22K0537**		
Gasoline Range Organics	ND	---	21.9	mg/kg dry	1	11/15/22 09:47	NWTPH-HCID	
Diesel Range Organics	ND	---	54.8	mg/kg dry	1	11/15/22 09:47	NWTPH-HCID	
Oil Range Organics	ND	---	110	mg/kg dry	1	11/15/22 09:47	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*84 %*	*Limits: 50-150 %*	*1*	*11/15/22 09:47*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*83 %*	*50-150 %*	*1*	*11/15/22 09:47*	*NWTPH-HCID*	

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0528 - 11 15 22 1458**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Utility Trench Hot Spot (A2K0528-01)				**Matrix: Soil**		**Batch: 22K0544**		
% Solids	**77.6**	---	1.00	%	1	11/15/22 07:53	EPA 8000D	
Utility Trench (E+15') (A2K0528-02)				**Matrix: Soil**		**Batch: 22K0544**		
% Solids	**76.0**	---	1.00	%	1	11/15/22 07:53	EPA 8000D	
Utility Trench (SE+20') (A2K0528-03)				**Matrix: Soil**		**Batch: 22K0544**		
% Solids	**84.2**	---	1.00	%	1	11/15/22 07:53	EPA 8000D	

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0528 - 11 15 22 1458**

QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22K0537 - NWTPH-HCID (Soil)							Soil					
Blank (22K0537-BLK1)			Prepared: 11/14/22 15:29 Analyzed: 11/15/22 08:15									
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 85 %*	*Limits: 50-150 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*82 %*	*50-150 %*			*"*					
Duplicate (22K0537-DUP1)			Prepared: 11/14/22 15:29 Analyzed: 11/15/22 09:01									
QC Source Sample: Utility Trench Hot Spot (A2K0528-01)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	23.6	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	59.1	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	118	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 83 %*	*Limits: 50-150 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*69 %*	*50-150 %*			*"*					

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ANALYTICAL REPORT

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202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0528 - 11 15 22 1458**

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22K0544 - Total Solids (Dry Weight)							**Soil**					
Duplicate (22K0544-DUP1)			Prepared: 11/14/22 19:26		Analyzed: 11/15/22 07:53							
QC Source Sample: Non-SDG (A2K0524-01)												
% Solids	**90.9**	---	1.00	%	1	---	92.6	---	---	2	10%	
Duplicate (22K0544-DUP2)			Prepared: 11/14/22 19:26		Analyzed: 11/15/22 07:53							
QC Source Sample: Non-SDG (A2K0548-01)												
% Solids	**79.0**	---	1.00	%	1	---	80.0	---	---	1	10%	
Duplicate (22K0544-DUP3)			Prepared: 11/14/22 19:26		Analyzed: 11/15/22 07:53							
QC Source Sample: Non-SDG (A2K0552-02)												
% Solids	**82.3**	---	1.00	%	1	---	82.3	---	---	0.07	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0528 - 11 15 22 1458**

SAMPLE PREPARATION INFORMATION

Hydrocarbon Identification Screen by NWTPH-HCID

Prep: NWTPH-HCID (Soil)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22K0537							
A2K0528-01	Soil	NWTPH-HCID	11/11/22 05:30	11/14/22 15:29	10.31g/10mL	10g/10mL	0.97
A2K0528-02	Soil	NWTPH-HCID	11/14/22 08:00	11/14/22 15:29	10.69g/10mL	10g/10mL	0.94
A2K0528-03	Soil	NWTPH-HCID	11/14/22 08:08	11/14/22 15:29	10.84g/10mL	10g/10mL	0.92

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22K0544							
A2K0528-01	Soil	EPA 8000D	11/11/22 05:30	11/14/22 19:26			NA
A2K0528-02	Soil	EPA 8000D	11/14/22 08:00	11/14/22 19:26			NA
A2K0528-03	Soil	EPA 8000D	11/14/22 08:08	11/14/22 19:26			NA

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Darrell Auvil, Client Services Manager

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503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0528 - 11 15 22 1458**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

There are No Qualifiers on Sample or QC Data for this report

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0528 - 11 15 22 1458**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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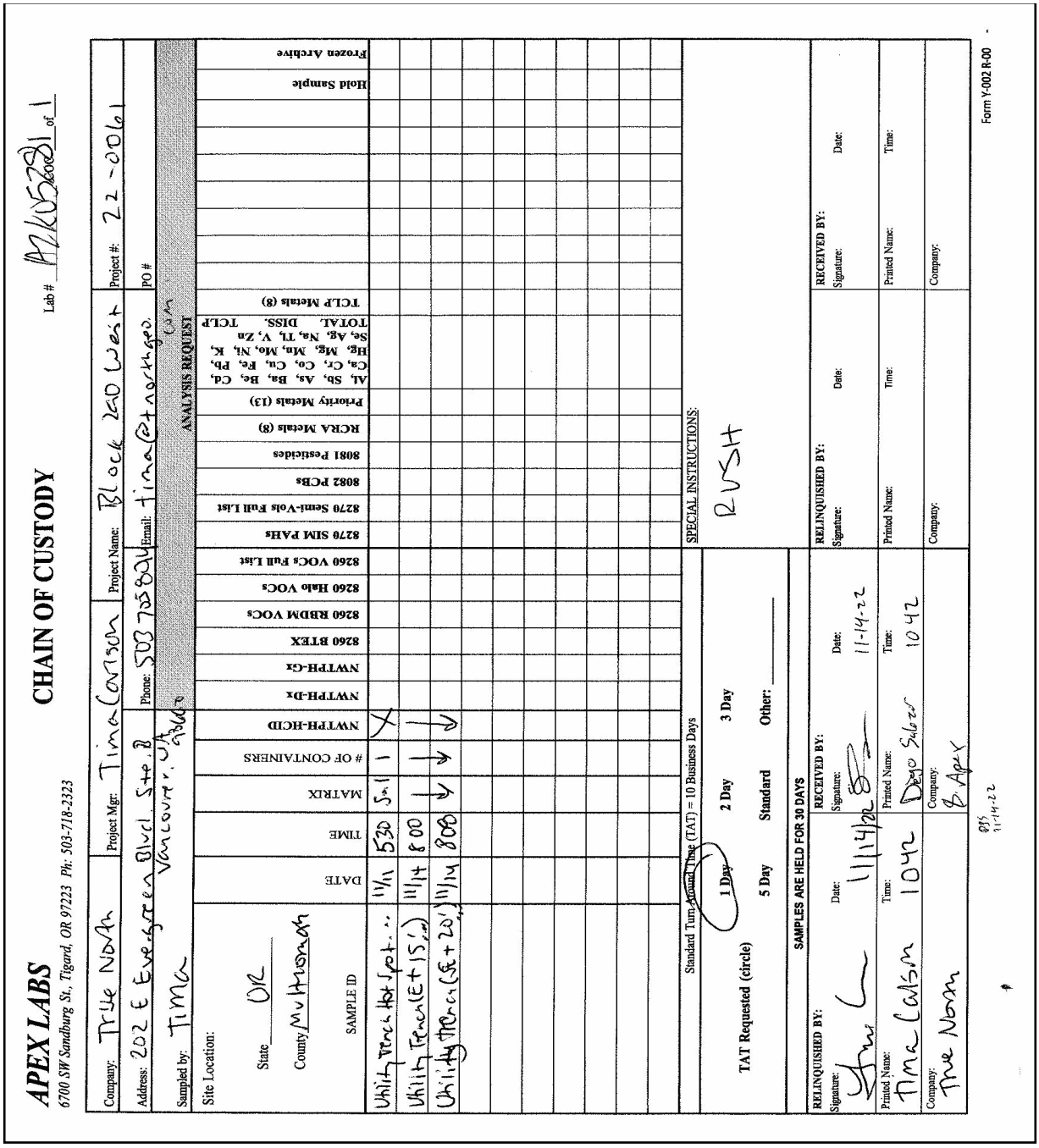

APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # A2K0528 Page 1 of 1

Company: True North | Project Mgr: Tima Carlson | Project Name: Block 290 West | Project #: 22-0061
Address: 202 E Evergreen Blvd, Ste. B Vancouver, WA 98660 | Phone: 503 735 8096 | Email: tima@truenorthgeo.com | PO #
Sampled by: Tima

Site Location: State OR County/Municipality

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
Utility Trench Hot Spot...	11/11	530	Soil	1	X																
Utility Trench (E+15')	11/14	800		1																	
Utility Trench (SE+20')	11/14	800																			

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day 2 Day 3 Day 5 Day Standard Other: _____

SPECIAL INSTRUCTIONS: RUSH

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature:	Signature:	Signature:	Signature:
Date: 11/14/22	Date: 11-14-22	Date:	Date:
Printed Name: Tima Carlson	Printed Name: Dejo Sykes	Printed Name:	Printed Name:
Time: 1042	Time: 1042	Time:	Time:
Company: True North	Company: D. Apex	Company:	Company:

11-14-22

Form Y-002 R-00

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0528 - 11 15 22 1458**

APEX LABS COOLER RECEIPT FORM

Client: True North Element WO#: A2 K0528

Project/Project #: Block 290 West / 22-0061

Delivery Info:

Date/time received: 11-14-22 @ 1042 By: DSS

Delivered by: Apex____Client X ESS____FedEx____UPS____Swift____Senvoy____SDS____Other_____

Cooler Inspection Date/time inspected: 11-14-22 @ 1043 By: DSS

Chain of Custody included? Yes X No _____ Custody seals? Yes_____ No X

Signed/dated by client? Yes X No _____

Signed/dated by Apex? Yes X No _____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	4.8						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	N						
Ice type: (Gel/Real/Other)	Real						
Condition (In/Out):	In						

Cooler out of temp? (Y/N) Possible reason why: _____

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 11/14/22 @ 11:02 By: AAW

All samples intact? Yes X No ___ Comments: _____

Bottle labels/COCs agree? Yes X AAW 11/14 No X Comments: Bottles missing time, Sample ID differs Bottle 1 reads 'Utility trench hot spot (East Center) -4' Bottle 2 reads 'Utility trench CE HS' from (HOTSPOT) -4' Bottle 3 reads utility trench (SE +20' from SE corner) -4'

COC/container discrepancies form initiated? Yes ___ No X

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: _____

Do VOA vials have visible headspace? Yes ___ No ___ NA Y

Comments _____

Water samples: pH checked: Yes___No___NA X pH appropriate? Yes___No___NA X

Comments: _____

Additional information: _____

Labeled by: Witness: Cooler Inspected by:

DSS

Form Y-003 R-00

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ANALYTICAL REPORT

Monday, December 5, 2022

Tima Carlson
True North Geotechnical Services
202 E Evergreen Blvd, Suite B
Vancouver, WA 98660

RE: A2K0677 - Block 290 - 22-0061

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A2K0677, which was received by the laboratory on 11/17/2022 at 3:37:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	5.6 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0677 - 12 05 22 1217**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
ROW SE Corner-6	A2K0677-01	Soil	11/17/22 13:20	11/17/22 15:37
ROW SE Corner-3	A2K0677-02	Soil	11/17/22 13:25	11/17/22 15:37
ROW SE Corner-2	A2K0677-03	Soil	11/17/22 13:30	11/17/22 15:37
ROW SE Corner-4	A2K0677-04	Soil	11/17/22 13:35	11/17/22 15:37
ROW SE Corner+3-5	A2K0677-05	Soil	11/17/22 13:40	11/17/22 15:37

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0677 - 12 05 22 1217**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
ROW SE Corner-6 (A2K0677-01)				**Matrix: Soil**		**Batch: 22K0745**		
Gasoline Range Organics	ND	---	26.3	mg/kg dry	1	11/19/22 06:54	NWTPH-HCID	
Diesel Range Organics	**DET**	---	65.8	mg/kg dry	1	11/19/22 06:54	NWTPH-HCID	
Oil Range Organics	ND	---	132	mg/kg dry	1	11/19/22 06:54	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*130 %*	*Limits: 50-150 %*	*1*	*11/19/22 06:54*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*125 %*	*50-150 %*	*1*	*11/19/22 06:54*	*NWTPH-HCID*	
ROW SE Corner-3 (A2K0677-02)				**Matrix: Soil**		**Batch: 22K0745**		
Gasoline Range Organics	ND	---	25.9	mg/kg dry	1	11/19/22 07:40	NWTPH-HCID	
Diesel Range Organics	**DET**	---	64.8	mg/kg dry	1	11/19/22 07:40	NWTPH-HCID	
Oil Range Organics	ND	---	130	mg/kg dry	1	11/19/22 07:40	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*146 %*	*Limits: 50-150 %*	*1*	*11/19/22 07:40*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*137 %*	*50-150 %*	*1*	*11/19/22 07:40*	*NWTPH-HCID*	
ROW SE Corner-2 (A2K0677-03)				**Matrix: Soil**		**Batch: 22K0745**		
Gasoline Range Organics	ND	---	24.2	mg/kg dry	1	11/19/22 08:03	NWTPH-HCID	
Diesel Range Organics	ND	---	60.6	mg/kg dry	1	11/19/22 08:03	NWTPH-HCID	
Oil Range Organics	ND	---	121	mg/kg dry	1	11/19/22 08:03	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*103 %*	*Limits: 50-150 %*	*1*	*11/19/22 08:03*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*106 %*	*50-150 %*	*1*	*11/19/22 08:03*	*NWTPH-HCID*	
ROW SE Corner-4 (A2K0677-04)				**Matrix: Soil**		**Batch: 22K0745**		
Gasoline Range Organics	ND	---	25.8	mg/kg dry	1	11/19/22 08:26	NWTPH-HCID	
Diesel Range Organics	**DET**	---	64.5	mg/kg dry	1	11/19/22 08:26	NWTPH-HCID	
Oil Range Organics	ND	---	129	mg/kg dry	1	11/19/22 08:26	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*150 %*	*Limits: 50-150 %*	*1*	*11/19/22 08:26*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*138 %*	*50-150 %*	*1*	*11/19/22 08:26*	*NWTPH-HCID*	
ROW SE Corner+3-5 (A2K0677-05)				**Matrix: Soil**		**Batch: 22K0745**		
Gasoline Range Organics	ND	---	25.7	mg/kg dry	1	11/19/22 08:49	NWTPH-HCID	
Diesel Range Organics	**DET**	---	64.3	mg/kg dry	1	11/19/22 08:49	NWTPH-HCID	
Oil Range Organics	ND	---	129	mg/kg dry	1	11/19/22 08:49	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*114 %*	*Limits: 50-150 %*	*1*	*11/19/22 08:49*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*107 %*	*50-150 %*	*1*	*11/19/22 08:49*	*NWTPH-HCID*	

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0677 - 12 05 22 1217**

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
ROW SE Corner-6 (A2K0677-01)				**Matrix: Soil**		**Batch: 22K0988**		
Diesel	**1050**	---	26.4	mg/kg dry	1	12/01/22 02:20	NWTPH-Dx	
Oil	ND	---	52.9	mg/kg dry	1	12/01/22 02:20	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 78 %*		*Limits: 50-150 %*	*1*	*12/01/22 02:20*	*NWTPH-Dx*	
ROW SE Corner-3 (A2K0677-02)				**Matrix: Soil**		**Batch: 22K0988**		
Diesel	**1210**	---	27.3	mg/kg dry	1	12/01/22 03:01	NWTPH-Dx	
Oil	ND	---	54.5	mg/kg dry	1	12/01/22 03:01	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 85 %*		*Limits: 50-150 %*	*1*	*12/01/22 03:01*	*NWTPH-Dx*	
ROW SE Corner-4 (A2K0677-04)				**Matrix: Soil**		**Batch: 22K0988**		
Diesel	**1660**	---	27.1	mg/kg dry	1	12/01/22 03:21	NWTPH-Dx	
Oil	ND	---	54.3	mg/kg dry	1	12/01/22 03:21	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 96 %*		*Limits: 50-150 %*	*1*	*12/01/22 03:21*	*NWTPH-Dx*	
ROW SE Corner+3-5 (A2K0677-05)				**Matrix: Soil**		**Batch: 22K0988**		
Diesel	**1040**	---	26.9	mg/kg dry	1	12/01/22 03:41	NWTPH-Dx	
Oil	ND	---	53.7	mg/kg dry	1	12/01/22 03:41	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 83 %*		*Limits: 50-150 %*	*1*	*12/01/22 03:41*	*NWTPH-Dx*	

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ANALYTICAL REPORT

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202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0677 - 12 05 22 1217**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
ROW SE Corner-6 (A2K0677-01)				**Matrix: Soil**		**Batch: 22K0759**		
% Solids	**72.8**	---	1.00	%	1	11/21/22 05:30	EPA 8000D	
ROW SE Corner-3 (A2K0677-02)				**Matrix: Soil**		**Batch: 22K0759**		
% Solids	**73.2**	---	1.00	%	1	11/21/22 05:30	EPA 8000D	
ROW SE Corner-2 (A2K0677-03)				**Matrix: Soil**		**Batch: 22K0759**		
% Solids	**78.4**	---	1.00	%	1	11/21/22 05:30	EPA 8000D	
ROW SE Corner-4 (A2K0677-04)				**Matrix: Soil**		**Batch: 22K0759**		
% Solids	**73.1**	---	1.00	%	1	11/21/22 05:30	EPA 8000D	
ROW SE Corner+3-5 (A2K0677-05)				**Matrix: Soil**		**Batch: 22K0759**		
% Solids	**72.0**	---	1.00	%	1	11/21/22 05:30	EPA 8000D	

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

ANALYTICAL REPORT

True North Geotechnical Services	Project: Block 290	
202 E Evergreen Blvd, Suite B	Project Number: 22-0061	Report ID:
Vancouver, WA 98660	Project Manager: Tima Carlson	A2K0677 - 12 05 22 1217

QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22K0745 - NWTPH-HCID (Soil)							Soil					
Blank (22K0745-BLK1)			Prepared: 11/18/22 13:20 Analyzed: 11/19/22 06:30									
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 97 %*	*Limits: 50-150 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*95 %*	*50-150 %*			*"*					
Duplicate (22K0745-DUP1)			Prepared: 11/18/22 13:20 Analyzed: 11/19/22 07:17									
QC Source Sample: ROW SE Corner-6 (A2K0677-01)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	27.0	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	**DET**	---	67.6	mg/kg dry	1	---	ND	---	---		30%	
Oil Range Organics	ND	---	135	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 117 %*	*Limits: 50-150 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*115 %*	*50-150 %*			*"*					
Duplicate (22K0745-DUP2)			Prepared: 11/18/22 18:45 Analyzed: 11/19/22 12:40									
QC Source Sample: Non-SDG (A2K0720-04)												
Gasoline Range Organics	ND	---	25.4	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	63.6	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	127	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 94 %*	*Limits: 50-150 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*58 %*	*50-150 %*			*"*					

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0677 - 12 05 22 1217**

QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22K0988 - EPA 3546 (Fuels)							**Soil**					
Blank (22K0988-BLK1)			Prepared: 11/30/22 07:45		Analyzed: 12/01/22 01:39							
NWTPH-Dx												
Diesel	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	36.4	mg/kg wet	1	---	---	---	---	---	---	
Mineral Oil	ND	---	36.4	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		*Recovery: 87 %*		*Limits: 50-150 %*			*Dilution: 1x*					
LCS (22K0988-BS1)			Prepared: 11/30/22 07:45		Analyzed: 12/01/22 02:00							
NWTPH-Dx												
Diesel	130	---	20.0	mg/kg wet	1	125	---	104	38-132%	---	---	
Surr: o-Terphenyl (Surr)		*Recovery: 94 %*		*Limits: 50-150 %*			*Dilution: 1x*					
Duplicate (22K0988-DUP1)			Prepared: 11/30/22 07:45		Analyzed: 12/01/22 02:40							
QC Source Sample: ROW SE Corner-6 (A2K0677-01)												
NWTPH-Dx												
Diesel	**930**	---	26.8	mg/kg dry	1	---	1050	---	---	12	30%	
Oil	ND	---	53.6	mg/kg dry	1	---	ND	---	---	---	30%	
Mineral Oil	ND	---	53.6	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery: 86 %*		*Limits: 50-150 %*			*Dilution: 1x*					

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202 E Evergreen Blvd, Suite B	Project Number: 22-0061	Report ID:
Vancouver, WA 98660	Project Manager: Tima Carlson	A2K0677 - 12 05 22 1217

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22K0759 - Total Solids (Dry Weight)							**Soil**					
Duplicate (22K0759-DUP1)			Prepared: 11/19/22 12:20		Analyzed: 11/21/22 05:30							**PRO**
QC Source Sample: Non-SDG (A2K0512-02)												
% Solids	**98.6**	---	1.00	%	1	---	98.6	---	---	0.02	10%	
Duplicate (22K0759-DUP2)			Prepared: 11/19/22 12:20		Analyzed: 11/21/22 05:30							**PRO**
QC Source Sample: Non-SDG (A2K0512-04)												
% Solids	**98.6**	---	1.00	%	1	---	98.5	---	---	0.03	10%	
Duplicate (22K0759-DUP3)			Prepared: 11/19/22 12:20		Analyzed: 11/21/22 05:30							**PRO**
QC Source Sample: Non-SDG (A2K0512-06)												
% Solids	**98.5**	---	1.00	%	1	---	98.4	---	---	0.04	10%	
Duplicate (22K0759-DUP4)			Prepared: 11/19/22 12:20		Analyzed: 11/21/22 05:30							**PRO**
QC Source Sample: Non-SDG (A2K0646-02)												
% Solids	**98.2**	---	1.00	%	1	---	98.3	---	---	0.09	10%	
Duplicate (22K0759-DUP5)			Prepared: 11/19/22 12:20		Analyzed: 11/21/22 05:30							**PRO**
QC Source Sample: Non-SDG (A2K0646-04)												
% Solids	**97.9**	---	1.00	%	1	---	97.9	---	---	0.06	10%	
Duplicate (22K0759-DUP6)			Prepared: 11/19/22 12:20		Analyzed: 11/21/22 05:30							**PRO**
QC Source Sample: Non-SDG (A2K0646-06)												
% Solids	**98.2**	---	1.00	%	1	---	98.3	---	---	0.1	10%	
Duplicate (22K0759-DUP7)			Prepared: 11/19/22 12:20		Analyzed: 11/21/22 05:30							
QC Source Sample: ROW SE Corner-6 (A2K0677-01)												
EPA 8000D												
% Solids	**72.7**	---	1.00	%	1	---	72.8	---	---	0.2	10%	
Duplicate (22K0759-DUP8)			Prepared: 11/19/22 12:20		Analyzed: 11/21/22 05:30							
QC Source Sample: ROW SE Corner-3 (A2K0677-02)												
EPA 8000D												

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0677 - 12 05 22 1217**

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22K0759 - Total Solids (Dry Weight)							**Soil**					
Duplicate (22K0759-DUP8)			Prepared: 11/19/22 12:20		Analyzed: 11/21/22 05:30							
QC Source Sample: ROW SE Corner-3 (A2K0677-02)												
% Solids	**73.3**	---	1.00	%	1	---	73.2	---	---	0.1	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0677 - 12 05 22 1217**

SAMPLE PREPARATION INFORMATION

Hydrocarbon Identification Screen by NWTPH-HCID

Prep: NWTPH-HCID (Soil)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22K0745							
A2K0677-01	Soil	NWTPH-HCID	11/17/22 13:20	11/18/22 13:20	10.43g/10mL	10g/10mL	0.96
A2K0677-02	Soil	NWTPH-HCID	11/17/22 13:25	11/18/22 13:20	10.55g/10mL	10g/10mL	0.95
A2K0677-03	Soil	NWTPH-HCID	11/17/22 13:30	11/18/22 13:20	10.52g/10mL	10g/10mL	0.95
A2K0677-04	Soil	NWTPH-HCID	11/17/22 13:35	11/18/22 13:20	10.6g/10mL	10g/10mL	0.94
A2K0677-05	Soil	NWTPH-HCID	11/17/22 13:40	11/18/22 13:20	10.8g/10mL	10g/10mL	0.93

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3546 (Fuels)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22K0988							
A2K0677-01	Soil	NWTPH-Dx	11/17/22 13:20	11/30/22 07:45	10.38g/5mL	10g/5mL	0.96
A2K0677-02	Soil	NWTPH-Dx	11/17/22 13:25	11/30/22 07:45	10.02g/5mL	10g/5mL	1.00
A2K0677-04	Soil	NWTPH-Dx	11/17/22 13:35	11/30/22 07:45	10.08g/5mL	10g/5mL	0.99
A2K0677-05	Soil	NWTPH-Dx	11/17/22 13:40	11/30/22 07:45	10.34g/5mL	10g/5mL	0.97

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22K0759							
A2K0677-01	Soil	EPA 8000D	11/17/22 13:20	11/19/22 12:20			NA
A2K0677-02	Soil	EPA 8000D	11/17/22 13:25	11/19/22 12:20			NA
A2K0677-03	Soil	EPA 8000D	11/17/22 13:30	11/19/22 12:20			NA
A2K0677-04	Soil	EPA 8000D	11/17/22 13:35	11/19/22 12:20			NA
A2K0677-05	Soil	EPA 8000D	11/17/22 13:40	11/19/22 12:20			NA

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0677 - 12 05 22 1217**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

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PRO Sample has undergone sample processing prior to extraction and analysis.

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0677 - 12 05 22 1217**

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0677 - 12 05 22 1217**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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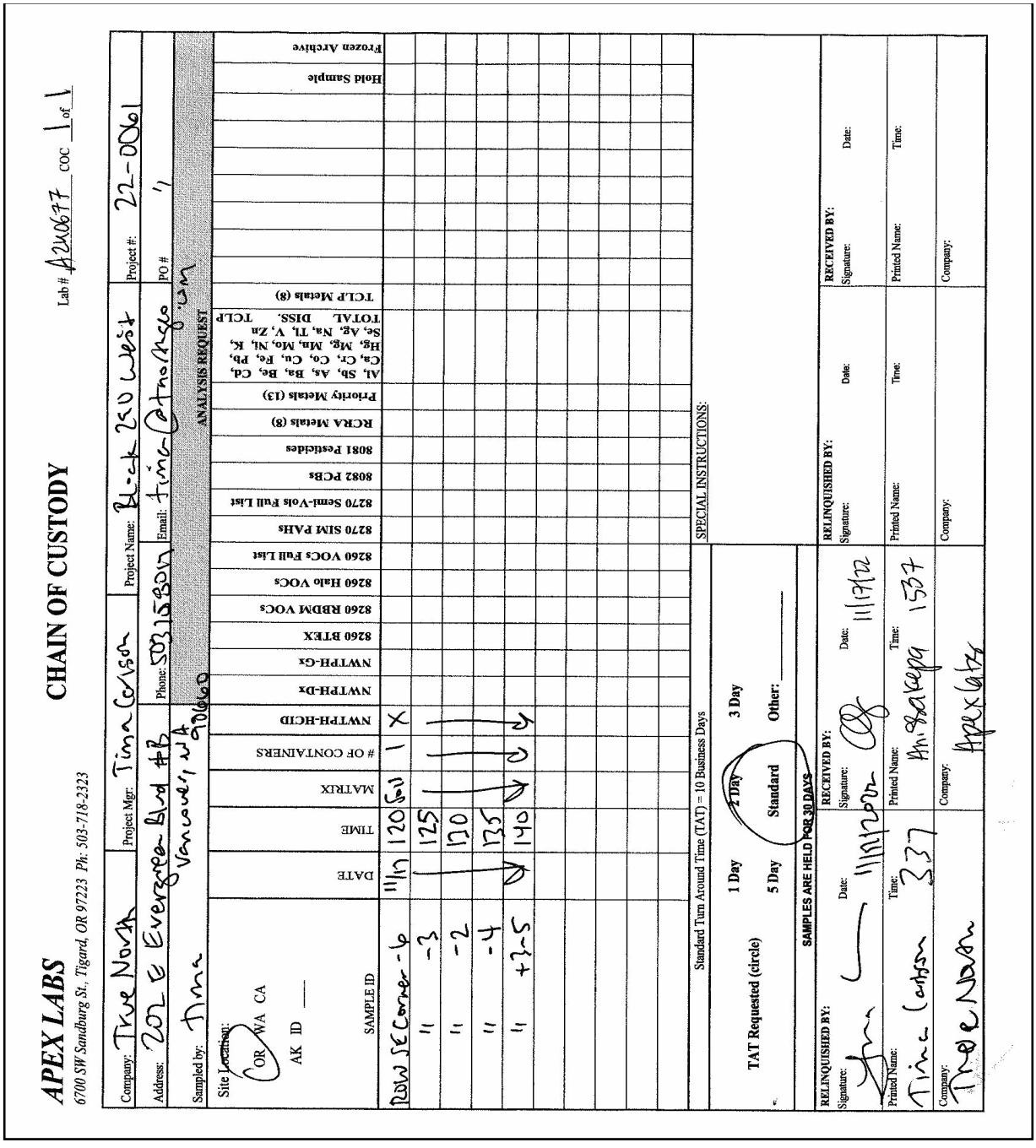

APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # A2K0677 COC 1 of 1

Company: True North — Project Mgr: Tima Carlson — Project Name: Block 290 West — Project #: 22-0061
Address: 202 E Evergreen Blvd #B Vancouver, WA 98660 — Phone: 503.358.3917 — Email: tima@truenorthgeo.com — PO #: 1
Sampled by: Tima

Site Location: OR WA CA AK ID ____

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticdes	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
Row SE Corner -6	11/1	1205	Soil	1	X																
" -3		1225																			
" -2		1230																			
" -4		1235																			
" +2.5		1240																			

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day 2 Day 3 Day 5 Day Standard Other: ____

SPECIAL INSTRUCTIONS:

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY:	Date:	Time:	RECEIVED BY:	Date:	Time:	RELINQUISHED BY:	Date:	Time:	RECEIVED BY:	Date:	Time:
Signature:	11/1		Signature:	11/1/22		Signature:	11/1/22	1537	Signature:		
Printed Name:			Printed Name:			Printed Name:			Printed Name:		
Company:			Company:			Company:			Company:		

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ANALYTICAL REPORT

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WO# A2K0677

COC/Container Discrepancies

COC Reads	Container Reads/Comments
ROW SE Corner -3	ROW SE Corner Utility -3
ROW SE Corner -2	ROW SE Corner Utility -2
ROW SE Corner +3-5	ROW SE Corner Utility ppe +3-5

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2K0677 - 12 05 22 1217**

APEX LABS COOLER RECEIPT FORM

Client: True North Element WO#: A2 K0677

Project/Project #: Block 290 west #22-0061

Delivery Info:

Date/time received: 11/17/22 @ 1537 By: AKC

Delivered by: Apex____Client X ESS____FedEx____UPS____Swift____Senvoy____SDS____Other_____

Cooler Inspection Date/time inspected: 11/17/22@ 1537 By: AKC

Chain of Custody included? Yes X No _____ Custody seals? Yes_____ No X

Signed/dated by client? Yes X No _____

Signed/dated by Apex? Yes X No _____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	5.6						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	N						
Ice type: (Gel/Real/Other)	Real						
Condition (In/Out):	In						

Cooler out of temp? (Y/N) Possible reason why:_____

Green dots applied to out of temperature samples? Yes (No)

Out of temperature samples form initiated? Yes (No)

Sample Inspection: Date/time inspected: 11-17-22 @ 1644 By: DSS

All samples intact? Yes X No ___ Comments:_____

Bottle labels/COCs agree? Yes ___ No X Comments: No time on containers.

COC/container discrepancies form initiated? Yes X No ___

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: _____

Do VOA vials have visible headspace? Yes ___ No ___ NA X

Comments_____

Water samples: pH checked: Yes___No___NA X pH appropriate? Yes___No___NA X

Comments: _____

Additional information:_____

Labeled by: DSS Witness: RMP Cooler Inspected by: AKC

Form Y-003 R-00 -

Apex Laboratories

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Friday, January 6, 2023

Tima Carlson
True North Geotechnical Services
202 E Evergreen Blvd, Suite B
Vancouver, WA 98660

RE: A2L0955 - Block 290 - 22-0061

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A2L0955, which was received by the laboratory on 12/28/2022 at 11:57:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	4.8 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2L0955 - 01 06 23 1552**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
5-1-35	**A2L0955-01**	**Solid**	**12/22/22 13:00**	**12/28/22 11:57**

Apex Laboratories

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2L0955 - 01 06 23 1552**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
5-1-35 (A2L0955-01)				**Matrix: Solid**		**Batch: 22L0869**		
Gasoline Range Organics	ND	---	18.3	mg/kg	1	12/29/22 00:23	NWTPH-HCID	
Diesel Range Organics	ND	---	45.7	mg/kg	1	12/29/22 00:23	NWTPH-HCID	
Oil Range Organics	ND	---	91.5	mg/kg	1	12/29/22 00:23	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*92 %*	*Limits: 50-150 %*	*1*	*12/29/22 00:23*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*87 %*	*50-150 %*	*1*	*12/29/22 00:23*	*NWTPH-HCID*	

Apex Laboratories

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2L0955 - 01 06 23 1552**

QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22L0869 - NWTPH-HCID (Soil)							**Solid**					
Blank (22L0869-BLK1)			Prepared: 12/28/22 06:36		Analyzed: 12/28/22 23:14							
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	mg/kg	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	mg/kg	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 94 %*		*Limits: 50-150 %*			*Dilution: 1x*				
4-Bromofluorobenzene (Surr)			*96 %*		*50-150 %*			*"*				
Duplicate (22L0869-DUP1)			Prepared: 12/28/22 06:36		Analyzed: 12/29/22 00:00							
QC Source Sample: Non-SDG (A2L0886-01)												
Gasoline Range Organics	ND	---	19.2	mg/kg	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	48.1	mg/kg	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	96.2	mg/kg	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 88 %*		*Limits: 50-150 %*			*Dilution: 1x*				
4-Bromofluorobenzene (Surr)			*90 %*		*50-150 %*			*"*				

Apex Laboratories

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Apex Laboratories, LLC

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2L0955 - 01 06 23 1552**

SAMPLE PREPARATION INFORMATION

Hydrocarbon Identification Screen by NWTPH-HCID

Prep: NWTPH-HCID (Soil)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22L0869							
A2L0955-01	Solid	NWTPH-HCID	12/22/22 13:00	12/28/22 12:55	10.93g/10mL	10g/10mL	0.92

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2L0955 - 01 06 23 1552**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

There are No Qualifiers on Sample or QC Data for this report

Apex Laboratories

Darrell Auvil, Client Services Manager

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503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2L0955 - 01 06 23 1552**

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

Apex Laboratories

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ORELAP ID: **OR100062**

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2L0955 - 01 06 23 1552**

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2L0955 - 01 06 23 1552**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

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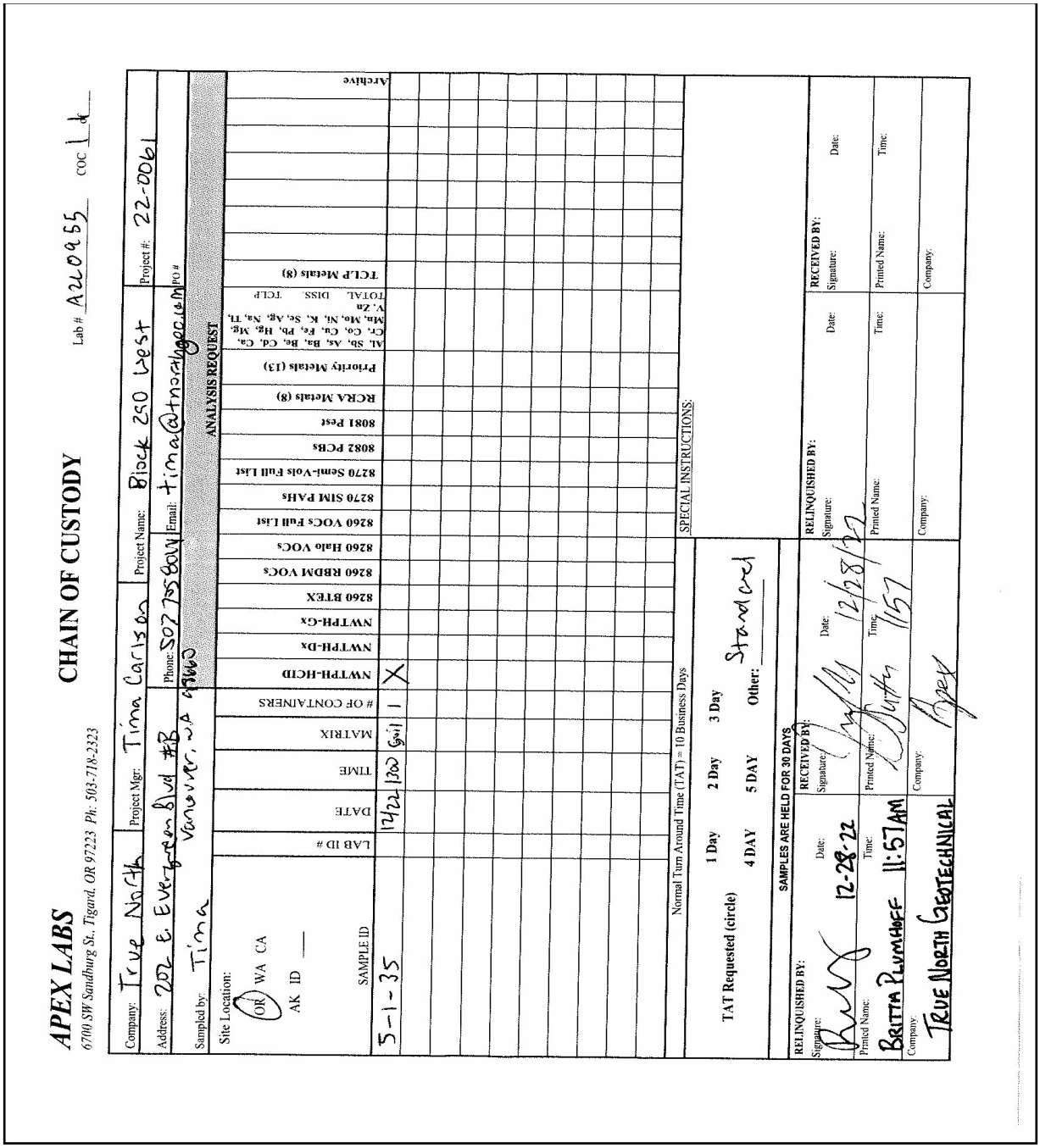
Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2L0955 - 01 06 23 1552**



APEX LABS
6700 SW Sandburg St. Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # A2L0955 COC 1 of 1

Company: True North | Project Mgr: Tima Carlson | Project Name: Block 290 West | Project #: 22-0061
Address: 202 E. Evergreen Blvd #B Vancouver, WA 98660 | Phone: 502 735 8044 | Email: tima@truenorthgeo.com | PO #
Sampled by: Tima

Site Location: (OR) WA CA AK ID —

ANALYSIS REQUEST

SAMPLE ID	LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pest	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS TCLP	TCLP Metals (8)	Archive
S-1-35		12/22	1300	Soil	1	X															

Normal Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day 2 Day 3 Day 4 DAY 5 DAY Other: Standard

SPECIAL INSTRUCTIONS:

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY: Signature: Date: 12-28-22 Time: 11:57AM Printed Name: Britta Plumhoff Company: True North Geotechnical

RECEIVED BY: Signature: Date: 12/28/22 Time: 1157 Printed Name: Company:

RELINQUISHED BY: Signature: Date: Time: Printed Name: Company:

RECEIVED BY: Signature: Date: Time: Printed Name: Company:

Apex Laboratories

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A2L0955 - 01 06 23 1552**

APEX LABS COOLER RECEIPT FORM

Client: True North Element WO#: A2L0955

Project/Project #: Block 290 West 22-0061

Delivery Info:

Date/time received: 12/28/22 @ 1157 By: JS

Delivered by: Apex ___ Client X ESS ___ FedEx ___ UPS ___ Swift ___ Senvoy ___ SDS ___ Other ___

Cooler Inspection Date/time inspected: 12/28/22 @ 1159 By: JS

Chain of Custody included? Yes Y No ___ Custody seals? Yes ___ No X

Signed/dated by client? Yes Y No ___

Signed/dated by Apex? Yes X No ___

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	4.8						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	N						
Ice type: (Gel/Real/Other)	Real						
Condition (In/Out):	In						

Cooler out of temp? (Y)(N) Possible reason why: ___

Green dots applied to out of temperature samples? Yes (No)

Out of temperature samples form initiated? Yes (No)

Sample Inspection: Date/time inspected: 12.28.22 @ 1207 By: DSS

All samples intact? Yes X No ___ Comments: ___

Bottle labels/COCs agree? Yes X No ___ Comments: No time on container

COC/container discrepancies form initiated? Yes ___ No X

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: Sample received >48hr HT for VOCs follow-ups

Do VOA vials have visible headspace? Yes ___ No ___ NA X

Comments ___

Water samples: pH checked: Yes ___ No ___ NA X pH appropriate? Yes ___ No ___ NA X

Comments: ___

Additional information: ___

Labeled by: DSS Witness: AKK Cooler Inspected by: DSS

Form Y-003 R-00

Apex Laboratories

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Wednesday, January 11, 2023

Tima Carlson
True North Geotechnical Services
202 E Evergreen Blvd, Suite B
Vancouver, WA 98660

RE: A3A0233 - Block 290 - 22-0061

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A3A0233, which was received by the laboratory on 1/6/2023 at 12:21:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Default Cooler	4.8 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

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Darrell Auvil, Client Services Manager

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A3A0233 - 01 11 23 1721**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
4-1-2.5	**A3A0233-01**	**Soil**	**01/05/23 08:30**	**01/06/23 12:21**
4-2-35	**A3A0233-02**	**Soil**	**01/05/23 08:40**	**01/06/23 12:21**
3-1-2.5	**A3A0233-03**	**Soil**	**01/06/23 09:30**	**01/06/23 12:21**
3-2-35	**A3A0233-04**	**Soil**	**01/06/23 09:40**	**01/06/23 12:21**
Interceptor-13	**A3A0233-05**	**Soil**	**01/05/23 13:40**	**01/06/23 12:21**

Apex Laboratories

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Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A3A0233 - 01 11 23 1721**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
4-1-2.5 (A3A0233-01)				**Matrix: Soil**		**Batch: 23A0221**		
Gasoline Range Organics	ND	---	25.0	mg/kg dry	1	01/10/23 08:24	NWTPH-HCID	
Diesel Range Organics	ND	---	62.4	mg/kg dry	1	01/10/23 08:24	NWTPH-HCID	
Oil Range Organics	ND	---	125	mg/kg dry	1	01/10/23 08:24	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*80 %*	*Limits: 50-150 %*	*1*	*01/10/23 08:24*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*86 %*	*50-150 %*	*1*	*01/10/23 08:24*	*NWTPH-HCID*	
4-2-35 (A3A0233-02)				**Matrix: Soil**		**Batch: 23A0221**		
Gasoline Range Organics	ND	---	21.7	mg/kg dry	1	01/10/23 09:10	NWTPH-HCID	
Diesel Range Organics	ND	---	54.3	mg/kg dry	1	01/10/23 09:10	NWTPH-HCID	
Oil Range Organics	ND	---	109	mg/kg dry	1	01/10/23 09:10	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*83 %*	*Limits: 50-150 %*	*1*	*01/10/23 09:10*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*86 %*	*50-150 %*	*1*	*01/10/23 09:10*	*NWTPH-HCID*	
3-1-2.5 (A3A0233-03)				**Matrix: Soil**		**Batch: 23A0221**		
Gasoline Range Organics	ND	---	23.4	mg/kg dry	1	01/10/23 09:34	NWTPH-HCID	
Diesel Range Organics	ND	---	58.5	mg/kg dry	1	01/10/23 09:34	NWTPH-HCID	
Oil Range Organics	ND	---	117	mg/kg dry	1	01/10/23 09:34	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*85 %*	*Limits: 50-150 %*	*1*	*01/10/23 09:34*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*88 %*	*50-150 %*	*1*	*01/10/23 09:34*	*NWTPH-HCID*	
3-2-35 (A3A0233-04)				**Matrix: Soil**		**Batch: 23A0221**		
Gasoline Range Organics	ND	---	25.7	mg/kg dry	1	01/10/23 09:57	NWTPH-HCID	
Diesel Range Organics	ND	---	64.4	mg/kg dry	1	01/10/23 09:57	NWTPH-HCID	
Oil Range Organics	ND	---	129	mg/kg dry	1	01/10/23 09:57	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*92 %*	*Limits: 50-150 %*	*1*	*01/10/23 09:57*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*90 %*	*50-150 %*	*1*	*01/10/23 09:57*	*NWTPH-HCID*	
Interceptor-13 (A3A0233-05)				**Matrix: Soil**		**Batch: 23A0221**		
Gasoline Range Organics	ND	---	21.6	mg/kg dry	1	01/10/23 10:20	NWTPH-HCID	
Diesel Range Organics	ND	---	54.0	mg/kg dry	1	01/10/23 10:20	NWTPH-HCID	
Oil Range Organics	ND	---	108	mg/kg dry	1	01/10/23 10:20	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*99 %*	*Limits: 50-150 %*	*1*	*01/10/23 10:20*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*96 %*	*50-150 %*	*1*	*01/10/23 10:20*	*NWTPH-HCID*	

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A3A0233 - 01 11 23 1721**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
4-1-2.5 (A3A0233-01)				**Matrix: Soil**		**Batch: 23A0251**		
% Solids	**79.9**	---	1.00	%	1	01/10/23 06:55	EPA 8000D	
4-2-35 (A3A0233-02)				**Matrix: Soil**		**Batch: 23A0251**		
% Solids	**89.9**	---	1.00	%	1	01/10/23 06:55	EPA 8000D	
3-1-2.5 (A3A0233-03)				**Matrix: Soil**		**Batch: 23A0251**		
% Solids	**78.9**	---	1.00	%	1	01/10/23 06:55	EPA 8000D	
3-2-35 (A3A0233-04)				**Matrix: Soil**		**Batch: 23A0251**		
% Solids	**76.5**	---	1.00	%	1	01/10/23 06:55	EPA 8000D	
Interceptor-13 (A3A0233-05)				**Matrix: Soil**		**Batch: 23A0251**		
% Solids	**90.5**	---	1.00	%	1	01/10/23 06:55	EPA 8000D	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23A0221 - NWTPH-HCID (Soil)							Soil					
Blank (23A0221-BLK1)			Prepared: 01/09/23 08:07		Analyzed: 01/10/23 08:01							
NWTPH-HCID												
Gasoline Range Organics	ND	---	20.0	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	50.0	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	100	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		*Recovery:*	*102 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
4-Bromofluorobenzene (Surr)			*106 %*		*50-150 %*			*"*				
Duplicate (23A0221-DUP1)			Prepared: 01/09/23 08:07		Analyzed: 01/10/23 08:47							
QC Source Sample: 4-1-2.5 (A3A0233-01)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	24.6	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	61.6	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	123	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery:*	*91 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
4-Bromofluorobenzene (Surr)			*92 %*		*50-150 %*			*"*				

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A3A0233 - 01 11 23 1721**

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23A0251 - Total Solids (Dry Weight)							**Soil**					
Duplicate (23A0251-DUP1)			Prepared: 01/09/23 13:11		Analyzed: 01/10/23 06:55							
QC Source Sample: Non-SDG (A3A0230-01)												
% Solids	**92.8**	---	1.00	%	1	---	93.8	---	---	1	10%	
Duplicate (23A0251-DUP2)			Prepared: 01/09/23 13:11		Analyzed: 01/10/23 06:55							
QC Source Sample: 4-1-2.5 (A3A0233-01)												
EPA 8000D												
% Solids	**79.4**	---	1.00	%	1	---	79.9	---	---	0.7	10%	
Duplicate (23A0251-DUP3)			Prepared: 01/09/23 13:11		Analyzed: 01/10/23 06:55							
QC Source Sample: 4-2-35 (A3A0233-02)												
EPA 8000D												
% Solids	**87.7**	---	1.00	%	1	---	89.9	---	---	3	10%	
Duplicate (23A0251-DUP4)			Prepared: 01/09/23 17:50		Analyzed: 01/10/23 06:55							
QC Source Sample: Non-SDG (A3A0297-01)												
% Solids	**88.2**	---	1.00	%	1	---	87.6	---	---	0.7	10%	
Duplicate (23A0251-DUP5)			Prepared: 01/09/23 18:04		Analyzed: 01/10/23 06:55							
QC Source Sample: Non-SDG (A3A0303-01)												
% Solids	**88.6**	---	1.00	%	1	---	88.6	---	---	0.04	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A3A0233 - 01 11 23 1721**

SAMPLE PREPARATION INFORMATION

Hydrocarbon Identification Screen by NWTPH-HCID

Prep: NWTPH-HCID (Soil)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23A0221							
A3A0233-01	Soil	NWTPH-HCID	01/05/23 08:30	01/09/23 08:07	10.02g/10mL	10g/10mL	1.00
A3A0233-02	Soil	NWTPH-HCID	01/05/23 08:40	01/09/23 08:07	10.25g/10mL	10g/10mL	0.98
A3A0233-03	Soil	NWTPH-HCID	01/06/23 09:30	01/09/23 08:07	10.83g/10mL	10g/10mL	0.92
A3A0233-04	Soil	NWTPH-HCID	01/06/23 09:40	01/09/23 08:07	10.15g/10mL	10g/10mL	0.99
A3A0233-05	Soil	NWTPH-HCID	01/05/23 13:40	01/09/23 08:07	10.23g/10mL	10g/10mL	0.98

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23A0251							
A3A0233-01	Soil	EPA 8000D	01/05/23 08:30	01/09/23 13:11			NA
A3A0233-02	Soil	EPA 8000D	01/05/23 08:40	01/09/23 13:11			NA
A3A0233-03	Soil	EPA 8000D	01/06/23 09:30	01/09/23 13:11			NA
A3A0233-04	Soil	EPA 8000D	01/06/23 09:40	01/09/23 13:11			NA
A3A0233-05	Soil	EPA 8000D	01/05/23 13:40	01/09/23 13:11			NA

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ANALYTICAL REPORT

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Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A3A0233 - 01 11 23 1721**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

There are No Qualifiers on Sample or QC Data for this report

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A3A0233 - 01 11 23 1721**

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A3A0233 - 01 11 23 1721**

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories, LLC
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503-718-2323
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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A3A0233 - 01 11 23 1721**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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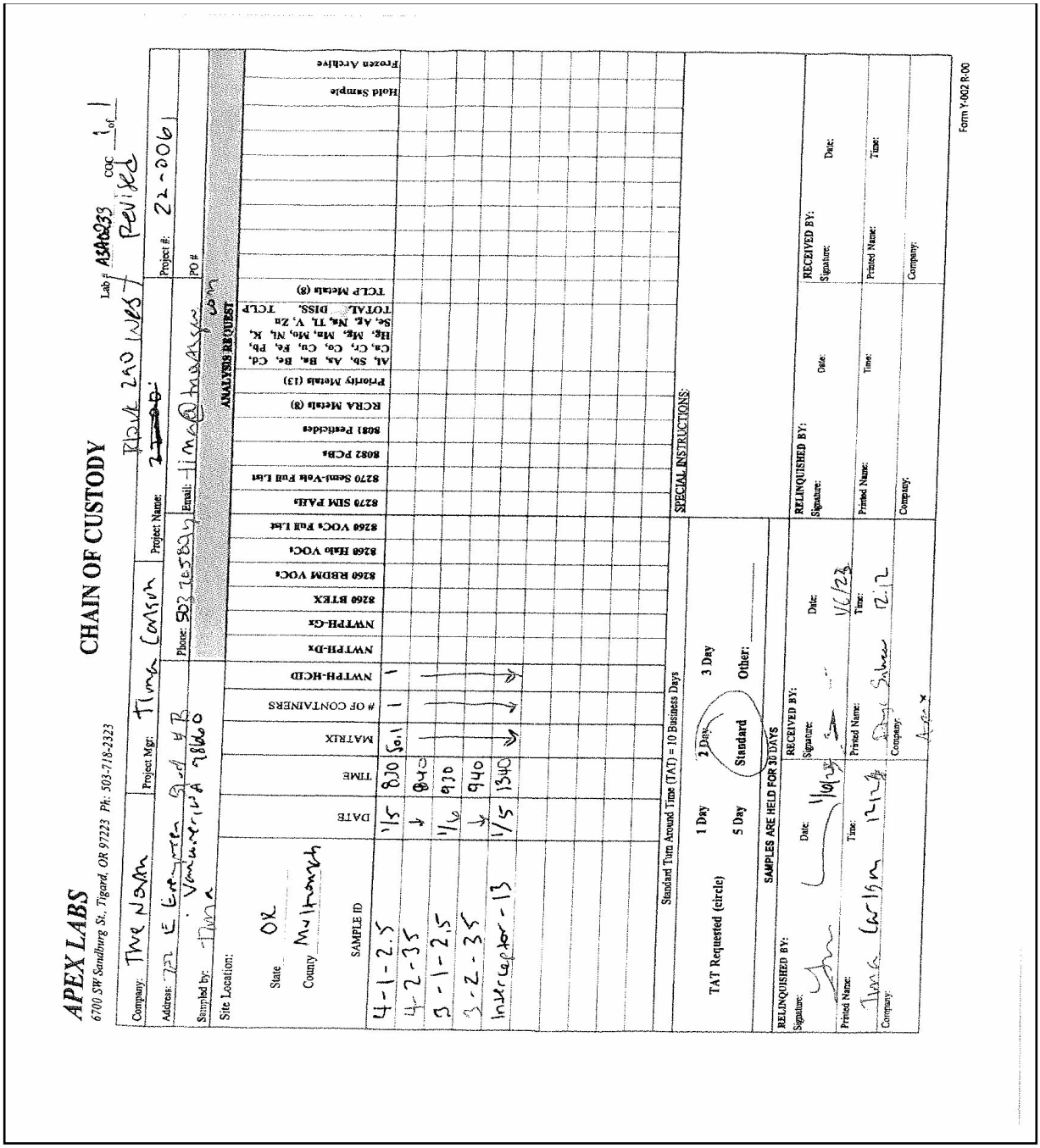
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A3A0233 - 01 11 23 1721**



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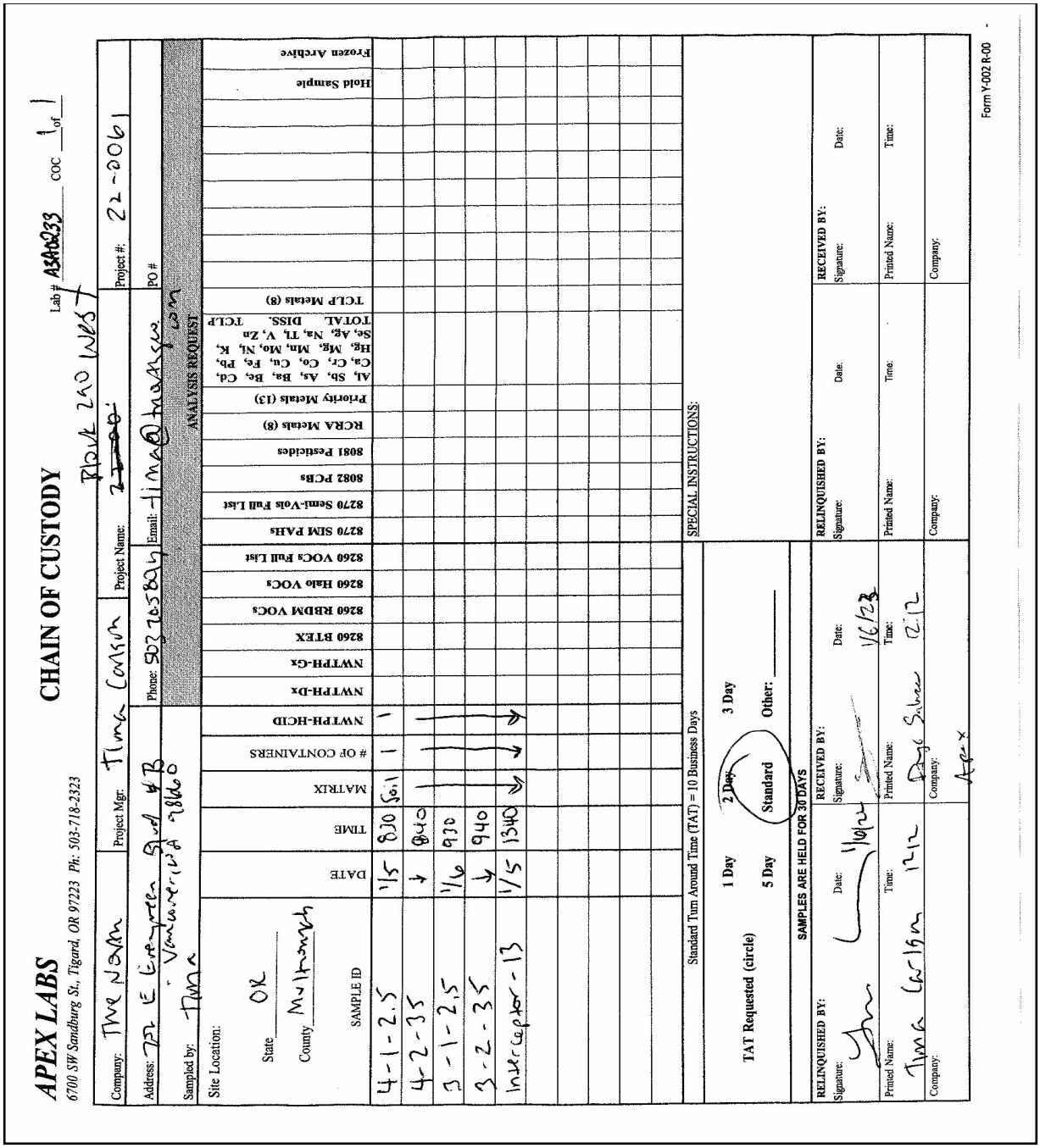

APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # A3A0233 COC 1 of 1

Company: True North — Project Mgr: Tima Carlson — Project Name: Block 290 Investigation — Project #: 22-0061
Address: 202 E Evergreen Blvd #B Vancouver, WA 98660 — Phone: 503 705 8041 — Email: tima@truenorthgeo.com — PO #
Sampled by: Tima

Site Location: State OR County Multnomah

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
4-1-2.5	1/5	830	Soil	1	✓																
4-2-3.5	↓	840		1	✓																
3-1-2.5	1/6	930			✓																
3-2-3.5	↓	940			✓																
Interceptor-13	1/5	1340	↓	↓	✓																

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day 2 Day 3 Day 5 Day Standard Other: _____

SPECIAL INSTRUCTIONS:

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY:	Date:	Time:	RECEIVED BY:	Date:	Time:
Signature:	1/6/23		Signature:	1/6/23	
Printed Name:			Printed Name: Ryan Sabee		0912
Company:			Company: Apex		

RELINQUISHED BY: Signature: Date: Time: Printed Name: Company:

RECEIVED BY: Signature: Date: Time: Printed Name: Company:

Form Y-002 R-00

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A3A0233 - 01 11 23 1721**

APEX LABS COOLER RECEIPT FORM

Client: True North Element WO#: A3A0233

Project/Project #: Block 290 West / 22-0061

Delivery Info:

Date/time received: 1/6/23 @ 12 12 By: DSS

Delivered by: Apex__Client X ESS__FedEx__UPS__Radio__Morgan__SDS__Evergreen__Other__

Cooler Inspection Date/time inspected: 1/6/23 @ 1215 By: DSS

Chain of Custody included? Yes X No _____

Signed/dated by client? Yes Y No _____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	4.8						
Custody seals? (Y/N)	N						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	N						
Ice type: (Gel/Real/Other)	Real						
Condition (In/Out):	In						

Cooler out of temp? (Y/(N)) Possible reason why: _____

Green dots applied to out of temperature samples? Yes/(No)

Out of temperature samples form initiated? Yes/(No)

Sample Inspection: Date/time inspected: 1/6/23 @ 12:21 By: KAM

All samples intact? Yes X No ___ Comments: _____

Bottle labels/COCs agree? Yes X No ___ Comments: No time on containers.

COC/container discrepancies form initiated? Yes ___ No X

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: _____

Do VOA vials have visible headspace? Yes ___ No ___ NA X

Comments _____

Water samples: pH checked: Yes___No___NA X pH appropriate? Yes___No___NA X

Comments: _____

Additional information: _____

Labeled by: KAM Witness: DSS Cooler Inspected by: Client

Form Y-003 R-00

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6700 S.W. Sandburg Street
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ORELAP ID: **OR100062**

ANALYTICAL REPORT

Thursday, January 19, 2023

Tima Carlson
True North Geotechnical Services
202 E Evergreen Blvd, Suite B
Vancouver, WA 98660

RE: A3A0619 - Block 290 - 22-0061

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A3A0619, which was received by the laboratory on 1/18/2023 at 2:56:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Default Cooler	6.0 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A3A0619 - 01 19 23 1601**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
1-1-1.2	**A3A0619-01**	**Soil**	**01/17/23 10:00**	**01/18/23 14:56**

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503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A3A0619 - 01 19 23 1601**

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
1-1-1.2 (A3A0619-01)				**Matrix: Soil**		**Batch: 23A0608**		
Gasoline Range Organics	ND	---	23.5	mg/kg dry	1	01/18/23 22:54	NWTPH-HCID	
Diesel Range Organics	ND	---	58.8	mg/kg dry	1	01/18/23 22:54	NWTPH-HCID	
Oil Range Organics	ND	---	118	mg/kg dry	1	01/18/23 22:54	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)		*Recovery:*	*79 %*	*Limits: 50-150 %*	*1*	*01/18/23 22:54*	*NWTPH-HCID*	
4-Bromofluorobenzene (Surr)			*79 %*	*50-150 %*	*1*	*01/18/23 22:54*	*NWTPH-HCID*	

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Darrell Auvil, Client Services Manager

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A3A0619 - 01 19 23 1601**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
1-1-1.2 (A3A0619-01)				**Matrix: Soil**		**Batch: 23A0640**		
% Solids	**84.6**	---	1.00	%	1	01/19/23 05:05	EPA 8000D	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23A0608 - NWTPH-HCID (Soil)							Soil					
Blank (23A0608-BLK1)			Prepared: 01/18/23 06:28		Analyzed: 01/18/23 21:21							
NWTPH-HCID												
Gasoline Range Organics	**DET**	---	20.0	mg/kg wet	1	---	---	---	---	---	---	B
Diesel Range Organics	ND	---	50.0	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	100	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 81 %*		*Limits: 50-150 %*		*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*84 %*		*50-150 %*		*"*					
Duplicate (23A0608-DUP1)			Prepared: 01/18/23 06:28		Analyzed: 01/18/23 22:31							
QC Source Sample: Non-SDG (A3A0562-02)												
Gasoline Range Organics	ND	---	21.3	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	53.1	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	106	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 80 %*		*Limits: 50-150 %*		*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*82 %*		*50-150 %*		*"*					

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ANALYTICAL REPORT

True North Geotechnical Services	Project: Block 290	
202 E Evergreen Blvd, Suite B	Project Number: 22-0061	Report ID:
Vancouver, WA 98660	Project Manager: Tima Carlson	A3A0619 - 01 19 23 1601

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23A0640 - Total Solids (Dry Weight)							Soil					
Duplicate (23A0640-DUP1)			Prepared: 01/18/23 12:14		Analyzed: 01/19/23 05:05							
QC Source Sample: Non-SDG (A3A0537-01)												
% Solids	**66.3**	---	1.00	%	1	---	66.6	---	---	0.3	10%	
Duplicate (23A0640-DUP2)			Prepared: 01/18/23 12:14		Analyzed: 01/19/23 05:05							
QC Source Sample: Non-SDG (A3A0537-02)												
% Solids	**67.4**	---	1.00	%	1	---	67.1	---	---	0.4	10%	
Duplicate (23A0640-DUP3)			Prepared: 01/18/23 16:15		Analyzed: 01/19/23 05:05							
QC Source Sample: Non-SDG (A3A0617-01)												
% Solids	**74.1**	---	1.00	%	1	---	73.9	---	---	0.2	10%	
Duplicate (23A0640-DUP4)			Prepared: 01/18/23 18:41		Analyzed: 01/19/23 05:05							
QC Source Sample: Non-SDG (A3A0635-01)												
% Solids	**86.3**	---	1.00	%	1	---	87.1	---	---	0.9	10%	
Duplicate (23A0640-DUP5)			Prepared: 01/18/23 18:41		Analyzed: 01/19/23 05:05							
QC Source Sample: Non-SDG (A3A0635-02)												
% Solids	**86.1**	---	1.00	%	1	---	86.2	---	---	0.2	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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ANALYTICAL REPORT

True North Geotechnical Services	Project: **Block 290**	
202 E Evergreen Blvd, Suite B	Project Number: **22-0061**	**Report ID:**
Vancouver, WA 98660	Project Manager: **Tima Carlson**	**A3A0619 - 01 19 23 1601**

SAMPLE PREPARATION INFORMATION

Hydrocarbon Identification Screen by NWTPH-HCID

Prep: NWTPH-HCID (Soil)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23A0608							
A3A0619-01	Soil	NWTPH-HCID	01/17/23 10:00	01/18/23 15:46	10.05g/10mL	10g/10mL	1.00

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23A0640							
A3A0619-01	Soil	EPA 8000D	01/17/23 10:00	01/18/23 16:15			NA

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QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

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B	Analyte detected in an associated blank at a level above the MRL. (See Notes and Conventions below.)

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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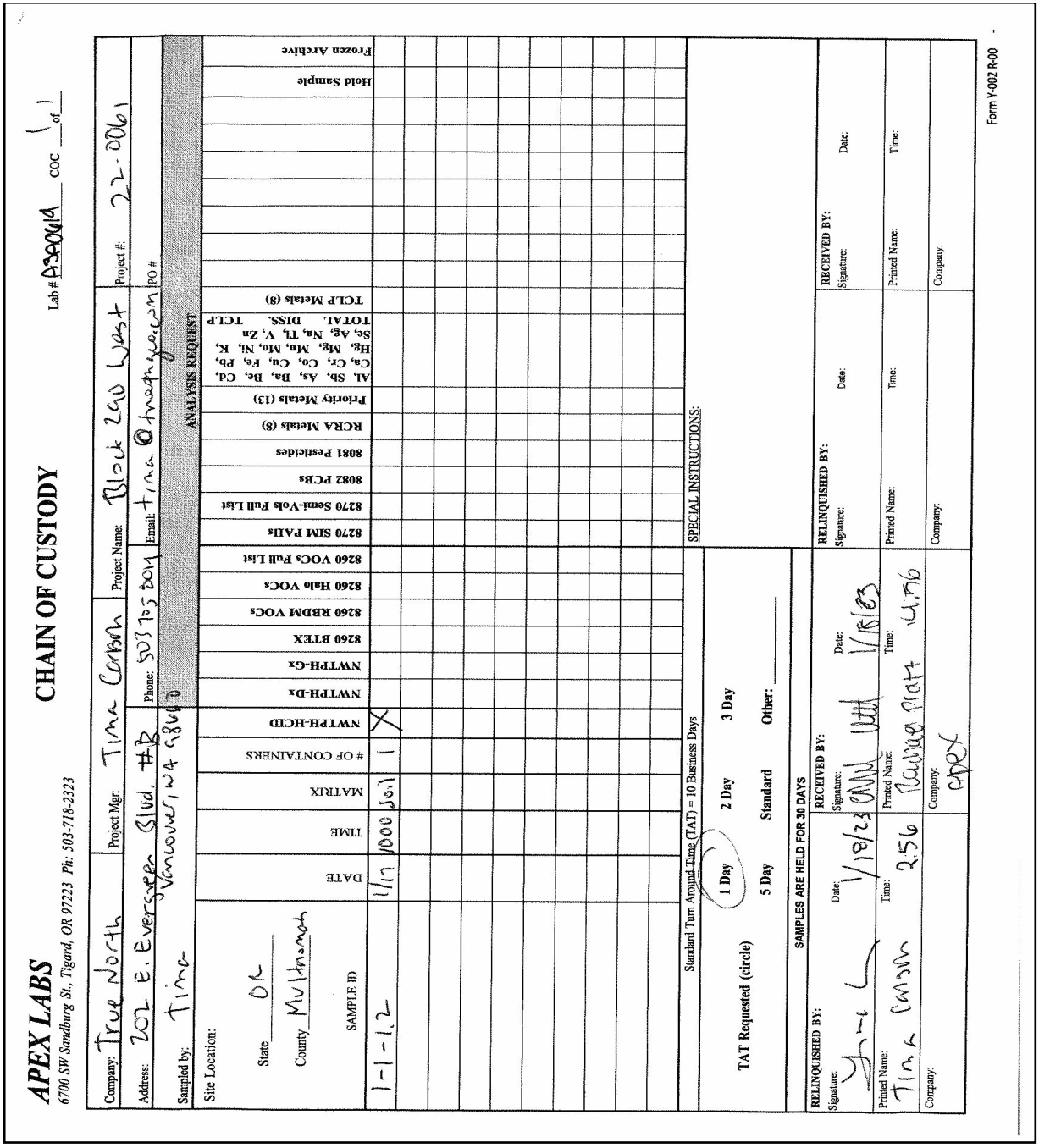

APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # A3A0619 COC 1 of 1

Company: True North | Project Mgr: Tima Carlson | Project Name: Block 290 Lyost | Project #: 22-0061
Address: 202 E. Evergreen Blvd. #B Vancouver, WA 98660 | Phone: 503 705 2004 | Email: tima@truenorthgeo.com | PO #
Sampled by: Tima

Site Location: State OR County Multnomah

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
1-1-1,2	1/17	1000	Soil	1	X																

ANALYSIS REQUEST

Standard Turn Around Time (TAT) = 10 Business Days
TAT Requested (circle): 1 Day 2 Day 3 Day 5 Day Standard Other: ____

SPECIAL INSTRUCTIONS:

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY: Signature: Date: 1/18/23 Printed Name: Time: 2:56 Company: APEX
RECEIVED BY: Signature: Date: 1/18/23 Printed Name: Time: 4:15 Company: Apex
RELINQUISHED BY: Signature: Date: Printed Name: Time: Company:
RECEIVED BY: Signature: Date: Printed Name: Time: Company:
RELINQUISHED BY: Signature: Date: Printed Name: Time: Company:
RECEIVED BY: Signature: Date: Printed Name: Time: Company:

Form Y-002 R-00

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APEX LABS COOLER RECEIPT FORM

Client: True North Element WO#: A3A0619

Project/Project #: Block 290 West / 22-0061

Delivery Info:

Date/time received: 1/18/23 @ 14:56 By: RMP

Delivered by: Apex__Client X ESS__FedEx__UPS__Radio__Morgan__SDS__Evergreen__Other__

Cooler Inspection Date/time inspected: 1/18/23 @ 14:57 By: RMP

Chain of Custody included? Yes X No ____

Signed/dated by client? Yes X No ____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	6.0						
Custody seals? (Y/N)	N						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	N						
Ice type: (Gel/Real/Other)	gel						
Condition (In/Out):	In						

Cooler out of temp? (Y/(N)) Possible reason why: ____

Green dots applied to out of temperature samples? Yes/(No)

Out of temperature samples form initiated? Yes/(No)

Sample Inspection: Date/time inspected: 1/18/23 @ 15:03 By: RMP

All samples intact? Yes X No ___ Comments: ____

Bottle labels/COCs agree? Yes X No ___ Comments: ____

COC/container discrepancies form initiated? Yes ___ No X

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: ____

Do VOA vials have visible headspace? Yes ___ No ___ NA X

Comments ____

Water samples: pH checked: Yes___No___NA X pH appropriate? Yes___No___NA X

Comments: ____

Additional information: ____

Labeled by: RMP Witness: DJS Cooler Inspected by: Client

Form Y-003 R-00

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APPENDIX C

WASTE MANAGEMENT PROFILE #137398OR
TRANSACTION HISTORY

Total Tally of Truck Tickets

Date	Profile #	Manifest/A	Ticket #	Material	Facility	Carrier	Vehicle	Tons/Tonne	Material Qu	Material Unit
4/11/2022	137367OR	na	1638838	Cont. Soil -	Hillsboro	Landfill	02-SOLO	11.3	11.3	TON
4/11/2022	137367OR	na	1638839	Cont. Soil -	Hillsboro	Landfill	14-SOLO	14.49	14.49	TON
4/11/2022	137367OR	na	1638837	Cont. Soil -	Hillsboro	Landfill	21-SOLO	14.13	14.13	TON
4/11/2022	137367OR	na	1638840	Cont. Soil -	Hillsboro	Landfill	23-SOLO	13.61	13.61	TON
4/11/2022	137367OR	na	1638842	Cont. Soil -	Hillsboro	La	DUMP TRU	20	15.01	15.01	TON
4/14/2022	137367OR	NA	1639254	Cont. Soil -	Hillsboro	Landfill	23-SOLO	21.19	21.19	TON
4/14/2022	137367OR	na	1639256	Cont. Soil -	Hillsboro	La	RA ROTH TF	29-SOLO	15.28	15.28	TON
4/15/2022	137367OR	NA	1639309	Cont. Soil -	Hillsboro	La	RA ROTH TF	29-SOLO	13.15	13.15	TON
4/15/2022	137367OR	NA	1639315	Cont. Soil -	Hillsboro	Landfill	23-SOLO	15.02	15.02	TON
4/15/2022	137367OR	NA	1639318	Cont. Soil -	Hillsboro	La	RA ROTH TF	27-SOLO	13.09	13.09	TON
4/15/2022	137367OR	NA	1639311	Cont. Soil -	Hillsboro	La	RA ROTH TF	13-SOLO	13.35	13.35	TON
4/15/2022	137367OR	NA	1639312	Cont. Soil -	Hillsboro	La	RA ROTH TF	21-SOLO	13.69	13.69	TON
4/15/2022	137367OR	NA	1639319	Cont. Soil -	Hillsboro	La	RA ROTH TF	16-SOLO	14.78	14.78	TON
4/15/2022	137367OR	NA	1639341	Cont. Soil -	Hillsboro	La	RA ROTH TF	21-SOLO	14.18	14.18	TON
4/15/2022	137367OR	NA	1639345	Cont. Soil -	Hillsboro	La	RA ROTH TF	29-SOLO	14.06	14.06	TON
4/15/2022	137367OR	NA	1639346	Cont. Soil -	Hillsboro	La	RA ROTH TF	27-SOLO	14.47	14.47	TON
4/15/2022	137367OR	NA	1639347	Cont. Soil -	Hillsboro	Landfill	23-SOLO	13.48	13.48	TON
4/15/2022	137367OR	NA	1639348	Cont. Soil -	Hillsboro	La	RA ROTH TF	16-SOLO	13.75	13.75	TON
4/15/2022	137367OR	NA	1639349	Cont. Soil -	Hillsboro	La	RA ROTH TF	13-SOLO	13.03	13.03	TON
4/15/2022	137367OR	na	1639368	Cont. Soil -	Hillsboro	La	RA ROTH TF	21-SOLO	14.84	14.84	TON
4/15/2022	137367OR	NA	1639369	Cont. Soil -	Hillsboro	La	RA ROTH TF	29-SOLO	13.5	13.5	TON
4/15/2022	137367OR	NA	1639373	Cont. Soil -	Hillsboro	La	RA ROTH TF	13-SOLO	12.65	12.65	TON
4/15/2022	137367OR	NA	1639374	Cont. Soil -	Hillsboro	La	RA ROTH TF	27-SOLO	13.97	13.97	TON
4/15/2022	137367OR	NA	1639377	Cont. Soil -	Hillsboro	Landfill	23-SOLO	15.89	15.89	TON
4/15/2022	137367OR	NA	1639392	Cont. Soil -	Hillsboro	La	RA ROTH TF	29-SOLO	13.66	13.66	TON
4/15/2022	137367OR	na	1639395	Cont. Soil -	Hillsboro	La	RA ROTH TF	21-SOLO	13.06	13.06	TON
4/15/2022	137367OR	NA	1639398	Cont. Soil -	Hillsboro	La	RA ROTH TF	27-SOLO	13.62	13.62	TON
4/15/2022	137367OR	na	1639402	Cont. Soil -	Hillsboro	La	RA ROTH TF	13-SOLO	12.41	12.41	TON
4/15/2022	137367OR	na	1639403	Cont. Soil -	Hillsboro	La	RA ROTH TF	16-SOLO	13.88	13.88	TON
4/15/2022	137367OR	NA	1639404	Cont. Soil -	Hillsboro	Landfill	23-SOLO	15.61	15.61	TON
4/18/2022	137367OR	NA	1639450	Cont. Soil -	Hillsboro	La	RA ROTH TF	21-SOLO	12.08	12.08	TON
4/18/2022	137367OR	NA	1639447	Cont. Soil -	Hillsboro	La	SOLO	1-SOLO	13.51	13.51	TON
4/18/2022	137367OR	NA	1639449	Cont. Soil -	Hillsboro	La	RA ROTH TF	20-SOLO	12.91	12.91	TON
4/18/2022	137367OR	NA	1639451	Cont. Soil -	Hillsboro	Landfill	23-SOLO	15.88	15.88	TON
4/18/2022	137367OR	NA	1639452	Cont. Soil -	Hillsboro	La	RA ROTH TF	16	13.64	13.64	TON
4/18/2022	137367OR	NA	1639454	Cont. Soil -	Hillsboro	La	RA ROTH TF	13	12.85	12.85	TON
4/18/2022	137367OR	na	1639471	Cont. Soil -	Hillsboro	La	RA ROTH TF	20-SOLO	13.68	13.68	TON
4/18/2022	137367OR	NA	1639472	Cont. Soil -	Hillsboro	La	RA ROTH TF	21-SOLO	16.01	16.01	TON
4/18/2022	137367OR	na	1639473	Cont. Soil -	Hillsboro	La	RA ROTH TF	16	15.51	15.51	TON
4/18/2022	137367OR	NA	1639474	Cont. Soil -	Hillsboro	La	SOLO	1-SOLO	13.72	13.72	TON
4/18/2022	137367OR	NA	1639475	Cont. Soil -	Hillsboro	Landfill	23-solo	15.86	15.86	TON
4/18/2022	137367OR	na	1639476	Cont. Soil -	Hillsboro	La	RA ROTH TF	13	13.4	13.4	TON
4/18/2022	137367OR	NA	1639488	Cont. Soil -	Hillsboro	Landfill	23-SOLO	15	15	TON
4/18/2022	137367OR	NA	1639489	Cont. Soil -	Hillsboro	La	RA ROTH TF	21-SOLO	13.43	13.43	TON
4/18/2022	137367OR	NA	1639490	Cont. Soil -	Hillsboro	La	RA ROTH TF	20-SOLO	13.74	13.74	TON
4/18/2022	137367OR	NA	1639492	Cont. Soil -	Hillsboro	La	RA ROTH TF	16	13.92	13.92	TON
4/18/2022	137367OR	na	1639495	Cont. Soil -	Hillsboro	La	SOLO	1-SOLO	14.52	14.52	TON
4/18/2022	137367OR	na	1639497	Cont. Soil -	Hillsboro	La	RA ROTH TF	13-SOLO	13.46	13.46	TON
4/18/2022	137367OR	na	1639500	Cont. Soil -	Hillsboro	Landfill	23-solo	17.3	17.3	TON
4/18/2022	137367OR	na	1639508	Cont. Soil -	Hillsboro	La	RA ROTH TF	21-SOLO	15.01	15.01	TON
4/18/2022	137367OR	na	1639509	Cont. Soil -	Hillsboro	La	RA ROTH TF	21-SOLO	15.97	15.97	TON
4/18/2022	137367OR	NA	1639510	Cont. Soil -	Hillsboro	Landfill	23-SOLO	15.08	15.08	TON
4/18/2022	137367OR	na	1639512	Cont. Soil -	Hillsboro	La	RA ROTH TF	16	15.36	15.36	TON
4/18/2022	137367OR	na	1639513	Cont. Soil -	Hillsboro	La	SOLO	1-SOLO	14.22	14.22	TON
4/18/2022	137367OR	na	1639517	Cont. Soil -	Hillsboro	Landfill	23-solo	16.91	16.91	TON
4/18/2022	137367OR	NA	1639547	Cont. Soil -	Hillsboro	La	RA ROTH TF	21-SOLO	14.34	14.34	TON
4/18/2022	137367OR	na	1639550	Cont. Soil -	Hillsboro	La	RA ROTH TF	20-SOLO	14.48	14.48	TON
4/18/2022	137367OR	NA	1639558	Cont. Soil -	Hillsboro	La	RA ROTH TF	16	15.42	15.42	TON
4/18/2022	137367OR	na	1639561	Cont. Soil -	Hillsboro	La	SOLO	1-SOLO	12.05	12.05	TON
4/18/2022	137367OR	NA	1639562	Cont. Soil -	Hillsboro	Landfill	23-SOLO	13.74	13.74	TON
4/19/2022	137367OR	NA	1639581	Cont. Soil -	Hillsboro	La	RA ROTH TF	21-SOLO	18.64	18.64	TON
4/19/2022	137367OR	NA	1639582	Cont. Soil -	Hillsboro	La	RA ROTH TF	29-SOLO	14.94	14.94	TON
4/19/2022	137367OR	na	1639583	Cont. Soil -	Hillsboro	Landfill	1-SOLO	16.94	16.94	TON
4/19/2022	137367OR	NA	1639588	Cont. Soil -	Hillsboro	Landfill	23-SOLO	19.8	19.8	TON
4/19/2022	137367OR	NA	1639587	Cont. Soil -	Hillsboro	Landfill	11-SOLO	17.76	17.76	TON
4/19/2022	137367OR	NA	1639612	Cont. Soil -	Hillsboro	La	RA ROTH TF	21-SOLO	18.29	18.29	TON
4/19/2022	137367OR	NA	1639614	Cont. Soil -	Hillsboro	La	RA ROTH TF	29-SOLO	17.88	17.88	TON
4/19/2022	137367OR	na	1639615	Cont. Soil -	Hillsboro	Landfill	1-SOLO	21.26	21.26	TON
4/19/2022	137367OR	na	1639621	Cont. Soil -	Hillsboro	Landfill	23-SOLO	20.68	20.68	TON
4/19/2022	137367OR	na	1639627	Cont. Soil -	Hillsboro	Landfill	11-SOLO	19.42	19.42	TON

4/19/2022	137367OR	NA	1639639	Cont. Soil -	Hillsboro L	RA ROTH TF	21-SOLO		17.12	17.12 TON
4/19/2022	137367OR	NA	1639640	Cont. Soil -	Hillsboro L	RA ROTH TF	29-SOLO		16.32	16.32 TON
4/19/2022	137367OR	NA	1639642	Cont. Soil -	Hillsboro	Landfill	1-SOLO		16.37	16.37 TON
4/19/2022	137367OR	na	1639646	Cont. Soil -	Hillsboro	Landfill	23-SOLO		19.41	19.41 TON
4/19/2022	137367OR	NA	1639654	Cont. Soil -	Hillsboro	Landfill	11-SOLO		19.11	19.11 TON
4/19/2022	137367OR	NA	1639656	Cont. Soil -	Hillsboro	Landfill	16-SOLO		22.18	22.18 TON
4/19/2022	137367OR	na	1639660	Cont. Soil -	Hillsboro L	RA ROTH TF	21-SOLO		17.19	17.19 TON
4/19/2022	137367OR	NA	1639662	Cont. Soil -	Hillsboro L	RA ROTH TF	29-SOLO		19.92	19.92 TON
4/19/2022	137367OR	na	1639664	Cont. Soil -	Hillsboro	Landfill	1-SOLO		21.8	21.8 TON
4/19/2022	137367OR	na	1639687	Cont. Soil -	Hillsboro	Landfill	11-SOLO		19.57	19.57 TON
4/19/2022	137367OR	na	1639704	Cont. Soil -	Hillsboro	Landfill	16-SOLO		17.87	17.87 TON
4/19/2022	137367OR	na	1639706	Cont. Soil -	Hillsboro L	RA ROTH TF	21-SOLO		16.84	16.84 TON
4/20/2022	137367OR	na	1639721	Cont. Soil -	Hillsboro	Landfill	14-SOLO		16.31	16.31 TON
4/20/2022	137367OR	na	1639724	Cont. Soil -	Hillsboro L	DUMP TRU(	73-SOLO		17.86	17.86 TON
4/20/2022	137367OR	na	1639725	Cont. Soil -	Hillsboro L	SOLO	1-SOLO		15.37	15.37 TON
4/20/2022	137367OR	na	1639728	Cont. Soil -	Hillsboro	Landfill	18-SOLO		22.74	22.74 TON
4/20/2022	137367OR	na	1639732	Cont. Soil -	Hillsboro	Landfill	20-SOLO		16.52	16.52 TON
4/20/2022	137367OR	na	1639734	Cont. Soil -	Hillsboro	Landfill	23-SOLO		20.65	20.65 TON
4/20/2022	137367OR	na	1639729	Cont. Soil -	Hillsboro L	DUMP TRU(	67-SOLO		19.22	19.22 TON
4/20/2022	137367OR	na	1639737	Cont. Soil -	Hillsboro	Landfill		22	20.13	20.13 TON
4/20/2022	137367OR	NA	1639758	Cont. Soil -	Hillsboro L	DUMP TRU(	73-SOLO		18.89	18.89 TON
4/20/2022	137367OR	NA	1639759	Cont. Soil -	Hillsboro L	SOLO	1-SOLO		17.63	17.63 TON
4/20/2022	137367OR	NA	1639761	Cont. Soil -	Hillsboro	Landfill	18-SOLO		20.84	20.84 TON
4/20/2022	137367OR	na	1639762	Cont. Soil -	Hillsboro L	DUMP TRU(	67-SOLO		21.09	21.09 TON
4/20/2022	137367OR	NA	1639765	Cont. Soil -	Hillsboro	Landfill		22	20.42	20.42 TON
4/20/2022	137367OR	NA	1639766	Cont. Soil -	Hillsboro	Landfill	20-SOLO		21.3	21.3 TON
4/20/2022	137367OR	NA	1639767	Cont. Soil -	Hillsboro	Landfill	23-SOLO		17.68	17.68 TON
4/20/2022	137367OR	NA	1639781	Cont. Soil -	Hillsboro L	DUMP TRU(	73-SOLO		21.03	21.03 TON
4/20/2022	137367OR	NA	1639782	Cont. Soil -	Hillsboro L	SOLO	1-SOLO		18.28	18.28 TON
4/20/2022	137367OR	NA	1639788	Cont. Soil -	Hillsboro L	DUMP TRU(	67-SOLO		17.17	17.17 TON
4/20/2022	137367OR	na	1639791	Cont. Soil -	Hillsboro	Landfill	18-SOLO		22.37	22.37 TON
4/20/2022	137367OR	na	1639793	Cont. Soil -	Hillsboro	Landfill		22	22.69	22.69 TON
4/20/2022	137367OR	na	1639795	Cont. Soil -	Hillsboro	Landfill	20-SOLO		19.2	19.2 TON
4/20/2022	137367OR	NA	1639797	Cont. Soil -	Hillsboro	Landfill	23-SOLO		18.91	18.91 TON
4/20/2022	137367OR	na	1639805	Cont. Soil -	Hillsboro L	DUMP TRU(	73-SOLO		18.37	18.37 TON
4/20/2022	137367OR	NA	1639807	Cont. Soil -	Hillsboro L	SOLO	1-SOLO		15.4	15.4 TON
4/20/2022	137367OR	NA	1639812	Cont. Soil -	Hillsboro	Landfill	18-SOLO		18.87	18.87 TON
4/20/2022	137367OR	NA	1639813	Cont. Soil -	Hillsboro L	DUMP TRU(	67-SOLO		16.28	16.28 TON
4/20/2022	137367OR	na	1639818	Cont. Soil -	Hillsboro	Landfill		22	19.46	19.46 TON
4/20/2022	137367OR	na	1639826	Cont. Soil -	Hillsboro	Landfill	20-SOLO		17.85	17.85 TON
4/20/2022	137367OR	NA	1639832	Cont. Soil -	Hillsboro	Landfill	23-SOLO		18.03	18.03 TON
4/21/2022	137367OR	na	1639908	Cont. Soil -	Hillsboro L	RA ROTH TF		13	14.53	14.53 TON
4/21/2022	137367OR	na	1639909	Cont. Soil -	Hillsboro L	DUMP TRU(	67-SOLO		17.3	17.3 TON
4/21/2022	137367OR	NA	1639915	Cont. Soil -	Hillsboro	Landfill	18-SOLO		19.42	19.42 TON
4/21/2022	137367OR	na	1639917	Cont. Soil -	Hillsboro	Landfill	37-SOLO		15.08	15.08 TON
4/21/2022	137367OR	na	1639918	Cont. Soil -	Hillsboro	Landfill		22	15.64	15.64 TON
4/21/2022	137367OR	na	1639921	Cont. Soil -	Hillsboro	Landfill	20-SOLO		16.14	16.14 TON
4/21/2022	137367OR	na	1639910	Cont. Soil -	Hillsboro L	DUMP TRU(	18-SOLO		15.77	15.77 TON
4/21/2022	137367OR	NA	1639912	Cont. Soil -	Hillsboro	Landfill	9-SOLO		13.9	13.9 TON
4/21/2022	137367OR	NA	1639937	Cont. Soil -	Hillsboro L	RA ROTH TF		13	16.29	16.29 TON
4/21/2022	137367OR	NA	1639941	Cont. Soil -	Hillsboro L	DUMP TRU(	67-SOLO		18.02	18.02 TON
4/21/2022	137367OR	NA	1639943	Cont. Soil -	Hillsboro L	DUMP TRU(	18-SOLO		15.12	15.12 TON
4/21/2022	137367OR	NA	1639945	Cont. Soil -	Hillsboro	Landfill	18-SOLO		16.84	16.84 TON
4/21/2022	137367OR	NA	1639946	Cont. Soil -	Hillsboro	Landfill	37-SOLO		17.74	17.74 TON
4/21/2022	137367OR	NA	1639948	Cont. Soil -	Hillsboro	Landfill	9-SOLO		13.6	13.6 TON
4/21/2022	137367OR	NA	1639949	Cont. Soil -	Hillsboro	Landfill		22	16.42	16.42 TON
4/21/2022	137367OR	NA	1639951	Cont. Soil -	Hillsboro	Landfill	20-SOLO		16.39	16.39 TON
4/21/2022	137367OR	NA	1639966	Cont. Soil -	Hillsboro L	DUMP TRU(	67-SOLO		17.21	17.21 TON
4/21/2022	137367OR	NA	1639967	Cont. Soil -	Hillsboro L	RA ROTH TF		13	14.18	14.18 TON
4/21/2022	137367OR	NA	1639969	Cont. Soil -	Hillsboro L	DUMP TRU(	18-SOLO		15.91	15.91 TON
4/21/2022	137367OR	na	1639973	Cont. Soil -	Hillsboro	Landfill	18-SOLO		16.98	16.98 TON
4/21/2022	137367OR	na	1639974	Cont. Soil -	Hillsboro	Landfill	9-SOLO		13.96	13.96 TON
4/21/2022	137367OR	NA	1639976	Cont. Soil -	Hillsboro	Landfill	37-SOLO		16.3	16.3 TON
4/21/2022	137367OR	NA	1639978	Cont. Soil -	Hillsboro	Landfill	20-SOLO		16.66	16.66 TON
4/21/2022	137367OR	NA	1639980	Cont. Soil -	Hillsboro	Landfill		22	16.66	16.66 TON
4/21/2022	137367OR	NA	1639989	Cont. Soil -	Hillsboro L	RA ROTH TF		13	13.97	13.97 TON
4/21/2022	137367OR	NA	1639990	Cont. Soil -	Hillsboro L	DUMP TRU(	67-SOLO		18.4	18.4 TON
4/21/2022	137367OR	NA	1640015	Cont. Soil -	Hillsboro L	DUMP TRU(	18-SOLO		13.57	13.57 TON
4/21/2022	137367OR	NA	1640019	Cont. Soil -	Hillsboro	Landfill	18-SOLO		18.78	18.78 TON
4/22/2022	137367OR	na	1640046	Cont. Soil -	Hillsboro L	SOLO	1-SOLO		14.63	14.63 TON
4/22/2022	137367OR	na	1640048	Cont. Soil -	Hillsboro	Landfill	55-SOLO		15.81	15.81 TON
4/22/2022	137367OR	NA	1640050	Cont. Soil -	Hillsboro	Landfill	1-SOLO		14.95	14.95 TON
4/22/2022	137367OR	NA	1640053	Cont. Soil -	Hillsboro	Landfill	18-SOLO		15.22	15.22 TON

4/22/2022	137367OR	NA	1640049	Cont. Soil -	Hillsboro Landfill	56-SOLO	16.17	16.17	TON
4/22/2022	137367OR	na	1640052	Cont. Soil -	Hillsboro Landfill	518-SOLO	14.5	14.5	TON
4/22/2022	137367OR	NA	1640057	Cont. Soil -	Hillsboro La	SOLO	22-SOLO	13.94	13.94	TON
4/22/2022	137367OR	NA	1640080	Cont. Soil -	Hillsboro La	SOLO	1-SOLO	13.04	13.04	TON
4/22/2022	137367OR	NA	1640084	Cont. Soil -	Hillsboro Landfill	55-SOLO	14.59	14.59	TON
4/22/2022	137367OR	NA	1640085	Cont. Soil -	Hillsboro Landfill	56-SOLO	13.48	13.48	TON
4/22/2022	137367OR	NA	1640087	Cont. Soil -	Hillsboro Landfill	1-SOLO	15.4	15.4	TON
4/22/2022	137367OR	MA	1640093	Cont. Soil -	Hillsboro Landfill	18-SOLO	16.47	16.47	TON
4/22/2022	137367OR	NA	1640094	Cont. Soil -	Hillsboro Landfill	518-SOLO	15.87	15.87	TON
4/22/2022	137367OR	NA	1640095	Cont. Soil -	Hillsboro Landfill	22-SOLO	12.56	12.56	TON
4/22/2022	137367OR	NA	1640111	Cont. Soil -	Hillsboro La	SOLO	1-SOLO	13.96	13.96	TON
4/22/2022	137367OR	NA	1640112	Cont. Soil -	Hillsboro Landfill	56-SOLO	15.89	15.89	TON
4/22/2022	137367OR	NA	1640113	Cont. Soil -	Hillsboro Landfill	55-SOLO	14.4	14.4	TON
4/22/2022	137367OR	NA	1640115	Cont. Soil -	Hillsboro Landfill	1-SOLO	17.23	17.23	TON
4/22/2022	137367OR	NA	1640121	Cont. Soil -	Hillsboro Landfill	518-SOLO	14.15	14.15	TON
4/22/2022	137367OR	NA	1640122	Cont. Soil -	Hillsboro Landfill	18-SOLO	18.63	18.63	TON
4/22/2022	137367OR	NA	1640124	Cont. Soil -	Hillsboro Landfill	22-SOLO	13.41	13.41	TON
4/22/2022	137367OR	na	1640144	Cont. Soil -	Hillsboro La	SOLO	1-SOLO	13.35	13.35	TON
4/22/2022	137367OR	NA	1640145	Cont. Soil -	Hillsboro Landfill	55-SOLO	16.51	16.51	TON
4/22/2022	137367OR	na	1640146	Cont. Soil -	Hillsboro Landfill	1-SOLO	19.28	19.28	TON
4/22/2022	137367OR	na	1640148	Cont. Soil -	Hillsboro Landfill	56-SOLO	15.93	15.93	TON
4/22/2022	137367OR	na	1640157	Cont. Soil -	Hillsboro Landfill	18-SOLO	19.17	19.17	TON
4/22/2022	137367OR	NA	1640160	Cont. Soil -	Hillsboro Landfill	22-SOLO	14.53	14.53	TON
4/22/2022	137367OR	NA	1640162	Cont. Soil -	Hillsboro Landfill	518-SOLO	16.24	16.24	TON
4/22/2022	137367OR	NA	1640173	Cont. Soil -	Hillsboro Landfill	56-SOLO	17.39	17.39	TON
4/22/2022	137367OR	NA	1640175	Cont. Soil -	Hillsboro Landfill	1-SOLO	18.22	18.22	TON
4/22/2022	137367OR	NBA	1640177	Cont. Soil -	Hillsboro La	SOLO	1-SOLO	14.84	14.84	TON
4/25/2022	137367OR	NA	1640207	Cont. Soil -	Hillsboro Landfill	55-SOLO	17.17	17.17	TON
4/25/2022	137367OR	na	1640212	Cont. Soil -	Hillsboro La	RA ROTH TF	29-SOLO	13.14	13.14	TON
4/25/2022	137367OR	NA	1640213	Cont. Soil -	Hillsboro La	RA ROTH TF	21-SOLO	12.34	12.34	TON
4/25/2022	137367OR	na	1640214	Cont. Soil -	Hillsboro La	RA ROTH TF	20-SOLO	14.14	14.14	TON
4/25/2022	137367OR	NA	1640216	Cont. Soil -	Hillsboro Landfill	1-SOLO	16.44	16.44	TON
4/25/2022	137367OR	NA	1640217	Cont. Soil -	Hillsboro Landfill	18-SOLO	16.22	16.22	TON
4/25/2022	137367OR	NA	1640270	Cont. Soil -	Hillsboro La	RA ROTH TF	21-SOLO	12.68	12.68	TON
4/25/2022	137367OR	NA	1640271	Cont. Soil -	Hillsboro La	RA ROTH TF	29-SOLO	14.62	14.62	TON
4/25/2022	137367OR	NA	1640272	Cont. Soil -	Hillsboro La	RA ROTH TF	20-SOLO	13.82	13.82	TON
4/25/2022	137367OR	NA	1640273	Cont. Soil -	Hillsboro Landfill	1-SOLO	14.3	14.3	TON
4/25/2022	137367OR	NA	1640276	Cont. Soil -	Hillsboro Landfill	18-SOLO	13.84	13.84	TON
4/25/2022	137367OR	NA	1640299	Cont. Soil -	Hillsboro La	RA ROTH TF	21-SOLO	14.41	14.41	TON
4/25/2022	137367OR	NA	1640304	Cont. Soil -	Hillsboro La	RA ROTH TF	29-SOLO	15.18	15.18	TON
4/25/2022	137367OR	NA	1640305	Cont. Soil -	Hillsboro La	RA ROTH TF	20-SOLO	15.05	15.05	TON
4/25/2022	137367OR	NA	1640308	Cont. Soil -	Hillsboro Landfill	1-SOLO	17.43	17.43	TON
4/25/2022	137367OR	NA	1640309	Cont. Soil -	Hillsboro Landfill	18-SOLO	16.48	16.48	TON
4/25/2022	137367OR	NA	1640335	Cont. Soil -	Hillsboro La	RA ROTH TF	21-SOLO	15.24	15.24	TON
4/25/2022	137367OR	na	1640344	Cont. Soil -	Hillsboro La	RA ROTH TF	29-SOLO	14.3	14.3	TON
4/25/2022	137367OR	NA	1640345	Cont. Soil -	Hillsboro La	RA ROTH TF	20-SOLO	14.69	14.69	TON
4/25/2022	137367OR	NA	1640349	Cont. Soil -	Hillsboro Landfill	1-SOLO	16.48	16.48	TON
4/25/2022	137367OR	NA	1640363	Cont. Soil -	Hillsboro Landfill	18-SOLO	14.51	14.51	TON
4/26/2022	137367OR	NA	1640421	Cont. Soil -	Hillsboro La	RA ROTH TF	27-SOLO	15.79	15.79	TON
4/26/2022	137367OR	na	1640422	Cont. Soil -	Hillsboro La	RA ROTH TF	26-SOLO	15.31	15.31	TON
4/26/2022	137367OR	NA	1640454	Cont. Soil -	Hillsboro La	RA ROTH TF	27-SOLO	16.55	16.55	TON
4/26/2022	137367OR	NA	1640456	Cont. Soil -	Hillsboro La	RA ROTH TF	26-SOLO	15.69	15.69	TON
4/26/2022	137367OR	na	1640478	Cont. Soil -	Hillsboro La	RA ROTH TF	27-SOLO	16.68	16.68	TON
4/26/2022	137367OR	NA	1640480	Cont. Soil -	Hillsboro La	RA ROTH TF	26-SOLO	17.15	17.15	TON
4/26/2022	137367OR	NA	1640501	Cont. Soil -	Hillsboro La	RA ROTH TF	27-SOLO	16.5	16.5	TON
4/26/2022	137367OR	NA	1640503	Cont. Soil -	Hillsboro La	RA ROTH TF	26-SOLO	17.19	17.19	TON
4/26/2022	137367OR	NA	1640531	Cont. Soil -	Hillsboro La	RA ROTH TF	27-SOLO	17.07	17.07	TON
4/26/2022	137367OR	NA	1640534	Cont. Soil -	Hillsboro La	RA ROTH TF	26-SOLO	16.92	16.92	TON
4/27/2022	137367OR	NA	1640585	Cont. Soil -	Hillsboro La	DUMP TRUC	70-SOLO	14.93	14.93	TON
4/27/2022	137367OR	NA	1640586	Cont. Soil -	Hillsboro La	DUMP TRUC	71-SOLO	16.49	16.49	TON
4/27/2022	137367OR	NA	1640629	Cont. Soil -	Hillsboro La	DUMP TRUC	70-SOLO	20.58	20.58	TON
4/27/2022	137367OR	NA	1640630	Cont. Soil -	Hillsboro La	DUMP TRUC	71-SOLO	19.66	19.66	TON
4/27/2022	137367OR	na	1640664	Cont. Soil -	Hillsboro La	DUMP TRUC	70-SOLO	19.88	19.88	TON
4/27/2022	137367OR	NA	1640665	Cont. Soil -	Hillsboro La	DUMP TRUC	71-SOLO	21.65	21.65	TON
4/27/2022	137367OR	NA	1640689	Cont. Soil -	Hillsboro La	DUMP TRUC	70-SOLO	21.32	21.32	TON
4/27/2022	137367OR	NA	1640692	Cont. Soil -	Hillsboro La	DUMP TRUC	71-SOLO	22.94	22.94	TON
10/6/2022	137367OR	na	1661858	Cont. Soil -	Hillsboro Landfill	6-SOLO	12.14	12.14	TON
10/6/2022	137367OR	na	1661931	Cont. Soil -	Hillsboro Landfill	6-SOLO	13.26	13.26	TON
10/7/2022	137367OR	NA	1662113	Cont. Soil -	Hillsboro Landfill	1	12.59	12.59	TON
10/31/2022	137367OR	na	1664800	Cont. Soil -	Hillsboro Landfill	02-SOLO	17.26	17.26	TON
10/31/2022	137367OR	NA	1664837	Cont. Soil -	Hillsboro Landfill	02-SOLO	12.2	12.2	TON
10/31/2022	137367OR	NA	1664881	Cont. Soil -	Hillsboro Landfill	02-SOLO	13.83	13.83	TON
11/16/2022	137367OR	NA	1666575	Cont. Soil -	Hillsboro La	DUMP TRUC	19	13.42	13.42	TON

11/16/2022	137367OR	na	1666604	Cont. Soil -	Hillsboro L	DUMP TRU	19	16.18	16.18	TON
11/17/2022	137367OR	na	1666718	Cont. Soil -	Hillsboro L	DUMP TRU	20	18.78	18.78	TON
11/22/2022	137367OR	na	1667140	Cont. Soil -	Hillsboro	Landfill	11-SOLO	14.67	14.67	TON
2/2/2023	137367OR	NA	1672795	Cont. Soil -	Hillsboro	Landfill	2	7.41	7.41	TON
2/2/2023	137367OR	na	1672841	Cont. Soil -	Hillsboro	Landfill	2	8.28	8.28	TON
2/3/2023	137367OR	NA	1672900	Cont. Soil -	Hillsboro	Landfill	1-SOLO	7.47	7.47	TON
2/6/2023	137367OR	NA	1673048	Cont. Soil -	Hillsboro	Landfill	1-SOLO	6.49	6.49	TON
									3556.32	

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1638838

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC		
Ticket Date	04/11/2022	Vehicle#	02-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	LES		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/11/2022 09:00:05	Inbound 1	amarti22		Gross	50600 lb
Out	04/11/2022 09:00:05		amarti22		Tare	28000 lb
					Net	22600 lb
					Tons	11.30

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	11.30	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1638839

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC		
Ticket Date	04/11/2022	Vehicle#	14-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	ROBERT		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/11/2022 09:02:05	Inbound 1	amarti22		Gross	59020 lb
Out	04/11/2022 09:02:05		amarti22		Tare	30040 lb
					Net	28980 lb
					Tons	14.49

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.49	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1638837

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC		
Ticket Date	04/11/2022	Vehicle#	21-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	LONNIE		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/11/2022 08:58:38	Inbound 1	amarti22		Gross	57640 lb
Out	04/11/2022 09:18:23	Outbound	amarti22		Tare	29380 lb
					Net	28260 lb
					Tons	14.13

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.13	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1638840

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC		
Ticket Date	04/11/2022	Vehicle#	23-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	BRAD		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/11/2022 09:04:15	Inbound 1	amarti22		Gross	57200 lb
Out	04/11/2022 09:22:42	Outbound	amarti22		Tare	29980 lb
					Net	27220 lb
					Tons	13.61

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.61	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1638842

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	FILLIUPS DUMP TRUCK
Ticket Date	04/11/2022	Vehicle#	20
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	scott
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/11/2022 09:12:42	Inbound 1	amarti22		Gross	59240 lb
Out	04/11/2022 09:38:55	Outbound	amarti22		Tare	29220 lb
					Net	30020 lb
					Tons	15.01

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.01	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639254

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC		
Ticket Date	04/14/2022	Vehicle#	23-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	BRAD		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/14/2022 13:28:49	Inbound 1	amarti22		Gross	72360 lb
Out	04/14/2022 13:28:49		amarti22		Tare	29980 lb
					Net	42380 lb
					Tons	21.19

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	21.19	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639256

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/14/2022	Vehicle#	29-SOLO Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	DON
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/14/2022 13:36:38	Inbound 1	amarti22		Gross	60340 lb
Out	04/14/2022 13:54:57	Outbound	AMARTI22		Tare	29780 lb
					Net	30560 lb
					Tons	15.28

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.28	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639309

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/15/2022	Vehicle#	29-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	DON
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/15/2022 08:02:20	Inbound 1	JPRIME		Gross	56080 lb
Out	04/15/2022 08:02:20		JPRIME		Tare	29780 lb
					Net	26300 lb
					Tons	13.15

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.15	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639315

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC		
Ticket Date	04/15/2022	Vehicle#	23-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	BRAD		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/15/2022 08:15:01	Inbound 1	JPRIME		Gross	60020 lb
Out	04/15/2022 08:15:01		JPRIME		Tare	29980 lb
					Net	30040 lb
					Tons	15.02

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.02	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639318

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/15/2022	Vehicle#	27-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	DANNY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/15/2022 08:19:05	Inbound 1	JPRIME		Gross	56720 lb
Out	04/15/2022 08:19:05		JPRIME		Tare	30540 lb
					Net	26180 lb
					Tons	13.09

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.09	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639311

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/15/2022	Vehicle#	13-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	KARA
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/15/2022 08:05:41	Inbound 1	JPRIME		Gross	55400 lb
Out	04/15/2022 08:24:10	Outbound	JPRIME		Tare	28700 lb
					Net	26700 lb
					Tons	13.35

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.35	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639312

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/15/2022	Vehicle#	21-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	LARRY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/15/2022 08:08:22	Inbound 1	JPRIME		Gross	57180 lb
Out	04/15/2022 08:23:16	Outbound	JPRIME		Tare	29800 lb
					Net	27380 lb
					Tons	13.69

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.69	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639319

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/15/2022	Vehicle#	16-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	JAY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/15/2022 08:22:39	Inbound 1	JPRIME		Gross	60560 lb
Out	04/15/2022 08:41:20	Outbound	JPRIME		Tare	31000 lb
					Net	29560 lb
					Tons	14.78

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.78	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639341

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/15/2022	Vehicle#	21-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	LARRY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/15/2022 09:51:26	Inbound 2	mramos14		Gross	58160 lb
Out	04/15/2022 09:51:26		mramos14		Tare	29800 lb
					Net	28360 lb
					Tons	14.18

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.18	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639345

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/15/2022	Vehicle#	29-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	DON
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/15/2022 09:56:46	Inbound 1	JPRIME		Gross	57900 lb
Out	04/15/2022 09:56:46		JPRIME		Tare	29780 lb
					Net	28120 lb
					Tons	14.06

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.06	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639346

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/15/2022	Vehicle#	27-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	DANNY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/15/2022 10:04:52	Inbound 1	JPRIME		Gross	59480 lb
Out	04/15/2022 10:04:52		JPRIME		Tare	30540 lb
					Net	28940 lb
					Tons	14.47

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.47	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639347

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC		
Ticket Date	04/15/2022	Vehicle#	23-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	SAMIE		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/15/2022 10:10:17	Inbound 2	mramos14		Gross	56940 lb
Out	04/15/2022 10:10:17		mramos14		Tare	29980 lb
					Net	26960 lb
					Tons	13.48

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.48	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639348

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/15/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier RA ROTH RA ROTH TRKING
Vehicle# 16-SOLO
Container
Driver JAY
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/15/2022 10:11:54	Inbound 2	mramos14		Gross	58500 lb
Out	04/15/2022 10:11:54		mramos14		Tare	31000 lb
					Net	27500 lb
					Tons	13.75

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.75	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639349

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/15/2022	Vehicle#	13-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	KARA
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/15/2022 10:12:53	Inbound 1	JPRIME		Gross	54760 lb
Out	04/15/2022 10:12:53		JPRIME		Tare	28700 lb
					Net	26060 lb
					Tons	13.03

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.03	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639368

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/15/2022	Vehicle#	21-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	LARRY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/15/2022 11:45:09	Inbound 2	mramos14		Gross	59480 lb
Out	04/15/2022 11:45:09		mramos14		Tare	29800 lb
					Net	29680 lb
					Tons	14.84

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.84	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639369

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/15/2022	Vehicle#	29-SOLO Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	DON
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/15/2022 11:45:39	Inbound 1	JPRIME		Gross	56780 lb
Out	04/15/2022 11:45:39		JPRIME		Tare	29780 lb
					Net	27000 lb
					Tons	13.50

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.50	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639373

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/15/2022	Vehicle#	13-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	KARA
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/15/2022 11:59:00	Inbound 1	JPRIME		Gross	54000 lb
Out	04/15/2022 11:59:00		JPRIME		Tare	28700 lb
					Net	25300 lb
					Tons	12.65

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	12.65	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639374

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/15/2022	Vehicle#	27-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	DANNY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/15/2022 11:59:58	Inbound 1	JPRIME		Gross	58480 lb
Out	04/15/2022 11:59:58		JPRIME		Tare	30540 lb
					Net	27940 lb
					Tons	13.97

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.97	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639377

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC		
Ticket Date	04/15/2022	Vehicle#	23-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	SAMIE		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/15/2022 12:08:12	Inbound 2	mramos14		Gross	61760 lb
Out	04/15/2022 12:08:12		mramos14		Tare	29980 lb
					Net	31780 lb
					Tons	15.89

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.89	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639392

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/15/2022	Vehicle#	29-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	DON
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/15/2022 13:47:17	Inbound 1	JPRIME		Gross	57100 lb
Out	04/15/2022 13:47:17		JPRIME		Tare	29780 lb
					Net	27320 lb
					Tons	13.66

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.66	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639395

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/15/2022	Vehicle#	21-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	LARRY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/15/2022 13:49:52	Inbound 2	mramos14		Gross	55920 lb
Out	04/15/2022 13:49:52		mramos14		Tare	29800 lb
					Net	26120 lb
					Tons	13.06

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.06	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639398

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/15/2022	Vehicle#	27-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	DANNY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/15/2022 13:59:13	Inbound 1	JPRIME		Gross	57780 lb
Out	04/15/2022 13:59:13		JPRIME		Tare	30540 lb
					Net	27240 lb
					Tons	13.62

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.62	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639402

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/15/2022	Vehicle#	13-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	MIKE
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/15/2022 14:12:41	Inbound 1	JPRIME		Gross	53520 lb
Out	04/15/2022 14:12:41		JPRIME		Tare	28700 lb
					Net	24820 lb
					Tons	12.41

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	12.41	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639403

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/15/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier RA ROTH RA ROTH TRKING
Vehicle# 16-SOLO
Container
Driver JAY
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/15/2022 14:27:03	Inbound 1	JPRIME		Gross	58760 lb
Out	04/15/2022 14:27:03		JPRIME		Tare	31000 lb
					Net	27760 lb
					Tons	13.88

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.88	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639404

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC		
Ticket Date	04/15/2022	Vehicle#	23-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	SAMIE		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/15/2022 14:29:49	Inbound 2	mramos14		Gross	61200 lb
Out	04/15/2022 14:29:49		mramos14		Tare	29980 lb
					Net	31220 lb
					Tons	15.61

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.61	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639450

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/18/2022	Vehicle#	21-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	LARRY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/18/2022 07:59:24	Inbound 1	amarti22		Gross	53960 lb
Out	04/18/2022 07:59:24		amarti22		Tare	29800 lb
					Net	24160 lb
					Tons	12.08

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	12.08	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639447

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/18/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier JIMMYS TRUCKING SOLO
Vehicle# 1-SOLO
Container
Driver garry
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/18/2022 07:50:13	Inbound 1	amarti22		Gross	56040 lb
Out	04/18/2022 08:10:36	Outbound	amarti22		Tare	29020 lb
					Net	27020 lb
					Tons	13.51

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.51	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639449

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/18/2022	Vehicle#	20-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	JASON
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/18/2022 07:58:20	Inbound 2	EDESMART		Gross	55720 lb
Out	04/18/2022 08:14:02	Outbound	amarti22		Tare	29900 lb
					Net	25820 lb
					Tons	12.91

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	12.91	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639451

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	GATEWAY		
Ticket Date	04/18/2022	Vehicle#	23-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	MARK		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/18/2022 08:03:01	Inbound 2	EDESMART		Gross	61460 lb
Out	04/18/2022 08:18:35	Outbound	amarti22		Tare	29700 lb
					Net	31760 lb
					Tons	15.88

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.88	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639452

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/18/2022	Vehicle#	16
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	JAY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/18/2022 08:08:03	Inbound 1	amarti22		Gross	58280 lb
Out	04/18/2022 08:30:09	Outbound	amarti22		Tare	31000 lb
					Net	27280 lb
					Tons	13.64

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.64	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639454

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/18/2022	Vehicle#	13 Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	KEN
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/18/2022 08:13:30	Inbound 2	EDESMART		Gross	54280 lb
Out	04/18/2022 08:34:47	Outbound	amarti22		Tare	28580 lb
					Net	25700 lb
					Tons	12.85

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	12.85	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639471

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/18/2022	Vehicle#	20-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	JASON
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/18/2022 09:44:13	Inbound 2	EDESMART		Gross	57260 lb
Out	04/18/2022 09:44:13		EDESMART		Tare	29900 lb
					Net	27360 lb
					Tons	13.68

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.68	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639472

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/18/2022	Vehicle#	21-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	LARRY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/18/2022 09:44:47	Inbound 1	amarti22		Gross	61820 lb
Out	04/18/2022 09:44:47		amarti22		Tare	29800 lb
					Net	32020 lb
					Tons	16.01

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.01	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639473

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/18/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier RA ROTH RA ROTH TRKING
Vehicle# 16
Container
Driver JAY
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/18/2022 09:55:07	Inbound 2	EDESMART		Gross	62020 lb
Out	04/18/2022 09:55:07		EDESMART		Tare	31000 lb
					Net	31020 lb
					Tons	15.51

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.51	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639474

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/18/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier JIMMYS TRUCKING SOLO
Vehicle# 1-SOLO
Container
Driver GARRY
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/18/2022 09:55:17	Inbound 1	amarti22		Gross	56460 lb
Out	04/18/2022 09:55:17		amarti22		Tare	29020 lb
					Net	27440 lb
					Tons	13.72

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.72	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639475

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	GATEWAY		
Ticket Date	04/18/2022	Vehicle#	23-solo	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	MARK		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/18/2022 10:06:29	Inbound 2	EDESMART		Gross	61420 lb
Out	04/18/2022 10:06:49	Inbound 2	EDESMART		Tare	29700 lb*
			* Manual Weight		Net	31720 lb
					Tons	15.86

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.86	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639476

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/18/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier RA ROTH RA ROTH TRKING
Vehicle# 13
Container
Driver DAN
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound
In	04/18/2022 10:08:39	Inbound 1	amarti22	
Out	04/18/2022 10:08:39		amarti22	

Gross	55380 lb
Tare	28580 lb
Net	26800 lb
Tons	13.40

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.40	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639488

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC		
Ticket Date	04/18/2022	Vehicle#	23-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	BRAD		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/18/2022 11:22:13	Inbound 2	EDESMART		Gross	59980 lb
Out	04/18/2022 11:22:13		EDESMART		Tare	29980 lb
					Net	30000 lb
					Tons	15.00

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.00	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639489

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/18/2022	Vehicle#	21-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	LARRY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/18/2022 11:23:49	Inbound 2	EDESMART		Gross	56660 lb
Out	04/18/2022 11:23:49		EDESMART		Tare	29800 lb
					Net	26860 lb
					Tons	13.43

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.43	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639490

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/18/2022	Vehicle#	20-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	JASON
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/18/2022 11:25:47	Inbound 2	EDESMART		Gross	57380 lb
Out	04/18/2022 11:25:47		EDESMART		Tare	29900 lb
					Net	27480 lb
					Tons	13.74

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.74	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639492

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/18/2022	Vehicle#	16
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	JAY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/18/2022 11:30:53	Inbound 2	EDESMART		Gross	58840 lb
Out	04/18/2022 11:30:53		EDESMART		Tare	31000 lb
					Net	27840 lb
					Tons	13.92

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.92	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639495

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/18/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier JIMMYS TRUCKING SOLO
Vehicle# 1-SOLO
Container
Driver G7arry
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/18/2022 11:55:44	Inbound 1	amarti22		Gross	58060 lb
Out	04/18/2022 11:55:44		amarti22		Tare	29020 lb
					Net	29040 lb
					Tons	14.52

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.52	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639497

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/18/2022	Vehicle#	13-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	MIKE
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/18/2022 12:03:55	Inbound 2	EDESMART		Gross	55620 lb
Out	04/18/2022 12:03:55		EDESMART		Tare	28700 lb
					Net	26920 lb
					Tons	13.46

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.46	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639500

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	GATEWAY		
Ticket Date	04/18/2022	Vehicle#	23-solo	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	MARK		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/18/2022 12:16:02	Inbound 2	EDESMART		Gross	64300 lb
Out	04/18/2022 12:16:02		EDESMART		Tare	29700 lb
					Net	34600 lb
					Tons	17.30

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	17.30	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639508

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/18/2022	Vehicle#	21-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	LARRY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/18/2022 13:20:11	Inbound 1	EDESMART		Gross	59820 lb
Out	04/18/2022 13:20:11		EDESMART		Tare	29800 lb
					Net	30020 lb
					Tons	15.01

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.01	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639509

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/18/2022	Vehicle#	21-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	LARRY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/18/2022 13:25:02	Inbound 1	EDESMART		Gross	61740 lb
Out	04/18/2022 13:25:02		EDESMART		Tare	29800 lb
					Net	31940 lb
					Tons	15.97

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.97	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639510

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/18/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier CASEDAY INC
Vehicle# 23-SOLO
Container
Driver BRAD
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/18/2022 13:31:22	Inbound 1	AMARTI22		Gross	60140 lb
Out	04/18/2022 13:31:22		AMARTI22		Tare	29980 lb
					Net	30160 lb
					Tons	15.08

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.08	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639512

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/18/2022	Vehicle#	16
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	JAY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/18/2022 13:36:38	Inbound 2	EDESMART		Gross	61720 lb
Out	04/18/2022 13:36:38		EDESMART		Tare	31000 lb
					Net	30720 lb
					Tons	15.36

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.36	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639513

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	JIMMYS TRUCKING SOLO		
Ticket Date	04/18/2022	Vehicle#	1-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	JAMIE		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/18/2022 13:39:35	Inbound 2	EDESMART		Gross	57460 lb
Out	04/18/2022 13:39:35		EDESMART		Tare	29020 lb
					Net	28440 lb
					Tons	14.22

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.22	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639517

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	GATEWAY		
Ticket Date	04/18/2022	Vehicle#	23-solo	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	MARK		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/18/2022 14:37:11	Inbound 2	EDESMART		Gross	63520 lb
Out	04/18/2022 14:37:11		EDESMART		Tare	29700 lb
					Net	33820 lb
					Tons	16.91

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.91	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639547

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/18/2022	Vehicle#	21-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	LARRY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/18/2022 15:17:41	Inbound 1	AMARTI22		Gross	58480 lb
Out	04/18/2022 15:17:41		AMARTI22		Tare	29800 lb
					Net	28680 lb
					Tons	14.34

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.34	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639550

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/18/2022	Vehicle#	20-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	JASON
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/18/2022 15:20:01	Inbound 1	AMARTI22		Gross	58860 lb
Out	04/18/2022 15:20:01		AMARTI22		Tare	29900 lb
					Net	28960 lb
					Tons	14.48

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.48	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639558

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/18/2022	Vehicle#	16
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	JAY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/18/2022 15:37:25	Inbound 1	EDESMART		Gross	61840 lb
Out	04/18/2022 15:37:25		EDESMART		Tare	31000 lb
					Net	30840 lb
					Tons	15.42

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.42	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639561

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/18/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier JIMMYS TRUCKING SOLO
Vehicle# 1-SOLO
Container
Driver john
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/18/2022 15:44:51	Inbound 1	AMARTI22		Gross	53120 lb
Out	04/18/2022 15:44:51		AMARTI22		Tare	29020 lb
					Net	24100 lb
					Tons	12.05

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	12.05	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639562

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC		
Ticket Date	04/18/2022	Vehicle#	23-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	BRAD		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/18/2022 16:08:06	Inbound 1	AMARTI22		Gross	57460 lb
Out	04/18/2022 16:08:06		AMARTI22		Tare	29980 lb
					Net	27480 lb
					Tons	13.74

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.74	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639581

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/19/2022	Vehicle#	21-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	LARRY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/19/2022 07:44:40	Inbound 1	amarti22		Gross	67080 lb
Out	04/19/2022 07:44:40		amarti22		Tare	29800 lb
					Net	37280 lb
					Tons	18.64

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	18.64	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639582

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/19/2022	Vehicle#	29-SOLO Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	DON
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/19/2022 07:48:11	Inbound 1	amarti22		Gross	59660 lb
Out	04/19/2022 07:48:11		amarti22		Tare	29780 lb
					Net	29880 lb
					Tons	14.94

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.94	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639583

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	TTE INC		
Ticket Date	04/19/2022	Vehicle#	1-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	GALAN		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/19/2022 07:54:29	Inbound 1	amarti22		Gross	61640 lb
Out	04/19/2022 08:12:32	Outbound	amarti22		Tare	27760 lb
					Net	33880 lb
					Tons	16.94

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.94	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639588

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CUTTER		
Ticket Date	04/19/2022	Vehicle#	23-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	KEVIN		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/19/2022 08:13:55	Inbound 1	amarti22		Gross	69060 lb
Out	04/19/2022 08:31:51	Outbound	amarti22		Tare	29460 lb
					Net	39600 lb
					Tons	19.80

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	19.80	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639587

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CUTTER		
Ticket Date	04/19/2022	Vehicle#	11-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	TIM		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/19/2022 08:13:10	Inbound 1	amarti22		Gross	64000 lb
Out	04/19/2022 08:49:12	Outbound	amarti22		Tare	28480 lb
					Net	35520 lb
					Tons	17.76

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	17.76	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639612

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/19/2022	Vehicle#	21-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	LARRY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/19/2022 09:47:05	Inbound 1	AMARTI22		Gross	66380 lb
Out	04/19/2022 09:47:05		AMARTI22		Tare	29800 lb
					Net	36580 lb
					Tons	18.29

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	18.29	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639614

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/19/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier RA ROTH RA ROTH TRKING
Vehicle# 29-SOLO
Container
Driver DON
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/19/2022 09:53:17	Inbound 1	AMARTI22		Gross	65540 lb
Out	04/19/2022 09:53:17		AMARTI22		Tare	29780 lb
					Net	35760 lb
					Tons	17.88

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	17.88	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639615

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	TTE INC		
Ticket Date	04/19/2022	Vehicle#	1-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	GALAN		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/19/2022 10:03:17	Inbound 2	EDESMART		Gross	70280 lb
Out	04/19/2022 10:03:17		EDESMART		Tare	27760 lb
					Net	42520 lb
					Tons	21.26

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	21.26	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639621

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CUTTER		
Ticket Date	04/19/2022	Vehicle#	23-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	KEVIN		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/19/2022 10:16:16	Inbound 1	AMARTI22		Gross	70820 lb
Out	04/19/2022 10:16:16		AMARTI22		Tare	29460 lb
					Net	41360 lb
					Tons	20.68

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	20.68	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639627

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CUTTER		
Ticket Date	04/19/2022	Vehicle#	11-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	TIM		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/19/2022 10:44:25	Inbound 1	AMARTI22		Gross	67320 lb
Out	04/19/2022 10:44:25		AMARTI22		Tare	28480 lb
					Net	38840 lb
					Tons	19.42

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	19.42	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639639

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/19/2022	Vehicle#	21-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	LARRY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/19/2022 11:37:10	Inbound 2	EDESMART		Gross	64040 lb
Out	04/19/2022 11:37:10		EDESMART		Tare	29800 lb
					Net	34240 lb
					Tons	17.12

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	17.12	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639640

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/19/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier RA ROTH RA ROTH TRKING
Vehicle# 29-SOLO
Container
Driver DON
Check#
Billing # 0004202
Gen EPA ID
Grid

	Time	Scale	Operator	Inbound		
In	04/19/2022 11:44:57	Inbound 1	AMARTI22		Gross	62420 lb
Out	04/19/2022 11:44:57		AMARTI22		Tare	29780 lb
					Net	32640 lb
					Tons	16.32

Volume

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.32	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639642

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	TTE INC		
Ticket Date	04/19/2022	Vehicle#	1-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	GALAN		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/19/2022 11:50:09	Inbound 2	EDESMART		Gross	60500 lb
Out	04/19/2022 11:50:09		EDESMART		Tare	27760 lb
					Net	32740 lb
					Tons	16.37

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.37	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639646

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CUTTER		
Ticket Date	04/19/2022	Vehicle#	23-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	KEVIN		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/19/2022 12:09:05	Inbound 2	EDESMART		Gross	68280 lb
Out	04/19/2022 12:09:05		EDESMART		Tare	29460 lb
					Net	38820 lb
					Tons	19.41

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	19.41	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639654

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CUTTER		
Ticket Date	04/19/2022	Vehicle#	11-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	TIM		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/19/2022 12:45:04	Inbound 1	EDESMART		Gross	66700 lb
Out	04/19/2022 12:45:04		EDESMART		Tare	28480 lb
					Net	38220 lb
					Tons	19.11

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	19.11	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639656

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC
Ticket Date	04/19/2022	Vehicle#	16-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/19/2022 12:55:36	Inbound 1	EDESMART		Gross	76560 lb
Out	04/19/2022 12:55:36		EDESMART		Tare	32200 lb
					Net	44360 lb
					Tons	22.18

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	22.18	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639660

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/19/2022	Vehicle#	21-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	LARRY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/19/2022 13:36:16	Inbound 1	AMARTI22		Gross	64180 lb
Out	04/19/2022 13:36:16		AMARTI22		Tare	29800 lb
					Net	34380 lb
					Tons	17.19

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	17.19	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639662

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/19/2022	Vehicle#	29-SOLO Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	DON
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/19/2022 13:41:33	Inbound 1	AMARTI22		Gross	69620 lb
Out	04/19/2022 13:41:33		AMARTI22		Tare	29780 lb
					Net	39840 lb
					Tons	19.92

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	19.92	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639664

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/19/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier TTE INC
Vehicle# 1-SOLO
Container
Driver GALAN
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/19/2022 13:46:14	Inbound 1	AMARTI22		Gross	71360 lb
Out	04/19/2022 13:46:14		AMARTI22		Tare	27760 lb
					Net	43600 lb
					Tons	21.80

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	21.80	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639687

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CUTTER		
Ticket Date	04/19/2022	Vehicle#	11-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	TIM		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/19/2022 14:42:11	Inbound 1	AMARTI22		Gross	67620 lb
Out	04/19/2022 14:42:11		AMARTI22		Tare	28480 lb
					Net	39140 lb
					Tons	19.57

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	19.57	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639704

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC		
Ticket Date	04/19/2022	Vehicle#	16-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	MARC		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/19/2022 15:10:04	Inbound 1	AMARTI22		Gross	67940 lb
Out	04/19/2022 15:10:04		AMARTI22		Tare	32200 lb
					Net	35740 lb
					Tons	17.87

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	17.87	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639706

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/19/2022	Vehicle#	21-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	LARRY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/19/2022 15:28:44	Inbound 1	AMARTI22		Gross	63480 lb
Out	04/19/2022 15:28:44		AMARTI22		Tare	29800 lb
					Net	33680 lb
					Tons	16.84

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.84	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639721

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CUTTER		
Ticket Date	04/20/2022	Vehicle#	14-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	TONY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/20/2022 06:25:28	Inbound 1	amarti22		Gross	62480 lb
Out	04/20/2022 06:44:44	Outbound	amarti22		Tare	29860 lb
					Net	32620 lb
					Tons	16.31

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.31	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639724

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	PRESTO HOMES INC DUMP TRUCK
Ticket Date	04/20/2022	Vehicle#	73-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	Gabino
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/20/2022 07:51:52	Inbound 1	amarti22		Gross	64400 lb
Out	04/20/2022 07:51:52		amarti22		Tare	28680 lb
					Net	35720 lb
					Tons	17.86

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	17.86	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639725

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	JIMMYS TRUCKING SOLO
Ticket Date	04/20/2022	Vehicle#	1-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	JAMIE
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/20/2022 07:54:17	Inbound 2	EDESMART		Gross	59760 lb
Out	04/20/2022 07:54:17		EDESMART		Tare	29020 lb
					Net	30740 lb
					Tons	15.37

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.37	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639728

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC		
Ticket Date	04/20/2022	Vehicle#	18-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	CODY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/20/2022 08:01:54	Inbound 2	EDESMART		Gross	79080 lb
Out	04/20/2022 08:01:54		EDESMART		Tare	33600 lb
					Net	45480 lb
					Tons	22.74

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	22.74	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639732

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CUTTER		
Ticket Date	04/20/2022	Vehicle#	20-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	RAY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/20/2022 08:12:06	Inbound 1	amarti22		Gross	61120 lb
Out	04/20/2022 08:12:06		amarti22		Tare	28080 lb
					Net	33040 lb
					Tons	16.52

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.52	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639734

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CUTTER		
Ticket Date	04/20/2022	Vehicle#	23-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	KEVIN		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/20/2022 08:13:51	Inbound 1	amarti22		Gross	70760 lb
Out	04/20/2022 08:13:51		amarti22		Tare	29460 lb
					Net	41300 lb
					Tons	20.65

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	20.65	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639729

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	WEST COAST DUMP TRUCKS
Ticket Date	04/20/2022	Vehicle#	67-SOLO Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	MICHAEL
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/20/2022 08:02:16	Inbound 1	amarti22		Gross	69440 lb
Out	04/20/2022 08:18:03	Outbound	amarti22		Tare	31000 lb
					Net	38440 lb
					Tons	19.22

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	19.22	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639737

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/20/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier CUTTER
Vehicle# 22
Container
Driver JERRY
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/20/2022 08:20:21	Inbound 1	amarti22		Gross	69780 lb
Out	04/20/2022 08:20:21		amarti22		Tare	29520 lb
					Net	40260 lb
					Tons	20.13

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	20.13	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639758

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	PRESTO HOMES INC DUMP TRUCK
Ticket Date	04/20/2022	Vehicle#	73-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	GABINO
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/20/2022 09:37:16	Inbound 1	amarti22		Gross	66460 lb
Out	04/20/2022 09:37:16		amarti22		Tare	28680 lb
					Net	37780 lb
					Tons	18.89

Volume

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	18.89	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639759

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	JIMMYS TRUCKING SOLO		
Ticket Date	04/20/2022	Vehicle#	1-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	JAMIE		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/20/2022 09:39:24	Inbound 2	EDESMART		Gross	64280 lb
Out	04/20/2022 09:39:24		EDESMART		Tare	29020 lb
					Net	35260 lb
					Tons	17.63

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	17.63	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639761

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC		
Ticket Date	04/20/2022	Vehicle#	18-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	CODY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/20/2022 09:49:05	Inbound 2	EDESMART		Gross	75280 lb
Out	04/20/2022 09:49:05		EDESMART		Tare	33600 lb
					Net	41680 lb
					Tons	20.84

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	20.84	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639762

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	WEST COAST DUMP TRUCKS
Ticket Date	04/20/2022	Vehicle#	67-SOLO Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	MICHAEL
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/20/2022 09:50:58	Inbound 2	EDESMART		Gross	73180 lb
Out	04/20/2022 09:50:58		EDESMART		Tare	31000 lb
					Net	42180 lb
					Tons	21.09

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	21.09	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639765

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CUTTER		
Ticket Date	04/20/2022	Vehicle#	22	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	JERRY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/20/2022 10:10:33	Inbound 2	EDESMART		Gross	70360 lb
Out	04/20/2022 10:10:33		EDESMART		Tare	29520 lb
					Net	40840 lb
					Tons	20.42

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	20.42	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639766

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CUTTER		
Ticket Date	04/20/2022	Vehicle#	20-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	RAY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/20/2022 10:13:08	Inbound 1	amarti22		Gross	70680 lb
Out	04/20/2022 10:13:08		amarti22		Tare	28080 lb
					Net	42600 lb
					Tons	21.30

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	21.30	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639767

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CUTTER		
Ticket Date	04/20/2022	Vehicle#	23-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	KEVIN		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/20/2022 10:14:10	Inbound 1	amarti22		Gross	64820 lb
Out	04/20/2022 10:14:10		amarti22		Tare	29460 lb
					Net	35360 lb
					Tons	17.68

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	17.68	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639781

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	PRESTO HOMES INC DUMP TRUCK
Ticket Date	04/20/2022	Vehicle#	73-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/20/2022 11:24:33	Inbound 1	EDESMART		Gross	70740 lb
Out	04/20/2022 11:24:33		EDESMART		Tare	28680 lb
					Net	42060 lb
					Tons	21.03

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	21.03	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639782

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	JIMMYS TRUCKING SOLO
Ticket Date	04/20/2022	Vehicle#	1-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	JAMIE
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/20/2022 11:27:09	Inbound 1	EDESMART		Gross	65580 lb
Out	04/20/2022 11:27:09		EDESMART		Tare	29020 lb
					Net	36560 lb
					Tons	18.28

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	18.28	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639788

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/20/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier WEST COAST DUMP TRUCKS
Vehicle# 67-SOLO
Container
Driver MICHAEL
Check#
Billing # 0004202
Gen EPA ID
Grid

	Time	Scale	Operator	Inbound		
In	04/20/2022 11:51:48	Inbound 1	AMARTI22		Gross	65340 lb
Out	04/20/2022 11:51:48		AMARTI22		Tare	31000 lb
					Net	34340 lb
					Tons	17.17

Volume

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	17.17	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639791

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC		
Ticket Date	04/20/2022	Vehicle#	18-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	CODY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/20/2022 11:57:33	Inbound 2	EDESMART		Gross	78340 lb
Out	04/20/2022 11:57:33		EDESMART		Tare	33600 lb
					Net	44740 lb
					Tons	22.37

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	22.37	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639793

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/20/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier CUTTER
Vehicle# 22
Container
Driver JERRY
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/20/2022 12:02:52	Inbound 2	EDESMART		Gross	74900 lb
Out	04/20/2022 12:02:52		EDESMART		Tare	29520 lb
					Net	45380 lb
					Tons	22.69

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	22.69	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639795

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CUTTER		
Ticket Date	04/20/2022	Vehicle#	20-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	RAY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/20/2022 12:09:01	Inbound 2	EDESMART		Gross	66480 lb
Out	04/20/2022 12:09:01		EDESMART		Tare	28080 lb
					Net	38400 lb
					Tons	19.20

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	19.20	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639797

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CUTTER		
Ticket Date	04/20/2022	Vehicle#	23-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	KEVIN		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/20/2022 12:11:53	Inbound 1	AMARTI22		Gross	67280 lb
Out	04/20/2022 12:11:53		AMARTI22		Tare	29460 lb
					Net	37820 lb
					Tons	18.91

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	18.91	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639805

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	PRESTO HOMES INC DUMP TRUCK
Ticket Date	04/20/2022	Vehicle#	73-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	GAVINO
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/20/2022 13:35:25	Inbound 1	AMARTI22		Gross	65420 lb
Out	04/20/2022 13:35:25		AMARTI22		Tare	28680 lb
					Net	36740 lb
					Tons	18.37

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	18.37	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639807

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/20/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier JIMMYS TRUCKING SOLO
Vehicle# 1-SOLO
Container
Driver JAMIE
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/20/2022 13:41:47	Inbound 1	AMARTI22		Gross	59820 lb
Out	04/20/2022 13:41:47		AMARTI22		Tare	29020 lb
					Net	30800 lb
					Tons	15.40

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.40	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639812

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC		
Ticket Date	04/20/2022	Vehicle#	18-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	CODY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/20/2022 13:52:03	Inbound 2	EDESMART		Gross	71340 lb
Out	04/20/2022 13:52:03		EDESMART		Tare	33600 lb
					Net	37740 lb
					Tons	18.87

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	18.87	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639813

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	WEST COAST DUMP TRUCKS
Ticket Date	04/20/2022	Vehicle#	67-SOLO Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	MICHAEL
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/20/2022 13:53:28	Inbound 2	EDESMART		Gross	63560 lb
Out	04/20/2022 13:53:28		EDESMART		Tare	31000 lb
					Net	32560 lb
					Tons	16.28

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.28	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639818

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CUTTER		
Ticket Date	04/20/2022	Vehicle#	22	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	JERRY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/20/2022 14:14:36	Inbound 1	AMARTI22		Gross	68440 lb
Out	04/20/2022 14:14:36		AMARTI22		Tare	29520 lb
					Net	38920 lb
					Tons	19.46

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	19.46	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639826

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CUTTER		
Ticket Date	04/20/2022	Vehicle#	20-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	RAY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/20/2022 14:20:54	Inbound 1	AMARTI22		Gross	63780 lb
Out	04/20/2022 14:20:54		AMARTI22		Tare	28080 lb
					Net	35700 lb
					Tons	17.85

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	17.85	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639832

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CUTTER		
Ticket Date	04/20/2022	Vehicle#	23-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	KEVIN		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/20/2022 14:24:30	Inbound 1	AMARTI22		Gross	65520 lb
Out	04/20/2022 14:24:30		AMARTI22		Tare	29460 lb
					Net	36060 lb
					Tons	18.03

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	18.03	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639908

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/21/2022	Vehicle#	13
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	Jeff
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/21/2022 09:13:43	Inbound 1	AMARTI22		Gross	57640 lb
Out	04/21/2022 09:13:43		AMARTI22		Tare	28580 lb
					Net	29060 lb
					Tons	14.53

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.53	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639909

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	WEST COAST DUMP TRUCKS
Ticket Date	04/21/2022	Vehicle#	67-SOLO Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	MICHAEL
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/21/2022 09:20:31	Inbound 1	AMARTI22		Gross	65600 lb
Out	04/21/2022 09:20:31		AMARTI22		Tare	31000 lb
					Net	34600 lb
					Tons	17.30

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	17.30	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639915

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC		
Ticket Date	04/21/2022	Vehicle#	18-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	CASEY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/21/2022 09:36:52	Inbound 2	EDESMART		Gross	72440 lb
Out	04/21/2022 09:36:52		EDESMART		Tare	33600 lb
					Net	38840 lb
					Tons	19.42

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	19.42	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639917

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	OLD CROW TRUCKING		
Ticket Date	04/21/2022	Vehicle#	37-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	BRANDEN		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/21/2022 09:39:01	Inbound 1	AMARTI22		Gross	57060 lb
Out	04/21/2022 09:39:01		AMARTI22		Tare	26900 lb
					Net	30160 lb
					Tons	15.08

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.08	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639918

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CUTTER		
Ticket Date	04/21/2022	Vehicle#	22	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	JERRY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/21/2022 09:44:25	Inbound 2	EDESMART		Gross	60800 lb
Out	04/21/2022 09:44:25		EDESMART		Tare	29520 lb
					Net	31280 lb
					Tons	15.64

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.64	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639921

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CUTTER		
Ticket Date	04/21/2022	Vehicle#	20-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	RAY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/21/2022 09:47:22	Inbound 2	EDESMART		Gross	60360 lb
Out	04/21/2022 09:47:22		EDESMART		Tare	28080 lb
					Net	32280 lb
					Tons	16.14

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.14	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639910

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	WEST COAST DUMP TRUCKS
Ticket Date	04/21/2022	Vehicle#	18-SOLO Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	SCOTTY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/21/2022 09:25:23	Inbound 2	EDESMART		Gross	63100 lb
Out	04/21/2022 09:49:02	Outbound	AMARTI22		Tare	31560 lb
					Net	31540 lb
					Tons	15.77

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.77	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639912

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	PACIFIC EARTH		
Ticket Date	04/21/2022	Vehicle#	9-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	JESSIE		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/21/2022 09:31:40	Inbound 2	EDESMART		Gross	54400 lb
Out	04/21/2022 09:53:53	Outbound	AMARTI22		Tare	26600 lb
					Net	27800 lb
					Tons	13.90

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.90	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639937

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/21/2022	Vehicle#	13 Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	JEFF
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/21/2022 10:56:13	Inbound 1	AMARTI22		Gross	61160 lb
Out	04/21/2022 10:56:13		AMARTI22		Tare	28580 lb
					Net	32580 lb
					Tons	16.29

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.29	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639941

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	WEST COAST DUMP TRUCKS
Ticket Date	04/21/2022	Vehicle#	67-SOLO Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	MICHAEL
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/21/2022 11:07:51	Inbound 1	EDESMART		Gross	67040 lb
Out	04/21/2022 11:07:51		EDESMART		Tare	31000 lb
					Net	36040 lb
					Tons	18.02

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	18.02	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639943

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	WEST COAST DUMP TRUCKS
Ticket Date	04/21/2022	Vehicle#	18-SOLO Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/21/2022 11:23:08	Inbound 1	EDESMART		Gross	61800 lb
Out	04/21/2022 11:23:08		EDESMART		Tare	31560 lb
					Net	30240 lb
					Tons	15.12

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.12	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639945

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC		
Ticket Date	04/21/2022	Vehicle#	18-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	CASEY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/21/2022 11:34:03	Inbound 1	EDESMART		Gross	67280 lb
Out	04/21/2022 11:34:03		EDESMART		Tare	33600 lb
					Net	33680 lb
					Tons	16.84

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.84	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639946

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	OLD CROW TRUCKING		
Ticket Date	04/21/2022	Vehicle#	37-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	ROD		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/21/2022 11:36:20	Inbound 1	EDESMART		Gross	62380 lb
Out	04/21/2022 11:36:20		EDESMART		Tare	26900 lb
					Net	35480 lb
					Tons	17.74

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	17.74	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639948

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	PACIFIC EARTH		
Ticket Date	04/21/2022	Vehicle#	9-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	AUSTIN		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/21/2022 11:42:00	Inbound 1	EDESMART		Gross	53800 lb
Out	04/21/2022 11:42:00		EDESMART		Tare	26600 lb
					Net	27200 lb
					Tons	13.60

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.60	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639949

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CUTTER		
Ticket Date	04/21/2022	Vehicle#	22	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	JERRY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/21/2022 11:47:00	Inbound 2	EDESMART		Gross	62360 lb
Out	04/21/2022 11:47:00		EDESMART		Tare	29520 lb
					Net	32840 lb
					Tons	16.42

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.42	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639951

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CUTTER		
Ticket Date	04/21/2022	Vehicle#	20-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	RAY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/21/2022 11:48:20	Inbound 2	EDESMART		Gross	60860 lb
Out	04/21/2022 11:48:20		EDESMART		Tare	28080 lb
					Net	32780 lb
					Tons	16.39

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.39	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639966

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	WEST COAST DUMP TRUCKS
Ticket Date	04/21/2022	Vehicle#	67-SOLO Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	MICHAEL
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/21/2022 12:51:23	Inbound 2	EDESMART		Gross	65420 lb
Out	04/21/2022 12:51:23		EDESMART		Tare	31000 lb
					Net	34420 lb
					Tons	17.21

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	17.21	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639967

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/21/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier RA ROTH RA ROTH TRKING
Vehicle# 13
Container
Driver JEFF
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/21/2022 12:52:33	Inbound 1	AMARTI22		Gross	56940 lb
Out	04/21/2022 12:52:33		AMARTI22		Tare	28580 lb
					Net	28360 lb
					Tons	14.18

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.18	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639969

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	WEST COAST DUMP TRUCKS
Ticket Date	04/21/2022	Vehicle#	18-SOLO Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/21/2022 13:01:52	Inbound 2	EDESMART		Gross	63380 lb
Out	04/21/2022 13:01:52		EDESMART		Tare	31560 lb
					Net	31820 lb
					Tons	15.91

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.91	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639973

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC		
Ticket Date	04/21/2022	Vehicle#	18-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	CASEY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/21/2022 13:30:31	Inbound 2	EDESMART		Gross	67560 lb
Out	04/21/2022 13:30:31		EDESMART		Tare	33600 lb
					Net	33960 lb
					Tons	16.98

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.98	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639974

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/21/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier PACIFIC EARTH
Vehicle# 9-SOLO
Container
Driver JESSIE
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/21/2022 13:44:41	Inbound 1	AMARTI22		Gross	54520 lb
Out	04/21/2022 13:44:41		AMARTI22		Tare	26600 lb
					Net	27920 lb
					Tons	13.96

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.96	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639976

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/21/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier OLD CROW TRUCKING
Vehicle# 37-SOLO
Container
Driver BRANDEN
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/21/2022 13:46:59	Inbound 1	AMARTI22		Gross	59500 lb
Out	04/21/2022 13:46:59		AMARTI22		Tare	26900 lb
					Net	32600 lb
					Tons	16.30

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.30	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639978

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/21/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier CUTTER
Vehicle# 20-SOLO
Container
Driver RAY
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/21/2022 13:59:56	Inbound 1	AMARTI22		Gross	61400 lb
Out	04/21/2022 13:59:56		AMARTI22		Tare	28080 lb
					Net	33320 lb
					Tons	16.66

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.66	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639980

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/21/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier CUTTER
Vehicle# 22
Container
Driver JERRY
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/21/2022 14:01:23	Inbound 2	EDESMART		Gross	62840 lb
Out	04/21/2022 14:01:23		EDESMART		Tare	29520 lb
					Net	33320 lb
					Tons	16.66

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.66	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639989

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/21/2022	Vehicle#	13
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	JUAN
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/21/2022 14:41:55	Inbound 2	EDESMART		Gross	56520 lb
Out	04/21/2022 14:41:55		EDESMART		Tare	28580 lb
					Net	27940 lb
					Tons	13.97

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.97	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1639990

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	WEST COAST DUMP TRUCKS
Ticket Date	04/21/2022	Vehicle#	67-SOLO Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	MICHAEL
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/21/2022 14:49:28	Inbound 2	EDESMART		Gross	67800 lb
Out	04/21/2022 14:49:28		EDESMART		Tare	31000 lb
					Net	36800 lb
					Tons	18.40

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	18.40	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640015

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	WEST COAST DUMP TRUCKS
Ticket Date	04/21/2022	Vehicle#	18-SOLO Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/21/2022 15:09:46	Inbound 2	EDESMART		Gross	58700 lb
Out	04/21/2022 15:09:46		EDESMART		Tare	31560 lb
					Net	27140 lb
					Tons	13.57

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.57	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640019

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC		
Ticket Date	04/21/2022	Vehicle#	18-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	CASEY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/21/2022 15:26:11	Inbound 2	EDESMART		Gross	71160 lb
Out	04/21/2022 15:26:11		EDESMART		Tare	33600 lb
					Net	37560 lb
					Tons	18.78

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	18.78	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640046

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/22/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier JIMMYS TRUCKING SOLO
Vehicle# 1-SOLO
Container
Driver garry
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/22/2022 07:48:20	Inbound 1	amarti22		Gross	58280 lb
Out	04/22/2022 07:48:20		amarti22		Tare	29020 lb
					Net	29260 lb
					Tons	14.63

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.63	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640048

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	MOBILE MIX		
Ticket Date	04/22/2022	Vehicle#	55-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	ROGER		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/22/2022 07:53:44	Inbound 1	amarti22		Gross	61980 lb
Out	04/22/2022 07:53:44		amarti22		Tare	30360 lb
					Net	31620 lb
					Tons	15.81

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.81	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640050

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	TTE INC		
Ticket Date	04/22/2022	Vehicle#	1-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	GALAN		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/22/2022 07:57:10	Inbound 2	EDESMART		Gross	57660 lb
Out	04/22/2022 07:57:10		EDESMART		Tare	27760 lb
					Net	29900 lb
					Tons	14.95

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.95	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640053

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC		
Ticket Date	04/22/2022	Vehicle#	18-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	CASEY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/22/2022 08:04:52	Inbound 2	EDESMART		Gross	64040 lb
Out	04/22/2022 08:04:52		EDESMART		Tare	33600 lb
					Net	30440 lb
					Tons	15.22

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.22	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640049

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	MOBILE MIX		
Ticket Date	04/22/2022	Vehicle#	56-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver			
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/22/2022 07:55:15	Inbound 2	EDESMART		Gross	60620 lb
Out	04/22/2022 08:12:00	Outbound	amarti22		Tare	28280 lb
					Net	32340 lb
					Tons	16.17

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.17	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640052

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	BUD CONST		
Ticket Date	04/22/2022	Vehicle#	518-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	KEN		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/22/2022 08:04:05	Inbound 1	amarti22		Gross	59340 lb
Out	04/22/2022 08:26:36	Outbound	amarti22		Tare	30340 lb
					Net	29000 lb
					Tons	14.50

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.50	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640057

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	KARAM TRUCKING SOLO		
Ticket Date	04/22/2022	Vehicle#	22-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	JASON		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/22/2022 08:14:21	Inbound 2	EDESMART		Gross	56720 lb
Out	04/22/2022 08:29:24	Outbound	amarti22		Tare	28840 lb
					Net	27880 lb
					Tons	13.94

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.94	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640080

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	JIMMYS TRUCKING SOLO
Ticket Date	04/22/2022	Vehicle#	1-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	GREG
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/22/2022 09:35:22	Inbound 1	amarti22		Gross	55100 lb
Out	04/22/2022 09:35:22		amarti22		Tare	29020 lb
					Net	26080 lb
					Tons	13.04

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.04	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640084

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	MOBILE MIX		
Ticket Date	04/22/2022	Vehicle#	55-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	ROGER		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/22/2022 09:43:17	Inbound 2	EDESMART		Gross	59540 lb
Out	04/22/2022 09:43:17		EDESMART		Tare	30360 lb
					Net	29180 lb
					Tons	14.59

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.59	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640085

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	MOBILE MIX
Ticket Date	04/22/2022	Vehicle#	56-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	LINDSEY
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/22/2022 09:46:09	Inbound 2	EDESMART		Gross	55240 lb
Out	04/22/2022 09:46:09		EDESMART		Tare	28280 lb
					Net	26960 lb
					Tons	13.48

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.48	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640087

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	TTE INC		
Ticket Date	04/22/2022	Vehicle#	1-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	GALAN		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/22/2022 09:47:43	Inbound 2	EDESMART		Gross	58560 lb
Out	04/22/2022 09:47:43		EDESMART		Tare	27760 lb
					Net	30800 lb
					Tons	15.40

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.40	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640093

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC		
Ticket Date	04/22/2022	Vehicle#	18-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	CASEY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	MA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/22/2022 09:59:37	Inbound 1	amarti22		Gross	66540 lb
Out	04/22/2022 09:59:37		amarti22		Tare	33600 lb
					Net	32940 lb
					Tons	16.47

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.47	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640094

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	BUD CONST		
Ticket Date	04/22/2022	Vehicle#	518-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	KEN		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/22/2022 10:00:26	Inbound 1	amarti22		Gross	62080 lb
Out	04/22/2022 10:00:26		amarti22		Tare	30340 lb
					Net	31740 lb
					Tons	15.87

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.87	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640095

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	SMKARAM		
Ticket Date	04/22/2022	Vehicle#	22-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	JASON		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/22/2022 10:02:55	Inbound 1	amarti22		Gross	54080 lb
Out	04/22/2022 10:02:55		amarti22		Tare	28960 lb
					Net	25120 lb
					Tons	12.56

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	12.56	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640111

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/22/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier JIMMYS TRUCKING SOLO
Vehicle# 1-SOLO
Container
Driver JAMIE
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/22/2022 11:23:47	Inbound 1	EDESMART		Gross	56940 lb
Out	04/22/2022 11:23:47		EDESMART		Tare	29020 lb
					Net	27920 lb
					Tons	13.96

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.96	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640112

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	MOBILE MIX		
Ticket Date	04/22/2022	Vehicle#	56-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	LINDSEY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/22/2022 11:31:57	Inbound 1	EDESMART		Gross	60060 lb
Out	04/22/2022 11:31:57		EDESMART		Tare	28280 lb
					Net	31780 lb
					Tons	15.89

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.89	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640113

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	MOBILE MIX		
Ticket Date	04/22/2022	Vehicle#	55-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	ROGER		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/22/2022 11:33:11	Inbound 1	EDESMART		Gross	59160 lb
Out	04/22/2022 11:33:11		EDESMART		Tare	30360 lb
					Net	28800 lb
					Tons	14.40

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.40	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640115

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	TTE INC
Ticket Date	04/22/2022	Vehicle#	1-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	GALAN
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/22/2022 11:37:18	Inbound 1	EDESMART		Gross	62220 lb
Out	04/22/2022 11:37:18		EDESMART		Tare	27760 lb
					Net	34460 lb
					Tons	17.23

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	17.23	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640121

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	BUD CONST		
Ticket Date	04/22/2022	Vehicle#	518-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	KEN		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/22/2022 11:52:09	Inbound 1	AMARTI22		Gross	58640 lb
Out	04/22/2022 11:52:09		AMARTI22		Tare	30340 lb
					Net	28300 lb
					Tons	14.15

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.15	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640122

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC		
Ticket Date	04/22/2022	Vehicle#	18-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	CASEY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/22/2022 11:52:36	Inbound 2	EDESMART		Gross	70860 lb
Out	04/22/2022 11:52:36		EDESMART		Tare	33600 lb
					Net	37260 lb
					Tons	18.63

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	18.63	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640124

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/22/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier SMKARAM
Vehicle# 22-SOLO
Container
Driver JASON
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/22/2022 11:55:39	Inbound 1	AMARTI22		Gross	55780 lb
Out	04/22/2022 11:55:39		AMARTI22		Tare	28960 lb
					Net	26820 lb
					Tons	13.41

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.41	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640144

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	JIMMYS TRUCKING SOLO
Ticket Date	04/22/2022	Vehicle#	1-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	JAMIE
Hauling Ticket#		Check#	
Route		Billing #	0004202
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/22/2022 13:08:46	Inbound 2	EDESMART		Gross	55720 lb
Out	04/22/2022 13:08:46		EDESMART		Tare	29020 lb
					Net	26700 lb
					Tons	13.35

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.35	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640145

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/22/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier MOBILE MIX
Vehicle# 55-SOLO
Container
Driver ROGER
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/22/2022 13:12:01	Inbound 1	AMARTI22		Gross	63380 lb
Out	04/22/2022 13:12:01		AMARTI22		Tare	30360 lb
					Net	33020 lb
					Tons	16.51

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.51	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640146

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	TTE INC		
Ticket Date	04/22/2022	Vehicle#	1-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	GALAN		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/22/2022 13:23:02	Inbound 2	EDESMART		Gross	66320 lb
Out	04/22/2022 13:23:02		EDESMART		Tare	27760 lb
					Net	38560 lb
					Tons	19.28

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	19.28	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640148

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/22/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier MOBILE MIX
Vehicle# 56-SOLO
Container
Driver jeff
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/22/2022 13:25:29	Inbound 1	AMARTI22		Gross	60140 lb
Out	04/22/2022 13:25:29		AMARTI22		Tare	28280 lb
					Net	31860 lb
					Tons	15.93

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.93	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640157

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	CASEDAY INC		
Ticket Date	04/22/2022	Vehicle#	18-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	CASEY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/22/2022 13:45:09	Inbound 2	EDESMART		Gross	71940 lb
Out	04/22/2022 13:45:09		EDESMART		Tare	33600 lb
					Net	38340 lb
					Tons	19.17

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	19.17	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640160

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	SMKARAM		
Ticket Date	04/22/2022	Vehicle#	22-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	JASON		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/22/2022 13:59:23	Inbound 1	AMARTI22		Gross	58020 lb
Out	04/22/2022 13:59:23		AMARTI22		Tare	28960 lb
					Net	29060 lb
					Tons	14.53

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.53	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640162

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	BUD CONST		
Ticket Date	04/22/2022	Vehicle#	518-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	KEN		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/22/2022 14:03:20	Inbound 1	AMARTI22		Gross	62820 lb
Out	04/22/2022 14:03:20		AMARTI22		Tare	30340 lb
					Net	32480 lb
					Tons	16.24

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.24	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640173

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	MOBILE MIX		
Ticket Date	04/22/2022	Vehicle#	56-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	LINDSEY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/22/2022 15:02:53	Inbound 2	EDESMART		Gross	63060 lb
Out	04/22/2022 15:02:53		EDESMART		Tare	28280 lb
					Net	34780 lb
					Tons	17.39

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	17.39	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640175

Customer Name LMC CONSTRUCTION INC LMC CONS
Ticket Date 04/22/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier TTE INC
Vehicle# 1-SOLO
Container
Driver GALAN
Check#
Billing # 0004202
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/22/2022 15:08:55	Inbound 1	AMARTI22		Gross	64200 lb
Out	04/22/2022 15:08:55		AMARTI22		Tare	27760 lb
					Net	36440 lb
					Tons	18.22

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	18.22	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640177

Customer Name	LMC CONSTRUCTION INC LMC CONS	Carrier	JIMMYS TRUCKING SOLO		
Ticket Date	04/22/2022	Vehicle#	1-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	GARRY		
Hauling Ticket#		Check#			
Route		Billing #	0004202		
State Waste Code		Gen EPA ID			
Manifest	NBA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/22/2022 15:24:05	Inbound 1	AMARTI22		Gross	58700 lb
Out	04/22/2022 15:24:05		AMARTI22		Tare	29020 lb
					Net	29680 lb
					Tons	14.84

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.84	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640207

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	MOBILE MIX		
Ticket Date	04/25/2022	Vehicle#	55-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	ROGER		
Hauling Ticket#		Check#			
Route		Billing #	0002733		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/25/2022 07:10:15	Inbound 1	amarti22		Gross	64700 lb
Out	04/25/2022 07:10:15		amarti22		Tare	30360 lb
					Net	34340 lb
					Tons	17.17

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	17.17	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640212

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/25/2022	Vehicle#	29-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	DON
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/25/2022 07:46:13	Inbound 1	amarti22		Gross	56060 lb
Out	04/25/2022 07:46:13		amarti22		Tare	29780 lb
					Net	26280 lb
					Tons	13.14

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.14	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640213

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/25/2022	Vehicle#	21-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	LARRY
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/25/2022 07:46:17	Inbound 2	EDESMART		Gross	54480 lb
Out	04/25/2022 07:46:17		EDESMART		Tare	29800 lb
					Net	24680 lb
					Tons	12.34

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	12.34	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640214

Customer Name LAUZON CONTRACTING LLC LAUZON
Ticket Date 04/25/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier RA ROTH RA ROTH TRKING
Vehicle# 20-SOLO
Container
Driver JASON
Check#
Billing # 0002733
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/25/2022 07:50:11	Inbound 1	amarti22		Gross	58180 lb
Out	04/25/2022 07:50:11		amarti22		Tare	29900 lb
					Net	28280 lb
					Tons	14.14

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.14	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640216

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	TTE INC		
Ticket Date	04/25/2022	Vehicle#	1-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	GALAN		
Hauling Ticket#		Check#			
Route		Billing #	0002733		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/25/2022 07:54:05	Inbound 2	EDESMART		Gross	60640 lb
Out	04/25/2022 07:54:05		EDESMART		Tare	27760 lb
					Net	32880 lb
					Tons	16.44

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.44	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640217

Customer Name LAUZON CONTRACTING LLC LAUZON
Ticket Date 04/25/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier CASEDAY INC
Vehicle# 18-SOLO
Container
Driver CASEY
Check#
Billing # 0002733
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/25/2022 07:58:15	Inbound 2	EDESMART		Gross	66040 lb
Out	04/25/2022 07:58:15		EDESMART		Tare	33600 lb
					Net	32440 lb
					Tons	16.22

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.22	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640270

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/25/2022	Vehicle#	21-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	LARRY
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/25/2022 09:32:39	Inbound 2	EDESMART		Gross	55160 lb
Out	04/25/2022 09:32:39		EDESMART		Tare	29800 lb
					Net	25360 lb
					Tons	12.68

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	12.68	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640271

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/25/2022	Vehicle#	29-SOLO Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	DON
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/25/2022 09:43:52	Inbound 1	amarti22		Gross	59020 lb
Out	04/25/2022 09:43:52		amarti22		Tare	29780 lb
					Net	29240 lb
					Tons	14.62

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.62	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640272

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/25/2022	Vehicle#	20-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	JASON
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/25/2022 09:44:48	Inbound 1	amarti22		Gross	57540 lb
Out	04/25/2022 09:44:48		amarti22		Tare	29900 lb
					Net	27640 lb
					Tons	13.82

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.82	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640273

Customer Name LAUZON CONTRACTING LLC LAUZON
Ticket Date 04/25/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier TTE INC
Vehicle# 1-SOLO
Container
Driver GALAN
Check#
Billing # 0002733
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/25/2022 09:45:41	Inbound 2	EDESMART		Gross	56360 lb
Out	04/25/2022 09:45:41		EDESMART		Tare	27760 lb
					Net	28600 lb
					Tons	14.30

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.30	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640276

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	CASEDAY INC		
Ticket Date	04/25/2022	Vehicle#	18-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	CASEY		
Hauling Ticket#		Check#			
Route		Billing #	0002733		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/25/2022 09:54:55	Inbound 2	EDESMART		Gross	61280 lb
Out	04/25/2022 09:54:55		EDESMART		Tare	33600 lb
					Net	27680 lb
					Tons	13.84

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.84	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640299

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/25/2022	Vehicle#	21-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	LARRY
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/25/2022 11:22:15	Inbound 1	EDESMART		Gross	58620 lb
Out	04/25/2022 11:22:15		EDESMART		Tare	29800 lb
					Net	28820 lb
					Tons	14.41

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.41	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640304

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/25/2022	Vehicle#	29-SOLO Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	DON
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/25/2022 11:37:11	Inbound 1	EDESMART		Gross	60140 lb
Out	04/25/2022 11:37:11		EDESMART		Tare	29780 lb
					Net	30360 lb
					Tons	15.18

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.18	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640305

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/25/2022	Vehicle#	20-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	JASON
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/25/2022 11:44:00	Inbound 1	AMARTI22		Gross	60000 lb
Out	04/25/2022 11:44:00		AMARTI22		Tare	29900 lb
					Net	30100 lb
					Tons	15.05

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.05	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640308

Customer Name LAUZON CONTRACTING LLC LAUZON
Ticket Date 04/25/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier TTE INC
Vehicle# 1-SOLO
Container
Driver GALAN
Check#
Billing # 0002733
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/25/2022 11:46:40	Inbound 2	EDESMART		Gross	62620 lb
Out	04/25/2022 11:46:40		EDESMART		Tare	27760 lb
					Net	34860 lb
					Tons	17.43

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	17.43	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640309

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	CASEDAY INC		
Ticket Date	04/25/2022	Vehicle#	18-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	CASEY		
Hauling Ticket#		Check#			
Route		Billing #	0002733		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/25/2022 11:53:12	Inbound 2	EDESMART		Gross	66560 lb
Out	04/25/2022 11:53:12		EDESMART		Tare	33600 lb
					Net	32960 lb
					Tons	16.48

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.48	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640335

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/25/2022	Vehicle#	21-SOLO Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	LARRY
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/25/2022 13:24:42	Inbound 2	EDESMART		Gross	60280 lb
Out	04/25/2022 13:24:42		EDESMART		Tare	29800 lb
					Net	30480 lb
					Tons	15.24

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.24	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640344

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/25/2022	Vehicle#	29-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	DON
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/25/2022 13:40:41	Inbound 1	AMARTI22		Gross	58380 lb
Out	04/25/2022 13:40:41		AMARTI22		Tare	29780 lb
					Net	28600 lb
					Tons	14.30

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.30	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640345

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/25/2022	Vehicle#	20-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	JASON
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/25/2022 13:42:08	Inbound 2	EDESMART		Gross	59280 lb
Out	04/25/2022 13:42:08		EDESMART		Tare	29900 lb
					Net	29380 lb
					Tons	14.69

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.69	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640349

Customer Name LAUZON CONTRACTING LLC LAUZON
Ticket Date 04/25/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier TTE INC
Vehicle# 1-SOLO
Container
Driver GALAN
Check#
Billing # 0002733
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	04/25/2022 13:51:23	Inbound 2	EDESMART		Gross	60720 lb
Out	04/25/2022 13:51:23		EDESMART		Tare	27760 lb
					Net	32960 lb
					Tons	16.48

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.48	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640363

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	CASEDAY INC		
Ticket Date	04/25/2022	Vehicle#	18-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	CASEY		
Hauling Ticket#		Check#			
Route		Billing #	0002733		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/25/2022 14:10:18	Inbound 2	EDESMART		Gross	62620 lb
Out	04/25/2022 14:10:18		EDESMART		Tare	33600 lb
					Net	29020 lb
					Tons	14.51

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.51	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640421

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/26/2022	Vehicle#	27-SOLO Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	DANNY
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/26/2022 07:43:32	Inbound 2	EDESMART		Gross	62120 lb
Out	04/26/2022 07:43:32		EDESMART		Tare	30540 lb
					Net	31580 lb
					Tons	15.79

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.79	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640422

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/26/2022	Vehicle#	26-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	BILL
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/26/2022 07:44:41	Inbound 1	amarti22		Gross	61360 lb
Out	04/26/2022 08:00:15	Outbound	amarti22		Tare	30740 lb
					Net	30620 lb
					Tons	15.31

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.31	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640454

Customer Name LAUZON CONTRACTING LLC LAUZON
Ticket Date 04/26/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier RA ROTH RA ROTH TRKING
Vehicle# 27-SOLO
Container
Driver JEFF
Check#
Billing # 0002733
Gen EPA ID
Grid

	Time	Scale	Operator	Inbound		
In	04/26/2022 09:30:47	Inbound 1	amarti22		Gross	63640 lb
Out	04/26/2022 09:30:47		amarti22		Tare	30540 lb
					Net	33100 lb
					Tons	16.55

Volume

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.55	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640456

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/26/2022	Vehicle#	26-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	BILL
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/26/2022 09:39:31	Inbound 2	EDESMART		Gross	62120 lb
Out	04/26/2022 09:39:31		EDESMART		Tare	30740 lb
					Net	31380 lb
					Tons	15.69

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	15.69	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640478

Customer Name LAUZON CONTRACTING LLC LAUZON
Ticket Date 04/26/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier RA ROTH RA ROTH TRKING
Vehicle# 27-SOLO
Container
Driver JEFF
Check#
Billing # 0002733
Gen EPA ID
Grid

	Time	Scale	Operator	Inbound		
In	04/26/2022 11:06:30	Inbound 1	amarti22		Gross	63900 lb
Out	04/26/2022 11:06:30		amarti22		Tare	30540 lb
					Net	33360 lb
					Tons	16.68

Volume

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.68	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640480

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/26/2022	Vehicle#	26-SOLO Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	BILL
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/26/2022 11:17:20	Inbound 2	EDESMART		Gross	65040 lb
Out	04/26/2022 11:17:20		EDESMART		Tare	30740 lb
					Net	34300 lb
					Tons	17.15

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	17.15	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640501

Customer Name LAUZON CONTRACTING LLC LAUZON
Ticket Date 04/26/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier RA ROTH RA ROTH TRKING
Vehicle# 27-SOLO
Container
Driver JEFF
Check#
Billing # 0002733
Gen EPA ID
Grid

	Time	Scale	Operator	Inbound		
In	04/26/2022 12:47:54	Inbound 1	AMARTI22		Gross	63540 lb
Out	04/26/2022 12:47:54		AMARTI22		Tare	30540 lb
					Net	33000 lb
					Tons	16.50

Volume

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.50	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640503

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	RA ROTH RA ROTH TRKING
Ticket Date	04/26/2022	Vehicle#	26-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	BILL
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/26/2022 12:51:09	Inbound 1	AMARTI22		Gross	65120 lb
Out	04/26/2022 12:51:09		AMARTI22		Tare	30740 lb
					Net	34380 lb
					Tons	17.19

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	17.19	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640531

Customer Name LAUZON CONTRACTING LLC LAUZON
Ticket Date 04/26/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier RA ROTH RA ROTH TRKING
Vehicle# 27-SOLO
Container
Driver JEFF
Check#
Billing # 0002733
Gen EPA ID
Grid

	Time	Scale	Operator	Inbound		
In	04/26/2022 14:31:21	Inbound 1	AMARTI22		Gross	64680 lb
Out	04/26/2022 14:31:21		AMARTI22		Tare	30540 lb
					Net	34140 lb
					Tons	17.07

Volume

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	17.07	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640534

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	RA ROTH RA ROTH TRKING		
Ticket Date	04/26/2022	Vehicle#	26-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	BILL		
Hauling Ticket#		Check#			
Route		Billing #	0002733		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	04/26/2022 14:34:46	Inbound 2	EDESMART		Gross	64580 lb
Out	04/26/2022 14:34:46		EDESMART		Tare	30740 lb
					Net	33840 lb
					Tons	16.92

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.92	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640585

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	PRESTO HOMES INC DUMP TRUCK
Ticket Date	04/27/2022	Vehicle#	70-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	CHUCK
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

Volume

	Time	Scale	Operator	Inbound		
In	04/27/2022 08:00:58	Inbound 2	EDESMART		Gross	58800 lb
Out	04/27/2022 08:18:14	Outbound	AMARTI22		Tare	28940 lb
					Net	29860 lb
					Tons	14.93

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.93	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640586

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	PRESTO HOMES INC DUMP TRUCK
Ticket Date	04/27/2022	Vehicle#	71-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	NOAH
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/27/2022 08:04:00	Inbound 2	EDESMART		Gross	62020 lb
Out	04/27/2022 08:20:16	Outbound	AMARTI22		Tare	29040 lb
					Net	32980 lb
					Tons	16.49

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.49	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640629

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	PRESTO HOMES INC DUMP TRUCK
Ticket Date	04/27/2022	Vehicle#	70-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	CHUCK
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/27/2022 10:00:33	Inbound 2	EDESMART		Gross	70100 lb
Out	04/27/2022 10:00:33		EDESMART		Tare	28940 lb
					Net	41160 lb
					Tons	20.58

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	20.58	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640630

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	PRESTO HOMES INC DUMP TRUCK
Ticket Date	04/27/2022	Vehicle#	71-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	NOAH
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/27/2022 10:02:30	Inbound 2	EDESMART		Gross	68360 lb
Out	04/27/2022 10:02:30		EDESMART		Tare	29040 lb
					Net	39320 lb
					Tons	19.66

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	19.66	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640664

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	PRESTO HOMES INC DUMP TRUCK
Ticket Date	04/27/2022	Vehicle#	70-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	JOSH
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/27/2022 11:48:18	Inbound 1	edesmart		Gross	68700 lb
Out	04/27/2022 11:48:18		edesmart		Tare	28940 lb
					Net	39760 lb
					Tons	19.88

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	19.88	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640665

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	PRESTO HOMES INC DUMP TRUCK
Ticket Date	04/27/2022	Vehicle#	71-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/27/2022 11:54:34	Inbound 1	edesmart		Gross	72340 lb
Out	04/27/2022 11:54:34		edesmart		Tare	29040 lb
					Net	43300 lb
					Tons	21.65

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	21.65	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640689

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	PRESTO HOMES INC DUMP TRUCK
Ticket Date	04/27/2022	Vehicle#	70-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	CHUCK
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/27/2022 13:33:01	Inbound 2	EDESMART		Gross	71580 lb
Out	04/27/2022 13:33:01		EDESMART		Tare	28940 lb
					Net	42640 lb
					Tons	21.32

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	21.32	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1640692

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	PRESTO HOMES INC DUMP TRUCK
Ticket Date	04/27/2022	Vehicle#	71-SOLO
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	NOAH
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	NA		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	04/27/2022 13:40:21	Inbound 1	AMARTI22		Gross	74920 lb
Out	04/27/2022 13:40:21		AMARTI22		Tare	29040 lb
					Net	45880 lb
					Tons	22.94

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	22.94	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1661858

Customer Name LAUZON CONTRACTING LLC LAUZON
Ticket Date 10/06/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier CASEDAY INC
Vehicle# 6-SOLO
Container
Driver JIM
Check#
Billing # 0002733
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	10/06/2022 10:13:29	Inbound 2	jdrury		Gross	45180 lb
Out	10/06/2022 10:29:38	Outbound	MLAWREN4		Tare	20900 lb
					Net	24280 lb
					Tons	12.14

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	12.14	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1661931

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	CASEDAY INC		
Ticket Date	10/06/2022	Vehicle#	6-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver			
Hauling Ticket#		Check#			
Route		Billing #	0002733		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	10/06/2022 13:13:12	Inbound 2	JDRURY		Gross	47420 lb
Out	10/06/2022 13:13:12		JDRURY		Tare	20900 lb
					Net	26520 lb
					Tons	13.26

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.26	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1662113

Customer Name LAUZON CONTRACTING LLC LAUZON
Ticket Date 10/07/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier Wilson and Sons
Vehicle# 01
Container
Driver RANDY
Check#
Billing # 0002733
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	10/07/2022 12:50:39	Inbound 1	ECOBB		Gross	51680 lb
Out	10/07/2022 12:50:39		ECOBB		Tare	26500 lb
					Net	25180 lb
					Tons	12.59

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	12.59	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1664800

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	CASEDAY INC		
Ticket Date	10/31/2022	Vehicle#	02-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	LES		
Hauling Ticket#		Check#			
Route		Billing #	0002733		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	10/31/2022 09:30:18	Inbound 1	jbrown40		Gross	62660 lb
Out	10/31/2022 09:51:30	Outbound	ecobb		Tare	28140 lb
					Net	34520 lb
					Tons	17.26

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	17.26	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1664837

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	CASEDAY INC		
Ticket Date	10/31/2022	Vehicle#	02-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	LES		
Hauling Ticket#		Check#			
Route		Billing #	0002733		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	10/31/2022 11:30:27	Inbound 2	jdrury		Gross	52540 lb
Out	10/31/2022 11:30:27		jdrury		Tare	28140 lb
					Net	24400 lb
					Tons	12.20

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	12.20	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1664881

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	CASEDAY INC		
Ticket Date	10/31/2022	Vehicle#	02-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	LES		
Hauling Ticket#		Check#			
Route		Billing #	0002733		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	10/31/2022 13:55:10	Inbound 1	ECOBB		Gross	55800 lb
Out	10/31/2022 13:55:10		ECOBB		Tare	28140 lb
					Net	27660 lb
					Tons	13.83

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.83	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1666575

Customer Name LAUZON CONTRACTING LLC LAUZON
Ticket Date 11/16/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier FILLIUPS DUMP TRUCK
Vehicle# 19
Container
Driver Jeff
Check#
Billing # 0002733
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	11/16/2022 12:20:04	Inbound 1	ecobb		Gross	51720 lb
Out	11/16/2022 12:41:12	Outbound	ecobb		Tare	24880 lb
					Net	26840 lb
					Tons	13.42

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.42	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1666604

Customer Name LAUZON CONTRACTING LLC LAUZON
Ticket Date 11/16/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier FILLIUPS DUMP TRUCK
Vehicle# 19
Container
Driver Jeff
Check#
Billing # 0002733
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	11/16/2022 14:36:10	Inbound 1	jdrury		Gross	57240 lb
Out	11/16/2022 14:36:10		jdrury		Tare	24880 lb
					Net	32360 lb
					Tons	16.18

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.18	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1666718

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	FILLIUPS DUMP TRUCK		
Ticket Date	11/17/2022	Vehicle#	20	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	CAMERON		
Hauling Ticket#		Check#			
Route		Billing #	0002733		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	11/17/2022 13:06:55	Inbound 1	ECOBB		Gross	66620 lb
Out	11/17/2022 13:21:33	Outbound	jdrury		Tare	29060 lb
					Net	37560 lb
					Tons	18.78

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	18.78	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1667140

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	CASEDAY INC		
Ticket Date	11/22/2022	Vehicle#	11-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver	CODY		
Hauling Ticket#		Check#			
Route		Billing #	0002733		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	11/22/2022 15:04:54	Inbound 1	jbrown40		Gross	52580 lb
Out	11/22/2022 15:04:54		jbrown40		Tare	23240 lb
					Net	29340 lb
					Tons	14.67

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.67	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1672795

Customer Name LAUZON CONTRACTING LLC LAUZON
Ticket Date 02/02/2023
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier LAUZON CONTRACTING
Vehicle# 2
Container
Driver
Check#
Billing # 0002733
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	02/02/2023 10:19:18	Inbound 2	lgillila		Gross	28620 lb
Out	02/02/2023 10:42:23	Outbound	jdrury		Tare	13800 lb
					Net	14820 lb
					Tons	7.41

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	7.41	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1672841

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	LAUZON CONTRACTING		
Ticket Date	02/02/2023	Vehicle#	2	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver			
Hauling Ticket#		Check#			
Route		Billing #	0002733		
State Waste Code		Gen EPA ID			
Manifest	na				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	02/02/2023 13:56:33	Inbound 1	jdrury		Gross	30300 lb
Out	02/02/2023 14:11:40	Outbound	LGILLILA		Tare	13740 lb
					Net	16560 lb
					Tons	8.28

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	8.28	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1672900

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	LAUZON CONTRACTING		
Ticket Date	02/03/2023	Vehicle#	1-SOLO	Volume	
Payment Type	Credit Account	Container			
Manual Ticket#		Driver			
Hauling Ticket#		Check#			
Route		Billing #	0002733		
State Waste Code		Gen EPA ID			
Manifest	NA				
Destination		Grid			
PO					
Profile	137367OR (Non-Hazardous Contaminated Soil)				
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE				

	Time	Scale	Operator	Inbound		
In	02/03/2023 10:10:09	Inbound 1	LGILLILA		Gross	29420 lb
Out	02/03/2023 10:10:09		LGILLILA		Tare	14480 lb
					Net	14940 lb
					Tons	7.47

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	7.47	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1673048

Customer Name LAUZON CONTRACTING LLC LAUZON
Ticket Date 02/06/2023
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier LAUZON CONTRACTING
Vehicle# 1-SOLO
Container
Driver
Check#
Billing # 0002733
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	02/06/2023 13:09:56	Inbound 2	LGILLILA		Gross	27460 lb
Out	02/06/2023 13:09:56		LGILLILA		Tare	14480 lb
					Net	12980 lb
					Tons	6.49

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	6.49	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN

Total Tax
Total Ticket

Driver`s Signature

APPENDIX D

VAPOR BARRIER DOCUMENTS

RETURN OF SUBMITTAL

Submittal 33000-9.0 Concrete Accessories

DATE

March 7, 2022

PROJECT

216209
Block 290 APT
(Slabtown Square)
2070 NW Quimby St.
Portland, Or 97209

To

Siriane Lawless, LMC Construction

DISTRIBUTION

BC Group: Michael Rudis, Bob Beauchemin

GRES: Levi Curran, Tamara Holden

This submittal has been reviewed only for conformance with the design concept and for compliance with information given in the Contract Documents, and does not extend to means, methods, techniques, sequence of construction, dimensions, or safety precautions thereto. Review does not relieve the Contractor from responsibility for deviations from Drawings or Specifications unless the LRS Architect's attention has been called to such deviation in writing at the time of submission.

Corrections have been made on submittal material by LRS Architects in accordance with Article 4.2.7 of the General Conditions of the Contract for Construction, with additional comments as follows:

Action

☒ No Exception Taken ☐ Revise & Resubmit ☐ Make Corrections Noted ☐ Record Only

Comments

No Exception Taken per IMEG Review.

Attachments:
B290 033000-9.0 Concrete Accessories 2.28.22 - IMEG

ISSUED BY LRS ARCHITECTS, INC

Benjamin Riemer, Project Manager

Name, Title

03/07/22

Date

SUBMITTAL COVER SHEET

Date: 2/28/2022
Project Name: Block 290
Attention: Ben Reimer
Architect: LRS Architects

Submittal #: **03 3000-9.0**
Reference: 03 3000
Description: Concrete Accessories

Product Information

Subcontractor: Whitaker Ellis

This review is for general conformance with plans and specifications only. Any deviations from same not clearly noted by the subcontactor/supplier have not been reviewed. Review shall not constitute a complete check or detailed dimensions or count or serve to relieve the subcontractor/supplier of contractual responsibility for any error or deviation from contract requirements.

PROJECT # TBD

SPEC. SECTION # 03 3000

REVIEWED BY Nate Racanelli, Project Coordinator

☑ Reviewed ☐ Reviewed w/Comments
☐ Rejected ☐ Revise & Resubmit

This review is only for general conformance with the design concept of the project and general compliance with the information given in the contract documents. Notations made on the shop drawings during this review do not relieve the contractor from compliance with the requirements of the contract documents. Approval of a specific item shall not include approval of an assembly of which the item is a component. The contractor is solely responsible for confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordination of his or her work with that of all other trades; and performing all work in a safe and satisfactory manner.

☒ **APPROVED** ☐ **NOTATIONS; NO RESUBMITTAL**
☐ **REJECTED** ☐ **REVISE and RESUBMIT**

IMEG

Date Received: 03/02/2022

Date Returned: 03/03/2022 By: Mark.R.SantaMaria

Discipline Reviewed:
☒ Structural ☐ Mechanical ☐ Electrical ☐ Plumbing
☐ Civil ☐ Technology ☐ Other _____

Transmitted: ☑ Procore ☐ Hand Deliver
☐ Email ☐ Other

WHITAKER / ELLIS

YOUR CONCRETE CONTRACTOR

7180 SW Sandburg St., Suite 400 • Tigard, OR 97223 • Phone: 503-768-3017 • Fax: 503-768-3018 • CCB# 124833

Voted Top Concrete Contractor in North America

2204 Block 290

CAST-IN-PLACE CONCRETE SUBMITTAL PACKAGE: 033000

---

1. **VAPOR BARIER**
- Raven – VaporBlock 15 mil.

2. **WATERSTOP**
- Henry – SF302 SynkoFlex

3. **FORM RELEASE**
- Mascokote Premium

4. **EVAPORATION RETARDER**
- Euclid- Eucobar

5. **CURING COMPOUND**
- Masco Biokure

6. **EPOXY ADHESIVE**
- Dewlat – Pure110+

7. **PT GROUT**
- Euclid – Euco Repair V100

8. **EXPANSION MATERIAL**
- Nomaflex

9. **PATCH MATERIAL**
- Patchcrete P100

VAPORBLOCK® VB15, VBLP15 & VBGL15

High Performance Underslab Vapor Barrier

RAVEN INDUSTRIES

Product Description

VaporBlock® is a high performance, multi-layer underslab vapor barrier designed to retard moisture migration through concrete slabs and concrete walls to protect your structure from:

- MOLD: VaporBlock® reduces moisture condensation within a structure, impeding the growth of molds, mildews, and fungi.
- MOISTURE: VaporBlock® protects flooring materials by maintaining moisture levels well below the requirements of ASTM E-1745-11.
- RADON: VaporBlock® is used as a component of radon mitigation systems to protect indoor air quality and occupant health.

VaporBlock® is one of the most effective underslab vapor barriers on the market today! Benefits include:

- Virtually Zero Moisture Vapor Permeability
- Superior Puncture and Impact Resistance
- Resistance to decay and degradation

VaporBlock® VBLP15 meets an impressive virtually zero-perm rating at less than 0.01 perms after conditioning to exceed requirements in ACI 302.2R-06, section 9.3.

VaporBlock® G™ VBGL15 can help achieve a higher LEED rating by qualifying for Credit 4 (Recycled Content) of Materials and Resources by containing a minimum of 10% post-consumer recycled polyethylene for 1 LEED point on qualifying projects.

VaporBlock® is manufactured to strict conformance specifications under our ISO 9001-2008 Certified Management System to consistently exceed ASTM standards and project expectations. Raven's accredited lab ensures VaporBlock® meets the highest possible quality standards across multiple industries. VaporBlock® is supported with independent testing. Results are available upon request, as required under ASTM E-1745-11. VaporBlock® is readily available through nationwide distribution:

- Available in three 15 mil options for optimal project flexibility
- Larger roll sizes equal lower installation costs

Raven Industries manufactures VaporBlock® and controls all aspects from start to finish assuring the final product meets our high performance standards. Raven is a publicly-traded company, with over 50 years of stability and service excellence to stand behind our products with a future of innovation and growth.

VaporBlock® UNDERSLAB VAPOR BARRIER

Vapor Barrier - Commercial

Product	Part #
VAPORBLOCK 15	VB15
VAPORBLOCK 15 LOW PERM	VBLP15
VAPORBLOCK GREEN	VBGL15

APPLICATIONS

- Underslab Vapor Retarder/Barrier
- Foundation Wall Vapor Retarder
- Radon Retarder

Note: All instructions on architectural or structural drawings should be reviewed and followed. Detailed installation instructions accompany each roll of VaporBlock and can also be located on our website.

ASTM E-1643 also provides general installation information for vapor retarders. All VaporBlock series materials can be installed with print or color facing up or down and will provide the same performance.

ASTM E-1745-11, "Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs".

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VAPORBLOCK® VB15, VBLP15 & VBGL15

High Performance Underslab Vapor Barrier

ISO 9001:2008 CERTIFIED MANAGEMENT SYSTEM

PRO-FORMA DATA SHEET **VB15

PROPERTIES	TEST METHOD	VAPORBLOCK VB15 Imperial	VAPORBLOCK VBLP15 Imperial	VAPORBLOCK VBGL15 Imperial	ASTM E 1745-11 Class A, B & C[1] Imperial
Appearance		Blue	Blue/White	Green	-
Thickness, Nominal		15 mil	15 mil	15 mil	-
Roll Size		12 ft x 200 ft	12 ft x 200 ft	12 ft x 200 ft	-
Weight		73 lbs/MSF	73 lbs/MSF	76 lbs/MSF	-
Classification	ASTM E1745-11	CLASS A, B & C	CLASS A, B & C	CLASS A, B & C	Class A, B, or C
Tensile Strength Average MD & TD (New Material)	ASTM E154 Section 9, (D882)	60 lbs/in	78 lbs/in	50 lbs/in	Class A = 45 lbs/in Class B = 30 lbs/in Class C = 13.6 lbs/in Minimum
(After Exposure)		61 lbs/in	80 lbs/in	50 lbs/in	
Puncture Resistance	ASTM D1709 Method B	>3300 g	>3300 g	>4000 g	Class A = 2200 g Class B = 1700 g Class C = 475 g Minimum
Permeance (New Material)	ASTM E154 Section 7 ASTM E96 Procedure B	0.018 *Perms	0.0057 *Perms	0.0134 *Perms	Class A, B, & C 0.1 *Perms Maximum
(After Conditioning)	ASTM E154 Section 8, E96	0.018	0.0076	0.0139	
	Section 11, E96	0.018	0.0075	0.0124	
	Section 12, E96	0.018	0.0076	0.0115	
	Section 13, E96	0.018	0.0053	0.0137	
WVTR	ASTM E96 Procedure B	0.0075 grain/hr-ft^2	0.0023 grain/hr-ft^2	0.0057 grain/hr-ft^2	-
Maximum Use Temperature		180° F	180° F	180° F	-
Minimum Use Temperature		-70° F	-70° F	-70° F	-

* grains/(ft^2·hr·in Hg)

[1] Referencing ASTM E1745-11, Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs

**PRO-FORMA Contents: Data listed for VaporBlock® VB15 is extrapolated from similar products and initial prototypes and is subject to change at any time as additional test data becomes available.

VaporBlock® UNDERSLAB VAPOR BARRIER

VaporBlock® VB15 and VBLP15 can be identified as blue or blue/white, and VBGL15 as green in color and all three products are printed with the brand logo and the conformance classification information listing ASTM E-1745, Class A.

Note: To the best of our knowledge, unless otherwise stated, these are typical property values and are intended as guides only, not as specification limits. Chemical resistance, odor transmission, longevity as well as other performance criteria is not implied or given and actual testing must be performed for applicability in specific applications and/or conditions. RAVEN INDUSTRIES MAKES NO WARRANTIES AS TO THE FITNESS FOR A SPECIFIC USE OR MERCHANTABILITY OF PRODUCTS REFERRED TO, no guarantee of satisfactory results from reliance upon contained information or recommendations and disclaims all liability for resulting loss or damage. Limited Warranty available at www.RavenEFD.com

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3/14 EFD 1484

Scan QR Code to download current technical data sheets via the Raven website.

TECHNICAL DATA SHEET

SF302 Synko-Flex®
Waterstop

Physical Properties

Appearance……Black strips Hydrocarbon Content…… 50% to 70% (ASTM D4) Volatile Matter……..2.0% max. (ASTM D6) Specific Gravity……...1.20 to 1.35 (ASTM D71) Ductility……..…5.0 min. (ASTM D113) Softening Point……..…320°F (ASTM D36) Penetration……50 to 120 (ASTM D217) Flash Point……600°F min. (ASTM D92) Flow Resistance……....No Flow (Fed. Spec SSS-210) (in vertical position 5 days at 135°F) Resistance to Hydrostatic Head……..68 feet of water (on non-moving joints)	**Sizes** Length/strip……..…..3 ft. Cross section (as extruded)……....1 in. x 1 in. Cross section (as installed)……..…5/8 in. x 1-1/2 in. **Packaging** No. strips per carton……..……35

Approvals & Certifications

Meets Federal Specification SSS-210	Certified ANSI/NSF 61 for use in potable water systems

Description

SF302 Synko-Flex® waterstop is a specially formulated non-swelling preformed joint sealant that provides a lasting, watertight bond to both fresh and cured concrete surfaces. It is a single component, self-sealing adhesive compound, extruded in a square cross-section between two quick-release protective wrappers. It bonds to cured concrete surfaces and fuses with fresh concrete during the hydration and curing process to achieve a watertight seal within cold joints at footings, walls and slabs on a wide variety of concrete structures. It does not rely on swelling to achieve its watertight seal, and therefore, it is unaffected by rain or wet conditions which may occur prior to joint completion.

Features

- Easy to install
- Eliminates split forming, wiring to rebar, heat welding of splices
- Unaffected by rain or wet conditions during installation
- Excellent chemical resistance
- Bonds to most all substrates
- Unaffected by cyclic wetting and drying
- Never a risk of fracturing concrete like swelling type waterstops
- Safe for use in potable water structures

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Technical Services- Phone (800) 486-1278 – Email: techservices@henry.com
www.henry.com

SF302 Synko-Flex®

Uses

SF302 Synko-Flex® is designed to provide a watertight seal of cold joints in a wide range of concrete structures including: residential and commercial basements, secondary containment structures, highway tunnels, concrete lined storm drainage and irrigation channels, pedestrian tunnels and below-grade walkways, swimming pools and water features, below-grade parking garages, waste-water treatment plants, fish hatcheries and aquariums, potable water reservoirs, and water theme parks. **SF302 Synko-Flex®** may also be used to seal around concrete, steel, PVC, or HDPE pipe penetrations through concrete walls or floor slabs. **SF302 Synko-Flex®** is also ideal for use as a joint sealant on precast structures such as box culverts, septic tanks and utility vaults.

Surface Preparation

Joint surfaces should be clean and dry before priming and just prior to placing the **SF302 Synko-Flex®** strips. Concrete should cure a minimum of 24 hours prior to priming. Ensure that concrete surfaces are free from form oils, release agents, curing compounds, laitance and other dirt or debris. Use a wire brush or stiff bristle brush to clean surface prior to priming.

Application

Positioning: SF302 Synko-Flex® is generally positioned in the center of the joint. It may be placed at the bottom of a keyway, if a keyway is incorporated into the joint design. However, a keyway is not required for the use of this product. Two inches of concrete coverage is recommended.

Standard Method: Apply **SF302 Synko-Flex®** to the cured surface and allow to dry. Drying time generally takes 2 to 3 hours. Drying time will take longer in low temperatures and in humid environments.

Peel the protective release paper from one side of the **Synko-Flex®** strip. Place the strip onto the primed surface pressing firmly along the entire length of the strip. The strip should be depressed to approximately 5/8 inch in thickness forcing it to widen to approximately 1-1/2 inches. Splice strips together with a 1-inch overlap or side lap. Remove the remaining release film. Fresh concrete may then be poured directly against the **Synko-Flex®**. The waterstop sealing system is complete when the fresh concrete cures.

In cold weather, both the **Synko-Flex®** strips and the concrete surface should be warmed just prior to application.

Alternate Application Method: Synko-Flex® may also be installed directly in the fresh concrete.

Horizontal Applications: Peel the protective release paper from one side of the **Synko-Flex®** strip. While concrete is still wet, carefully press the **Synko-Flex®** strips into the fresh concrete, leaving approximately ½ inch exposed above the concrete surface. When concrete cures, remove remaining release film, and continue with pour.

Vertical Applications: Peel off release paper from one side of the strip, leaving the polyethylene release film on the formwork side of the **Synko-Flex®** to prevent the **Synko-Flex®** from adhering to the formwork and to keep the **Synko-Flex®** clean once the forms are removed. The **Synko-Flex®** is then nailed to the inside of the concrete form using small finishing nails. Chamfer strips (1/2") should be positioned on each side of the **Synko-Flex®** strip. Finishing nails will pull through the **Synko-Flex®** strips when end form is removed.

Limitations: Synko-Flex® is designed for use in non-moving or reinforced joints. Contact manufacturer regarding applications where limited movement could be expected.

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SF302 Synko-Flex®

Caution

FLAMMABLE! Use caution around open flame. Do not heat container or store at temperatures greater than 120°F. DO NOT TAKE INTERNALLY! Use protective measures to avoid contact with eyes and skin**. If swallowed**, CALL PHYSICIAN IMMEDIATELY. **In case of eye contact,** open eyelids wide and flush immediately with plenty of water for at least 15 minutes. GET MEDICAL ATTENTION!

KEEP OUT OF REACH OF CHILDREN
DO NOT ALLOW PRODUCT TO FREEZE

Warning: This product contains detectable amounts of chemicals known to the State of California to cause cancer, or birth defects or other reproductive harm.

Employers should obtain a copy of the **Material Safety Data Sheet (MSDS)** from your supplier or directly from Henry at the toll free number or website below.

Limited Warranty

Specifications and other information contained herein supersede all previously printed matter and are subject to change without notice. All goods sold by the seller are warranted to be free from defects in material and workmanship and meet the physical and chemical requirements of Federal Specification SSS-210. The foregoing warranty is in lieu of and excludes all other warranties not expressly set forth herein, whether express or implied by operation of law or otherwise, including but not limited to any implied warranties of merchantability or fitness. Seller shall not be liable for incidental or consequential losses, damages or expenses, directly or indirectly arising from the sale, handling or use of the goods, or from any other cause relating thereto, and seller's liability hereunder in any case is expressly limited to the replacement (in the form originally shipped) of goods not complying with this agreement or at seller's election, to the repayment of, or crediting buyer with, an amount equal to the purchase price of such goods, whether such claims are for breach of warranty or negligence. Any claim by buyer with reference to the goods sold hereunder for any cause shall be deemed waived by buyer unless submitted to seller in writing within 30 days from the date buyer discovered or should have discovered any claimed breach.

Statement of Responsibility

The technical and application information herein is based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use. Henry Company data sheets are updated on a regular basis; it is the user's responsibility to obtain and to confirm the most recent version. Information contained in this data sheet may change without notice.

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MASCOKOTE PREMIUM

DESCRIPTION

MASCOKOTE PREMIUM is a top of the line reactive form release with a mineral carrier that leaves an architectural or high visual impact concrete surface. It is specially formulated for use on conditioned aluminum and steel forms, but is also effective on plywood, composite forms, plastic, and urethane formliners. MASCOKOTE PREMIUM is manufactured with virgin oil and organic chemicals which react with concrete to prevent adhesion and provides a quick and easy release. It will not break down with steam. It is ideal for architectural precast. It is water insoluble and contains no diesel, kerosene, waxes or silicones that would reduce effectiveness and damage formwork. MASCOKOTE PREMIUM is a thin amber liquid that remains fluid at subfreezing temperatures.

BENEFITS

- Manufactured with virgin oil.
- Cost-efficient: Coverage rate is 300% greater than most premium form release agents.
- Compatible with elastomeric and urethane form liners
- Does not impair bonding of paint and other concrete surface coatings.
- Produces high visual impact architectural concrete.
- Won't stain white or grey concrete.
- Triples life of wood forms.
- Reduces bug holes trapped by heavier oils.
- Waterproofs and prevents forms from rotting.
- Reduces maintenance costs as much as 50% on metal forms.

EFFECTS ON CONCRETE

- Produces architectural concrete by eliminating bug holes caused by thick form oils.
- Provides a quick, easy release without staining, discoloration, or pitting.
- Leaves no residue or cement dust on the concrete surface when properly applied.
- Concrete is left with an architectural surface and ready for application of curing compound, sealers, and coatings.
- When any subsequent coatings are to be applied to form finished concrete, follow the application instructions of the subsequent coatings manufacturer.

APPLICATION

Forms should be free of dirt, hardened concrete, rust, scale, and other foreign matter. Release agent is ready to use direct from container. Apply a thin film using an atomizing or misting spray tip to maximize product performance and economy. Spray uniformly with cross spray to avoid pin holes and uncoated areas. Over application will not produce better results and may cause dusting. Puddles should be wiped up with rags prior to pouring concrete. Prior to coating plywood forms, apply one or two heavy brush coats to edges for waterproofing protection.

Equipment should be sprayed daily with MASCOKOTE PREMIUM at the end of each day's use to keep concrete or plaster soft for easy removal.
Aluminum doors, windows, and panels should be wiped down with MASCOKOTE PREMIUM upon installation to prevent cement and plaster from adhering.
Light fogging of prestress and precast forms prior to each use will produce a clean cast with a lighter finish and fewer bug holes. Less works better. With continuous use, beds will stay clean and rust-free. Cleaning of forms will be greatly simplified, reducing expensive maintenance.

COVERAGE

Steel, Plastic, Fiberglass	2000 sq ft/gal
Conditioned Aluminum	2000 sq ft/gal
HDO Plywood	2000 sq ft/gal
MDO Plywood	1500 sq ft/gal
Dimensional Lumber	1000 sq ft/gal
BB Grade Plywood	1000 sq ft/gal

COMPLIANCES

Corps of Engineers CEGS-03300, Section 10.8 form Coating.
Navy Dock and Piers 56359
V.O.C. Compliant

PHYSICAL PROPERTIES

Finished Appearance:	N/A
Color:	Light Blue in Container
Flash Point:	>200˚F
V.O.C. Content:	<100 g/L

CAUTIONS

- For subsequent coatings over form finished concrete, follow recommended application procedures by paint or coatings manufacturer.
- Not recommended for use when forms are to be removed in less than 12 hours unless heat is used to speed curing time.
- Not recommended for untreated masonite, untreated paper, or foam.
- Over application may cause concrete dusting.
- Should not be applied to reinforcing steel.
- Should not be used as a bondbreaker.
- Keep out of reach of children.
- Do not cut top off drum with torch.
- Keep away from open flame or excessive heat.
- Avoid inhalation of vapors. Use only with adequate ventilation.

- Avoid contact with skin. Protective clothing is recommended. Contact areas should be thoroughly washed with soap and water.
- Avoid contact with eyes. Protective goggles are recommended in case of splashing. Flush eyes with water if contact occurs.
- Avoid ingestion of material. If ingestion occurs, contact a poison center or physician.
- Additional precautions, safety information, and first aid treatments are contained in the Material Safety Data Sheet.

PACKAGING
5 gallon and 55 gallon DOT approved containers.
Storage: 40° F to 85° F
Protect from Freezing.
Shelf Life: 2 years unopened, in protected storage.
Freight Class: Class 55
DOT Hazard Class: Non-regulated
Packing Group: Non-regulated
Shipping Name: Non-regulated

HAZARDS IDENTIFICATION
Expect to have a low degree of toxicity by inhalation. Excessive inhalation of vapors and/or spray/mist may cause respiratory irritation, dizziness, weakness, nausea, headache, loss of coordination and fatigue. Contact with eyes may cause mild irritation including stinging, watering and redness. Skin irritant; contact may cause redness, burning, drying and cracking of the skin and skin damage. Ingestion is not expected to be a relevant route of exposure. Aspiration hazard; this material can enter the lungs during vomiting or swallowing and cause lung inflammation and damage (pneumonitis and/or pulmonary adema).

FIRST AID
Inhalation: Remove victim from exposure to fresh air.
If victim has difficulty breathing, administer oxygen.
If breathing has stopped, administer artificial respiration. Seek medical attention.
Eyes: Flush eyes with water, lifting upper and lower lids occasionally for 15 minutes. Seek medical attention.
Skin: Remove contaminated shoes and clothing, flush affected area with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. If skin surface is not damaged, cleanse affected area thoroughly by washing with mild soap and water. If irritation or redness develops, seek medical attention.
Ingestion: Aspiration hazard; do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Seek medial attention.

CLEANUP INSTRUCTIONS
Sprayers and other application equipment can be cleaned with MASCO CITRIS CLEAN. Clean drips and over spray while still wet. Clean glass and other non-absorbent materials soon after application.

TECHNICAL SERVICE
For application procedures or surface conditions not specified above, please contact:

MASONS SUPPLY
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Portland, OR 97202
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masco.net

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06/09

EUCOBAR

Evaporation Retardant

EUCLID CHEMICAL

Description

EUCOBAR is designed to be used as an evaporation retardant on concrete surfaces of all types. When sprayed over fresh concrete, EUCOBAR forms a monomolecular film that prevents rapid moisture loss from the concrete surface. It is easy to use requiring only the addition of water before spray application. EUCOBAR is especially effective when concreting operations must be performed in direct sun, wind, high temperatures, or low relative humidity.

Primary Applications

- Floors
- Pavements
- Concrete toppings
- Vertical/overhead repairs
- Dry shake floors including all SURFLEX and EUCO-PLATE formulations
- Specialty iron toppings
- Parking decks and ramps

Features/Benefits

- Holds in surface moisture on concrete floors, slabs, and repairs
- Helps prevent plastic shrinkage cracking
- Easy and economical to use
- Helps eliminate crusting caused by loss of surface moisture
- Water based for total compatibility with fresh concrete
- Excellent for both interior and exterior concrete projects
- Will not effect adhesion of curing compound or other treatments

Technical Information

EUCOBAR is a water based polymer concentrate that is readily dilutable in water.

Evaporation rate is a function of relative humidity, concrete temperature, air temperature and wind velocity. Plastic shrinkage cracking is a strong possibility when the rate of evaporation exceeds 0.2 lb/ft^2/hr (1.0 kg/m^2/hr). The chart on the back of this page (Fig. 2.1.5 of ACI 305, Hot Weather Concreting) is useful in determining the evaporation rate under a given set of jobsite conditions. Use EUCOBAR when the above limit is exceeded.

Appearance: EUCOBAR is a free flowing pink liquid designed to be mixed with water. The use of EUCOBAR will not affect the color of concrete.

Packaging

EUCOBAR is packaged in 55 gal (208 L) drums, 5 gal (18.9 L) pails and 6/1 gal (3.8 L) units per case.

Shelf Life

2 years in original, unopened package

Coverage

Dilution Rate: 9:1 (Water:EUCOBAR)

EUCOBAR (after dilution) will cover approximately 200 to 400 ft^2/gal (5 to 10 m^2/L). Coverage will vary depending on concrete texture and wind conditions. For estimating purposes, 1 gal (3.8 L) of EUCOBAR concentrate will treat 2000 to 4000 ft^2 (186 to 372 m^2) of concrete surface area, but is highly dependent upon ambient conditions.

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Directions for Use

Surface Preparation: EUCOBAR is applied directly to the surface of fresh concrete. No surface preparation is necessary.

Mixing: EUCOBAR is supplied as a concentrate and must be diluted with water at a 9:1 (water:EUCOBAR) ratio. Determine capacity of sprayer and divide by 10. Add this amount of EUCOBAR to the sprayer canister followed by 9 times that amount of water. For example, if 1 quart (0.95 L) of EUCOBAR is added, dilute with 9 quarts (8.5 L) of water. Mix or shake until thoroughly blended.

Placement: Apply using a tank type, hand pump sprayer capable of spraying in a fine mist. Use a slotted tip for the best spray. Spray EUCOBAR over the fresh concrete surface as soon as possible after floating. A pink, translucent sheen will appear as the surface is treated. On extreme drying conditions, additional applications may be given as needed. When used on floors with dry shake hardener applications, EUCOBAR may be used on the fresh concrete as well as between each shake application.

Curing & Sealing: Proper curing procedures are important to ensure the durability and quality of concrete. To prevent surface cracking, cure flatwork with a high solids cure and seal, such as SUPER AQUA-CURE VOX or REZ-SEAL.

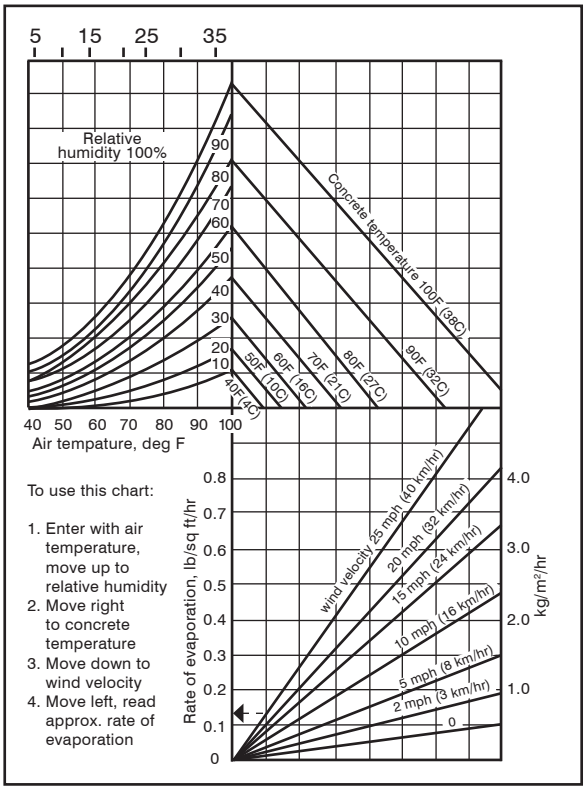

Fig. 2.1.5, ACI 305, Hot Weather Concreting

Clean Up

Clean spray equipment with soap and water.

Precautions/Limitations

- Use with proper dilution rate.
- Do not use as a curing compound.
- Apply only as a fine spray.
- Do not allow to freeze.
- In all cases, consult the Safety Data Sheet before use.

Rev. 11.14

WARRANTY: The Euclid Chemical Company ("Euclid") solely and expressly warrants that its products shall be free from defects in materials and workmanship for one (1) year from the date of purchase. Unless authorized in writing by an officer of Euclid, no other representations or statements made by Euclid or its representatives, in writing or orally, shall alter this warranty. EUCLID MAKES NO WARRANTIES, IMPLIED OR OTHERWISE, AS TO THE MERCHANTABILITY OR FITNESS FOR ORDINARY OR PARTICULAR PURPOSES OF ITS PRODUCTS AND EXCLUDES THE SAME. If any Euclid product fails to conform with this warranty, Euclid will replace the product at no cost to Buyer. Replacement of any product shall be the sole and exclusive remedy available and buyer shall have no claim for incidental or consequential damages. Any warranty claim must be made within one (1) year from the date of the claimed breach. Euclid does not authorize anyone on its behalf to make any written or oral statements which in any way alter Euclid's installation information or instructions in its product literature or on its packaging labels. Any installation of Euclid products which fails to conform with such installation information or instructions shall void this warranty. Product demonstrations, if any, are done for illustrative purposes only and do not constitute a warranty or warranty alteration of any kind. Buyer shall be solely responsible for determining the suitability of Euclid's products for the Buyer's intended purposes.

MASCO BIOKURE | CURING COMPOUND

DESCRIPTION
MASCO BIOKURE is a new generation spray applied clear concrete curing compound that was developed to cure concrete as well as resolve compatibility issues related to secondary coatings, toppings and flooring adhesives. BIOKURE penetrates and forms a temporary membrane to cure, densify, and dustproof concrete essential for proper strength development. BIOKURE meets the moisture retention of ASTM C-309 on hard-troweled concrete surfaces.

USES
- Interior and exterior concrete surfaces.
- Walls, floors, columns, and beams.
- Ideal for decks, parking garages, multi-use warehouses, schools, food processing plants, hospitals, etc.

FEATURES AND BENEFITS
- A unique cure, hardener and dustproofer.
- Produces a moisture retention membrane to control hydration. Results in a concrete surface with increased abrasion and impact resistance.
- When applied per manufacturers recommendations will not inhibit the adhesion of secondary coatings, toppings or adhesives designed for concrete.
- Non-yellowing, does not alter natural color of concrete.
- Does not contain any waxes, silicones, or paraffins.
- Does not contain any flammable or combustible solvents.
- Ready-to-use formulation.
- No special cleaning required. Just rinse equipment with water after use.

MIXING INSTRUCTIONS
Stir MASCO BIOKURE slowly and thoroughly using slow speed mixing equipment before each use. Do not aerate with high speed mixers.

APPLICATION TECHNIQUES
New Concrete
Horizontal Floors & Slabs: Apply after surface water sheen has disappeared from the concrete surface. As soon as concrete surface is hard enough to walk on, apply MASCO BIOKURE with a low pressure sprayer in a uniform and continuous manner. See recommended coverage rates **Avoid over application**. Do not allow material to puddle on concrete surface. Do not apply if rain is expected within 48 hours, white crystals may develop. *Vertical Concrete*: After stripping vertical formwork, immediately apply MASCO BIOKURE with a sprayer. Hold spray tip approximately 2 feet from the surface and apply in a uniform and continuous manner at 300–400 sq. ft./gal. Do not apply when temperature is below 40ºF (4ºC). Do not apply MASCO BIOKURE over free standing water.

SUBSEQUENT SURFACE COATINGS
Allow new concrete to cure for 28 days prior to applying paint or coatings. These application procedures do not supersede secondary product manufacturers' surface preparation instructions. Always perform an adhesion bond test prior to application of secondary coatings, topping or adhesive.

COVERAGE

Surface Finish	**Coverage Rate** *Sq. ft./gal.*
Rough finish	200-300
Broom finish	300-400
Hard troweled	400-500
Vertical surface	300-400

Note: Above rates are approximate. Coverage varies with porosity of concrete. Product should never be puddled. Over application may cause a white residue.

COMPLIANCES
Federal EPA VOC

DRYING TIME (at 72° F < 50% humidity)

Dry Time to Touch:	1 hr.
Light Floor Traffic:	2 hrs.
Normal Traffic:	4 hrs

PHYSICAL PROPERTIES

Finished Appearance:	Clear
Color:	Light Blue in Container
Flash Point:	None
V.O.C. Content: 0 g/L	

CAUTIONS
Do not apply to frozen surfaces or when temperature is below 40ºF (4ºC). Do not apply if rain is expected within 48 hours, white crystals may develop. Protect material from freezing. If white crystals begin to develop, this is an indication that too much material has been applied. Rinse over applied areas with water, scrub with brush and squeegee off remaining puddles. If material is sprayed on glass or other architectural metal finishes, quickly wipe-up with damp cloth and warm soapy water. Not for use on exposed aggregate, masonry, or colored concrete. Check with secondary coating manufacturer for their guidelines. MASCO BIOKURE instructions do not supersede

the paint or coatings manufacturers preparation or application instructions.

PACKAGING: 5 gallon, and 55 gallon DOT approved containers.

Storage: 50°F to 85°F

Protect from Freezing.

Shelf Life: 1 year unopened, in protected storage.

Freight Class: Class 55

DOT/UN Shipping Name: Non-regulated

DOT Hazard Class: Non-regulated

Shipping Name: Non-regulated

FIRST AID
Inhalation: Remove victim from exposure. If victim has difficulty breathing, administer oxygen. If breathing has stopped, administer artificial respiration. Seek medical attention.
Eyes: Flush eyes with water, lifting upper and lower lids occasionally for 15 minutes. Seek medical attention.
Skin: Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Obtain medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Ingestion: Give large amounts of water to drink. Never give anything by mouth to an unconscious person. Obtain medical attention.

CLEANUP INSTRUCTIONS
If material is sprayed on glass or other finished surfaces, quickly wipe-up with warm soapy water. Dried material may require mechanical abrasion for removal. Clean application and spray equipment with detergent and water immediately following use.

TECHNICAL SERVICE
For application procedures or surface conditions not specified above, please contact:

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www.masco.net

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11/09

No substitution for Pure110+ called out on structural notes.

DEWALT ENGINEERED BY Powers

Product Submittal/Substitution Request

TO:

PROJECT:

PROJECT LOCATION:

SPECIFIED ITEM: DEWALT Pure110+

Section	Page	Paragraph	Description

PRODUCT SUBMIT TAL / SUBSTITUTION REQUESTED:

DEWALT® Engineered By Powers® Pure110+(R) -

The attached submittal package includes the product description, specifications, drawings, and performance data for use in the evaluation of the request.

SUBMITTED BY:

Name: Adam Craig Signature:

Company: Whitaker Ellis

Address: 7180 SW Sandburg St., Suite 400, Tigard, OR 97223

Date: Telephone: 503.768.3017 Fax:

FOR USE BY THE ARCHITECT AND/OR ENGINEER

☐ **Approved** ☐ **Approved as Noted** ☐ **Not Approved**

(If not approved, please briefly explain why the product was not accepted.)

By: Date:

Remarks:

Questions or inquiries? Contact us at engineering@powers.com, or call 1.800.524.3244

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DEWALT® Pure110+(R) Submittal Section:

Competitive Comparisons:

– DEWALT® Pure110+(R) vs. HILTI* RE 500 V3 vs. SIMPSON* SET–XPÂ®

Product Pages:

– General Information

– Design Tables

Code Reports & Agency Listings:

– ICC–ES Approval: ESR–3298 (Cracked & Uncracked Concrete)

DDA DEWALT DESIGN ASSIST™

Offline version available for download at www.dewaltdesignassist.com.

DEWALT developed the DEWALT Design Assist (DDA) anchor software to enable users to input technical data into a dynamic model environment-to visualize, consider, and specify anchors in today's changing engineering climate.

For a demonstration of the latest version of PDA, contact us at anchors@DEWALT.com

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COMPETITIVE COMPARISON

PURE110+® VS. HILTI* RE 500 V3 VS. SIMPSON* SET-XP®

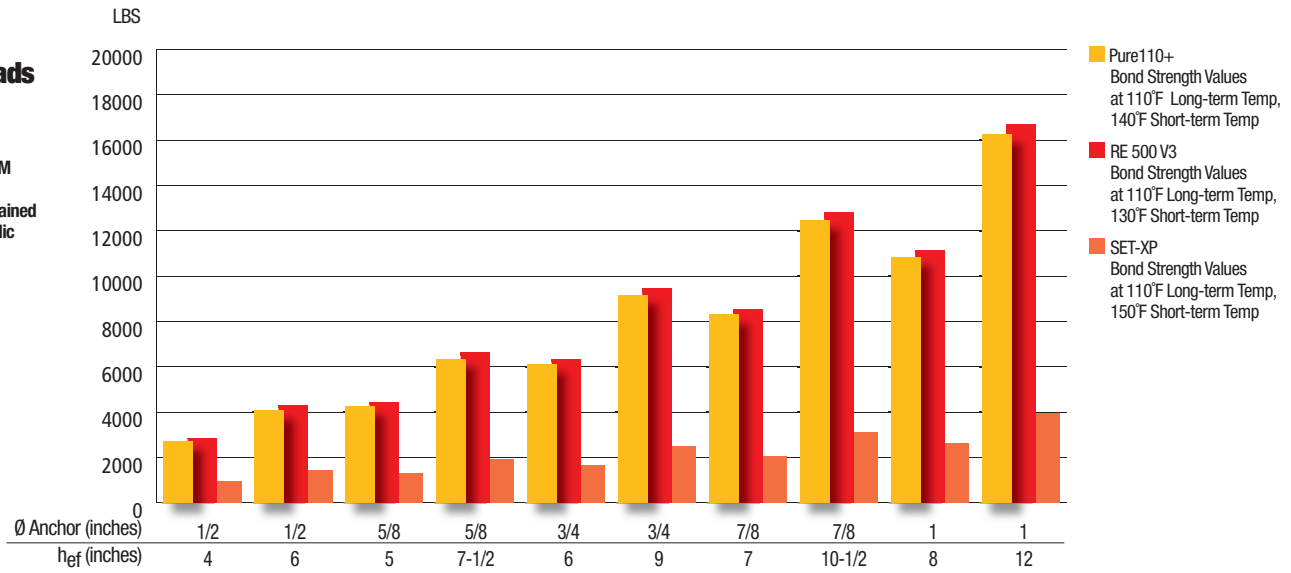
Product Comparison

Product Name	Pure110+	HIT-RE 500 V3	SET-XP
Company	DEWALT	Hilti*	Simpson*
Description	Adhesive Anchoring System	Adhesive Anchoring System	Adhesive Anchoring System
Size Range (inch)	3/8, 1/2, 5/8, 3/4, 7/8, 1, 1-1/4 #3, #4, #5, #6, #7, #8, #9, #10	3/8, 1/2, 5/8, 3/4, 7/8, 1, 1-1/4 #3, #4, #5, #6, #7, #8, #9, #10	3/8, 1/2, 5/8, 3/4, 7/8, 1, 1-1/4 #3, #4, #5, #6, #7, #8, #10
ICC-ES ESR (concrete)	ESR-3298	ESR-3814	ESR-2508
Revision Date	2017 July	2017 Jan	2017 July
Cracked Concrete	Yes	Yes	Yes
Seismic Approval in Concrete	Yes	Yes	Yes
Post Installed Rebar Design	Yes	Yes	No
LEED	Yes	Yes	Yes
VOC	Yes	Yes	Yes
NSF 61 (potable drinking water)	Yes	Yes	Yes

* Hilti is a registered trademark of Hilti Corporation *SET-XP and Simpson are registered trademarks of Simpson Strong-Tie Company Inc.

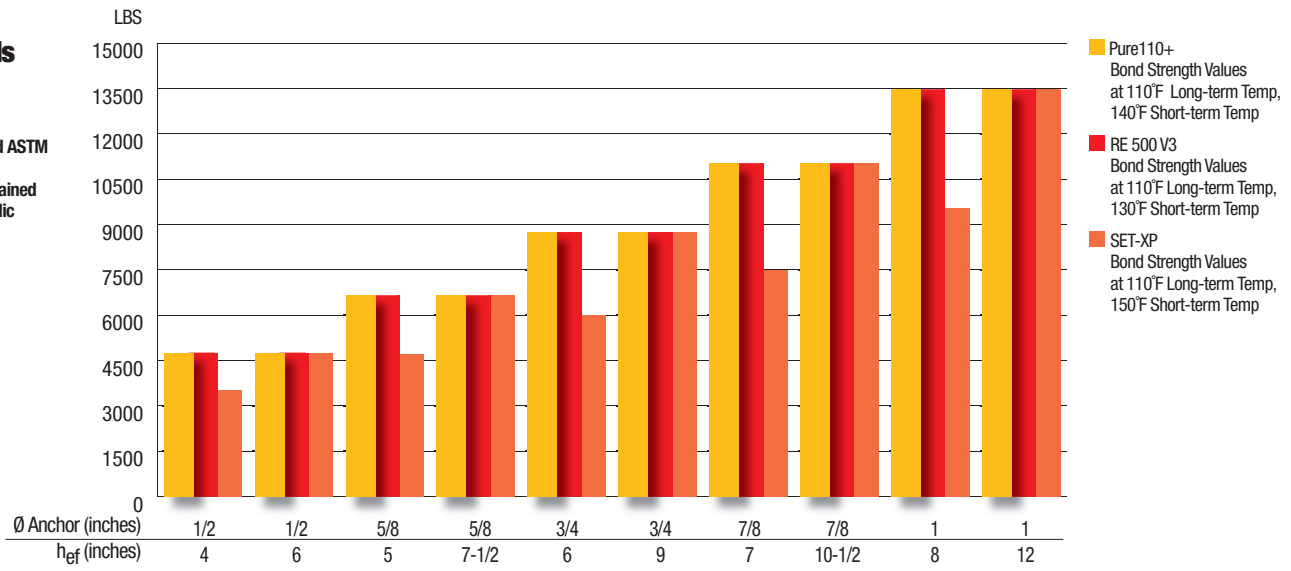
Factored Sustained Tension Loads Cracked Concrete

2500 psi, Rod ASTM A193 Grade B7 Dry concrete, sustained loading and periodic special inspection



Factored Shear Loads Cracked Concrete

2500 psi NWC, Rod ASTM A193 Grade B7 Dry concrete, sustained loading and periodic special inspection



Source: ESR-3298 (Revised: 2017 July), ESR-3814 (Revised: 2017 Jan), ESR-2508 (Revised: 2017 July)

GENERAL INFORMATION

PURE110+®

Epoxy Injection Adhesive Anchoring System
and Post-Installed Reinforcing Bar Connections

PRODUCT DESCRIPTION

The Pure110+ is a two-component, high strength adhesive anchoring system. The system includes injection adhesive in plastic cartridges, mixing nozzles, dispensing tools and hole cleaning equipment. The Pure110+ is designed for bonding threaded rod and reinforcing bar hardware into drilled holes in concrete and masonry base materials and for post-installed reinforcing bar connections.

Pure110+ has the same bond strength at room temperature and at 110ºF.

GENERAL APPLICATIONS AND USES

- Bonding threaded rod and reinforcing bar into hardened concrete
- Evaluated for installation and use in dry and wet holes, including water filled and submerged
- Can be installed in a wide range of base material temperatures
- Cracked and uncracked concrete
- Seismic and wind loading
- Oversized hammer-drilled holes in concrete, for short term loading only (contact DEWALT for details)

FEATURES AND BENEFITS

+ Designed for use with threaded rod and reinforcing bar hardware elements
+ Evaluated and recognized for freeze/thaw performance
+ Cartridge design allows for multiple uses using extra mixing nozzles
+ Mixing nozzles proportion adhesive and provide simple delivery method into drilled holes
+ Evaluated and recognized for long term and short term loading (see performance tables)
+ Same bond strength at room temperature and at 110ºF.

APPROVALS AND LISTINGS

- International Code Council, Evaluation Service (ICC-ES) ESR-3298 for cracked and uncracked concrete
- Code Compliant with 2015 IBC, 2015 IRC, 2012 IBC, 2012 IRC, 2009 IBC, and 2009 IRC.
- Conforms to requirements of ASTM C 881 and AASHTO M235, Types I, II, IV and V, Grade 3, Classes B & C (also meets Type III except for elongation)
- Department of Transportation listings – see www.DEWALT.com or contact transportation agency
- Tested in accordance with ACI 355.4, ASTM E 488, and ICC-ES AC308 for use in structural concrete (Design according to ACI 318-14, Chapter 17 and ACI 318-11/08 Appendix D)
- Tested and qualified for use in post-installed reinforcing bar connections
- Evaluated and qualified by an accredited independent testing laboratory for recognition in cracked and uncracked concrete including seismic and wind loading
- Compliant with NSF/ANSI 61 for drinking water system components - health effects; minimum requirements for materials in contact with potable water and water treatment

GUIDE SPECIFICATIONS

CSI Divisions: 03 16 00 - Concrete Anchors, 04 05 19.16 Masonry Anchors and 05 05 19 Post-Installed Concrete Anchors. Adhesive anchoring system shall be Pure110+ as supplied by DEWALT, Towson, MD. Anchors shall be installed in accordance with published instructions and requirements of the Authority Having Jurisdiction.

TENSION ZONE CRACKED CONCRETE · SEISMIC REGION QUALIFICATION · TESTED AND VALIDATED WaterQuality UNDER INDUSTRY STANDARDS · CODE LISTED ICC-ES ESR-3298 CONCRETE · DDA DEWALT DESIGN ASSIST · DUST X+ ANCHOR INSTALLATION SYSTEM

SECTION CONTENTS

General Information....1
Reference Data (ASD)....2
Strength Design (SD)....6
Installation Instructions for Adhesive Anchors (Solid Base Materials)....18
Installation Instructions for Adhesive Anchors (Hollow Base Materials)....20
Installation Instructions (Post-Installed rebar)....21
Reference Installation Tables....23
Ordering Information....24

PACKAGING

Coaxial Cartridge

- 9 fl. oz. (265 ml or 16.2 in³)

Dual (side-by-side) Cartridge

- 21 fl. oz. (620 ml or 37.8 in³), 1:1 mix ratio
- 51 fl. oz. (1510 ml or 92.1 in³), 1:1 mix ratio
- 13 fl. oz. (385 ml or 23.5 in³), 3:1 mix ratio
- 20 fl. oz. (585 ml or 35.7 in³), 3:1 mix ratio

STORAGE LIFE & CONDITIONS

Dual cartridge: Two years
Coaxial cartridge: Eighteen months
In a dry, dark environment with temperature ranging from 41°F to 86°F (5°C to 30°C)

ANCHOR SIZE RANGE (TYPICAL)

- 3/8" to 1-1/4" diameter threaded rod
- No. 3 to No. 10 reinforcing bar (rebar)

SUITABLE BASE MATERIALS

- Normal-weight concrete
- Lightweight concrete
- Grouted Concrete Masonry
- Hollow Concrete Masonry

PERMISSIBLE INSTALLATION CONDITIONS (ADHESIVE)

- Dry concrete
- Water-saturated concrete (wet)
- Water-filled holes (flooded)
- Underwater concrete (submerged)

REFERENCE DATA (ASD)

Installation Table for Pure110+ (Solid Concrete Base Materials)

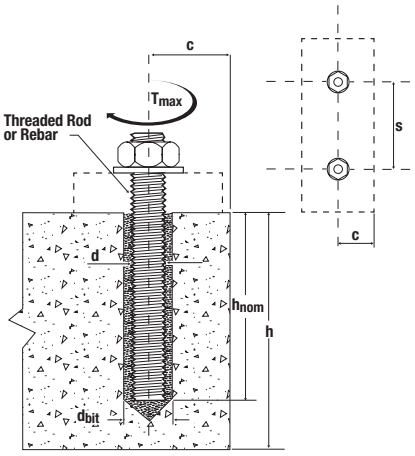
Dimension/Property	Notation	Units	Nominal Anchor Size									
Threaded Rod	-	-	3/8	1/2	-	5/8	3/4	7/8	1	-	1-1/4	-
Reinforcing Bar	-	-	#3	-	#4	#5	#6	#7	#8	#9	-	#10
Nominal anchor diameter	d	in. (mm)	0.375 (9.5)	0.500 (12.7)		0.625 (15.9)	0.750 (19.1)	0.875 (22.5)	1.000 (25.4)	1.125 (28.6)	1.250 (31.8)	1.250 (31.8)
Carbide drill bit nominal size[3]	d_{bit}	in.	7/16 ANSI	9/16 ANSI	5/8 ANSI	11/16 or 3/4 ANSI	7/8 ANSI	1 ANSI	1-1/8 ANSI	1-3/8 ANSI	1-3/8 ANSI	1-1/2 ANSI
Minimum embedment	h_{nom}	in. (mm)	2-3/8 (61)	2-3/4 (70)		3-1/8 (80)	3-1/2 (89)	3-1/2 (89)	4 (102)	4-1/2 (114)	5 (127)	5 (127)
Minimum spacing distance	s_{min}	in. (mm)	1-7/8 (48)	2-1/2 (62)		3-1/8 (80)	3-3/4 (95)	4-3/8 (111)	5 (127)	5-5/8 (143)	6-1/4 (159)	6-1/4 (159
Minimum edge distance	c_{min}	in. (mm)	1-7/8 (48)	2-1/2 (62)		3-1/8 (80)	3-3/4 (95)	4-3/8 (111)	5 (127)	5-5/8 (143)	6-1/4 (159)	6-1/4 (159
Maximum torque[1]	T_{max}	ft.-lb. (N-m)	15 (20)	30 (41)		60 (81)	105 (142)	125 (169)	165 (223)	200 (270)	280 (379)	280 (379)
Maximum torque (low strength rods)[1,2]		ft.-lb. (N-m)	5 (7)	20 (27)		40 (54)	60 (81)	100 (136)	165 (223)	-	280 (379)	-

1. Torque may not be applied to the anchors until the full cure time of the adhesive has been achieved.
2. These torque values apply to ASTM A 36 / F 1554, Grade 36 carbon steel threaded rods; ASTM F1554 Grade 55 carbon steel threaded rods; and ASTM A193 Grade B8/B8M (Class 1) stainless steel threaded rods.
3. For any case, it must be possible for the steel anchor element to be inserted into the cleaned drilled hole without resistance.

Installation Table for Pure110+ (Hollow Base Material with Screen Tube)

Dimensions/property	Notation	Units	Nominal Size - Plastic			
			3/8"	1/2"	5/8"	3/4"
Nominal threaded rod diameter	d	in (mm)	0.375 (9.5)	0.500 (12.7)	0.625 (15.9)	0.750 (19.0)
Nominal screen tube diameter	-	in.	3/8	1/2	5/8	3/4
Nominal diameter of drilled hole	d_{bit}	in.	9/16 ANSI	3/4 ANSI	7/8 ANSI	1 ANSI
Maximum torque (only possible after full cure time of adhesive)	T_{max}	ft.-lb. (N-m)	10 (8)	10 (8)	10 (8)	10 (8)

Detail of Steel Hardware Elements used with Injection Adhesive System



Nomenclature

d = Diameter of anchor
d_{bit} = Diameter of drilled hole
h = Base material thickness
The greater of:
[h_{nom} + 1-1/4"] and [h_{nom} + 2d_{bit}]
h_{nom} = Minimum embedment depth

Threaded Rod and Deformed Reinforcing Bar Material Properties

Steel Description (General)	Steel Specification (ASTM)	Nominal Anchor Size (inch)	Minimum Yield Strength, f_y (ksi)	Minimum Ultimate Strength, f_u (ksi)
Carbon Steel	A 36 or F1554 Grade 36	3/8 through 1-1/4	36.0	58.0
	F 1554 Grade 55		55.0	75.0
	A 449	3/8 through 1	92.0	120.0
		1-1/4	81.0	105.0
	A 193, Grade B7 or F 1554, Grade 105	3/8 through 1-1/4	105.0	125.0
	F 568M Class 5.8	3/4 through 1-1/4	58.0	72.5
Stainless Steel	F 593, Condition CW	3/8 through 5/8	65.0	100.0
		3/4 through 1-1/4	45.0	85.0
	A 193/A193M Grade B8/B8M2, Class 1	3/4 through 1-1/4	30.0	75.0
	A 193/A193M Grade B8/B8M2, Class 2B	3/8 through 1-1/4	75.0	95.0
Grade 40 Reinforcing Bar	A 615, A 767	3/8 through 3/4 (#3 through #6)	40.0	60.0
Grade 60 Reinforcing Bar	A 615, A 767	3/8 through 1-1/4 (#3 through #10)	60.0	90.0
	A 706, A 767		60.0	80.0
Grade 75 Reinforcing Bar	A 615, A 767	3/8 through 1-1/4 (#3 through #10)	75.0	100.0

Ultimate and Allowable Load Capacities for Pure110+ Installed with Threaded Rod into Normal Weight Concrete (based on bond strength/concrete capacity)[1,2,3,4,5,6,7]

Rod Diameter d in.	Drill Diameter d_{bit} in.	Minimum Embedment Depth in. (mm)	Minimum Concrete Compressive Strength			
			f'c = 3,000 psi (20.7 MPa)		f'c = 4,000 psi (27.6 MPa)	
			Ultimate Tension Load Capacity lbs. (kN)	Allowable Tension Load Capacity lbs. (kN)	Ultimate Tension Load Capacity lbs. (kN)	Allowable Tension Load Capacity lbs. (kN)
3/8	7/16	3-3/8 (85.7)	10,445 (46.5)	2,610 (11.6)	10,445 (46.5)	2,610 (11.6)
1/2	9/16	4 1/2 (114.3)	17,470 (77.7)	4,370 (19.4)	20,225 (90.0)	5,055 (22.5)
5/8	11/16 or 3/4	5-5/8 (142.9)	23,335 (103.8)	5,835 (26.0)	28,600 (127.2)	7,150 (31.8)
3/4	7/8	6-3/4 (171.5)	36,255 (161.3)	9,065 (40.3)	40,930 (182.1)	10,235 (45.5)
7/8	1	7-7/8 (200.0)	46,275 (205.8)	11,570 (51.5)	52,920 (235.4)	13,230 (58.8)
1	1-1/8	9 (228.6)	57,015 (253.6)	14,255 (63.4)	79,295 (352.7)	19,825 (88.2)
		10 (254.0)	77,445 (344.5)	19,360 (86.1)	82,745 (368.1)	20,685 (92.0)
1-1/4	1-3/8	11-1/4 (285.8)	91,885 (408.7)	22,970 (102.2)	98,170 (436.7)	24,545 (109.2)

1. Allowable load capacities listed are calculated using an applied safety factor of 4.0. Consideration of safety factors of 10 or higher may be necessary depending on the application, such as life safety or overhead.
2. Linear interpolation may be used to determine allowable loads for intermediate embedments and compressive strengths.
3. The tabulated load values are applicable to single anchors installed at critical edge and spacing distances and where the minimum member thickness is the greater of [h_{nom} + 1-1/4"] and [h_{nom} + 2d_{bit}]
4. The tabulated load values are applicable for dry concrete. Holes must be drilled with a hammer drill and an ANSI carbide drill bit. Installations in water-saturated concrete (wet) or in water-filled holes (flooded) require a 15% reduction in capacity. Installations in underwater concrete (submerged) require a 30% reduction in capacity. Contact DEWALT for more information concerning these installation conditions.
5. Adhesives experience reductions in capacity at elevated temperatures. See the in-service temperature chart for allowable load capacity reduction factors.
6. Allowable bond strength/concrete capacity must be checked against allowable steel strength in tension to determine the controlling allowable load.
7. Allowable shear capacity is controlled by allowable steel strength for the given conditions.

Ultimate and Allowable Load Capacities for Pure110+ Installed with Reinforcing Bar into Normal Weight Concrete (based on bond strength/concrete capacity)[1,2,3,4,5,6,7]

Bar Diameter d #	Drill Diameter dbit in.	Minimum Embedment Depth in. (mm)	Minimum Concrete Compressive Strength			
			f'c = 3,000 psi (20.7 MPa)		f'c = 4,000 psi (27.6 MPa)	
			Ultimate Tension Load Capacity lbs. (kN)	Allowable Tension Load Capacity lbs. (kN)	Ultimate Tension Load Capacity lbs. (kN)	Allowable Tension Load Capacity lbs. (kN)
#3	7/16	3-3/8 (85.7)	11,155 (49.6)	2,790 (12.4)	11,155 (49.6)	2,790 (12.4)
#4	9/16	4-1/2 (114.3)	17,735 (78.9)	4,435 (19.7)	19,200 (85.4)	4,800 (21.4)
#5	11/16 or 3/4	4 (101.6)	16,740 (74.5)	4,185 (18.6)	16,910 (75.2)	4,230 (18.8)
		5-5/8 (142.9)	23,420 (104.2)	5,855 (26.0)	25,705 (114.3)	6,425 (28.6)
#6	7/8	6-3/4 (171.5)	34,266 (152.4)	8,565 (38.1)	40,775 (181.4)	10,195 (45.3)
#8	1-1/8	9 (228.6)	55,140 (245.3)	13,785 (61.3)	72,575 (322.8)	18,145 (80.7)

1. Allowable load capacities listed are calculated using an applied safety factor of 4.0. Consideration of safety factors of 10 or higher may be necessary depending on the application, such as life safety or overhead.
2. Linear interpolation may be used to determine allowable loads for intermediate embedments and compressive strengths.
3. The tabulated load values are applicable to single anchors installed at critical edge and spacing distances and where the minimum member thickness is The greater of [h_{nom} + 1-1/4"] and [h_{nom} + 2d_{bit}].
4. The tabulated load values are applicable for dry concrete. Holes must be drilled with a hammer drill and an ANSI carbide drill bit. Installations in water-saturated concrete (wet) or in water-filled holes (flooded) require a 15% reduction in capacity. Installations in underwater concrete (submerged) require a 30% reduction in capacity. Contact DEWALT for more information concerning these installation conditions.
5. Adhesives experience reductions in capacity at elevated temperatures. See the in-service temperature chart for allowable load capacity reduction factors.
6. Allowable bond strength/concrete capacity must be checked against allowable steel strength in tension to determine the controlling allowable load.
7. Allowable shear capacity is controlled by allowable steel strength for the given conditions.

Allowable Load Capacities for Threaded Rod and Reinforcing Bar (Based on Steel Strength)[1,2,3,4,5]

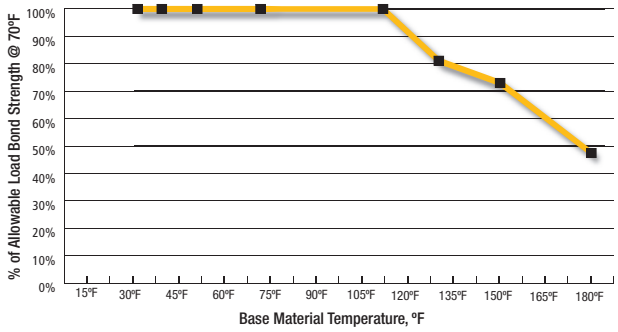
Nominal Rod Diameter or Rebar Size (in. or #)	Steel Elements - Threaded Rod and Reinforcing Bar																	
	A36 or F1554, Grade 36		A36 or F1554, Grade 55		A 193, Grade B7 or F1554, Grade 105		F 593, CW (SS)		ASTM A615 Grade 40 Rebar		ASTM A615 Grade 60 Rebar		ASTM A706 Grade 60 Rebar		ASTM A615 Grade 75 Rebar		ASTM A706 Grade 80 Rebar	
	Tension lbs. (kN)	Shear lbs (kN)	Tension lbs. (kN)	Shear lbs (kN)	Tension lbs. (kN)	Shear lbs (kN)	Tension lbs. (kN)	Shear lbs (kN)	Tension lbs. (kN)	Shear lbs (kN)	Tension lbs. (kN)	Shear lbs (kN)	Tension lbs. (kN)	Shear lbs (kN)	Tension lbs. (kN)	Shear lbs (kN)	Tension lbs. (kN)	Shear lbs (kN)
3/8 or #3	2,115 (9.4)	1,090 (4.8)	2,735 (12.2)	1,410 (6.3)	4,555 (20.3)	2,345 (10.4)	3,645 (16.2)	1,880 (8.4)	2,210 (9.8)	1,125 (5.0)	2,650 (11.8)	1,690 (7.5)	2,650 (11.8)	1,500 (6.7)	2,650 (11.8)	1,875 (8.3)	2,650 (11.8)	1,875 (8.3)
1/2 or #4	3,760 (16.7)	1,935 (8.6)	4,860 (21.6)	2,505 (11.1)	8,100 (36.0)	4,170 (18.5)	6,480 (28.8)	3,340 (14.9)	3,925 (17.5)	2,005 (8.9)	4,710 (21.0)	3,005 (13.4)	4,710 (21.0)	2,670 (11.9)	4,710 (21.0)	3,335 (14.8)	4,710 (21.0)	3,335 (14.8)
5/8 or #5	5,870 (26.1)	3,025 (13.5)	7,595 (33.8)	3,910 (17.4)	12,655 (56.3)	6,520 (29.0)	10,125 (45.0)	5,215 (23.2)	6,135 (27.3)	3,130 (13.9)	7,365 (32.8)	4,695 (20.9)	7,365 (32.8)	4,170 (18.5)	7,365 (32.8)	5,215 (23.2)	7,365 (32.8)	5,215 (23.2)
3/4 or #6	8,455 (37.6)	4,355 (19.4)	10,935 (48.6)	5,635 (25.1)	18,225 (81.1)	9,390 (41.8)	12,390 (55.1)	6,385 (28.4)	8,835 (39.3)	4,505 (20.0)	10,605 (47.2)	6,760 (30.1)	10,605 (47.2)	6,010 (26.7)	10,605 (47.2)	7,510 (33.4)	10,605 (47.2)	7,510 (33.4)
7/8 or #7	11,510 (51.2)	5,930 (26.4)	14,885 (66.2)	7,665 (34.1)	24,805 (110.3)	12,780 (56.8)	16,865 (75.0)	8,690 (38.7)	-	-	14,430 (64.2)	9,200 (40.9)	14,430 (64.2)	8,180 (36.4)	14,430 (64.2)	10,220 (45.5)	14,430 (64.2)	10,220 (45.5)
1 or #8	15,035 (66.9)	7,745 (34.5)	19,440 (86.5)	10,015 (44.5)	32,400 (144.1)	16,690 (74.2)	22,030 (98.0)	11,350 (50.5)	-	-	18,850 (83.8)	12,015 (53.4)	18,850 (83.8)	10,680 (47.5)	18,850 (83.8)	13,350 (59.4)	18,850 (83.8)	13,350 (59.4)
#9	-	-	-	-	-	-	-	-	-	-	23,985 (106.7)	15,290 (68.0)	23,985 (106.7)	13,590 (60.5)	23,985 (106.7)	16,990 (75.6)	23,985 (106.7)	16,990 (75.6)
1-1/4	23,490 (104.5)	12,100 (53.8)	30,375 (135.1)	15,645 (69.6)	50,620 (225.2)	26,080 (116.0)	34,425 (153.1)	17,735 (78.9)	-	-	-	-	-	-	-	-	-	-
#10	-	-	-	-	-	-	-	-	-	-	30,405 (135.2)	19,380 (86.2)	30,405 (135.2)	17,230 (76.6)	30,405 (135.2)	21,535 (95.8)	30,405 (135.2)	21,535 (95.8)

1. AISC defined steel strength (ASD) for threaded rod: Tensile = 0.33 • F_u • A_{nom}, Shear = 0.17 • F_u • A_{nom}
2. For reinforcing bars: The allowable steel tensile strength is based on 20 ksi for Grade 40 and 24 ksi for Grade 60 and higher, applied to the cross sectional area of the bar; allowable steel shear strength = 0.17 • F_u • A_{nom}
3. Allowable load capacities are calculated for the steel element type. Consideration of applying additional safety factors may be necessary depending on the application, such as life safety or overhead.
4. Allowable steel strength in tension must be checked against allowable bond strength/concrete capacity in tension to determine the controlling allowable load.
5. The tabulated load values are applicable to single anchors installed at critical edge and spacing distances and where the minimum member thickness is the greater of [h_{nom} + 1-1/4"] and [h_{nom} + 2d_{bit}]

In-Service Temperature Chart For Allowable Load Capacities[1]

Base Material Temperature		Reduction Factor For Temperature
°F	°C	
32	0	1.00
41	5	1.00
50	10	1.00
70	20	1.00
110	43	1.00
130	54	0.82
150	66	0.73
180	82	0.48

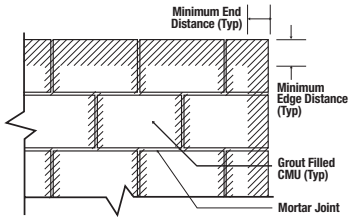
1. Linear interpolation may be used to derive reduction factors for temperatures between those listed.



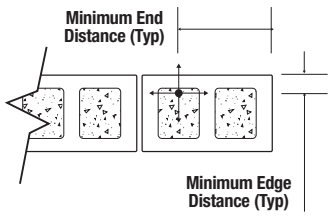
Ultimate and Allowable Load Capacities for Threaded Rod Installed with Pure110+ into Grout-Filled Masonry[1,2,3,4,5]

Anchor Installed Into Grouted Masonry Wall Faces								
Nominal Diameter d in.	Minimum Embed. h_v in. (mm)	Nominal Drill Bit Diameter in.	Minimum End Distance in. (mm)	Minimum Edge Distance in. (mm)	Ultimate Load		Allowable Load	
					Tension lbs. (kN)	Shear lbs. (kN)	Tension lbs. (kN)	Shear lbs. (kN)
3/8	3 (76.2)	7/16 ANSI	12 (304.8)	12 (304.8)	6,005 (26.7)	5,200 (23.1)	1,200 (5.3)	1,040 (4.6)
1/2	4 (101.6)	9/16 ANSI	12 (304.8)	12 (304.8)	8,650 (38.5)	8,845 (39.3)	1,730 (7.7)	1,770 (7.9)
5/8	5 (127)	11/16 ANSI	12 (304.8)	12 (304.8)	12,840 (57.1)	8,430 (37.5)	2,570 (11.4)	1,685 (7.5)
3/4	6 (152.4)	7/8 ANSI	20 (508)	20 (508)	19,560 (87.0)	12,685 (56.4)	3,910 (17.4)	2,540 (11.3)
Anchor Installed in the Tops of Grouted Masonry Walls[6]								
Nominal Diameter d in.	Minimum Embed. h_v in. (mm)	Nominal Drill Bit Diameter in.	Minimum End Distance in. (mm)	Minimum Edge Distance in. (mm)	Ultimate Load		Allowable Load	
					Tension lbs. (kN)	Shear lbs. (kN)	Tension lbs. (kN)	Shear lbs. (kN)
1/2	4 (101.6)	9/16 ANSI	4 (101.6)	1.75 (44.5)	5,135 (22.8)	1,750 (7.8)	1,030 (4.6)	350 (1.6)
5/8	5 (127)	11/16 ANSI	4 (101.6)	2.75 (69.9)	5,360 (23.6)	3,130 (13.9)	1,070 (4.8)	625 (2.8)

1. Tabulated load values are for 3/8" and 1/2" diameter anchors installed in minimum 6" wide, Grade N, Type II, light weight concrete masonry units conforming to ASTM C 90 that have reached the minimum designated ultimate compressive strength at the time of installation (f'm ≥ 1,500 psi).
2. Tabulated load values are for 5/8" and 3/4" diameter anchors installed in 8" wide, Grade N, Type II, light weight concrete masonry units conforming to ASTM C 90 that have reached the minimum designated ultimate compressive strength at the time of installation (f'm ≥ 1,500 psi).
3. Anchors must be installed in grouted cells and the minimum edge and end distances must be maintained.
4. Allowable load capacities listed are calculated using an applied safety factor of 5.0 and must be checked against the allowable tension and shear capacities for threaded rod based on steel strength to determine the controlling factor.
5. The tabulated values are applicable for anchors installed into grouted masonry wall faces and masonry wall tops at a critical spacing distance, s_{cr}, between anchors of 3 times the embedment depth.
6. Anchor installations into tops of grouted masonry walls are limited to one per masonry cell.



Wall Face
Permissible Anchor Locations
(Un-hatched Area)



Top of Wall

Ultimate and Allowable Load Capacities for Threaded Rod Installed with Pure110+ into Hollow Concrete Masonry Walls with Plastic Screen Tubes[1,2,3]

Nominal Anchor Diameter in.	Minimum Screen Tube Length in.	Minimum End Distance in. (mm)	Minimum Edge Distance in. (mm)	ASTM C-90 Block Type	Ultimate Load	Allowable Load
					Tension lbs. (kN)	Tension lbs. (kN)
3/8	3-1/2	3-3/4 (95.3)	3-3/4 (95.3)	Lightweight	790 (3.5)	160 (0.7)
1/2	3-1/2	3-3/4 (95.3)	3-3/4 (95.3)	Lightweight	1,255 (5.6)	250 (1.1)
5/8	6	3-3/4 (95.3)	3-3/4 (95.3)	Normal-weight[4]	1,545 (6.9)	310 (1.4)
3/4	6	3-3/4 (95.3)	3-3/4 (95.3)	Normal-weight[4]	1,545 (6.9)	310 (1.4)

1. Tabulated load values are for anchors installed in minimum 8" wide, Grade N, Type II, lightweight or normal weight concrete masonry units conforming to ASTM C 90 that have reached a designated ultimate compressive strength at the time of installation (f'm ≥ 1,500 psi). Mortar must be type N, S or M.
2. Allowable loads are calculated using an applied safety factor of 5.0. Consideration of safety factors of 10 or higher may be necessary depending on the application, such as life safety.
3. Anchor spacing is limited to one per masonry cell.
4. The tabulated load values are applicable to normal-weight concrete masonry units with a minimum face shell thickness of 1-1/2 inches.

STRENGTH DESIGN (SD)

Installation Specifications for Threaded Rod and Reinforcing Bar[1]

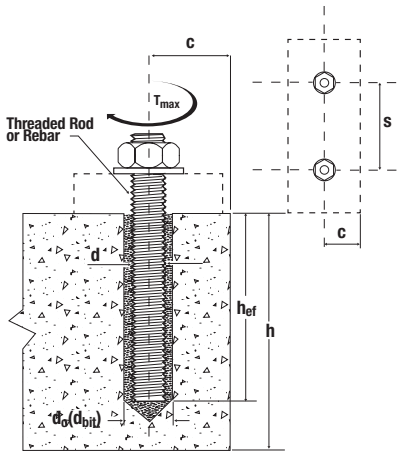
CODE LISTED
ICC-ES ESR-3298

Parameter	Symbol	Units	Fractional Nominal Rod Diameter (Inch) / Reinforcing Bar Size									
			3/8 or #3	1/2	#4	5/8 or #5	3/4 or #6	7/8 or #7	1 or #8	#9	1-1/4	#10
Threaded rod outside diameter	d	inch (mm)	0.375 (9.5)	0.500 (12.7)		0.625 (15.9)	0.750 (19.1)	0.875 (22.2)	1.000 (25.4)	-	1.250 (31.8)	-
Rebar nominal outside diameter	d	inch (mm)	0.375 (9.5)	0.500 (12.7)		0.625 (15.9)	0.750 (19.1)	0.875 (22.2)	1.000 (25.4)	1.125 (28.7)	-	1.250 (31.8)
Carbide drill bit nominal size[6]	d_o (d_{bit})	inch	7/16	9/16	5/8	11/16 or 3/4	7/8	1	1-1/8	1-3/8	1-3/8	1-1/2
Minimum embedment	$h_{ef,min}$	inch (mm)	2-3/8 (60)	2-3/4 (70)		3-1/8 (79)	3-1/2 (89)	3-1/2 (89)	4 (102)	4-1/2 (114)	5 (127)	5 (127)
Maximum embedment	$h_{ef,max}$	inch (mm)	7-1/2 (191)	10 (254)		12-1/2 (318)	15 (381)	17-1/2 (445)	20 (508)	22-1/2 (572)	25 (635)	25 (635)
Minimum member thickness	h_{min}	inch (mm)	h_{ef} + 1-1/4 (h_{ef} + 30)			$h_{ef} + 2d_o$						
Minimum anchor spacing	s_{min}	inch (mm)	1-7/8 (48)	2-1/2 (64)		3-1/8 (79)	3-3/4 (95)	4-3/8 (111)	5 (127)	5-5/8 (143)	6-1/4 (159)	6-1/4 (159)
Minimum edge distance	c_{min}	inch (mm)	1-7/8 (48)	2-1/2 (64)		3-1/8 (79)	3-3/4 (95)	4-3/8 (111)	5 (127)	5-5/8 (143)	6-1/4 (159)	6-1/4 (159)
Max. torque[2]	T_{max}	ft-lbs (N-m)	15 (20)	30 (41)		60 (81)	105 (142)	125 (169)	165 (221)	200 (280)	280 (379)	280 (379)
Max. torque[2,3] (low strength rods)	T_{max}	ft-lbs (N-m)	5 (7)	20 (27)		40 (54)	60 (81)	100 (136)	165 (223)	-	280 (379)	-
Minimum edge distance, reduced[5]	$c_{min,red}$	inch (mm)	1-3/4 (45)	1-3/4 (45)		1-3/4 (45)	1-3/4 (45)	1-3/4 (45)	1-3/4 (45)	2-3/4 (70)	2-3/4 (70)	2-3/4 (70)
Max. torque, reduced[2]	$T_{max,red}$	ft-lbs (N-m)	7 [5][4]	14 (19)		27 (37)	47 (64)	56 (76)	74 (100)	90 (122)	126 (171)	126 (171)

For pound-inch units: 1 mm = 0.03937 inch, 1 N-m = 0.7375 ft-lbf. For SI: 1 inch = 25.4 mm, 1 ft-lbf = 1.356 N-m.

1. For use with the design provisions of ACI 318-14 Ch.17 or ACI 318-11 Appendix D as applicable, ICC-ES AC308, Section 4.2 and ESR-3298
2. Torque may not be applied to the anchors until the full cure time of the adhesive has been achieved.
3. These torque values apply to ASTM A 36 / F 1554 Grade 36 carbon steel threaded rods; ASTM F 1554 Grade 55 carbon steel threaded rods; and ASTM A 193 Grade B8/B8M (Class 1) stainless steel threaded rods.
4. These torque values apply to ASTM A 193 Grade B8/B8M (Class 1) stainless steel threaded rods.
5. For Installation between the minimum edge distance, c_{min}, and the reduced minimum edge distance, $c_{min,red}$, the maximum torque applied must be max torque reduced, $T_{max,red}$.
6. For any case, it must be possible for the steel anchor element to be inserted into the cleaned drill hole without resistance.

Detail of Steel Hardware Elements used with Injection Adhesive System



Threaded Rod and Deformed Reinforcing Bar Material Properties

Steel Description (General)	Steel Specification (ASTM)	Nominal Anchor Size (inch)	Minimum Yield Strength, f_y (ksi)	Minimum Ultimate Strength, f_u (ksi)
Carbon rod	A 36 or F 1554 Grade 36	3/8 through 1-1/4	36.0	58.0
	F 1554 Grade 55		55.0	75.0
	A 449	3/8 through 1	92.0	120.0
		1-1/4	81.0	105.0
	A 193, Grade B7 or F 1554, Grade 105	3/8 through 1-1/4	105.0	125.0
	F 568M Class 5 8	3/4 through 1-1/4	58.0	72.5
Stainless rod	F 593 Condition CW	3/8 through 5/8	65.0	100.0
		3/4 through 1-1/4	45.0	85.0
	A 193/193M Grade B8/B8M, Class 1	3/8 through 1-1/4	30.0	75.0
	A 193/A193M Grade B8/B8M2, Class 2B	3/8 through 1-1/4	75.0	95.0
Grade 40 Reinforcing Bar	A 615, A 767	3/8 through 1-1/4 (#3 through #10)	40.0	60.0
Grade 60 Reinforcing Bar	A 615, A 767	3/8 through 1-1/4 (#3 through #10)	60.0	90.0
	A 706, A 767		60.0	80.0
Grade 75 Reinforcing Bar	A 615, A 767	3/8 through 1-1/4 (#3 through #10)	75.0	100.0

Steel Tension and Shear Design for Threaded Rod in Normal Weight Concrete (For use with load combinations taken from ACI 318-14 Section 5.3)

CODE LISTED ICC-ES ESR-3298

Design Information		Symbol	Units	Nominal Rod Diameter[1] (inch)						
				3/8	1/2	5/8	3/4	7/8	1	1-1/4
Threaded rod nominal outside diameter		d	inch (mm)	0.375 (9.5)	0.500 (12.7)	0.625 (15.9)	0.750 (19.1)	0.875 (22.2)	1.000 (25.4)	1.250 (31.8)
Threaded rod effective cross-sectional area		A_{se}	inch² (mm²)	0.0775 (50)	0.1419 (92)	0.2260 (146)	0.3345 (216)	0.4617 (298)	0.6057 (391)	0.9691 (625)
ASTM A 36 and ASTM F 1554 Grade 36	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	lbf (kN)	4,495 (20.0)	8,230 (36.6)	13,110 (58.3)	19,400 (86.3)	26,780 (119.1)	35,130 (156.3)	56,210 (250.0)
		V_{sa}	lbf (kN)	2,695 (12.0)	4,940 (22.0)	7,860 (35.0)	11,640 (51.8)	16,070 (71.4)	21,080 (93.8)	33,725 (150.0)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.80	0.80	0.80	0.80	0.80	0.80	0.80
	Strength reduction factor for tension[2]	ϕ	-	0.75						
	Strength reduction factor for shear[2]	ϕ	-	0.65						
ASTM F 1554 Grade 55	Nominal strength as governed by steel strength(for a single anchor)	N_{sa}	lbf (kN)	5,810 (25.9)	10,640 (47.3)	16,950 (75.4)	25,085 (111.6)	34,625 (154.0)	45,425 (202.0)	72,680 (323.3)
		v_{sa}	lbf (kN)	3,485 (15.5)	6,385 (28.4)	10,170 (45.2)	15,050 (67.0)	20,775 (92.4)	27,255 (121.2)	43,610 (194.0)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.80	0.80	0.80	0.80	0.80	0.80	0.80
	Strength reduction factor for tension[2]	ϕ	-	0.75						
	Strength reduction factor for shear[2]	ϕ	-	0.65						
ASTM A 193 Grade B7 and ASTM F 1554 Grade 105	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	lbf (kN)	9,685 (43.1)	17,735 (78.9)	28,250 (125.7)	41,810 (186.0)	57,710 (256.7)	75,710 (336.8)	121,135 (538.8)
		V_{sa}	lbf (kN)	5,815 (25.9)	10,640 (7.3)	16,950 (75.4)	25,085 (111.6)	34,625 (154.0)	45,425 (202.1)	72,680 (323.3)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.80	0.80	0.80	0.80	0.80	0.80	0.80
	Strength reduction factor for tension[2]	ϕ	-	0.75						
	Strength reduction factor for shear[2]	ϕ	-	0.65						
ASTM A 449	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	lbf (kN)	9,300 (41.4)	17,025 (75.7)	27,120 (120.6)	40,140 (178.5)	55,905 (248.7)	72,685 (323.3)	101,755 (452.6)
		V_{sa}	lbf (kN)	5,580 (24.8)	10,215 (45.4)	16,270 (72.4)	24,085 (107.1)	33,540 (149.2)	43,610 (194.0)	61,050 (271.6)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.80	0.80	0.80	0.80	0.80	0.80	0.80
	Strength reduction factor for tension[2]	ϕ	-	0.75						
	Strength reduction factor for shear[2]	ϕ	-	0.65						
ISO 898-1 Class 5.8	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	lbf (kN)	5,620 (25.0)	10,290 (45.8)	16,385 (72.9)	24,250 (107.9)	33,475 (148.9)	43,915 (195.4)	-[5]
		V_{sa}	lbf (kN)	3,370 (15.0)	6,175 (27.5)	9,830 (43.7)	14,550 (64.7)	20,085 (89.3)	26,350 (117.2)	-[5]
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.80	0.80	0.80	0.80	0.80	0.80	-[5]
	Strength reduction factor for tension[3]	ϕ	-	0.65						
	Strength reduction factor for shear[3]	ϕ	-	0.60						
ASTM F 593 CW Stainless (Types 304 and 316)	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	lbf (kN)	7,750 (34.5)	14,190 (63.1)	22,600 (100.5)	28,430 (126.5)	39,245 (174.6)	51,485 (229.0)	82,370 (366.4)
		V_{sa}	lbf (kN)	4,650 (20.7)	8,515 (37.9)	13,560 (60.3)	17,060 (75.9)	23,545 (104.7)	30,890 (137.4)	49,425 (219.8)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.70	0.70	0.80	0.80	0.80	0.80	0.80
	Strength reduction factor for tension[3]	ϕ	-	0.65						
	Strength reduction factor for shear[3]	ϕ	-	0.60						
ASTM A 193 Grade B8/B8M, Class 1 Stainless (Types 304 and 316)	Nominal strength as governed by steel strength (for a single anchor)[4]	N_{sa}	lbf (kN)	4,420 (19.7)	8,090 (36.0)	12,880 (57.3)	19,065 (84.8)	26,315 (117.1)	34,525 (153.6)	55,240 (245.7)
		V_{sa}	lbf (kN)	2,650 (11.8)	4,855 (21.6)	7,730 (34.4)	11,440 (50.9)	15,790 (70.2)	20,715 (92.1)	33,145 (147.4)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.70	0.70	0.80	0.80	0.80	0.80	0.80
	Strength reduction factor for tension[2]	ϕ	-	0.75						
	Strength reduction factor for shear[2]	ϕ	-	0.65						
ASTM A 193 Grade B8/ B8M2, Class 2B Stainless (Types 304 and 316)	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	lbf (kN)	7,365 (32.8)	13,480 (60.0)	21,470 (95.5)	31,775 (141.3)	43,860 (195.1)	57,545 (256.0)	92,065 (409.5)
		V_{sa}	lbf (kN)	4,420 (19.7)	8,085 (36.0)	12,880 (57.3)	19,065 (84.8)	26,315 (117.1)	34,525 (153.6)	55,240 (245.7)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.70	0.70	0.80	0.80	0.80	0.80	0.80
	Strength reduction factor for tension[2]	ϕ	-	0.75						
	Strength reduction factor for shear[2]	ϕ	-	0.65						

For SI: 1 inch = 25.4 mm, 1 lbf = 4.448 N. For pound-inch units: 1 mm = 0.03937 inches, 1 N = 0.2248 lbf.

1. Values provided for steel element material types are based on minimum specified strengths and calculated in accordance with ACI 318-14 Eq. 17.4.1.2 and Eq. 17.5.1.2b or ACI 318-11 Eq. (D-2) and Eq. (D-29), as applicable, except where noted. Nuts and washers must be appropriate for the rod. Nuts must have specified proof load stresses equal to or greater than the minimum tensile strength of the specified threaded rod.
2. The tabulated value of ϕ applies when the load combinations of Section 1605.2 of the IBC, ACI 318-14 5.3 or ACI 318-11 9.2, as applicable, are used in accordance with ACI 318-14 17.3.3 or ACI 318-11 D.4.3, as applicable. If the load combinations of ACI 318-11 Appendix C are used, the appropriate value of ϕ must be determined in accordance with ACI 318 D.4.4. Values correspond to ductile steel elements.
3. The tabulated value of ϕ applies when the load combinations of Section 1605.2 of the IBC, ACI 318-14 5.3 or ACI 318-11 9.2, as applicable, are used in accordance with ACI 318-14 17.3.3 or ACI 318-11 D.4.3, as applicable. If the load combinations of ACI 318-11 Appendix C are used, the appropriate value of ϕ must be determined in accordance with ACI 318 D.4.4. Values correspond to brittle steel elements
4. In accordance with AACI 318-14 17.4.1.2 and 17.5.1.2 or ACI 318-11 D.5.1.2 and D.6.1.2, as applicable, the calculated values for nominal tension and shear strength for ASTM A193 Grade B8/B8M Class 1 stainless steel threaded rods are based on limiting the specified tensile strength of the anchor steel to 1.9fy or 57,000 psi (393 MPa).
5. The referenced standard includes rod diameters up to and including 1-inch (24 mm).

Steel Tension and Shear Design for Reinforcing Bars in Normal Weight Concrete (For use with load combinations taken from ACI 318-14 Section 5.3)

CODE LISTED
ICC-ES ESR-3298

Design Information		Symbol	Units	Nominal Reinforcing Bar Size (Rebar)[1]							
				No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9	No. 10
Rebar nominal outside diameter		d	inch (mm)	0.375 (9.5)	0.500 (12.7)	0.625 (15.9)	0.750 (19.1)	0.875 (22.2)	1.000 (25.4)	1.125 (28.7)	1.250 (32.3)
Rebar effective cross-sectional area		A_{se}	inch² (mm²)	0.110 (71.0)	0.200 (129.0)	0.310 (200.0)	0.440 (283.9)	0.600 (387.1)	0.790 (509.7)	1.000 (645.2)	1.270 (819.4)
ASTM A 615 Grade 75	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	lbf (kN)	11,000 (48.9)	20,000 (89.0)	31,000 (137.9)	44,000 (195.7)	60,000 (266.9)	79,000 (351.4)	100,000 (444.8)	127,000 (564.9)
		V_{sa}	lbf (kN)	6,600 (29.4)	12,000 (53.4)	18,600 (82.7)	26,400 (117.4)	36,000 (160.1)	47,400 (210.8)	60,000 (266.9)	76,200 (338.9)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.70	0.70	0.80	0.80	0.80	0.80	0.80	0.80
	Strength reduction factor for tension[3]	ϕ	-	0.65							
	Strength reduction factor for shear[3]	ϕ	-	0.60							
ASTM A 615 Grade 60	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	lbf (kN)	9,900 (44.0)	18,000 (80.1)	27,900 (124.1)	39,600 (176.1)	54,000 (240.2)	71,100 (316.3)	90,000 (400.3)	114,300 (508.4)
		V_{sa}	lbf (kN)	5,940 (26.4)	10,800 (48.0)	16,740 (74.5)	23,760 (105.7)	32,400 (144.1)	42,660 (189.8)	54,000 (240.2)	68,580 (305.0)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.70	0.70	0.80	0.80	0.80	0.80	0.80	0.80
	Strength reduction factor for tension[2]	ϕ	-	0.75							
	Strength reduction factor for shear[2]	ϕ	-	0.65							
ASTM A 706 Grade 60	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	lbf (kN)	8,800 (39.1)	16,000 (71.2)	24,800 (110.3)	35,200 (156.6)	48,000 (213.5)	63,200 (281.1)	80,000 (355.9)	101,600 (452.0)
		V_{sa}	lbf (kN)	5,280 (23.5)	9,600 (42.7)	14,880 (66.2)	21,120 (94.0)	28,800 (128.1)	37,920 (168.7)	48,000 (213.5)	60,960 (271.2)
	Reduction factor for seismic shear	$\alpha_{V,seis}$		0.70	0.70	0.80	0.80	0.80	0.80	0.80	0.80
	Strength reduction factor for tension[2]	ϕ	-	0.75							
	Strength reduction factor for shear[2]	ϕ	-	0.65							
ASTM A 615 Grade 40	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	lbf (kN)	6,600 (29.4)	12,000 (53.4)	18,600 (82.7)	26,400 (117.4)	In accordance with ASTM A 615, Grade 40 bars are furnished only in sizes No. 3 through No. 6			
		V_{sa}	lbf (kN)	3,960 (17.6)	7,200 (32.0)	11,160 (49.6)	15,840 (70.5)				
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.70	0.70	0.80	0.80				
	Strength reduction factor for tension[2]	ϕ	-	0.75							
	Strength reduction factor for shear[2]	ϕ	-	0.65							

For SI: 1 inch = 25.4 mm, 1 lbf = 4.448 N. For pound-inch units: 1 mm = 0.03937 inches, 1 N = 0.2248 lbf.

1. Values provided for reinforcing bar material types based on minimum specified strengths and calculated in accordance with ACI 318-14 Eq. 17.4.1.2 and Eq. 17.5.1.2b or ACI 318-11 Eq. (D-2) and Eq. (D-29), as applicable.
2. The tabulated value of ϕ applies when the load combinations of Section 1605.2 of the IBC, ACI 318-14 5.3 or ACI 318-11 9.2, as applicable, are used in accordance with ACI 318-14 17.3.3 or ACI 318-11 D.4.3, as applicable. If the load combinations of ACI 318-11 Appendix C are used, the appropriate value of ϕ must be determined in accordance with ACI 318 D.4.4. Values correspond to ductile steel elements. In accordance with ACI 318-14 17.2.3.4.3(a)(vi) or ACI 318-11 D.3.3.4.3(a)6, as applicable, deformed reinforcing bars meeting this specification used as ductile steel elements to resist earthquake effects shall be limited to reinforcing bars satisfying the requirements of ACI 318-14 20.2.2.4 and 20.2.2.5 or ACI 318-11 21.1.5.2 (a) and (b), as applicable.
3. The tabulated value of ϕ applies when the load combinations of Section 1605.2 of the IBC, ACI 318-14 5.3 or ACI 318-11 9.2, as applicable, are used in accordance with ACI 318-14 17.3.3 or ACI 318-11 D.4.3, as applicable. If the load combinations of ACI 318-11 Appendix C are used, the appropriate value of ϕ must be determined in accordance with ACI 318 D.4.4. Values correspond to brittle steel elements.

Concrete Breakout Design Information for Threaded Rod and Reinforcing Bars (For use with loads combinations taken from ACI 318-14 Section 5.3)[1]

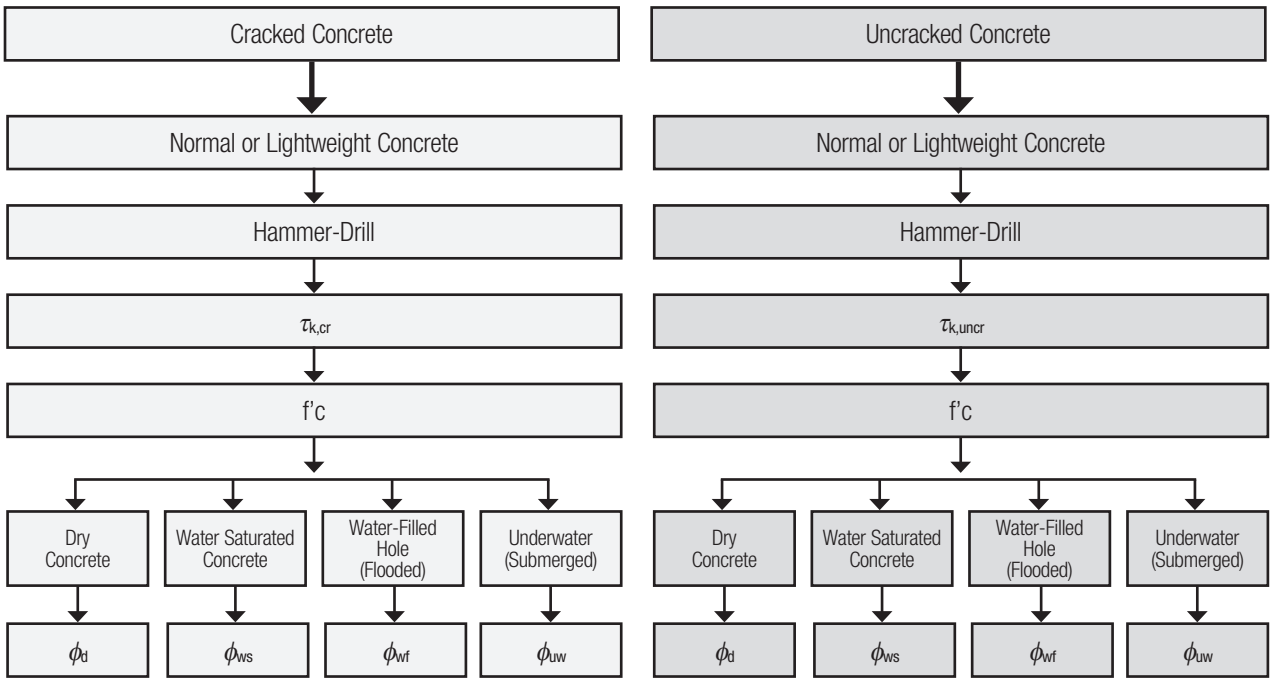
CODE LISTED ICC-ES ESR-3298

Design Information	Symbol	Units	Nominal Rod Diameter (inch) / Reinforcing Bar Size							
			3/8 or #3	1/2 or #4	5/8 or #5	3/4 or #6	7/8 or #7	1 or #8	#9	1-1/4 or #10
Effectiveness factor for cracked concrete	$k_{c,cr}$	- (SI)	17 (7.1)							
Effectiveness factor for uncracked concrete	$k_{c,uncr}$	- (SI)	24 (10.0)							
Minimum embedment	$h_{ef,min}$	inch (mm)	2-3/8 (60)	2-3/4 (70)	3-1/8 (79)	3-1/2 (89)	3-1/2 (89)	4 (102)	4-1/2 (114)	5 (127)
Maximum embedment	$h_{ef,max}$	inch (mm)	7-1/2 (191)	10 (254)	12-1/2 (318)	15 (381)	17-1/2 (445)	20 (508)	22-1/2 (572)	25 (635)
Minimum anchor spacing	s_{min}	inch (mm)	1-7/8 (48)	2-1/2 (64)	3-1/8 (79)	3-3/4 (95)	4-3/8 (111)	5 (127)	5-5/8 (143)	6-1/4 (159)
Minimum edge distance[2]	c_{min}	inch (mm)	5*d* where *d* is nominal outside diameter of the anchor							
Minimum edge distance, reduced[2]	$c_{min,red}$	inch (mm)	1-3/4 (45)	1-3/4 (45)	1-3/4 (45)	1-3/4 (45)	1-3/4 (45)	1-3/4 (45)	2-3/4 (70)	2-3/4 (70)
Minimum member thickness	h_{min}	inch (mm)	h_{ef} + 1-1/4 (h_{ef} + 30)		$h_{ef} + 2d_o$ where d_o is hole diameter;					
Critical edge distance—splitting (for uncracked concrete only)[3]	c_{ac}	inch	$c_{ac} = h_{ef} \cdot (\frac{\tau_{uncr}}{1160})^{0.4} \cdot [3.1\text{-}0.7 \frac{h}{h_{ef}}]$							
		(mm)	$c_{ac} = h_{ef} \cdot (\frac{\tau_{uncr}}{8})^{0.4} \cdot [3.1\text{-}0.7 \frac{h}{h_{ef}}]$							
Strength reduction factor for tension, concrete failure modes, Condition B[4]	ϕ	-	0.65							
Strength reduction factor for shear, concrete failure modes, Condition B[4]	ϕ	-	0.70							

For SI: 1 inch = 25.4 mm, 1 lbf = 4.448 N. For pound-inch units: 1 mm = 0.03937 inch, 1 N = 0.2248 lbf.

1. Additional setting information is described in the installation instructions.
2. For installation between the minimum edge distance, c_{min}, and the reduced minimum edge distance, $c_{min,red}$, the maximum torque applied must be reduced (multiplied) by a factor of 0.45.
3. $\tau_{k,uncr}$ need not be taken as greater than: $\tau_{k,uncr} = \frac{k_{uncr} \cdot \sqrt{h_{ef} \cdot f'c}}{\pi \cdot d}$ and $\frac{h}{h_{ef}}$ need not be taken as larger than 2.4.
4. Condition A requires supplemental reinforcement, while Condition B applies where supplemental reinforcement is not provided or where pryout governs, as set forth in ACI 318-14 17.3.3 or ACI 318-11 D.4.3, as applicable. The tabulated value of ϕ applies when the load combinations of Section 1605.2 of the IBC, ACI 318-14 5.3 or ACI 318-11 9.2, as applicable, are used in accordance with ACI 318-14 17.3.3 or ACI 318-11 D.4.3, as applicable. If the load combinations of ACI 318-11 Appendix C are used, the appropriate value of ϕ must be determined in accordance with ACI 318 D.4.4.

FLOWCHART FOR THE ESTABLISHMENT OF DESIGN BOND STRENGTH



Bond Strength Design Information for Threaded Rods and Reinforcing Bars[1,2]

CODE LISTED ICC-ES ESR-3298

Design Information		Symbol	Units	Nominal Rod Diameter (inch)						
				3/8	1/2	5/8	3/4	7/8	1	1-1/4
Minimum embedment		$h_{ef,min}$	inch (mm)	2-3/8 (60)	2-3/4 (70)	3-1/8 (79)	3-1/2 (89)	3-1/2 (89)	4 (102)	5 (127)
Maximum embedment		$h_{ef,max}$	inch (mm)	7-1/2 (191)	10 (254)	12-1/2 (318)	15 (381)	17-1/2 (445)	20 (508)	25 (635)
110°F (43°C) Maximum Long-Term Service Temperature; 140°F (60°C) Maximum Short-Term Service Temperature[3,5]	Characteristic bond strength in cracked concrete[6,9]	$\tau_{k,cr}$	psi (N/mm²)	1,206 (8.3)	1,206 (8.3)	1,206 (8.3)	1,206 (8.3)	1,206 (8.3)	1,206 (8.3)	1,206 (8.3)
	Characteristic bond strength in cracked concrete, short-term loading only[9]	$\tau_{k,cr}$	psi (N/mm²)	1,206 (8.3)	1,206 (8.3)	1,206 (8.3)	1,206 (8.3)	1,206 (8.3)	1,206 (8.3)	1,206 (8.3)
	Characteristic bond strength in uncracked concrete[6,8]	$\tau_{k,uncr}$	psi (N/mm²)	1,829 (12.6)	1,738 (12.0)	1,671 (11.5)	1,617 (11.1)	1,567 (10.8)	1,538 (10.6)	1,479 (10.2)
	Characteristic bond strength in uncracked concrete, short-term loading only[8]	$\tau_{k,uncr}$	psi (N/mm²)	1,829 (12.6)	1,738 (12.0)	1,671 (11.5)	1,617 (11.1)	1,567 (10.8)	1,538 (10.6)	1,479 (10.2)
110°F (43°C) Maximum Long-Term Service Temperature; 176°F (80°C) Maximum Short-Term Service Temperature[4,5]	Characteristic bond strength in cracked concrete[6,9]	$\tau_{k,cr}$	psi (N/mm²)	882 (6.1)	882 (6.1)	882 (6.1)	882 (6.1)	882 (6.1)	882 (6.1)	882 (6.1)
	Characteristic bond strength in cracked concrete, short-term loading only[9]	$\tau_{k,cr}$	psi (N/mm²)	882 (6.1)	882 (6.1)	882 (6.1)	882 (6.1)	882 (6.1)	882 (6.1)	882 (6.1)
	Characteristic bond strength in uncracked concrete[6,8]	$\tau_{k,uncr}$	psi (N/mm²)	1,334 (9.2)	1,262 (8.7)	1,218 (8.4)	1,175 (8.1)	1,146 (7.9)	1,117 (7.7)	1,073 (7.4)
	Characteristic bond strength in uncracked concrete, short-term loading only[8]	$\tau_{k,uncr}$	psi (N/mm²)	1,334 (9.2)	1,262 (8.7)	1,218 (8.4)	1,175 (8.1)	1,146 (7.9)	1,117 (7.7)	1,073 (7.4)

Design Information		Symbol	Units	Nominal Bar Size							
				#3	#4	#5	#6	#7	#8	#9	#10
Minimum embedment		$h_{ef,min}$	inch (mm)	2-3/8 (60.0)	2-3/4 (70.0)	3-1/8 (79.0)	3-1/2 (89.0)	3-1/2 (89.0)	4 (102.0)	4-1/2 (114.0)	5 (127.0)
Maximum embedment		$h_{ef,max}$	inch (mm)	7-1/2 (191.0)	10 (254.0)	12-1/2 (318.0)	15 (381.0)	17-1/2 (445.0)	20 (508.0)	22-1/2 (572.0)	25 (635.0)
110°F (43°C) Maximum Long-Term Service Temperature; 140°F (60°C) Maximum Short-Term Service Temperature[3,5]	Characteristic bond strength in cracked concrete[6,9]	$\tau_{k,cr}$	psi (N/mm²)	1,206 (8.3)	1,170 (8.1)	1,122 (7.7)	1,122 (7.7)	1,122 (7.7)	1,122 (7.7)	1,122 (7.7)	1,122 (7.7)
	Characteristic bond strength in cracked concrete, short-term loading only[9]	$\tau_{k,cr}$	psi (N/mm²)	1,206 (8.3)	1,170 (8.1)	1,122 (7.7)	1,122 (7.7)	1,122 (7.7)	1,122 (7.7)	1,122 (7.7)	1,122 (7.7)
	Characteristic bond strength in uncracked concrete[6,8]	$\tau_{k,uncr}$	psi (N/mm²)	1,829 (12.6)	1,738 (12.0)	1,671 (11.5)	1,617 (11.1)	1,567 (10.8)	1,538 (10.6)	1,507 (10.4)	1,479 (10.2)
	Characteristic bond strength in uncracked concrete, short-term loading only[8]	$\tau_{k,uncr}$	psi (N/mm²)	1,829 (12.6)	1,738 (12.0)	1,671 (11.5)	1,617 (11.1)	1,567 (10.8)	1,538 (10.6)	1,507 (10.4)	1,479 (10.2)
110°F (43°C) Maximum Long-Term Service Temperature; 176°F (80°C) Maximum Short-Term Service Temperature[4,5]	Characteristic bond strength in cracked concrete[6,9]	$\tau_{k,cr}$	psi (N/mm²)	882 (6.1)	848 (5.8)	814 (5.6)	814 (5.6)	814 (5.6)	814 (5.6)	814 (5.6)	814 (5.6)
	Characteristic bond strength in cracked concrete, short-term loading only[9]	$\tau_{k,cr}$	psi (N/mm²)	882 (6.1)	848 (5.8)	814 (5.6)	814 (5.6)	814 (5.6)	814 (5.6)	814 (5.6)	814 (5.6)
	Characteristic bond strength in uncracked concrete[6,8]	$\tau_{k,uncr}$	psi (N/mm²)	1,334 (9.2)	1,262 (8.7)	1,218 (8.4)	1,175 (8.1)	1,146 (7.9)	1,117 (7.7)	1,102 (7.6)	1,073 (7.4)
	Characteristic bond strength in uncracked concrete, short-term loading only[8]	$\tau_{k,uncr}$	psi (N/mm²)	1,334 (9.2)	1,262 (8.7)	1,218 (8.4)	1,175 (8.1)	1,146 (7.9)	1,117 (7.7)	1,102 (7.6)	1,073 (7.4)

Permissible installation conditions[7]	Dry concrete	Anchor Category		1							
		ϕ_d		0.65							
	Water-saturated concrete, Water-filled hole (flooded)	Anchor Category		2							
		ϕ_{ws}, ϕ_{wf}		0.55							
	Underwater (submerged)	Anchor Category		2				3			
		ϕ_{uw}		0.55				0.45			
Reduction factor for seismic tension[9]		$\alpha_{N,seis}$		1.00							

For SI: 1 inch = 25.4 mm, 1 psi = 0.006894 MPa. For pound-inch units: 1 mm = 0.03937 inch, 1 MPa = 145.0 psi.

1. Bond strength values correspond to a normal-weight concrete compressive strength f'c = 2,500 psi (17.2 MPa). For concrete compressive strength, f'c between 2,500 psi and 8,000 psi (17.2 MPa and 55.2 MPa), the tabulated characteristic bond strength may be increased by a factor of $(f'c / 2{,}500)^{0.23}$ [For SI: $(f'c / 17.2)^{0.23}$].
2. The modification factor for bond strength of adhesive anchors in lightweight concrete shall be taken as given in ACI 318-14 17.2.6 or ACI 318-11 D.3.6, as applicable, where applicable.
3. The maximum short-term service temperature may be increased to 162°F (72°C) provided characteristic bond strengths are reduced by 3 percent. Long-term and short-term temperatures meet the requirements of Section 8.5 of ACI 355.4 and Table 8.1, Temperature Category B.
4. Long-term and short-term temperatures meet the requirements of Section 8.5 of ACI 355.4 and Table 8.1, Temperature Category A.
5. Short-term base material service temperatures are those that occur over brief intervals, e.g. as a result of diurnal cycling. Long-term elevated concrete base material service temperatures are roughly constant over significant periods of time.
6. Characteristic bond strengths are for sustained loads including dead and live loads.
7. Permissible installation conditions include dry concrete, water-saturated concrete, water-filled holes and underwater. Water-filled holes include applications in dry or water-saturated concrete where the drilled holes contain standing water at the time of anchor installation.
8. Bond strength values for uncracked concrete are applicable for structures assigned to Seismic Design Categories A and B only.
9. For structures assigned to Seismic Design Categories C, D, E or F, the tabulated bond strength values for cracked concrete do not require an additional reduction factor applied for seismic tension ($\alpha_{N,seis}$ = 1.0), where seismic design is applicable.

Tension and Shear Design Strength for Threaded Rod Installed in Uncracked Concrete (Bond or Concrete Strength)
Drilled with a Hammer-Drill and Carbide Bit in a Dry Hole Condition
110°F (43°C) Maximum Long-Term Service Temperature;
140°F (60°C) Maximum Short-Term Service Temperature[1,2,3,4,5,6,7,8,9]

Nominal Rod/Rebar Size (in.)	Embed. Depth h_{ef} (in.)	Minimum Concrete Compressive Strength									
		f'c = 2,500 (psi)		f'c = 3,000 (psi)		f'c = 4,000 (psi)		f'c = 6,000 (psi)		f'c = 8,000 (psi)	
		ϕN_{cb} or ϕN_a Tension (lbs.)	ϕV_{cb} or ϕV_{cp} Shear (lbs.)	ϕN_{cb} or ϕN_a Tension (lbs.)	ϕV_{cb} or ϕV_{cp} Shear (lbs.)	ϕN_{cb} or ϕN_a Tension (lbs.)	ϕV_{cb} or ϕV_{cp} Shear (lbs.)	ϕN_{cb} or ϕN_a Tension (lbs.)	ϕV_{cb} or ϕV_{cp} Shear (lbs.)	ϕN_{cb} or ϕN_a Tension (lbs.)	ϕV_{cb} or ϕV_{cp} Shear (lbs.)
3/8	2-3/8	2,855	2,570	3,125	2,920	3,610	3,575	4,070	4,380	4,345	4,680
	3	4,055	4,010	4,380	4,530	4,680	5,370	5,140	6,830	5,490	8,095
	4-1/2	6,305	7,420	6,575	8,270	7,020	9,805	7,710	12,465	8,235	14,775
	7-1/2	10,505	15,800	10,955	17,600	11,705	20,865	12,845	26,530	13,725	29,565
1/2	2-3/4	3,555	3,305	3,895	3,755	4,500	4,590	5,510	6,095	6,365	7,455
	4	6,240	6,700	6,835	7,610	7,895	9,310	8,680	11,845	9,275	14,045
	6	10,645	12,850	11,105	14,315	11,865	16,970	13,020	21,575	13,915	25,585
	10	17,745	27,370	18,505	30,485	19,770	36,150	21,705	45,955	23,190	49,945
5/8	3-1/8	4,310	4,120	4,720	4,680	5,450	5,725	6,675	7,600	7,710	9,295
	5	8,720	10,005	9,555	11,365	11,030	13,900	13,040	18,205	13,935	21,585
	7-1/2	15,995	19,745	16,680	22,000	17,820	26,080	19,565	33,160	20,900	39,315
	12-1/2	26,660	42,065	27,800	46,860	29,700	55,560	32,605	70,225	34,835	75,030
3/4	3-1/2	5,105	5,015	5,595	5,700	6,460	6,970	7,910	9,255	9,135	11,320
	6	11,465	13,595	12,560	15,445	14,500	18,895	17,760	25,095	19,415	30,030
	9	21,060	26,855	23,070	30,510	24,835	36,285	27,260	46,130	29,125	54,695
	15	37,145	58,530	38,740	65,200	41,390	77,305	45,435	97,855	48,540	104,550
7/8	3-1/2	5,105	4,930	5,595	5,605	6,460	6,855	7,910	9,100	9,135	11,130
	7	14,445	16,605	15,825	18,865	18,275	23,075	22,380	30,650	25,610	37,355
	10-1/2	26,540	32,800	29,070	37,265	32,755	45,135	35,955	57,380	38,415	68,035
	17-1/2	49,000	72,810	51,095	81,105	54,590	96,165	59,930	122,255	64,025	137,905
1	4	6,240	6,115	6,835	6,945	7,895	8,495	9,665	11,280	11,160	13,800
	8	17,650	19,750	19,335	22,435	22,325	27,440	27,340	36,450	31,570	44,580
	12	32,425	39,005	35,520	44,315	41,015	54,200	46,095	69,560	49,250	82,475
	20	62,815	88,270	65,505	98,330	69,985	116,585	76,825	148,215	82,080	175,735
1-1/4	5	8,720	8,170	9,555	9,285	11,030	11,355	13,510	15,085	15,600	18,450
	10	24,665	26,380	27,020	29,975	31,200	36,660	38,210	48,690	44,125	59,555
	15	45,315	52,110	49,640	59,200	57,320	72,410	69,260	95,655	74,000	113,420
	25	94,380	121,400	98,420	135,235	105,155	160,345	115,435	203,845	123,330	241,695

- Concrete Breakout Strength - Bond Strength/Pryout Strength

1. Tabular values are provided for illustration and are applicable for single anchors installed in uncracked normal-weight concrete with minimum slab thickness, $h_a = h_{min}$, and with the following conditions:
   - c_{a1} is greater than or equal to the critical edge distance, c_{ac}
   - c_{a2} is greater than or equal to 1.5 times c_{a1}.
2. Calculations were performed according to ACI 318-14 Ch.17 and ICC-ES AC308. The load level corresponding to the failure mode listed [Concrete breakout strength, bond strength/pryout strength] must be checked against the tabulated steel strength of the corresponding threaded rod or rebar size and type, the lowest load level controls.
3. Strength reduction factors (ϕ) for concrete breakout strength are based on ACI 318-14 Section 5.3 for load combinations. Condition B was assumed.
4. Strength reduction factors (ϕ) for bond strength are determined from reliability testing and qualification in accordance with ICC-ES AC308 and are tabulated in this product information and in ESR-3298.
5. Tabular values are permitted for static loads only, seismic loading is not considered with these tables. Periodic special inspection must be performed where required by code, see ESR-3298 for applicable information.
6. For anchors subjected to tension resulting from sustained loading a supplemental check must be performed according to ACI 318-14 17.3.1.2.
7. For designs that include combined tension and shear, the interaction of tension and shear loads must be calculated in accordance with ACI 318-14 Ch.17.
8. Interpolation is not permitted to be used with the tabular values. For intermediate base material compressive strengths, please see ACI 318-14 Ch.17, ICC-ES AC308 and information included in this product supplement. For other design conditions including seismic considerations please see ACI 318-14 Ch.17 and ICC-ES AC308 and ESR-3298.
9. Long term concrete temperatures are roughly constant over significant periods of time. Short-term elevated temperatures are those that occur over brief intervals, e.g. as a result of diurnal cycling.

Tension and Shear Design Strength for Threaded Rod Installed in Cracked Concrete (Bond or Concrete Strength)
Drilled with a Hammer-Drill and Carbide Bit in a Dry Hole Condition
110°F (43°C) Maximum Long-Term Service Temperature;
140°F (60°C) Maximum Short-Term Service Temperature[1,2,3,4,5,6,7,8,9]

Nominal Rod/Rebar Size (in. or #)	Embed. Depth h_{ef} (in.)	Minimum Concrete Compressive Strength									
		f'c = 2,500 (psi)		f'c = 3,000 (psi)		f'c = 4,000 (psi)		f'c = 6,000 (psi)		f'c = 8,000 (psi)	
		ϕN_{cb} or ϕN_a Tension (lbs.)	ϕV_{cb} or ϕV_{cp} Shear (lbs.)	ϕN_{cb} or ϕN_a Tension (lbs.)	ϕV_{cb} or ϕV_{cp} Shear (lbs.)	ϕN_{cb} or ϕN_a Tension (lbs.)	ϕV_{cb} or ϕV_{cp} Shear (lbs.)	ϕN_{cb} or ϕN_a Tension (lbs.)	ϕV_{cb} or ϕV_{cp} Shear (lbs.)	ϕN_{cb} or ϕN_a Tension (lbs.)	ϕV_{cb} or ϕV_{cp} Shear (lbs.)
3/8	2-3/8	2,020	1,835	2,215	2,085	2,445	2,555	2,685	2,890	2,865	3,085
	3	2,770	2,865	2,890	3,235	3,085	3,835	3,390	4,875	3,620	5,785
	4-1/2	4,155	5,300	4,335	5,905	4,630	7,005	5,085	8,900	5,430	10,555
	7-1/2	6,925	11,285	7,225	12,570	7,715	14,905	8,470	18,245	9,050	19,495
1/2	2-3/4	2,520	2,360	2,760	2,680	3,185	3,280	3,905	4,355	4,425	5,325
	4	4,420	4,785	4,840	5,435	5,490	6,650	6,025	8,460	6,435	10,030
	6	7,390	9,180	7,705	10,225	8,230	12,125	9,035	15,410	9,655	18,275
	10	12,315	19,550	12,840	21,775	13,720	25,820	15,060	32,435	16,090	34,655
5/8	3-1/8	3,050	2,940	3,345	3,340	3,860	4,090	4,730	5,430	5,460	6,640
	5	6,175	7,145	6,765	8,120	7,815	9,930	9,415	13,005	10,055	15,415
	7-1/2	11,350	14,105	12,040	15,715	12,860	18,630	14,120	23,685	15,085	28,080
	12-1/2	19,240	30,045	20,065	33,470	21,435	39,685	23,530	50,455	25,140	54,150
3/4	3-1/2	3,620	3,580	3,965	4,070	4,575	4,980	5,605	6,610	6,470	8,085
	6	8,120	9,710	8,895	11,035	10,270	13,495	12,580	17,925	14,480	21,450
	9	14,920	19,185	16,340	21,795	18,520	25,920	20,330	32,950	21,720	39,070
	15	27,705	41,805	28,890	46,570	30,870	55,220	33,885	70,200	36,205	77,975
7/8	3-1/2	3,620	3,525	3,965	4,000	4,575	4,895	5,605	6,500	6,470	7,950
	7	10,230	11,860	11,210	13,475	12,945	16,485	15,850	21,895	18,305	26,680
	10-1/2	18,800	23,430	20,590	26,620	23,780	32,240	27,675	40,985	29,565	48,595
	17-1/2	37,710	52,005	39,325	57,935	42,015	68,690	46,120	87,325	49,275	103,540
1	4	4,420	4,365	4,840	4,960	5,590	6,065	6,845	8,060	7,905	9,855
	8	12,500	14,105	13,695	16,025	15,815	19,600	19,365	26,035	22,365	31,845
	12	22,965	27,860	25,160	31,655	29,050	38,715	35,580	49,685	38,615	58,910
	20	49,255	63,050	51,365	70,235	54,875	83,275	60,240	105,870	64,360	125,525
1-1/4	5	6,175	5,835	6,765	6,630	7,815	8,110	9,570	10,775	11,050	13,175
	10	17,470	18,845	19,140	21,410	22,100	26,185	27,065	34,780	31,255	42,540
	15	32,095	37,220	35,160	42,285	40,600	51,720	49,725	68,325	57,415	81,015
	25	69,060	86,715	75,655	96,595	85,745	114,530	94,125	145,605	100,565	172,640

□ - Concrete Breakout Strength □ - Bond Strength/Pryout Strength

1. Tabular values are provided for illustration and are applicable for single anchors installed in cracked normal-weight concrete with minimum slab thickness, $h_a = h_{min}$, and with the following conditions:
   - c_{a1} is greater than or equal to the critical edge distance, c_{ac}
   - c_{a2} is greater than or equal to 1.5 times c_{a1}.
2. Calculations were performed according to ACI 318-14 Ch.17 and ICC-ES AC308. The load level corresponding to the failure mode listed [Concrete breakout strength, bond strength/pryout strength] must be checked against the tabulated steel strength of the corresponding threaded rod or rebar size and type, the lowest load level controls.
3. Strength reduction factors (ϕ) for concrete breakout strength are based on ACI 318-14 Section 5.3 for load combinations. Condition B was assumed.
4. Strength reduction factors (ϕ) for bond strength are determined from reliability testing and qualification in accordance with ICC-ES AC308 and are tabulated in this product information and in ESR-3298.
5. Tabular values are permitted for static loads only, seismic loading is not considered with these tables. Periodic special inspection must be performed where required by code, see ESR-3298 for applicable information.
6. For anchors subjected to tension resulting from sustained loading a supplemental check must be performed according to ACI 318-14 17.3.1.2.
7. For designs that include combined tension and shear, the interaction of tension and shear loads must be calculated in accordance with ACI 318-14 Ch.17.
8. Interpolation is not permitted to be used with the tabular values. For intermediate base material compressive strengths, please see ACI 318-14 Ch.17, ICC-ES AC308 and information included in this product supplement. For other design conditions including seismic considerations please see ACI 318-14 Ch.17 and ICC-ES AC308 and ESR-3298.
9. Long term concrete temperatures are roughly constant over significant periods of time. Short-term elevated temperatures are those that occur over brief intervals, e.g. as a result of diurnal cycling.

Tension and Shear Design Strength for Reinforcing Bar Installed in Uncracked Concrete (Bond or Concrete Strength)
Drilled with a Hammer-Drill and Carbide Bit in a Dry Hole Condition
110°F (43°C) Maximum Long-Term Service Temperature;
140°F (60°C) Maximum Short-Term Service Temperature[1,2,3,4,5,6,7,8,9]

Nominal Rod/Rebar Size (#)	Embed. Depth h_{ef} (in.)	Minimum Concrete Compressive Strength									
		f'c = 2,500 (psi)		f'c = 3,000 (psi)		f'c = 4,000 (psi)		f'c = 6,000 (psi)		f'c = 8,000 (psi)	
		ϕN_{cb} or ϕN_a Tension (lbs.)	ϕV_{cb} or ϕV_{cp} Shear (lbs.)	ϕN_{cb} or ϕN_a Tension (lbs.)	ϕV_{cb} or ϕV_{cp} Shear (lbs.)	ϕN_{cb} or ϕN_a Tension (lbs.)	ϕV_{cb} or ϕV_{cp} Shear (lbs.)	ϕN_{cb} or ϕN_a Tension (lbs.)	ϕV_{cb} or ϕV_{cp} Shear (lbs.)	ϕN_{cb} or ϕN_a Tension (lbs.)	ϕV_{cb} or ϕV_{cp} Shear (lbs.)
#3	2-3/8	2,855	2,570	3,125	2,920	3,610	3,575	4,070	4,380	4,345	4,680
	3	4,055	4,010	4,380	4,530	4,680	5,370	5,140	6,830	5,490	8,095
	4-1/2	6,305	7,420	6,575	8,270	7,020	9,805	7,710	12,465	8,235	14,775
	7-1/2	10,505	15,800	10,955	17,600	11,705	20,865	12,845	26,530	13,725	29,565
#4	2-3/4	3,555	3,305	3,895	3,755	4,500	4,590	5,510	6,095	6,365	7,455
	4	6,240	6,700	6,835	7,610	7,895	9,310	8,680	11,845	9,275	14,045
	6	10,645	12,850	11,105	14,315	11,865	16,970	13,020	21,575	13,915	25,585
	10	17,745	27,370	18,505	30,485	19,770	36,150	21,705	45,955	23,190	49,945
#5	3-1/8	4,310	4,120	4,720	4,680	5,450	5,725	6,675	7,600	7,710	9,295
	5	8,720	10,005	9,555	11,365	11,030	13,900	13,040	18,205	13,935	21,585
	7-1/2	15,995	19,745	16,680	22,000	17,820	26,080	19,565	33,160	20,900	39,315
	12-1/2	26,660	42,065	27,800	46,860	29,700	55,560	32,605	70,225	34,835	75,030
#6	3-1/2	5,105	5,015	5,595	5,700	6,460	6,970	7,910	9,255	9,135	11,320
	6	11,465	13,595	12,560	15,445	14,500	18,895	17,760	25,095	19,415	30,030
	9	21,060	26,855	23,070	30,510	24,835	36,285	27,260	46,130	29,125	54,695
	15	37,145	58,530	38,740	65,200	41,390	77,305	45,435	97,855	48,540	104,550
#7	3-1/2	5,105	4,930	5,595	5,605	6,460	6,855	7,910	9,100	9,135	11,130
	7	14,445	16,605	15,825	18,865	18,275	23,075	22,380	30,650	25,610	37,355
	10-1/2	26,540	32,800	29,070	37,265	32,755	45,135	35,955	57,380	38,415	68,035
	17-1/2	49,000	72,810	51,095	81,105	54,590	96,165	59,930	122,255	64,025	137,905
#8	4	6,240	6,115	6,835	6,945	7,895	8,495	9,665	11,280	11,160	13,800
	8	17,650	19,750	19,335	22,435	22,325	27,440	27,340	36,450	31,570	44,580
	12	32,425	39,005	35,520	44,315	41,015	54,200	46,095	69,560	49,250	82,475
	20	62,815	88,270	65,505	98,330	69,985	116,585	76,825	148,215	82,080	175,735
#9	4-1/2	7,445	7,110	8,155	8,080	9,420	9,880	11,535	13,125	13,320	16,055
	9	21,060	23,055	23,070	26,190	26,640	32,035	32,625	42,550	37,675	52,040
	13-1/2	38,690	45,540	42,380	51,740	48,940	63,280	57,165	82,475	61,075	97,785
	22-1/2	77,895	104,620	81,230	116,545	86,790	138,185	95,270	175,670	101,790	208,290
#10	5	8,720	8,160	9,555	9,270	11,030	11,335	13,510	15,060	15,600	18,420
	10	24,665	26,430	27,020	30,025	31,200	36,725	38,210	48,780	44,125	59,660
	15	45,315	52,205	49,640	59,310	57,320	72,545	69,260	95,835	74,000	113,625
	25	94,380	121,580	98,420	135,435	105,155	160,580	115,435	204,145	123,330	242,050

□ - Concrete Breakout Strength □ - Bond Strength/Pryout Strength

1. Tabular values are provided for illustration and are applicable for single anchors installed in uncracked normal-weight concrete with minimum slab thickness, $h_a = h_{min}$, and with the following conditions:
   - c_{a1} is greater than or equal to the critical edge distance, c_{ac}
   - c_{a2} is greater than or equal to 1.5 times c_{a1}.
2. Calculations were performed according to ACI 318-14 Ch.17 and ICC-ES AC308. The load level corresponding to the failure mode listed [Concrete breakout strength, bond strength/pryout strength] must be checked against the tabulated steel strength of the corresponding threaded rod or rebar size and type, the lowest load level controls.
3. Strength reduction factors (ϕ) for concrete breakout strength are based on ACI 318-14 Section 5.3 for load combinations. Condition B was assumed.
4. Strength reduction factors (ϕ) for bond strength are determined from reliability testing and qualification in accordance with ICC-ES AC308 and are tabulated in this product information and in ESR-3298.
5. Tabular values are permitted for static loads only, seismic loading is not considered with these tables. Periodic special inspection must be performed where required by code, see ESR-3298 for applicable information.
6. For anchors subjected to tension resulting from sustained loading a supplemental check must be performed according to ACI 318-14 17.3.1.2.
7. For designs that include combined tension and shear, the interaction of tension and shear loads must be calculated in accordance with ACI 318-14 Ch.17.
8. Interpolation is not permitted to be used with the tabular values. For intermediate base material compressive strengths, please see ACI 318-14 Ch.17, ICC-ES AC308 and information included in this product supplement. For other design conditions including seismic considerations please see ACI 318-14 Ch.17 and ICC-ES AC308 and ESR-3298.
9. Long term concrete temperatures are roughly constant over significant periods of time. Short-term elevated temperatures are those that occur over brief intervals, e.g. as a result of diurnal cycling.

Tension and Shear Design Strength for Reinforcing Bar Installed in Cracked Concrete (Bond or Concrete Strength)
Drilled with a Hammer-Drill and Carbide Bit in a Dry Hole Condition
110°F (43°C) Maximum Long-Term Service Temperature;
140°F (60°C) Maximum Short-Term Service Temperature[1,2,3,4,5,6,7,8,9]

Nominal Rod/Rebar Size (#)	Embed. Depth h_{ef} (in.)	Minimum Concrete Compressive Strength									
		f'c = 2,500 (psi)		f'c = 3,000 (psi)		f'c = 4,000 (psi)		f'c = 6,000 (psi)		f'c = 8,000 (psi)	
		ϕN_{cb} or ϕN_a Tension (lbs.)	ϕV_{cb} or ϕV_{cp} Shear (lbs.)	ϕN_{cb} or ϕN_a Tension (lbs.)	ϕV_{cb} or ϕV_{cp} Shear (lbs.)	ϕN_{cb} or ϕN_a Tension (lbs.)	ϕV_{cb} or ϕV_{cp} Shear (lbs.)	ϕN_{cb} or ϕN_a Tension (lbs.)	ϕV_{cb} or ϕV_{cp} Shear (lbs.)	ϕN_{cb} or ϕN_a Tension (lbs.)	ϕV_{cb} or ϕV_{cp} Shear (lbs.)
#3	2-3/8	2,020	1,835	2,215	2,085	2,445	2,555	2,685	2,890	2,865	3,085
	3	2,770	2,865	2,890	3,235	3,085	3,835	3,390	4,875	3,620	5,785
	4-1/2	4,155	5,300	4,335	5,905	4,630	7,005	5,085	8,900	5,430	10,555
	7-1/2	6,925	11,285	7,225	12,570	7,715	14,905	8,470	18,245	9,050	19,495
#4	2-3/4	2,520	2,360	2,760	2,680	3,185	3,280	3,905	4,355	4,295	5,325
	4	4,420	4,785	4,840	5,435	5,325	6,650	5,845	8,460	6,245	10,030
	6	7,170	9,180	7,475	10,225	7,985	12,125	8,765	15,410	9,365	18,275
	10	11,945	19,550	12,455	21,775	13,310	25,820	14,610	31,470	15,610	33,620
#5	3-1/8	3,050	2,940	3,345	3,340	3,860	4,090	4,730	5,430	5,380	6,640
	5	6,175	7,145	6,765	8,120	7,815	9,930	8,755	13,005	9,355	15,415
	7-1/2	10,740	14,105	11,200	15,715	11,965	18,630	13,135	23,685	14,035	28,080
	12-1/2	17,900	30,045	18,665	33,470	19,945	39,685	21,890	47,155	23,390	50,380
#6	3-1/2	3,620	3,580	3,965	4,070	4,575	4,980	5,605	6,610	6,470	8,085
	6	8,120	9,710	8,895	11,035	10,270	13,495	12,580	17,925	13,475	21,450
	9	14,920	19,185	16,130	21,795	17,230	25,920	18,915	32,950	20,210	39,070
	15	25,775	41,805	26,880	46,570	28,720	55,220	31,525	67,900	33,680	72,545
#7	3-1/2	3,620	3,525	3,965	4,000	4,575	4,895	5,605	6,500	6,470	7,950
	7	10,230	11,860	11,210	13,475	12,945	16,485	15,850	21,895	18,305	26,680
	10-1/2	18,800	23,430	20,590	26,620	23,455	32,240	25,745	40,985	27,505	48,595
	17-1/2	35,085	52,005	36,585	57,935	39,090	68,690	42,910	87,325	45,845	98,740
#8	4	4,420	4,365	4,840	4,960	5,590	6,065	6,845	8,060	7,905	9,855
	8	12,500	14,105	13,695	16,025	15,815	19,600	19,365	26,035	22,365	31,845
	12	22,965	27,860	25,160	31,655	29,050	38,715	33,625	49,685	35,925	58,910
	20	45,825	63,050	47,785	70,235	51,055	83,275	56,045	105,870	59,880	125,525
#9	4-1/2	5,275	5,080	5,780	5,770	6,670	7,060	8,170	9,375	9,435	11,465
	9	14,920	16,465	16,340	18,710	18,870	22,880	23,110	30,390	26,685	37,170
	13-1/2	27,405	32,530	30,020	36,955	34,665	45,200	42,455	58,910	45,470	69,845
	22-1/2	57,995	74,730	60,480	83,245	64,615	98,700	70,930	125,480	75,785	148,775
#10	5	6,175	5,830	6,765	6,620	7,815	8,100	9,570	10,755	11,050	13,155
	10	17,470	18,880	19,140	21,445	22,100	26,230	27,065	34,840	31,255	42,615
	15	32,095	37,290	35,160	42,365	40,600	51,815	49,725	68,455	56,135	81,160
	25	69,060	86,840	74,665	96,740	79,775	114,700	87,570	145,820	93,560	172,890

□ - Concrete Breakout Strength □ - Bond Strength/Pryout Strength

1. Tabular values are provided for illustration and are applicable for single anchors installed in cracked normal-weight concrete with minimum slab thickness, $h_a = h_{min}$, and with the following conditions:
   - c_{a1} is greater than or equal to the critical edge distance, c_{ac}
   - c_{a2} is greater than or equal to 1.5 times c_{a1}.
2. Calculations were performed according to ACI 318-14 Ch.17 and ICC-ES AC308. The load level corresponding to the failure mode listed [Concrete breakout strength, bond strength/pryout strength] must be checked against the tabulated steel strength of the corresponding threaded rod or rebar size and type, the lowest load level controls.
3. Strength reduction factors (ϕ) for concrete breakout strength are based on ACI 318-14 Section 5.3 for load combinations. Condition B was assumed.
4. Strength reduction factors (ϕ) for bond strength are determined from reliability testing and qualification in accordance with ICC-ES AC308 and are tabulated in this product information and in ESR-3298.
5. Tabular values are permitted for static loads only, seismic loading is not considered with these tables. Periodic special inspection must be performed where required by code, see ESR-3298 for applicable information.
6. For anchors subjected to tension resulting from sustained loading a supplemental check must be performed according to ACI 318-14 17.3.1.2.
7. For designs that include combined tension and shear, the interaction of tension and shear loads must be calculated in accordance with ACI 318-14 Ch.17.
8. Interpolation is not permitted to be used with the tabular values. For intermediate base material compressive strengths, please see ACI 318-14 Ch.17, ICC-ES AC308 and information included in this product supplement. For other design conditions including seismic considerations please see ACI 318-14 Ch.17 and ICC-ES AC308 and ESR-3298.
9. Long term concrete temperatures are roughly constant over significant periods of time. Short-term elevated temperatures are those that occur over brief intervals, e.g. as a result of diurnal cycling.

Tension Design of Steel Elements (Steel Strength)[1,2]

Steel Elements - Threaded Rod and Reinforcing Bar												
Nominal Rod/Rebar Size (in. or No.)	ASTM A36 and ASTM F1554 Grade 36	ASTM F1554 Grade 55	ASTM A193 Grade B7 and ASTM F1554 Grade 105	ASTM A449	ASTM F568M Class 5.8 and ISO 898-1 Class 5.8	ASTM F593 CW Stainless (Types 304 and 316)	ASTM A193 Grade B8/B8M, Class 1 Stainless (Types 304 and 316)	ASTM A193 Grade B8/B8M2, Class 2B Stainless (Types 304 and 316)	ASTM A615 Grade 75 Rebar	ASTM A615 Grade 60 Rebar	ASTM A706 Grade 60 Rebar	ASTM A615 Grade 40 Rebar
	ϕN_{sa} Tension (lbs.)	ϕN_{sa} Tension (lbs.)	ϕN_{sa} Tension (lbs.)	ϕN_{sa} Tension (lbs.)	ϕN_{sa} Tension (lbs.)	ϕN_{sa} Tension (lbs.)	ϕN_{sa} Tension (lbs.)	ϕN_{sa} Tension (lbs.)	ϕN_{sa} Tension (lbs.)	ϕN_{sa} Tension (lbs.)	ϕN_{sa} Tension (lbs.)	ϕN_{sa} Tension (lbs.)
3/8 or #3	3,370	4,360	7,265	6,975	3,655	5,040	3,315	5,525	7,150	7,425	6,600	4,950
1/2 or #4	6,175	7,980	13,300	12,770	6,690	9,225	6,070	10,110	13,000	13,500	12,000	9,000
5/8 or #5	9,835	12,715	21,190	20,340	10,650	14,690	9,660	16,105	20,150	20,925	18,600	13,950
3/4 or #6	14,550	18,815	31,360	30,105	15,765	18,480	14,300	23,830	28,600	29,700	26,400	19,800
7/8 or #7	20,085	25,970	43,285	41,930	21,760	25,510	19,735	32,895	39,000	40,500	36,000	-
1 or #8	26,350	34,070	56,785	54,515	28,545	33,465	25,895	43,160	51,350	53,325	47,400	-
#9	-	-	-	-	-	-	-	-	65,000	67,500	60,000	-
1-1/4 or #10	42,160	54,510	90,850	76,315	-	53,540	41,430	69,050	82,550	85,725	76,200	-

■ - Steel Strength

1. Steel tensile design strength according to ACI 318-14 Ch.17, $\phi N_{sa} = \phi \bullet A_{se,N} \bullet f_{uta}$
2. The tabulated steel design strength in tension must be checked against the bond strength/concrete capacity design strength to determine the controlling failure mode, the lowest load level controls.

Shear Design of Steel Elements (Steel Strength)[1,2]

Steel Elements - Threaded Rod and Reinforcing Bar												
Nominal Rod/Rebar Size (in. or No.)	ASTM A36 and ASTM F1554 Grade 36	ASTM F1554 Grade 55	ASTM A193 Grade B7 and ASTM F1554 Grade 105	ASTM A449	ASTM F568M Class 5.8 and ISO 898-1 Class 5.8	ASTM F593 CW Stainless (Types 304 and 316)	ASTM A193 Grade B8/B8M, Class 1 Stainless (Types 304 and 316)	ASTM A193 Grade B8/B8M2, Class 2B Stainless (Types 304 and 316)	ASTM A615 Grade 75 Rebar	ASTM A615 Grade 60 Rebar	ASTM A706 Grade 60 Rebar	ASTM A615 Grade 40 Rebar
	ϕV_{sa} Shear (lbs.)	ϕV_{sa} Shear (lbs.)	ϕV_{sa} Shear (lbs.)	ϕV_{sa} Shear (lbs.)	ϕV_{sa} Shear (lbs.)	ϕV_{sa} Shear (lbs.)	ϕV_{sa} Shear (lbs.)	ϕV_{sa} Shear (lbs.)	ϕV_{sa} Shear (lbs.)	ϕV_{sa} Shear (lbs.)	ϕV_{sa} Shear (lbs.)	ϕV_{sa} Shear (lbs.)
3/8 or #3	1,755	2,265	3,775	3,625	2,025	2,790	1,725	2,870	3,960	3,860	3,430	2,575
1/2 or #4	3,210	4,150	6,915	6,640	3,705	5,110	3,155	5,255	7,200	7,020	6,240	4,680
5/8 or #5	5,115	6,610	11,020	10,575	5,900	8,135	5,025	8,375	11,160	10,880	9,670	7,255
3/4 or #6	7,565	9,785	16,305	15,655	8,730	10,235	7,435	12,390	15,840	15,445	13,730	10,295
7/8 or #7	10,445	13,505	22,505	21,805	12,050	14,130	10,265	17,105	21,600	21,060	18,720	-
1 or #8	13,700	17,715	29,525	28,345	15,810	18,535	13,465	22,445	28,440	27,730	24,650	-
#9	-	-	-	-	-	-	-	-	36,000	35,100	31,200	-
1-1/4 or #10	21,920	28,345	47,240	39,685	-	29,655	21,545	35,905	45,720	44,575	39,625	-

■ - Steel Strength

1. Steel shear design strength according to ACI 318-14 Ch.17, $\phi V_{sa} = \phi \bullet 0.60 \bullet A_{se,V} \bullet f_{uta}$
2. The tabulated steel design strength in shear must be checked against the bond strength/concrete capacity design strength to determine the controlling failure mode, the lowest load level controls.

Development Lengths for Common Reinforcing Bar Connections[1,2,3,6]

Design Information	Symbol	Reference Standard	Units	Nominal Rebar Size (US)								
				#3	#4	#5	#6	#7	#8	#9	#10	#11
Nominal rebar diameter	d_b	ASTM A615/A706, Grade 60 (fy = 60 ksi)	in. (mm)	0.375 (9.5)	0.5 (12.7)	0.625 (15.9)	0.75 (19.1)	0.875 (22.2)	1 (25.4)	1.128 (28.6)	1.27 (32.3)	1.41 (35.8)
Nominal rebar area	A_b		in^2 (mm^2)	0.11 (71)	0.2 (127)	0.31 (198)	0.44 (285)	0.6 (388)	0.79 (507)	1 (645)	1.27 (817)	1.56 (1006)
Development length in f'c = 2,500 psi concrete[4,5]	l_d	ACI 318-14 25.4.2.3 or ACI 318-11 12.2.3 as applicable	in. (mm)	12 (305)	14.4 (366)	18 (457)	21.6 (549)	31.5 (800)	36 (914)	40.6 (1031)	45.7 (1161)	50.8 (1290)
Development length in f'c = 3,000 psi concrete[4,5]			in. (mm)	12 (305)	13.1 (334)	16.4 (417)	19.7 (501)	28.8 (730)	32.9 (835)	37.1 (942)	41.7 (1060)	46.3 (1177)
Development length in f'c = 4,000 psi concrete[4,5]			in. (mm)	12 (305)	12 (305)	14.2 (361)	17.1 (434)	24.9 (633)	28.5 (723)	32.1 (815)	36.2 (920)	40.1 (1019)
Development length in f'c = 6,000 psi concrete[4,5]			in. (mm)	12 (305)	12 (305)	12 (305)	13.9 (354)	20.3 (516)	23.2 (590)	26.2 (666)	29.5 (750)	32.8 (832)
Development length in f'c = 8,000 psi concrete[4,5]			in. (mm)	12 (305)	12 (305)	12 (305)	12.1 (307)	17.6 (443)	20.1 (511)	22.7 (577)	25.6 (649)	28.4 (721)

For SI: 1 inch = 25.4 mm, 1 lbf = 4.448 N, 1 psi = 0.006897 MPa; for pound-inch units: 1 mm = 0.03937 inches, 1 N = 0.2248 lbf, 1 MPa = 145.0 psi.

1. Calculated development lengths in accordance with ACI 318-14 25.4.2.3 or ACI 318-11 12.2.3, as applicable, for reinforcing bars are valid for static, wind, and earthquake loads.
2. Calculated development lengths in SDC C through F must comply with ACI 318-14 Chapter 18 or ACI 318-11 Chapter 21, as applicable. The value of f 'c used to calculate development lengths shall not exceed 2,500 psi for post-installed reinforcing bar applications in SDC's C, D, E and F.
3. For Class B splices, minimum length of lap for tension lap splices is $1.3l_d$ in accordance with ACI 318-14 25.5.2 and ACI 318-11 12.15.1, as applicable.
4. For lightweight concrete, $\lambda = 0.75$; therefore multiply development lengths by 1.33 (increase development length by 33 percent), unless the provisions of ACI 318-14 25.4.2.4 or ACI 318-11 12.2.4 (d), as applicable, are met to permit alternate values of λ (e.g for sand-lightweight concrete, $\lambda = 0.85$; therefore multiply development lengths by 1.18). Refer to ACI 318-14 19.2.4 or ACI 318-11 8.6.1, as applicable.
5. $\left(\frac{c_b + K_{tr}}{d_b}\right) = 2.5$, $\psi_t = 1.0$, $\psi_e = 1.0$, $\psi_s = 0.8$ for $d_b \le$ #6,1.0 for $d_b >$ #6. Refer to ACI 318-14 25.4.2.4 or ACI 318-11 12.2.4, as applicable.
6. Calculations may be performed for other steel grades and concrete compressive strengths per ACI 318-14 Chapter 25 or ACI 318-11 Chapter 12, as applicable.

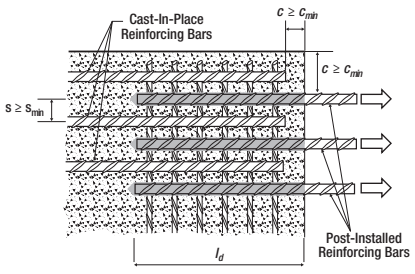
Installation Parameters for Common Post-Installed Reinforcing Bar Connections

Parameter	Symbol	Units	Nominal Rebar Size (US)								
			#3	#4	#5	#6	#7	#8	#9	#10	#11
Nominal hole diameter[1]	d_o	in.	7/16	5/8	3/4	7/8	1	11/8	1-3/8	1-1/2	1-3/4
Effective embedment	h_{ef}	in.	2-3/8 to 7-1/2	2-3/4 to 10	3-1/8 to 12-1/2	3-1/2 to 15	3-1/2 to 17-1/2	4 to 20	4-1/2 to 22-1/2	5 to 25	5-1/2 to 27-1/2
Nominal hole diameter[1]	d_o	in.	1/2	5/8	3/4	1	1-1/8	1-1/4	1-3/8	1-1/2	1-3/4
Effective embedment	h_{ef}	in.	7-1/2 to 22-1/2	10 to 30	12-1/2 to 37-1/2	15 to 45	17-1/2 to 52-1/2	20 to 60	22-1/2 to 67-1/2	25 to 75	27-1/2 to 82-1/2

For SI: 1 inch = 25.4 mm,; for pound-inch units: 1 mm = 0.03937 inches.

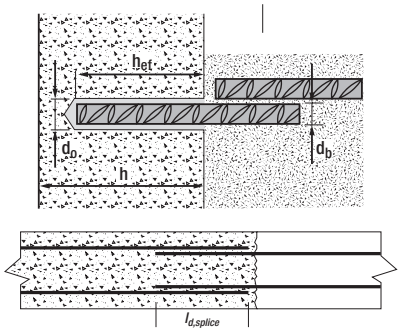
1. For any case, it must be possible for the reinforcing bar (rebar) to be inserted into the cleaned hole without resistance.
2. Consideration should be given regarding the commercial availability of carbide drill bits (including hollow drill bits) and diamond core bits, as applicable, with lengths necessary to achieve effective embedments for post-installed reinforcing bar connections.

Installation Detail for Post-Installed Reinforcing Bar Connection



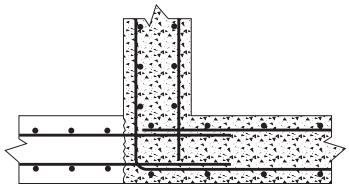
Development Length

c = edge distance
s = spacing

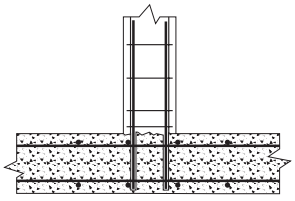


d_b = nomial bar diameter
d_o = nominal hole diameter
h_{ef} = effective embedment
h = member thickness

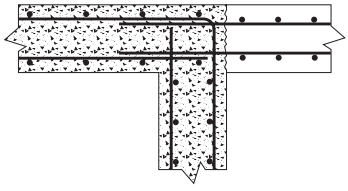
Examples of Development Length Application Details for Post-Installed Reinforcing Bar Connections Provided for Illustrator



Tension Lap Splice with Existing Reinforcement for Footing and Foundation Extensions



Tension Development of Column, Cap or Wall Dowels



Tension Lap Splice with Existing Flexural Reinforcement For Slab and Beam Extensions

Hole Cleaning Tools and Accessories for Post-Installed Rebar Connections[1,2,3,4,5,6,7]

Rebar Size (No.)	Drill Bit Size (inch)	Brush Size (inch)	Brush Length (inches)	Wire Brush (Cat. No.)	Plug Size (inch)	Piston Plug (Cat. No.)
3	7/16	7/16	6-3/4	08284	N/A	N/A
	1/2	1/2	6-3/4	08285	N/A	N/A
4	5/8	5/8	6-3/4	08275	N/A	N/A
5	3/4	3/4	7-7/8	08278	3/4	PFC1691520
6	7/8	7/8	7-7/8	08287	7/8	PFC1691530
	1	1	11-7/8	08288	1	PFC1691540
7	1	1	11-7/8	08288	1	PFC1691540
	1-1/8	1-1/8	11-7/8	08289	1-1/8	PFC1691550
8	1-1/8	1-1/8	11-7/8	08289	1-1/8	PFC1691550
	1-1/4	1-1/4	11-7/8	08290	1-1/4	PFC1691555
9	1-3/8	1-3/8	11-7/8	08290	1-3/8	PFC1691560
10	1-1/2	1-1/2	11-7/8	08291	1-1/2	PFC1691570
11	1-3/4	1-3/4	11-7/8	08299	1-3/4	PFC1691580

1. If the DEWALT DustX+ extraction system is used to automatically clean the holes during drilling, standard hole cleaning (brushing and blowing following drilling) is not required.
2. Holes may be drilled with hammer-drill, i.e. rotary impact drills or rock drills with a carbide drill bit (including hollow bits) or core-drill, i.e. core drill with a diamond core drill bit.
3. For any case, it must be possible for the reinforcing bar to be inserted into the cleaned hole without resistance.
4. A brush extension (Cat.#08282) must be used with a steel wire brush for holes drilled deeper than the listed brush length.
5. Brush adaptors for power tool connections are available for drill chuck (Cat.#08296) and SDS (Cat.#08283).
6. A flexible extension tube (Cat.#08297) or flexible extension hose (Cat.#PFC1640600) or equivalent approved by DEWALT must be used if the bottom or back of the anchor hole is not reached with the mixing nozzle only.
7. All overhead (i.e upwardly inclined) installations require the use of piston plugs during where one is tabulated together with the anchor size (see table). N/A = Not applicable. All horizontal installations require the use of piston plugs where one is tabulated together with the anchor size and where the embedment depth is greater than 8 inches. A flexible extension tube (Cat.#08297) or flexible extension hose (Cat.#PFC1640600) or equivalent approved by DEWALT must be used with piston plugs.

Wire Brush

Brush Extension

Drill Chuck Adapter

SDS Adapter

Premium Piston Plug

Compressed Air Nozzle

DustX+™ System

DUSTX+ ANCHOR INSTALLATION SYSTEM

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ESR-3298

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DIVISION: 03 00 00—CONCRETE
SECTION: 03 16 00—CONCRETE ANCHORS
DIVISION: 05 00 00—METALS
SECTION: 05 05 19—POST-INSTALLED CONCRETE ANCHORS

REPORT HOLDER:

DEWALT

701 EAST JOPPA ROAD
TOWSON, MARYLAND 21286

EVALUATION SUBJECT:

PURE110+® EPOXY ADHESIVE ANCHOR SYSTEM AND POST-INSTALLED REINFORCING BAR CONNECTION SYSTEM IN CRACKED AND UNCRACKED CONCRETE (DEWALT / POWERS)

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DIVISION: 03 00 00—CONCRETE
Section: 03 16 00—Concrete Anchors

DIVISION: 05 00 00—METALS
Section: 05 05 19—Post-Installed Concrete Anchors

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EVALUATION SUBJECT:

PURE110+® EPOXY ADHESIVE ANCHOR SYSTEM AND POST-INSTALLED REINFORCING BAR CONNECTION SYSTEM IN CRACKED AND UNCRACKED CONCRETE (DEWALT / POWERS)

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2015, 2012, and 2009 *International Building Code®* (IBC)
- 2015, 2012, and 2009 *International Residential Code®* (IRC)
- 2013 *Abu Dhabi International Building Code* (ADIBC)†

†The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

For evaluation for compliance with codes adopted by Los Angeles Department of Building and Safety (LADBS), see ESR-3298 LABC and LARC Supplement.

For evaluation for compliance with the *National Building Code of Canada®* (NBCC), see listing report ELC-3298.

Property evaluated:

Structural

2.0 USES

The Pure110+ Epoxy Adhesive Anchor System and Post-Installed Reinforcing Bar Connection System are used as anchorage in cracked and uncracked normal-weight concrete or lightweight concrete with a specified compressive strength, f'_c, of 2,500 psi to 8,500 psi (17.2 MPa to 58.6 MPa) [minimum of 24 MPa is required under ADIBC Appendix L, Section 5.1.1] to resist static, wind or earthquake (IBC Seismic Design Categories A through F) tension and shear loads.

The anchor system complies with anchors as described in Section 1901.3 of the 2015 IBC, Section 1909 of the 2012 IBC and is an alternative to cast-in-place and post-installed anchors described in Section 1908 of the 2012 IBC, and Sections 1911 and 1912 of the 2009 IBC. The anchor systems may also be used where an engineered design is submitted in accordance with Section R301.1.3 of the IRC.

The post-installed reinforcing bar connection system is an alternative to cast-in-place reinforcing bars governed by ACI 318 and IBC Chapter 19.

3.0 DESCRIPTION

3.1 General:

The Pure110+ Epoxy Adhesive System is comprised of a two-component epoxy adhesive filled in cartridges, static mixing nozzles, dispensing tools, hole cleaning equipment and adhesive injection accessories.The Pure110+ epoxy adhesive system may be used with continuously threaded steel rods to form the Pure110+ Epoxy Adhesive Anchor System (see Table 1A and Figure 1 of this report) or with deformed steel reinforcing bars to form the Pure110+ Epoxy Adhesive Post-Installed Reinforcing Bar Connection System (see Table 1A, Table 1B, Figure 1 and Figure 3 of this report).

Product names for the report holder and the additional listee are presented in the following table of this report.

COMPANY NAME	PRODUCT NAME
DEWALT	Pure110+®
	(Pure110-PRO outside North America)
Powers Fasteners	Pure110+®
	(Pure110-PRO outside North America)

The adhesive and steel anchor elements (continuously threaded steel rods or deformed steel reinforcing bars) are installed in pre-drilled holes into concrete. The primary

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components of the Pure110+ Epoxy Adhesive Anchor System and Post-Installed Reinforcing Bar Connection System, including the epoxy adhesive cartridge, static mixing nozzle, the nozzle extension tube, dispensing tool and typical steel anchor elements, are shown in Figure 2 of this report. Manufacturer's printed installation instructions (MPII) and parameters, included with each adhesive unit package, are shown in Figure 4.

3.2 Materials:

3.2.1 Pure110+ Epoxy Adhesive: Pure110+ epoxy adhesive is an injectable two-component epoxy. The two components are separated by means of a labelled dual-cylinder cartridge. The two components combine and react when dispensed through a static mixing nozzle, supplied by DEWALT, which is attached to the cartridge. The Pure110+ epoxy adhesive is available in 9-ounce (265 mL), 13-ounce (385 mL), 20-ounce (585 mL), 21-ounce (620 mL) and 51-ounce (1510 mL) cartridges. Each cartridge label is marked with the adhesive expiration date. The shelf life, as indicated by the expiration date, applies to an unopened cartridge when stored in accordance with the manufacturer's printed installation instructions (MPII) as illustrated in Figure 4 of this report.

3.2.2 Hole Cleaning Equipment: Standard hole cleaning equipment and dust extraction system equipment (i.e. suction, vacuum) are available from the report holder.

Standard hole cleaning equipment used after drilling is comprised of steel wire brushes supplied by DEWALT and a compressed air nozzle (applicable for both post-installed adhesive anchor system and post-installed reinforcing bar connection system). Standard hole cleaning equipment is shown in Figure 4.

The DustX+™ extraction system automatically cleans the holes during drilling using hollow drill bits with a carbide head meeting the requirements of ANSI B212.15 and a DEWALT DWV012 / DWV902M vacuum equipped with an automatic filter cleaning system or equivalent approved by DEWALT (applicable for post-installed adhesive anchors and post-installed reinforcing bar connections). After drilling with the DustX+ system, no further hole cleaning is required. See Figure A for an illustration of the DustX+™ extraction system.

3.2.3 Dispensers: Pure110+ epoxy adhesive must be dispensed with manual dispensers, pneumatic dispensers, or electric powered dispensers supplied by DEWALT.

3.2.4 Steel Anchor Elements:

3.2.4.1 Threaded Steel Rods: Threaded steel rods must be clean and continuously threaded (all-thread) in diameters as described in Tables 4 and 8 of this report. Threaded rods, matching nuts and washers must comply with the requirements including specifications, grades, and mechanical properties prescribed in Table 2 of this report. Carbon steel threaded rods must be furnished with a 0.0002-inch-thick (0.005 mm) zinc electroplated coating complying with ASTM B633, SC1; or a minimum 0.0021-inch-thick (0.053 mm) mechanically deposited zinc coating complying with ASTM B695, Class 55; or a hot dip galvanized zinc coating complying with ASTM A153, Class C or D. Steel grades and material types (carbon, stainless) of the washers and nuts must be matched to the threaded rods. Threaded steel rods must be straight and free of indentations or other defects along their length. The embedded end may be either flat cut or cut on the bias to a chisel point.

3.2.4.2 Steel Reinforcing Bars: Steel reinforcing bars must be deformed reinforcing bars (rebars) as described in Table 3 of this report. Tables 1A, 5, 6, 7, 9, 10 and 11 summarize reinforcing bar size ranges. The embedded portions of reinforcing bars must be clean, straight, and free of mill scale, rust and other coatings (other than zinc) that may impair the bond with the adhesive. Reinforcing bars must not be bent after installation, except as set forth in ACI 318-14 26.6.3.1 (b) or ACI 318-11 7.3.2, as applicable, with the additional condition that the bars must be bent cold, and heating of the reinforcing bars to facilitate field bending is not permitted.

3.2.4.3 Ductility: In accordance with ACI 318-14 Section 2.3 or ACI 318-11 Appendix D.1, as applicable, in order for a steel anchor element to be considered ductile, the tested elongation must be at least 14 percent and the reduction of area must be at least 30 percent. Steel elements with a tested elongation of less than 14 percent or a reduction of area less than 30 percent, or both, are considered brittle. Values for various steel materials are provided in Tables 2 and 3 of this report. Where values are nonconforming or unstated, the steel element must be considered brittle.

3.2.5 Steel Reinforcing Bars for Use in Post-Installed Reinforcing Bar Connection System: Steel reinforcing bars used in post-installed reinforcing bar connections must be deformed bars (rebar) as depicted in Figure 3. Tables 1B and 13 summarize reinforcing bar size ranges. The embedded portions of reinforcing bars must be straight, and free of mill scale, rust, mud, oil, and other coatings that may impair the bond with the adhesive. Reinforcing bars must not be bent after installation, except as set forth in ACI 318-14 26.6.3.1(b) or ACI 318-11 7.3.2, as applicable, with the additional condition that the bars must be bent cold, and heating of reinforcing bars to facilitate field bending is not permitted.

3.3 Concrete:

Normalweight concrete and lightweight concrete must comply with Sections 1903 and 1905 of the IBC, as applicable. The specified compressive strength of the concrete must be from 2,500 psi to 8,500 psi (17.2 MPa to 58.6 MPa) [minimum of 24 MPa is required under ADIBC Appendix L, Section 5.1.1].

4.0 DESIGN AND INSTALLATION

4.1 Strength Design of Pure110+ Epoxy Adhesive Post-installed Adhesive Anchor System:

4.1.1 General: The design strength of anchor system under the 2015 IBC, as well as the 2015 IRC must be determined in accordance with ACI 318-14 and this report. The design strength of anchor system under the 2012 and 2009 IBC, as well the 2012 and 2009 IRC, must be determined in accordance with ACI 318-11 and this report.

The strength design of anchor system must comply with ACI 318-14 17.3.1 or ACI 318-11 D.4.1, as applicable, except as required in ACI 318-14 17.2.3 or ACI 318-11 D.3.3, as applicable.

Design parameters are provided in Table 4 through Table 11. Strength reduction factors, ϕ, as given in ACI 318-14 17.3.3 or ACI 318-11 D.4.3, as applicable, must be used for load combinations calculated in accordance with Section 1605.2 of the IBC, ACI 318-14 5.3, or ACI 318-11 9.2, as applicable. Strength reduction factors, ϕ, as described in ACI 318-11 D.4.4 must be used for load combinations calculated in accordance with ACI 318-11 Appendix C.

4.1.2 Static Steel Strength in Tension: The nominal static steel strength of a single anchor in tension, N_{sa}, in accordance with ACI 318-14 17.4.1.2 or ACI 318-11 D.5.1.2, as applicable, and the associated strength reduction factors, ϕ, in accordance with ACI 318-14 17.3.3

or ACI 318-11 D.4.3, as applicable, are provided in Tables 4, 5, 8 and 9 of this report for the corresponding steel anchor element. See Table 1A for index of design tables.

4.1.3 Static Concrete Breakout Strength in Tension: The nominal static concrete breakout strength of a single anchor or group of anchors in tension, N_{cb} or N_{cbg}, must be calculated in accordance with ACI 318-14 17.4.2 or ACI 318-11 D.5.2, as applicable, with the following addition:

The basic concrete breakout strength of a single anchor in tension, N_b, must be calculated in accordance with ACI 318-14 17.4.2.2 or ACI 318-11 D.5.2.2, as applicable, using the selected values of $k_{c,cr}$ and $k_{c,uncr}$ as provided in the tables of this report. Where analysis indicates no cracking in accordance with ACI 318-14 17.4.2.6 or ACI 318-11 D.5.2.6, as applicable, N_b must be calculated using $k_{c,uncr}$ and $\Psi_{c,N}$ = 1.0. See Table 1A. For anchors in lightweight concrete see ACI 318-14 17.2.6 or ACI 318-11 D.3.6, as applicable. The value of f'_c used for calculation must be limited to 8,000 psi (55 MPa) in accordance with ACI 318-14 17.2.7 or ACI 318-11 D.3.7, as applicable. Additional information for the determination of nominal bond strength in tension is given in Section 4.1.4 of this report.

4.1.4 Static Bond Strength in Tension: The nominal static bond strength of a single adhesive anchor or group of adhesive anchors in tension, N_a or N_{ag}, must be calculated in accordance with ACI 318-14 17.4.5 or ACI 318-11 D.5.5, as applicable. Bond strength values ($\tau_{k,cr}$, $\tau_{k,uncr}$) are a function of the concrete service temperature, concrete state (cracked, uncracked), concrete type (normal weight, lightweight), drilling method (hammer-drill, i.e. rotary impact drill or rock drill with a carbide bit), concrete compressive strength (f'_c) and installation conditions (dry concrete, water-saturated concrete, water-filled holes, underwater). Special inspection level is qualified as periodic for all anchors except as noted in Section 4.4 of this report (the selection of continuous special inspection level does not provide an increase in anchor category or associated strength reduction factors for design). The following table summarizes the requirements.

CONCRETE STATE	COCRETE TYPE	DRILLING METHOD	BOND STRENGTH	CONCRETE COMPRESSIVE STRENGTH	PERMISSIBLE INSTALLATION CONDITIONS	ASSOCIATED STRENGTH REDUCTION FACTOR
Cracked	Normal weight or lightweight	Hammer-drill	$\tau_{k,cr}$	f'_c	Dry concrete	ϕ_d
					Water-saturated concrete	ϕ_{ws}
					Water-filled hole (flooded)	ϕ_{wf}
					Underwater (submerged)	ϕ_{uw}
Uncracked	Normal weight or lightweight	Hammer-drill	$\tau_{k,uncr}$	f'_c	Dry concrete	ϕ_d
					Water-saturated concrete	ϕ_{ws}
					Water-filled hole (flooded)	ϕ_{wf}
					Underwater (submerged)	ϕ_{uw}

Figure 1 of this report presents a flowchart for the establishment of the bond strength. The bond strength values in this report, correspond to concrete compressive strength f'_c equal to 2,500 psi (17.2 MPa). For concrete compressive strength, f'_c, between 2,500 psi and 8,000 psi (17.2 MPa and 55.2 MPa), the tabulated characteristic bond strength may be increased by a factor of $(f'_c / 2{,}500)^{0.23}$ [For **SI:** $(f'_c / 17.2)^{0.23}$]. Where applicable, the modified bond strength values must be used in lieu of $\tau_{k,cr}$ and $\tau_{k,uncr}$ in ACI 318-14 Equations (17.4.5.1d) and (17.4.5.2) or ACI 318-11 Equations (D-21) and (D-22), as applicable. The resulting nominal bond strength must be multiplied by the associated strength reduction factor ϕ_{nn}.

Figure 1 of this report presents a bond strength design selection flowchart. Strength reduction factors for determination of the bond strength are given in Tables 7 and 11 of this report (see Table 1A for an index of design tables). Adjustments to the bond strength may also be taken for increased concrete compressive strength as noted in the footnotes to the corresponding tables.

4.1.5 Static Steel Strength in Shear: The nominal static steel strength of a single anchor in shear as governed by the steel, V_{sa}, in accordance with ACI 318-14 17.5.1.2 or ACI 318-11 D.6.1.2, as applicable, and strength reduction factors, ϕ, in accordance with ACI 318-14 17.2.3 or ACI 318-11 D.4.3, as applicable, are given in Tables 4, 5, 8 and 9 of this report for the anchor element types included in this report.

4.1.6 Static Concrete Breakout Strength in Shear: The nominal concrete breakout strength of a single anchor or group of anchors in shear, V_{cb} or V_{cbg}, must be calculated in accordance with ACI 318-14 17.5.2 or ACI 318-11 D.6.2, as applicable, based on information given in Table 6 and 10 of this report. The basic concrete breakout strength in shear of a single anchor in cracked concrete, V_b, must be calculated in accordance with ACI 318-14 17.5.2.2 or ACI 318-11 D.6.2.2, as applicable, using the value of d given in Tables 4, 5, 8 and 9 of this report in lieu of d_a. In addition, h_{ef} must be substituted for ℓ_e. In no case shall ℓ_e exceed 8d. For anchors in lightweight concrete see ACI 318-14 17.2.6 or ACI 318-11 D.3.6, as applicable. The value of f'_c must be limited to a maximum of 8,000 psi (55.2 MPa), in accordance with ACI 318-14 17.2.7 or ACI 318-11 D.3.7, as applicable.

4.1.7 Static Concrete Pryout Strength in Shear: The nominal static pryout strength of a single anchor or group of anchors in shear, V_{cp} or V_{cpg}, shall be calculated in accordance with ACI 318-14 17.5.3 or ACI 318-11 D.6.3, as applicable.

4.1.8 Interaction of Tensile and Shear Forces: For designs that include combined tension and shear, the interaction of tension and shear loads must be calculated in accordance with ACI 318-14 17.6 or ACI 318-11 D.7, as applicable.

4.1.9 Minimum Member Thickness h_{min}, Anchor Spacing s_{min}, Edge Distance c_{min}: In lieu of ACI 318-14 17.7.1 and 17.7.3 or ACI 318-11 D.8.1 and D.8.3, as applicable, values of s_{min} and c_{min} described in this report must be observed for anchor design and installation. The minimum member thicknesses, h_{min}, described in this report must be observed for anchor design and installation. For adhesive anchors that will remain untorqued, ACI 318-14 17.7.4 or ACI 318-11 D.8.4, as applicable, applies.

For anchors that will be torqued during installation, the maximum torque, T_{max}, must be reduced for edge distances of less than five anchor diameters (5d). T_{max} is subject to the edge distance, c_{min}, and anchor spacing, s_{min}, and must comply with the following requirements:

MAXIMUM TORQUE SUBJECT TO EDGE DISTANCE			
NOMINAL ANCHOR SIZE, *d*	**MIN. EDGE DISTANCE, c_{min}**	**MIN. ANCHOR SPACING, s_{min}**	**MAXIMUM TORQUE, T_{max}**
All sizes	5*d*	5*d*	$1.0 \cdot T_{max}$
$^3/_8$ in. to 1 in. (9.5 mm to 25.4 mm)	1.75 in. (45 mm)	5*d*	$0.45 \cdot T_{max}$
$1^1/_4$ in. (31.8 mm)	2.75 in. (70 mm)		
10 mm to 27 mm (0.39 in. to 1.06 in.)	45 mm (1.75 in.)	5*d*	$0.45 \cdot T_{max}$
28 mm to 30 mm (1.1 in. to 1.18 in.)	70 mm (2.75 in.)		

For values of T_{max}, see Table 12 and Figure 4.

4.1.10 Critical Edge Distance c_{ac} and $\psi_{cp,Na}$: The modification factor $\psi_{cp,Na}$, must be determined in accordance with ACI 318-14 17.4.5.5 or ACI 318-11 D.5.5.5, as applicable, except as noted below:

For all cases where $c_{Na}/c_{ac}<1.0$, $\psi_{cp,Na}$ determined from ACI 318-14 Eq. 17.4.5.5b or ACI 318-11 Eq. D-27, as applicable, need not be taken less than c_{Na}/c_{ac}. For all other cases, $\psi_{cp,Na}$ shall be taken as 1.0.

The critical edge distance, c_{ac} must be calculated according to Eq. 17.4.5.5c for ACI 318-14 or Eq. D-27a for ACI 318-11, in lieu of ACI 318-14 17.7.6 or ACI 318-11 D.8.6, as applicable.

$$c_{ac}=h_{ef} \cdot \left(\frac{\tau_{k,\,uncr}}{1160}\right)^{0.4} \cdot \left[3.1 - 0.7\frac{h}{h_{ef}}\right]$$

(Eq. 17.4.5.5c for ACI 318-14 or Eq. D-27a for ACI 318-11)

where

$\left[\frac{h}{h_{ef}}\right]$ need not be taken as larger than 2.4; and

$\tau_{k,uncr}$ = the characteristic bond strength stated in the tables of this report whereby $\tau_{k,uncr}$ need not be taken as larger than:

$$\tau_{k,uncr} = \frac{k_{uncr}\sqrt{h_{ef} f'_c}}{\pi \cdot d_a} \qquad \text{Eq. (4-1)}$$

4.1.11 Design Strength in Seismic Design Categories C, D, E and F: In structures assigned to Seismic Design Category (SDC) C, D, E or F under the IBC or IRC, anchor system must be designed in accordance with ACI 318-14 17.2.3 or ACI 318-11 D.3.3, as applicable, except as described below.

The nominal steel shear strength, V_{sa}, must be adjusted by $\alpha_{V,seis}$ as given in Tables 4 and 5 for the corresponding anchor steel. The nominal bond strength τ_{kcr} need not be adjusted by $\alpha_{N,seis}$ since $\alpha_{N,seis}$ = 1.0.

As an exception to ACI 318-11 D.3.3.4.2: Anchor system designed to resist wall out-of-plane forces with design strengths equal to or greater than the force determined in accordance with ASCE 7 Equation 12.11-1 or 12.14-10 shall be deemed to satisfy ACI 318-11 D.3.3.4.3(d).

Under ACI 318-11 D.3.3.4.3(d), in lieu of requiring the anchor design tensile strength to satisfy the tensile strength requirements of ACI 318-11 D.4.1.1, the anchor design tensile strength shall be calculated from ACI 318-11 D.3.3.4.4.

The following exceptions apply to ACI 318-11 D.3.3.5.2:

1. For the calculation of the in-plane shear strength of anchor bolts attaching wood sill plates of bearing or non-bearing walls of light-frame wood structures to foundations or foundation stem walls, the in-plane shear strength in accordance with ACI 318-11 D.6.2 and D.6.3 need not be computed and ACI 318-11 D.3.3.5.3 need not apply provided all of the following are satisfied:

   1.1. The allowable in-plane shear strength of the anchor is determined in accordance with AF&PA NDS Table 11E for lateral design values parallel to grain.

   1.2. The maximum anchor nominal diameter is $^5/_8$ inch (16 mm).

   1.3. Anchor bolts are embedded into concrete a minimum of 7 inches (178 mm).

   1.4. Anchor bolts are located a minimum of $1^3/_4$ inches (45 mm) from the edge of the concrete parallel to the length of the wood sill plate.

   1.5. Anchor bolts are located a minimum of 15 anchor diameters from the edge of the concrete perpendicular to the length of the wood sill plate.

   1.6. The sill plate is 2-inch or 3-inch nominal thickness.

2. For the calculation of the in-plane shear strength of anchor bolts attaching cold-formed steel track of bearing or non-bearing walls of light-frame construction to foundations or foundation stem walls, the in-plane shear strength in accordance with ACI 318-11 D.6.2 and D.6.3 need not be computed and ACI 318-11 D.3.3.5.3 need not apply provided all of the following are satisfied:

   2.1. The maximum anchor nominal diameter is $^5/_8$ inch (16 mm).

   2.2. Anchors are embedded into concrete a minimum of 7 inches (178 mm).

   2.3. Anchors are located a minimum of $1^3/_4$ inches (45 mm) from the edge of the concrete parallel to the length of the track.

   2.4. Anchors are located a minimum of 15 anchor diameters from the edge of the concrete perpendicular to the length of the track.

   2.5. The track is 33 to 68 mil designation thickness.

   Allowable in-plane shear strength of exempt anchors, parallel to the edge of concrete shall be permitted to be determined in accordance with AISI S100 Section E3.3.1.

3. In light-frame construction, bearing or nonbearing walls, shear strength of concrete anchors less than or equal to 1 inch [25 mm] in diameter attaching a sill plate or track to foundation or foundation stem wall need not satisfy ACI 318-11 D.3.3.5.3(a) through (c) when the design strength of the anchors is determined in accordance with ACI 318-11 D.6.2.1(c).

4.2 Strength Design of Pure110+ Epoxy Adhesive Post-Installed Reinforcing Bar Connections:

4.2.1 General: The design of straight post-installed deformed reinforcing bars must be determined in accordance with ACI 318 rules for cast-in place reinforcing bar development and splices and this report.

Examples of typical applications for the use of post-installed reinforcing bars are illustrated in Figure 3 of this report.

4.2.2 Determination of bar development length l_d: Values of l_d must be determined in accordance with the ACI 318 development and splice length requirements for straight cast-in place reinforcing bars.

Exceptions:

1. For uncoated and zinc-coated (galvanized) post-installed reinforcing bars, the factor Ψ_e shall be taken as

1.0. For all other cases, the requirements in ACI 318-14 25.4.2.4 or ACI 318-11 12.2.4 (b) shall apply.

2. When using alternate methods to calculate the development length (e.g., anchor theory), the applicable factors for post-installed anchors generally apply.

4.2.3 Minimum Member Thickness, h_{min}, Minimum Concrete Cover, $c_{c,min}$, Minimum Concrete Edge Distance, $c_{b,min}$, Minimum Spacing, $s_{b,min}$,: For post-installed reinforcing bars, there is no limit on the minimum member thickness. In general, all requirements on concrete cover and spacing applicable to straight cast-in bars designed in accordance with ACI 318 shall be maintained.

For post-installed reinforcing bars installed at embedment depths, h_{ef}, larger than $20d_b$ ($h_{ef} > 20d_b$), the minimum concrete cover shall be as follows:

REBAR SIZE	MINIMUM CONCRETE COVER, $c_{c,min}$
$d_b \leq$ No. 6 (16 mm)	1 $^1/_8$ in. (29 mm)
No. 6 < $d_b \leq$ No. 11 (16 mm < $d_b \leq$ 35 mm)	1$^9/_{16}$ in. (40 mm)

The following requirements apply for minimum concrete edge and spacing for $h_{ef} > 20\ d_b$:

Required minimum edge distance for post-installed reinforcing bars (measured from the center of the bar):

$c_{b,min} = d_0/2 + c_{c,min}$

Required minimum center-to-center spacing between post-installed bars:

$s_{b,min} = d_0 + c_{c,min}$

Required minimum center-to-center spacing from existing (parallel) reinforcing:

$s_{b,min} = d_b/2$ *(existing reinforcing)* $+ d_0/2 + c_{c,min}$

All other requirements applicable to straight cast-in place bars designed in accordance with ACI 318 shall be maintained.

4.2.4 Design Strength in Seismic Design Categories C, D, E and F: In structures assigned to SDC C, D, E or F under the IBC or IRC, design of straight post-installed reinforcing bars must take into account the provisions of ACI 318-14 Chapter 18 or ACI 318-11 Chapter 21, as applicable. The value of f'_c to be used in ACI 318-14 25.4.2.2, 25.4.2.3, 25.4.9.2, and 25.4.9.3, or ACI 318-11 Section 12.2.2, 12.2.3, and 12.3.2, as applicable, shall not exceed 2,500 psi for post-installed reinforcing bar applications in SDCs C, D, E, and F.

4.3 Allowable Stress Design (ASD):

4.3.1 General: For anchor system designed using load combinations in accordance with IBC Section 1605.3 (Allowable Stress Design), allowable loads must be established using Eq. (4-2) and Eq. (4-3):

$$T_{allowable,ASD} = \phi N_n / \alpha \qquad \text{Eq. (4-2)}$$

and

$$V_{allowable,ASD} = \phi V_n / \alpha \qquad \text{Eq. (4-3)}$$

where

$T_{allowable,ASD}$ = Allowable tension load (lbf or kN).

$V_{allowable,ASD}$ = Allowable shear load (lbf or kN).

ϕN_n = The lowest design strength of an anchor or anchor group in tension as determined in accordance with ACI 318-14 Chapter 17 and 2015 IBC Section 1905.1.8; ACI 318-11 Appendix D as amended in this report; ACI 318-08 Appendix D and 2009 IBC Sections 1908.1.9 and 1908.1.10, as applicable.

ϕV_n = The lowest design strength of an anchor or anchor group in shear as determined in accordance with ACI 318-14 Chapter 17 and 2015 IBC Section 1905.1.8; ACI 318-11 Appendix D as amended in this report; ACI 318-08 Appendix D and 2009 IBC Sections 1908.1.9 and 1908.1.10, as applicable.

α = Conversion factor calculated as a weighted average of the load factors for the controlling load combination. In addition, α must include all applicable factors to account for non-ductile failure modes and required over-strength.

The requirements described in this report for member thickness, edge distance and spacing, must apply.

4.3.2 Interaction of Tensile and Shear Forces: Interaction must be calculated in accordance with ACI 318-14 17.6 or ACI 318 (-11, -08) D.7, as applicable, as follows:

For shear loads $V \leq 0.2\ V_{allowable,ASD}$, the full allowable load in tension shall be permitted.

For tension loads $T \leq 0.2\ T_{allowable,ASD}$, the full allowable load in shear shall be permitted.

For all other cases:

$$\frac{T}{T_{allowable,ASD}} + \frac{V}{V_{allowable,ASD}} \leq 1.2 \qquad \text{Eq. (4-4)}$$

4.4 Installation:

Installation parameters are illustrated in Table 12 of this report for post-installed adhesive anchor system and Table 14 for post-installed reinforcing bar connection system. Installation must be in accordance with ACI 318-14 17.8.1 and 17.8.2 or ACI 318-11 D.9.1 and D.9.2, as applicable. Anchor and post-installed reinforcing bar locations must comply with this report and the plans and specifications approved by the code official. Installation of the Pure110+ Epoxy Adhesive Anchor System and Post-installed Reinforcing Bar Connection System must be in accordance with the Manufacturer's printed installation instructions (MPII) included in each unit package as reproduced in Figure 4 of this report.

The adhesive anchor system may be used for upwardly inclined orientation applications (e.g. overhead). Upwardly inclined and horizontal orientation applications are to be installed using piston plugs for the $^5/_8$-inch through 1$^1/_4$-inch (M16 through M30) diameter threaded steel rods and No. 5 through No. 10 (14 mm through 32 mm) steel reinforcing bars, installed in the specified hole diameter, and attached to the mixing nozzle and extension tube supplied by DEWALT as described in Figure 4 in this report. Upwardly inclined and horizontal orientation installation for the $^3/_8$-inch and $^1/_2$-inch (M10 and M12) diameter threaded steel rods, and No. 3 and No. 4 (10 mm and 12 mm) steel reinforcing bars may be injected directly to the end of the hole using extension tubing attached to the mixing nozzle with a hole depth $h_0 \leq$ 10" (250 mm).

Installation of anchors in horizontal or upwardly inclined (overhead) orientations shall be fully restrained from movement throughout the specified curing period through the use of temporary wedges, external supports, or other methods. Where temporary restraint devices are used, their use shall not result in impairment of the anchor shear resistance.

4.5 Special Inspection:

Periodic special inspection must be performed where required in accordance with Section 1705.1.1 and Table 1705.3 of the 2015 and 2012 IBC, Section 1704.15 and Table 1704.4 of the 2009 IBC and this report. The special inspector must be on the jobsite initially during adhesive anchor or post-installed reinforcing bar connection installation to verify anchor or post-installed reinforcing bar type and dimensions, concrete type, concrete compressive strength, adhesive identification and expiration date, hole dimensions, hole cleaning procedures, anchor spacing, edge distances, concrete thickness, adhesive anchor or post-installed reinforcing bar connection embedment, tightening torque and adherence to the manufacturer's printed installation instructions (MPII). The special inspector must verify the initial installations of each type and size of adhesive anchor or post-installed reinforcing bar connection by construction personnel on the site. Subsequent installations of the same anchor type and size by the same construction personnel are permitted to be performed in the absence of the special inspector. Any change in the anchor product being installed or the personnel performing the installation requires an initial inspection. For ongoing installations over an extended period, the special inspector must make regular inspections to confirm correct handling and installation of the product.

Continuous special inspection of adhesive anchors installed in horizontal or upwardly inclined orientations to resist sustained tension loads must be performed in accordance with ACI 318-14 17.8.2.4, 26.7.1(h) and 26.13.3.2 (c) or ACI 318-11 D.9.2.4, as applicable.

Under the IBC, additional requirements as set forth in Section 1705.1.1 and Table 1705.3 of the 2015 or 2012 IBC and Sections 1705, 1706 or 1707 of the 2009 IBC must be observed, where applicable.

4.6 Compliance with NSF/ANSI Standard 61:

The Pure110+ Epoxy Adhesive Anchor System and Post-installed Reinforcing Bar Connections comply with the requirements of NSF/ANSI Standard 61, as referenced in Section 605 of the 2015, 2012 and 2009 *International Plumbing Code*® (IPC), and is certified for use in water distribution systems and may have a maximum exposed surface area to volume ratio of 216 square inches per 1000 gallons (3785 L) for water treatment applications.

5.0 CONDITIONS OF USE:

The Pure110+ Epoxy Adhesive Anchor System and Post-installed Reinforcing Bar Connection System described in this report comply with or is a suitable alternative to what is specified in the codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 Pure110+ epoxy Adhesive Anchors System and Post-installed Reinforcing Bar Connection System must be installed in accordance with the Manufacturer's printed installation instructions (MPII) as attached to each cartridge and reproduced in Figure 4 of this report.

5.2 The Adhesive Anchor System and Post-installed Reinforcing Bar Connection System described in this report must be installed in cracked or uncracked normalweight concrete or lightweight concrete having a specified compressive strength, f'_c = 2,500 psi to 8,500 psi (17.2 MPa to 58.6 MPa).

5.3 The values of f'_c used for calculation purposes must not exceed 8,000 psi (55.2 MPa), except as noted in Section 4.2.4 of this report. Steel anchor elements must be installed in concrete base materials in holes predrilled in accordance with the instructions provided in Figure 4 of this report.

5.4 The concrete shall have attained its minimum design strength prior to installation of the Adhesive Anchor System and Post-installed Reinforcing Bar Connection System.

5.5 Loads applied to the Adhesive Anchor System and Post-installed Reinforcing Bar Connection System must be adjusted in accordance with Section 1605.2 of the IBC for strength design and in accordance with Section 1605.3 of the IBC for allowable stress design.

5.6 Pure110+ epoxy Adhesive Anchors System and Post-installed Reinforcing Bar Connection System are recognized for use to resist short and long-term loads, including wind and earthquake, subject to the conditions of this report.

5.7 In structures assigned to Seismic Design Categories C, D, E, and F under the IBC or IRC, anchor strength must be adjusted in accordance with Section 4.1.11 of this report, and post-installed reinforcing bars must comply with Section 4.2.4 of this report.

5.8 Pure110+ epoxy Adhesive Anchors System and Post-installed Reinforcing Bar Connection System are permitted to be installed in concrete that is cracked or that may be expected to crack during the service life of the anchors or post-installed reinforcing bar, subject to the conditions of this report.

5.9 Adhesive anchor strength design values must be established in accordance with Section 4.1 of this report.

5.10 Post-installed reinforcing bar connection development and splice length is established in accordance with Section 4.2 of this report.

5.11 Allowable stress design values must be established in accordance with Section 4.3 of this report.

5.12 Minimum anchor spacing and edge distance, as well as minimum member thickness, must comply with the values described in this report.

5.13 Post-installed reinforcing bar connection spacing, minimum member thickness, and cover distance must be in accordance with the provisions of ACI 318 for cast-in place bars and Section 4.2.3 of this report.

5.14 Prior to installation, calculations and details demonstrating compliance with this report must be submitted to the code official. The calculations and details must be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

5.15 Pure110+ epoxy Adhesive Anchors System and Post-installed Reinforcing Bar Connection System are not permitted to support fire-resistive construction. Where not otherwise prohibited by the code, Pure110+ epoxy adhesive anchors and post-installed reinforcing bar connections are permitted for installation in fire-resistive construction provided that at least one of the following conditions is fulfilled:

- Pure110+ epoxy Adhesive Anchors System and Post-installed Reinforcing Bar Connection System are used to resist wind or seismic forces only.
- Pure110+ epoxy Adhesive Anchors System and Post-installed Reinforcing Bar Connection System that support gravity load-bearing structural elements are within a fire-resistive envelope or a

fire-resistive membrane, are protected by approved fire-resistive materials, or have been evaluated for resistance to fire exposure in accordance with recognized standards.

- Pure110+ epoxy Adhesive Anchors System and Post-installed Reinforcing Bar Connection System are used to support non-structural elements.

5.16 Since an ICC-ES acceptance criteria for evaluating data to determine the performance of adhesive anchor system and post-installed reinforcing bar connection system subjected to fatigue or shock loading is unavailable at this time, the use of these anchors under such conditions is beyond the scope of this report.

5.17 Use of zinc-plated carbon steel threaded rods or steel reinforcing bars for adhesive anchors is limited to dry, interior locations.

5.18 Use of hot-dipped galvanized carbon steel and stainless steel threaded rods for adhesive anchors is permitted for exterior exposure or damp environments.

5.19 Steel anchoring materials in contact with preservative-treated wood and fire-retardant-treated wood must be of zinc-coated carbon steel or stainless steel. The minimum coating weights for zinc-coated steel must comply with ASTM A153.

5.20 Periodic special inspection must be provided in accordance with Section 4.5 of this report. Continuous special inspection of adhesive anchor system and post-installed reinforcing bar connection system installed in horizontal or upwardly inclined orientations to resist sustained tension loads must be provided in accordance with Section 4.5 of this report.

5.21 Pure110+ epoxy Adhesive Anchors System and Post-installed Reinforcing Bar Connection System may be used to resist tension and shear forces in floor, wall and overhead installations into concrete with a temperature between 41°F and 104°F (5°C and 40°C). For overhead and upwardly inclined applications, cartridge temperature must be between 50°F and 90°F (10°C and 32°C) Overhead and upward inclined installations require the use of piston plugs and extension tubing during injection and the adhesive anchor or post-installed reinforcing bar connection system must be supported until fully cured (e.g. wedges or other suitable means). See the MPII in Figure 4 of this report for detailed installation requirements, including required installation equipment, procedures, and temperatures.

5.22 Installation of adhesive anchor system and post-installed reinforcing bar connection system in horizontal or upwardly inclined orientations to resist sustained tension loads must be performed by personnel certified by an applicable certification program in accordance with ACI 318-14 17.8.2.2 or 17.8.2.3 or ACI 318-11 D.9.2.2 or D.9.2.3, as applicable.

5.23 The Pure110+ epoxy adhesive is manufactured under an approved quality-control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED:

Data in accordance with the ICC-ES Acceptance Criteria for Post-installed Adhesive Anchors in Concrete (AC308), dated October 2017, which incorporates requirements inACI 355.4-11 for use in cracked and uncracked concrete; including, but not limited to, tests under freeze/thaw conditions, tests under sustained load, tests for installation including installation direction, tests at elevated temperatures, tests for resistance to alkalinity, tests for resistance to sulfur, tests for seismic tension and shear, and tests for post-installed reinforcing bar connections.

7.0 IDENTIFICATION:

The Pure110+ epoxy adhesive and additional listee product name described in Section 3.1 of this report are identified by packaging labeled with the lot number; expiration date; company name (DEWALT); and the evaluation report number (ESR-3298). Threaded rods, nuts, washers and deformed reinforcing bars are standard steel anchor elements and must conform to applicable national or international specifications as set forth in Tables 2 and 3 of this report.

The DEWALT drilling systems shown below collect and remove dust with a HEPA dust extractor during the hole drilling operation in dry base materials using hammer-drills (see step 1 of the manufacturer's published installation instructions).

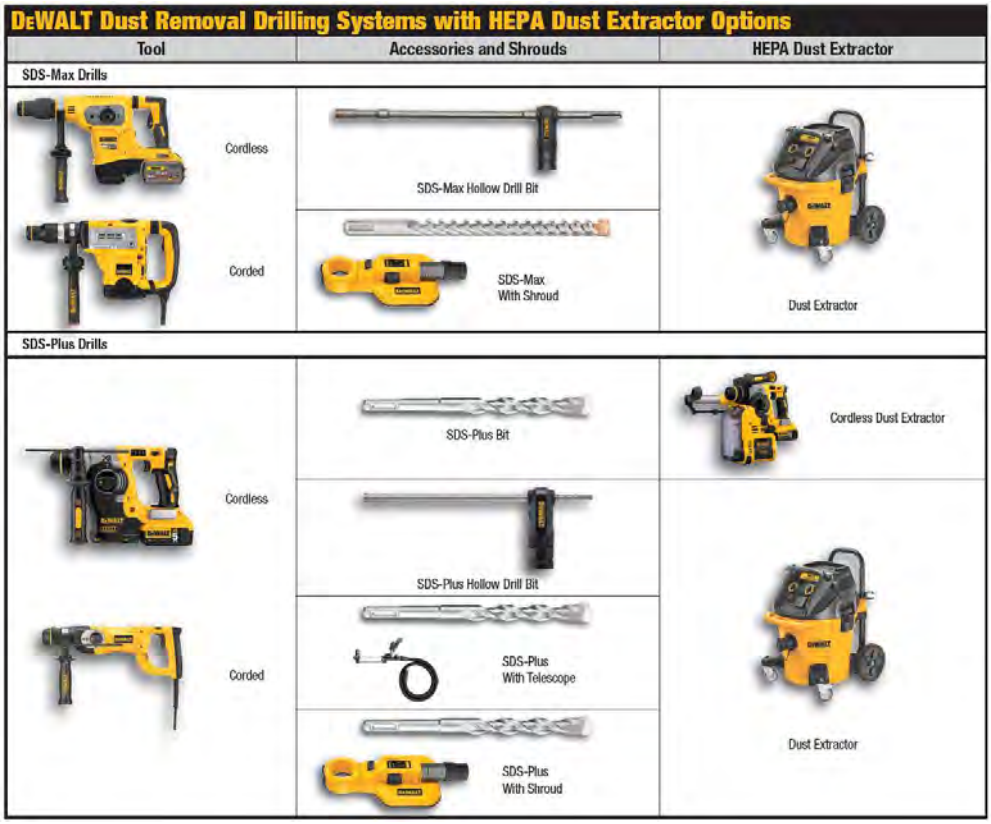


FIGURE A—EXAMPLES DEWALT DUST REMOVAL DRILLING SYSTEMS WITH HEPA DUST EXTRACTORS FOR ILLUSTRATION

TABLE 1A—DESIGN USE AND REPORT TABLE INDEX FOR POST-INSTALLED ADHESIVE ANCHORS

POST-INSTALLED ADHESIVE ANCHORS – TREADED RODS AND REINFORCING BARS (Tables 4 to 11 and Figure 1)					
DESIGN STRENGTH[1]		**THREADED ROD (FRACTIONAL)**	**DEFORMED REINFORCING BAR (FRACTIONAL)**	**THREADED ROD (METRIC)**	**DEFORMED REINFORCING BAR (METRIC)**
Steel	N_{sa}, V_{sa}	Table 4	Table 5	Table 8	Table 9
Concrete	N_{cb}, N_{cbg}, V_{cb}, V_{cbg}, V_{cp}, V_{cpg}	Table 6	Table 6	Table 10	Table 10
Bond[2]	N_a, N_{ag}	Table 7	Table 7	Table 11	Table 11

Concrete Type	**Concrete State**	**Threaded Rod Diameter (inch)**	**Reinforcing Bar Size (No.)**	**Drilling Method[3]**	**Minimum and Maximum Embedment**	**Seismic Design Categories[4]**
Normal-weight and lightweight	Cracked	$^3/_8$, $^1/_2$, $^5/_8$, $^3/_4$, $^7/_8$, 1, $1^1/_4$	3, 4, 5, 6, 7, 8, 9, 10	Hammer-drill	See Table 7	A through F
	Uncracked	$^3/_8$, $^1/_2$, $^5/_8$, $^3/_4$, $^7/_8$, 1, $1^1/_4$	3, 4, 5, 6, 7, 8, 9, 10	Hammer-drill	See Table 7	A and B
Concrete Type	**Concrete State**	**Threaded Rod Diameter (mm)**	**Reinforcing Bar Size (Ø)**	**Drilling Method[3]**	**Minimum and Maximum Embedment**	**Seismic Design Categories[4]**
Normal-weight and lightweight	Cracked	10, 12, 16, 20, 24, 27, 30	10, 12, 14, 16, 20, 25, 28, 32	Hammer-drill	See Table 11	A through F
	Uncracked	10, 12, 16, 20, 24, 27, 30	10, 12, 14, 16, 20, 25, 28, 32	Hammer-drill	See Table 11	A and B

For **SI:** 1 inch = 25.4 mm. For **pound-inch** units: 1 mm = 0.03937 inch.

[1]Reference ACI 318-14 17.3.1.1 or 318-11 D.4.1.1, as applicable for post-installed adhesive anchors. The controlling strength is decisive from all appropriate failure modes (i.e. steel, concrete, bond) and design assumptions.
[2]See Section 4.1.4 of this report for bond strength determination of post-installed adhesive anchors.
[3]Hammer-drill, i.e. rotary impact drills or rock drills with a carbide drill bit (including hollow drill bits).
[4]See Section 4.1.11 for requirements for seismic design of post-installed adhesive anchors, where applicable.

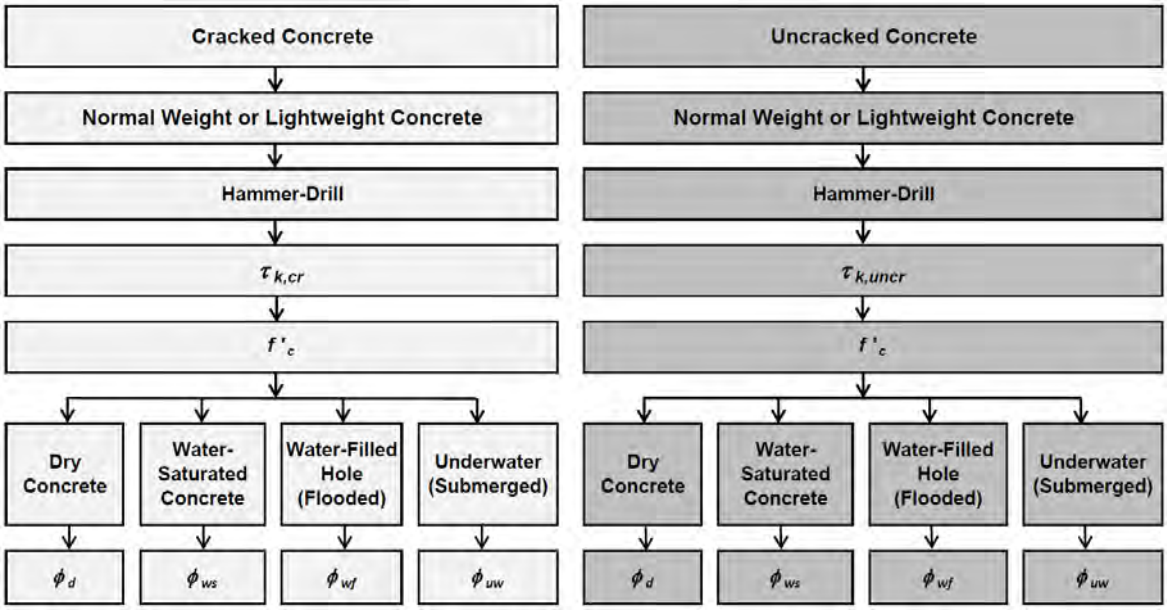


FIGURE 1—FLOWCHART FOR THE ESTABLISHMENT OF DESIGN BOND STRENGTH FOR POST-INSTALLED ADHESIVE ANCHORS

TABLE 1B—DESIGN USE AND REPORT TABLE INDEX FOR POST-INSTALLED REINFORCING BAR CONNECTIONS[1]

POST-INSTALLED REINFORCING BARS (Table 13 and Figure 3)[5]			
Concrete Type	**Reinforcing Bar Size**	**Drilling Method[2]**	**Seismic Design Categories[3]**
Normal-weight and lightweight	#3, #4, #5, #6, #7, #8, #9, #10, #11	Hammer-drill or core-drill	A through F
	Ø10, Ø12, Ø14, Ø16, Ø20, Ø25, Ø28, Ø32, Ø34, Ø36	Hammer-drill or core-drill	A through F
	10M, 15M, 20M, 25M, 30M, 35M	Hammer-drill or core-drill	A through F

For **SI:** 1 inch = 25.4 mm. For **pound-inch** units: 1 mm = 0.03937 inch.

[1]Determination of development length for post-installed reinforcing bar connections.
[2]Hammer-drill, i.e. rotary impact drills or rock drills with a carbide drill bit (including hollow drill bits); core-drill, i.e. core drill with a diamond core drill bit.
[3]See Section 4.2.4 for requirements for seismic design of post-installed reinforcing bar connections, where applicable.

TABLE 2—SPECIFICATIONS AND PROPERTIES OF COMMON THREADED CARBON AND STAINLESS STEEL ROD MATERIALS[1]

THREADED ROD SPECIFICATION		UNITS	MIN. SPECIFIED ULTIMATE STRENGTH, f_{uta}	MIN. SPECIFIED YIELD STRENGTH 0.2 PERCENT OFFSET, f_{ya}	$\frac{f_{uta}}{f_{ya}}$	ELONGATION MINIMUM PERCENT[11]	REDUCTION OF AREA MIN. PERCENT	NUT SPECIFICATION[12]
Carbon Steel	ASTM A36[2] and F1554[3] Grade 36	psi (MPa)	58,000 (400)	36,000 (248)	1.61	23	40 (50 for A36)	ASTM A194 / A563 Grade A
	ASTM F1554[3] Grade 55	psi (MPa)	75,000 (517)	55,000 (380)	1.36	23	40	
	ASTM F1554[3] Grade 105	psi (MPa)	125,000 (862)	105,000 (724)	1.19	15	45	ASTM A194 / A563 Grade DH
	ASTM A193[4] Grade B7	psi (MPa)	125,000 (860)	105,000 (720)	1.19	16	50	
	ASTM A449[5] ($^3/_8$ to 1 inch dia.)	psi (MPa)	120,000 (828)	92,000 (635)	1.30	14	35	ASTM A194 / A563 Grade DH
	ASTM A449[5] ($1^1/_4$ inch dia.)	psi (MPa)	105,000 (720)	81,000 (560)	1.30	14	35	
	ASTM F568M[6] Class 5.8 (equivalent to ISO 898-1)	psi (MPa)	72,500 (500)	58,000 (400)	1.25	10	35	ASTM A563 Grade DH DIN 934 (8-A2K)[13]
	ISO 898-1[7] Class 5.8	MPa (psi)	500 (72,500)	400 (58,000)	1.25	22	-[14]	DIN 934 Grade 6
	ISO 898-1[7] Class 8.8	MPa (psi)	800 (116,000)	640 (92,800)	1.25	12	52	DIN 934 Grade 8
Stainless Steel	ASTM F593[8] CW1 ($^3/_8$ to $^5/_8$ inch dia.)	psi (MPa)	100,000 (690)	65,000 (450)	1.54	20	-[14]	ASTM F594 Alloy Group 1, 2 or 3
	ASTM F593[8] CW2 ($^3/_4$ to $1^1/_4$ inch dia.)	psi (MPa)	85,000 (590)	45,000 (310)	1.89	25	-[14]	
	ASTM A193/A193M[9] Grade B8/B8M, Class 1	psi (MPa)	75,000 (515)	30,000 (205)	2.50	30	50	ASTM A194/A194M
	ASTM A193/A193M[9] Grade B8/B8M2, Class 2B	psi (MPa)	95,000 (655)	75,000 (515)	1.27	25	40	
	ISO 3506-1[10] A4-70 and HCR-70 (M8 – M24)	MPa (psi)	700 (101,500)	450 (65,250)	1.56	40	-[14]	ISO 4032
	ISO 3506-1[10] A4-50 and HCR-50 (M27 – M30)	MPa (psi)	500 (72,500)	210 (30,450)	2.38	40	-[14]	

For **SI:** 1 inch = 25.4 mm, 1 psi = 0.006897 MPa. For **pound-inch** units: 1 mm = 0.03937 inch, 1 MPa = 145.0 psi.

[1]Pure110+ epoxy adhesive may be used in conjunction with all grades of continuously threaded carbon or stainless steels (all-thread) that comply with this table and that have thread characteristics comparable with ANSI B1.1 UNC Coarse Thread Series or ANSI B1.13M M Profile Metric Thread Series. Tabulated values correspond to anchor diameters included in this report. See Section 3.2.4.3 of this report for ductility of steel anchor elements.

[2]*Standard Specification for Carbon Structural Steel.*

[3]*Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength.*

[4]*Standard Specification for Alloy-Steel and Stainless Steel Bolting Materials for High Temperature or High Pressure Service and Other Special Purpose Applications.*

[5]*Standard Specification for Hex Cap Screws, Bolts and Studs, Steel, Heat Treated, 120/105/90 ksi Minimum Tensile Strength, General Use.*

[6]*Standard Specification for Carbon and Alloy Steel Externally Threaded Metric Fasteners.*

[7]*Mechanical properties of fasteners made of carbon steel and alloy steel – Part 1: Bolts, screws and studs*

[8]*Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs.*

[9]*Standard Standard Specification for Alloy-Steel and Stainless Steel Bolting for High Temperature or High Pressure Service and Other Special Purpose Applications*.

[10] *Mechanical properties of fasteners made of corrosion-resistant stainless steel fasteners – Part 1: Bolts, screws and studs*

[11]Based on 2-inch (50 mm) gauge length except ASTM A193, which are based on a gauge length of 4*d* and ISO 898, which is based on 5*d*; *d* = nominal diameter.

[12]Nuts of other grades and style having specified proof load stress greater than the specified grade and style are also suitable. Nuts must have specified proof load stresses equal to or greater than the minimum tensile strength of the specified threaded rod. Material types of the nuts and washers must be matched to the threaded rods.

[13]Nuts for metric rods.

[14]Minimum percent reduction of area not reported in the referenced standard.

TABLE 3—SPECIFICATIONS AND PROPERTIES OF COMMON STEEL REINFORCING BARS[1]

REINFORCING SPECIFICATION	UNITS	MINIMUM SPECIFIED ULTIMATE STRENGTH, f_{uta}	MINIMUM SPECIFIED YIELD STRENGTH, f_{ya}
ASTM A615[2], A767[4], Grade 75	psi (MPa)	100,000 (690)	75,000 (520)
ASTM A615[2], A767[4], Grade 60	psi (MPa)	90,000 (620)	60,000 (420)
ASTM A706[3], A767[4], Grade 60	psi (MPa)	80,000 (550)	60,000 (420)
ASTM A615[2], A767[4], Grade 40	psi (MPa)	60,000 (420)	40,000 (280)
DIN 488[5] BSt 500	MPa (psi)	550 (80,000)	500 (72,500)
CAN/CSA G30.18[6], Grade 400	MPa (psi)	540 (78,300)	400 (58,000)

For **SI:** 1 psi = 0.006897 MPa. For **pound-inch** units: 1 MPa = 145.0 psi.

[1]Adhesive must be used with specified deformed reinforcing bars. Tabulated values correspond to bar sizes included in this report.

[2]*Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement.* Grade 40 and Grade 60 bars furnished to specification are considered ductile elements. In accordance with ACI 318-14 17.2.3.4.3(a)(vi) or ACI 318-11 D.3.3.4.3(a)6, as applicable, deformed reinforcing bars meeting this specification used as ductile steel elements to resist earthquake effects shall be limited to reinforcing bars satisfying the requirements of ACI 318-14 20.2.2.4 and 20.2.2.5 or ACI 318-11 21.1.5.2(a) and (b), as applicable. Grade 75 bars furnished to specification are considered brittle elements unless evidence is otherwise shown to the satisfaction of the registered design professional and code official in accordance with Section 3.2.4.3 of this report.

[3]*Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement.* Bars furnished to specification are considered ductile elements.

[4]*Standard Specification for Zinc-Coated (Galvanized) Steel Bars for Concrete Reinforcement*. Bars furnished to specification are considered brittle elements unless evidence is otherwise shown to the satisfaction of the registered design professional and code official in accordance with Section 3.2.4.3 of this report.

[5]*Reinforcing steel; reinforcing steel bars; dimensions and masses*. Bars furnished to this specification are considered brittle elements unless evidence is otherwise shown to the satisfaction of the registered design professional and code official in accordance with Section 3.2.4.3 of this report.

TABLE 4—STEEL DESIGN INFORMATION FOR FRACTIONAL THREADED ROD

DESIGN INFORMATION		SYMBOL	UNITS	NOMINAL ROD DIAMETER[1] (inch)						
				3/8	1/2	5/8	3/4	7/8	1	1 1/4
Threaded rod nominal outside diameter		d	inch (mm)	0.375 (9.5)	0.500 (12.7)	0.625 (15.9)	0.750 (19.1)	0.875 (22.2)	1.000 (25.4)	1.250 (31.8)
Threaded rod effective cross-sectional area		A_{se}	inch² (mm²)	0.0775 (50)	0.1419 (92)	0.2260 (146)	0.3345 (216)	0.4617 (298)	0.6057 (391)	0.9691 (625)
ASTM A36 and ASTM F1554 Grade 36	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	lbf (kN)	4,495 (20.0)	8,230 (36.6)	13,110 (58.3)	19,400 (86.3)	26,780 (119.1)	35,130 (156.3)	56,210 (250.0)
		V_{sa}	lbf (kN)	2,695 (12.0)	4,940 (22.0)	7,860 (35.0)	11,640 (51.8)	16,070 (71.4)	21,080 (93.8)	33,725 (150.0)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.80						
	Strength reduction factor for tension[2]	ϕ	-	0.75						
	Strength reduction factor for shear[2]	ϕ	-	0.65						
ASTM F1554 Grade 55	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	lbf (kN)	5,810 (25.9)	10,640 (47.3)	16,950 (75.4)	25,085 (111.6)	34,625 (154.0)	45,425 (202.0)	72,680 (323.3)
		V_{sa}	lbf (kN)	3,485 (15.5)	6,385 (28.4)	10,170 (45.2)	15,050 (67.0)	20,775 (92.4)	27,255 (121.2)	43,610 (194.0)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.80						
	Strength reduction factor for tension[2]	ϕ	-	0.75						
	Strength reduction factor for shear[2]	ϕ	-	0.65						
ASTM A193 Grade B7 and ASTM F1554 Grade 105	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	lbf (kN)	9,685 (43.1)	17,735 (78.9)	28,250 (125.7)	41,810 (186.0)	57,710 (256.7)	75,710 (336.8)	121,135 (538.8)
		V_{sa}	lbf (kN)	5,815 (25.9)	10,640 (7.3)	16,950 (75.4)	25,085 (111.6)	34,625 (154.0)	45,425 (202.1)	72,680 (323.3)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.80						
	Strength reduction factor for tension[2]	ϕ	-	0.75						
	Strength reduction factor for shear[2]	ϕ	-	0.65						
ASTM A449	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	lbf (kN)	9,300 (41.4)	17,025 (75.7)	27,120 (120.6)	40,140 (178.5)	55,905 (248.7)	72,685 (323.3)	101,755 (452.6)
		V_{sa}	lbf (kN)	5,580 (24.8)	10,215 (45.4)	16,270 (72.4)	24,085 (107.1)	33,540 (149.2)	43,610 (194.0)	61,050 (271.6)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.80						
	Strength reduction factor for tension[2]	ϕ	-	0.75						
	Strength reduction factor for shear[2]	ϕ	-	0.65						
ISO 898-1 Class 5.8	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	lbf (kN)	5,620 (25.0)	10,290 (45.8)	16,385 (72.9)	24,250 (107.9)	33,475 (148.9)	43,915 (195.4)	[5]
		V_{sa}	lbf (kN)	3,370 (15.0)	6,175 (27.5)	9,830 (43.7)	14,550 (64.7)	20,085 (89.3)	26,350 (117.2)	[5]
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.80						[5]
	Strength reduction factor for tension[3]	ϕ	-	0.65						
	Strength reduction factor for shear[3]	ϕ	-	0.60						
ASTM F593 CW Stainless (Types 304 and 316)	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	lbf (kN)	7,750 (34.5)	14,190 (63.1)	22,600 (100.5)	28,430 (126.5)	39,245 (174.6)	51,485 (229.0)	82,370 (366.4)
		V_{sa}	lbf (kN)	4,650 (20.7)	8,515 (37.9)	13,560 (60.3)	17,060 (75.9)	23,545 (104.7)	30,890 (137.4)	49,425 (219.8)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.70		0.80				
	Strength reduction factor for tension[3]	ϕ	-	0.65						
	Strength reduction factor for shear[3]	ϕ	-	0.60						
ASTM A193 Grade B8/B8M, Class 1 Stainless (Types 304 and 316)	Nominal strength as governed by steel strength (for a single anchor)[4]	N_{sa}	lbf (kN)	4,420 (19.7)	8,090 (36.0)	12,880 (57.3)	19,065 (84.8)	26,315 (117.1)	34,525 (153.6)	55,240 (245.7)
		V_{sa}	lbf (kN)	2,650 (11.8)	4,855 (21.6)	7,730 (34.4)	11,440 (50.9)	15,790 (70.2)	20715 (92.1)	33,145 (147.4)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.70		0.80				
	Strength reduction factor for tension[2]	ϕ	-	0.75						
	Strength reduction factor for shear[2]	ϕ	-	0.65						
ASTM A193 Grade B8/B8M2, Class 2B Stainless (Types 304 and 316)	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	lbf (kN)	7,365 (32.8)	13,480 (60.0)	21,470 (95.5)	31,775 (141.3)	43,860 (195.1)	57,545 (256.0)	92,065 (409.5)
		V_{sa}	lbf (kN)	4,420 (19.7)	8,085 (36.0)	12,880 (57.3)	19,065 (84.8)	26,315 (117.1)	34,525 (153.6)	55,240 (245.7)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.70		0.80				
	Strength reduction factor for tension[2]	ϕ	-	0.75						
	Strength reduction factor for shear[2]	ϕ	-	0.65						

For **SI:** 1 inch = 25.4 mm, 1 lbf = 4.448 N. For **pound-inch** units: 1 mm = 0.03937 inches, 1 N = 0.2248 lbf.

[1]Values provided for steel element material types are based on minimum specified strengths and calculated in accordance with ACI 318-14 Eq. 17.4.1.2 and Eq. 17.5.1.2(b) or ACI 318-11 Eq. D-2 and Eq. D-29, as applicable, except where noted. Nuts and washers must be appropriate for the rod. See Table 2 for nut specifications.

[2]The tabulated value of ϕ applies when the load combinations of Section 1605.2 of the IBC, ACI 318-14 5.3 or ACI 318-11 9.2, as applicable are used in accordance with ACI 318-14 17.3.3 or ACI 318-11 D.4.3, as applicable. If the load combinations of ACI 318-11 Appendix C are used, the appropriate value of ϕ must be determined in accordance with ACI 318-11 D.4.4. Values correspond to ductile steel elements.

[3]The tabulated value of ϕ applies when the load combinations of Section 1605.2 of the IBC, ACI 318-14 5.3 or ACI 318-11 9.2, as applicable are used in accordance with ACI 318-14 17.3.3 or ACI 318-11 D.4.3, as applicable. If the load combinations of ACI 318-11 Appendix C are used, the appropriate value of ϕ must be determined in accordance with ACI 318-11 D.4.4. Values correspond to brittle steel elements.

[4]In accordance with ACI 318-14 17.4.1.2 and 17.5.1.2 or ACI 318-11 D.5.1.2 and D.6.1.2, as applicable, the calculated values for nominal tension and shear strength for ASTM A193 Grade B8/B8M Class 1 stainless steel threaded rods are based on limiting the specified tensile strength of the anchor steel to $1.9f_y$ or 57,000 psi (393 MPa).

[5]The referenced standard includes rod diameters up to and including 1-inch (24 mm).

TABLE 5—STEEL DESIGN INFORMATION FOR FRACTIONAL REINFORCING BARS

DESIGN INFORMATION		SYMBOL	UNITS	NOMINAL REINFORCING BAR SIZE (REBAR)[1]							
				#3	#4	#5	#6	#7	#8	#9	#10
Rebar nominal outside diameter		d	inch (mm)	0.375 (9.5)	0.500 (12.7)	0.625 (15.9)	0.750 (19.1)	0.875 (22.2)	1.000 (25.4)	1.125 (28.7)	1.250 (32.3)
Rebar effective cross-sectional area		A_{se}	inch^2 (mm^2)	0.110 (71.0)	0.200 (129.0)	0.310 (200.0)	0.440 (283.9)	0.600 (387.1)	0.790 (509.7)	1.000 (645.2)	1.270 (819.4)
ASTM A615 Grade 75	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	lbf (kN)	11,000 (48.9)	20,000 (89.0)	31,000 (137.9)	44,000 (195.7)	60,000 (266.9)	79,000 (351.4)	100,000 (444.8)	127,000 (564.9)
		V_{sa}	lbf (kN)	6,600 (29.4)	12,000 (53.4)	18,600 (82.7)	26,400 (117.4)	36,000 (160.1)	47,400 (210.8)	60,000 (266.9)	76,200 (338.9)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.70		0.80					
	Strength reduction factor for tension[3]	ϕ	-	0.65							
	Strength reduction factor for shear[3]	ϕ	-	0.60							
ASTM A615 Grade 60	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	lbf (kN)	9,900 (44.0)	18,000 (80.1)	27,900 (124.1)	39,600 (176.1)	54,000 (240.2)	71,100 (316.3)	90,000 (400.3)	114,300 (508.4)
		V_{sa}	lbf (kN)	5,940 (26.4)	10,800 (48.0)	16,740 (74.5)	23,760 (105.7)	32,400 (144.1)	42,660 (189.8)	54,000 (240.2)	68,580 (305.0)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.70		0.80					
	Strength reduction factor for tension[2]	ϕ	-	0.75							
	Strength reduction factor for shear[2]	ϕ	-	0.65							
ASTM A706 Grade 60	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	lbf (kN)	8,800 (39.1)	16,000 (71.2)	24,800 (110.3)	35,200 (156.6)	48,000 (213.5)	63,200 (281.1)	80,000 (355.9)	101,600 (452.0)
		V_{sa}	lbf (kN)	5,280 (23.5)	9,600 (42.7)	14,880 (66.2)	21,120 (94.0)	28,800 (128.1)	37,920 (168.7)	48,000 (213.5)	60,960 (271.2)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.70		0.80					
	Strength reduction factor for tension[2]	ϕ	-	0.75							
	Strength reduction factor for shear[2]	ϕ	-	0.65							
ASTM A615 Grade 40	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	Lbf (kN)	6,600 (29.4)	12,000 (53.4)	18,600 (82.7)	26,400 (117.4)	In accordance with ASTM A615, Grade 40 bars are furnished only in sizes No. 3 through No. 6			
		V_{sa}	Lbf (kN)	3,960 (17.6)	7,200 (32.0)	11,160 (49.6)	15,840 (70.5)				
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.70		0.80					
	Strength reduction factor for tension[2]	ϕ	-	0.75							
	Strength reduction factor for shear[2]	ϕ	-	0.65							

For **SI:** 1 inch = 25.4 mm, 1 lbf = 4.448 N. For **pound-inch** units: 1 mm = 0.03937 inches, 1 N = 0.2248 lbf.

[1]Values provided for reinforcing bar material types based on minimum specified strengths and calculated in accordance with ACI 318-14 Eq. 17.4.1.2 and Eq. 17.5.1.2b or ACI 318-11 Eq. D-2 and Eq. D-29, as applicable.

[2]The tabulated value of ϕ applies when the load combinations of Section 1605.2 of the IBC, ACI 318-14 5.3 or ACI 318-11 9.2, as applicable, are used in accordance with ACI 318-14 17.3.3 or ACI 318-11 D.4.3, as applicable. If the load combinations of ACI 318-11 Appendix C are used, the appropriate value of ϕ must be determined in accordance with ACI 318-11 D.4.4. Values correspond to ductile steel elements. In accordance with ACI 318-14 17.2.3.4.3(a)(vi) or ACI 318-11 D.3.3.4.3 (a) 6, as applicable, deformed reinforcing bars meeting this specification used as ductile steel elements to resist earthquake effects shall be limited to reinforcing bars satisfying the requirements of ACI 318-14 20.2.2.4 and 20.2.2.5 or ACI 318-11 21.1.5.2 (a) and (b) as applicable.

[3]The tabulated value of ϕ applies when the load combinations of Section 1605.2 of the IBC, ACI 318-14 5.3 or ACI 318-11 9.2, as applicable, are used in accordance with ACI 318-14 17.3.3 or ACI 318-11 D.4.3, as applicable. If the load combinations of ACI 318-11 Appendix C are used, the appropriate value of ϕ must be determined in accordance with ACI 318-11 D.4.4. Values correspond to brittle steel elements.

TABLE 6—CONCRETE BREAKOUT DESIGN INFORMATION FOR FRACTIONAL THREADED ROD AND REINFORCING BARS[1]

DESIGN INFORMATION	SYMBOL	UNITS	NOMINAL ROD DIAMETER (inch) / REINFORCING BAR SIZE							
			$^3/_8$ or #3	$^1/_2$ or #4	$^5/_8$ or #5	$^3/_4$ or #6	$^7/_8$ or #7	1 or #8	#9	$1^1/_4$ or #10
Effectiveness factor for cracked concrete	$k_{c,cr}$	- (SI)	17 (7.1)							
Effectiveness factor for uncracked concrete	$k_{c,uncr}$	- (SI)	24 (10.0)							
Minimum embedment	$h_{ef,min}$	inch (mm)	$2^3/_8$ (60)	$2^3/_4$ (70)	$3^1/_8$ (79)	$3^1/_2$ (89)	$3^1/_2$ (89)	4 (102)	$4^1/_2$ (114)	5 (127)
Maximum embedment	$h_{ef,max}$	inch (mm)	$7^1/_2$ (191)	10 (254)	$12^1/_2$ (318)	15 (381)	$17^1/_2$ (445)	20 (508)	$22^1/_2$ (572)	25 (635)
Minimum anchor spacing	s_{min}	inch (mm)	$1^7/_8$ (48)	$2^1/_2$ (64)	$3^1/_8$ (79)	$3^3/_4$ (95)	$4^3/_8$ (111)	5 (127)	$5^5/_8$ (143)	$6^1/_4$ (159)
Minimum edge distance	c_{min}	inch (mm)	5*d* where *d* is nominal outside diameter of the anchor; or see Section 4.1.9 of this report for design with reduced minimum edge distances:							
			$1^3/_4$ (45)						$2^3/_4$ (70)	
Minimum member thickness	h_{min}	inch (mm)	$h_{ef} + 1^1/_4$ (h_{ef} + 30)		$h_{ef} + 2d_o$ where d_o is hole diameter; for installation parameters see Table 12 of this report					
Critical edge distance—splitting (for uncracked concrete only)	c_{ac}	nch (mm)	See Section 4.1.10 of this report							
Strength reduction factor for tension, concrete failure modes, Condition B[2] (concrete breakout)	ϕ	-	0.65							
Strength reduction factor for shear, concrete failure modes, Condition B[2] (concrete breakout and pryout)	ϕ	-	0.70							

For **SI:** 1 inch = 25.4 mm, 1 lbf = 4.448 N. For **pound-inch** units: 1 mm = 0.03937 inch, 1 N = 0.2248 lbf.

[1]Additional setting information is described in the installation instructions, Figure 4 of this report.
[2]Condition A requires supplemental reinforcement, while Condition B applies where supplemental reinforcement is not provided or where pryout governs, as set forth in ACI 318-14 17.3.3 or ACI 318-11 D.4.3, as applicable. The tabulated value of ϕ applies when the load combinations of Section 1605.2 of the IBC or ACI 318-14 5.3 or ACI 318-11 9.2, as applicable, are used in accordance with ACI 318-14 17.3.3 or ACI 318-11 D.4.3, as applicable. If the load combinations of ACI 318-11 Appendix C are used, the appropriate value of ϕ must be determined in accordance with ACI 318-11 D.4.4.

TABLE 7—BOND STRENGTH DESIGN INFORMATION FOR FRACTIONAL THREADED RODS AND REINFORCING BARS[1]

DESIGN INFORMATION		SYMBOL	UNITS	NOMINAL ROD DIAMETER (inch)						
				3/8	1/2	5/8	3/4	7/8	1	1 1/4
Minimum embedment		$h_{ef,min}$	inch (mm)	2 3/8 (60)	2 3/4 (70)	3 1/8 (79)	3 1/2 (89)	3 1/2 (89)	4 (102)	5 (127)
Maximum embedment		$h_{ef,max}$	inch (mm)	7 1/2 (191)	10 (254)	12 1/2 (318)	15 (381)	17 1/2 (445)	20 (508)	25 (635)
110°F (43°C) Maximum long-term service temperature; 140°F (60°C) maximum short-term service temperature[3,5] with Threaded Rods	Characteristic bond strength in cracked concrete[6,9]	$\tau_{k,cr}$	psi (N/mm²)	1,206 (8.3)	1,206 (8.3)	1,206 (8.3)	1,206 (8.3)	1,206 (8.3)	1,206 (8.3)	1,206 (8.3)
	Characteristic bond strength in cracked concrete, short-term loading only[9]		psi (N/mm²)	1,206 (8.3)	1,206 (8.3)	1,206 (8.3)	1,206 (8.3)	1,206 (8.3)	1,206 (8.3)	1,206 (8.3)
	Characteristic bond strength in uncracked concrete[6,8]	$\tau_{k,uncr}$	psi (N/mm²)	1,829 (12.6)	1,738 (12.0)	1,671 (11.5)	1,617 (11.1)	1,567 (10.8)	1,538 (10.6)	1,479 (10.2)
	Characteristic bond strength in uncracked concrete, short-term loading only[8]		psi (N/mm²)	1,829 (12.6)	1,738 (12.0)	1,671 (11.5)	1,617 (11.1)	1,567 (10.8)	1,538 (10.6)	1,479 (10.2)
110°F (43°C) Maximum long-term service temperature; 176°F (80°C) maximum short-term service temperature[4,5] with Threaded Rods	Characteristic bond strength in cracked concrete[6,9]	$\tau_{k,cr}$	psi (N/mm²)	882 (6.1)	882 (6.1)	882 (6.1)	882 (6.1)	882 (6.1)	882 (6.1)	882 (6.1)
	Characteristic bond strength in cracked concrete, short-term loading only[9]		psi (N/mm²)	882 (6.1)	882 (6.1)	882 (6.1)	882 (6.1)	882 (6.1)	882 (6.1)	882 (6.1)
	Characteristic bond strength in uncracked concrete[6,8]	$\tau_{k,uncr}$	psi (N/mm²)	1,334 (9.2)	1,262 (8.7)	1,218 (8.4)	1,175 (8.1)	1,146 (7.9)	1,117 (7.7)	1,073 (7.4)
	Characteristic bond strength in uncracked concrete, short-term loading only[8]		psi (N/mm²)	1,334 (9.2)	1,262 (8.7)	1,218 (8.4)	1,175 (8.1)	1,146 (7.9)	1,117 (7.7)	1,073 (7.4)

DESIGN INFORMATION		SYMBOL	UNITS	NOMINAL REINFORCING BAR SIZE							
				#3	#4	#5	#6	#7	#8	#9	#10
Minimum embedment		$h_{ef,min}$	inch (mm)	2 3/8 (60)	2 3/4 (70)	3 1/8 (79)	3 1/2 (89)	3 1/2 (89)	4 (102)	4 1/2 (114)	5 (127)
Maximum embedment		$h_{ef,max}$	inch (mm)	7 1/2 (191)	10 (254)	12 1/2 (318)	15 (381)	17 1/2 (445)	20 (508)	22 1/2 (572)	25 (635)
110°F (43°C) Maximum long-term service temperature; 140°F (60°C) maximum short-term service temperature[3,5] with Rebars	Characteristic bond strength in cracked concrete[6,9]	$\tau_{k,cr}$	psi (N/mm²)	1,206 (8.3)	1,170 (8.1)	1,122 (7.7)	1,122 (7.7)	1,122 (7.7)	1,122 (7.7)	1,122 (7.7)	1,122 (7.7)
	Characteristic bond strength in cracked concrete, short-term loading only[9]		psi (N/mm²)	1,206 (8.3)	1,170 (8.1)	1,122 (7.7)	1,122 (7.7)	1,122 (7.7)	1,122 (7.7)	1,122 (7.7)	1,122 (7.7)
	Characteristic bond strength in uncracked concrete[6,8]	$\tau_{k,uncr}$	psi (N/mm²)	1,829 (12.6)	1,738 (12.0)	1,671 (11.5)	1,617 (11.1)	1,567 (10.8)	1,538 (10.6)	1,507 (10.4)	1,479 (10.2)
	Characteristic bond strength in uncracked concrete, short-term loading only[8]		psi (N/mm²)	1,829 (12.6)	1,738 (12.0)	1,671 (11.5)	1,617 (11.1)	1,567 (10.8)	1,538 (10.6)	1,507 (10.4)	1,479 (10.2)
110°F (43°C) Maximum long-term service temperature; 176°F (80°C) maximum short-term service temperature[4,5] with Rebars	Characteristic bond strength in cracked concrete[6,9]	$\tau_{k,cr}$	psi (N/mm²)	882 (6.1)	848 (5.8)	814 (5.6)	814 (5.6)	814 (5.6)	814 (5.6)	814 (5.6)	814 (5.6)
	Characteristic bond strength in cracked concrete, short-term loading only[9]		psi (N/mm²)	882 (6.1)	848 (5.8)	814 (5.6)	814 (5.6)	814 (5.6)	814 (5.6)	814 (5.6)	814 (5.6)
	Characteristic bond strength in uncracked concrete[6,8]	$\tau_{k,uncr}$	psi (N/mm²)	1,334 (9.2)	1,262 (8.7)	1,218 (8.4)	1,175 (8.1)	1,146 (7.9)	1,117 (7.7)	1,102 (7.6)	1,073 (7.4)
	Characteristic bond strength in uncracked concrete, short-term loading only[8]		psi (N/mm²)	1,334 (9.2)	1,262 (8.7)	1,218 (8.4)	1,175 (8.1)	1,146 (7.9)	1,117 (7.7)	1,102 (7.6)	1,073 (7.4)

Permissible installation conditions[7]	Dry concrete	Anchor Category		1							
		ϕ_d		0.65							
	Water-saturated concrete, Water-filled hole (flooded)	Anchor Category		2							
		ϕ_{ws}, ϕ_{wf},		0.55							
	Underwater (submerged)	Anchor Category		2				3			
		ϕ_{uw}		0.55				0.45			
Reduction factor for seismic tension[9]		$\alpha_{N,seis}$		1.0							

For **SI:** 1 inch = 25.4 mm, 1 psi = 0.006894 MPa. For **pound-inch** units: 1 mm = 0.03937 inch, 1 MPa = 145.0 psi.

[1]Bond strength values correspond to a normal-weight concrete compressive strength f'_c = 2,500 psi (17.2 MPa). For concrete compressive strength, f'_c between 2,500 psi and 8,000 psi (17.2 MPa and 55.2 MPa), the tabulated characteristic bond strength may be increased by a factor of $(f'_c / 2{,}500)^{0.23}$ [For **SI:** $(f'_c / 17.2)^{0.23}$]. See Section 4.1.4 of this report for bond strength determination.

[2]The modification factor for bond strength of adhesive anchors in lightweight concrete shall be taken as given in ACI 318-14 17.2.6 or ACI 318-11 D.3.6, as applicable, where applicable.

[3]The maximum short-term service temperature may be increased to 162°F (72°C) provided characteristic bond strengths are reduced by 3 percent. Long-term and short-term temperatures meet the requirements of Section 8.5 of ACI 355.4 and Table 8.1, Temperature Category B.

[4]Long-term and short-term temperatures meet the requirements of Section 8.5 of ACI 355.4 and Table 8.1, Temperature Category A.

[5]Short-term base material service temperatures are those that occur over brief intervals, e.g. as a result of diurnal cycling. Long-term base material service temperatures are roughly constant over significant periods of time.

[6]Characteristic bond strengths are for sustained loads including dead and live loads.

[7]Permissible installation conditions include dry concrete, water-saturated concrete, water-filled holes and underwater. Water-filled holes include applications in dry or water-saturated concrete where the drilled holes contain standing water at the time of anchor installation. For installation instructions see Figure 4 of this report.

[8]Bond strength values for uncracked concrete are applicable for structures assigned to Seismic Design Categories A and B only.

[9]For structures assigned to Seismic Design Categories C, D, E or F, the tabulated bond strength values for cracked concrete do not require an additional reduction factor applied for seismic tension ($\alpha_{N,seis}$ = 1.0), where seismic design is applicable. See Section 4.1.11 of this report for requirements for seismic design.

TABLE 8—STEEL DESIGN INFORMATION FOR METRIC THREADED RODS

DESIGN INFORMATION		SYMBOL	UNITS	NOMINAL ROD DIAMETER[1] (mm)						
				10	12	16	20	24	27	30
Threaded rod nominal outside diameter		d	mm (inch)	10 (0.39)	12 (0.47)	16 (0.63)	20 (0.79)	24 (0.94)	27 (1.06)	30 (1.18)
Threaded rod effective cross-sectional area		A_{se}	mm² (inch²)	58.0 (0.090)	84.3 (0.131)	157 (0.243)	245 (0.380)	353 (0.547)	459 (0.711)	561 (0.870)
ISO 898-1 Class 5.8	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	kN (lbf)	29.0 (6,520)	42.0 (9,475)	78.5 (17,645)	122.5 (27,540)	176.5 (39,680)	229.5 (51,595)	280.5 (63,060)
		V_{sa}	kN (lbf)	17.4 (3,910)	25.5 (5,685)	47.0 (10,590)	73.5 (16,525)	106.0 (23,805)	137.5 (30,956)	168.5 (37,835)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.80						
	Strength reduction factor for tension[3]	ϕ	-	0.65						
	Strength reduction factor for shear[3]	ϕ	-	0.60						
ISO 898-1 Class 8.8	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	kN (lbf)	46.5 (10,430)	67.5 (15,160)	125.5 (28,235)	196.0 (44,065)	282.5 (63,485)	367.0 (82,550)	449.0 (100,895)
		V_{sa}	kN (lbf)	27.9 (6,270)	40.5 (9,095)	75.5 (16,940)	117.5 (26,440)	169.5 (38,090)	220.5 (49,530)	269.5 (60,535)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.80						
	Strength reduction factor for tension[3]	ϕ	-	0.65						
	Strength reduction factor for shear[3]	ϕ	-	0.60						
ISO 3506-1 Stainless Grades A4 and HCR	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	kN (lbf)	40.6 (9,125)	59.0 (13,265)	109.9 (24,705)	171.5 (38,555)	247.1 (55,550)	229.5 (51,595)	280.5 (63,060)
		V_{sa}	kN (lbf)	24.4 (5,475)	35.4 (7,960)	65.9 (14,825)	102.9 (23,135)	148.3 (33,330)	137.7 (30,955)	168.3 (37,835)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.80						
	Strength reduction factor for tension[3]	ϕ	-	0.65						
	Strength reduction factor for shear[3]	ϕ	-	0.60						
ASTM A193M Grade B8/B8M, Class 1 Stainless (Types 304 and 316)	Nominal strength as governed by steel strength (for a single anchor)[4]	N_{sa}	kN (lbf)	22.8 (5,125)	33.1 (7,450)	61.7 (13,870)	96.3 (21,645)	138.7 (21,645)	180.4 (40,455)	220.5 (49,465)
		V_{sa}	kN (lbf)	13.7 (3,075)	19.9 (4,470)	37.0 (8,325)	57.8 (12,990)	83.2 (18,715)	108.2 (24,335)	132.3 (29,740)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.80						
	Strength reduction factor for tension[2]	ϕ	-	0.75						
	Strength reduction factor for shear[2]	ϕ	-	0.65						
ASTM A193M Grade B8/B8M2, Class 2B Stainless (Types 304 and 316)	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	kN (lbf)	38.0 (8,540)	55.2 (12,415)	102.8 (23,120)	160.5 (36,080)	231.2 (51,980)	300.6 (67,590)	367.5 (82,610)
		V_{sa}	kN (lbf)	22.8 (5,125)	33.1 (7,450)	61.7 (13,870)	96.3 (21,645)	138.7 (21,645)	180.4 (40,455)	220.5 (49,465)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.80						
	Strength reduction factor for tension[2]	ϕ	-	0.75						
	Strength reduction factor for shear[2]	ϕ	-	0.65						

For **pound-inch** units: 1 mm = 0.03937 inches, 1 N = 0.2248 lbf. For **SI:** 1 inch = 25.4 mm, 1 lbf = 4.448 N.

[1]Values provided for steel element material types are based on minimum specified strengths and calculated in accordance with ACI 318-11 Eq. (D-2) and Eq. (D-29) except where noted. Nuts and washers must be appropriate for the rod. See Table 2 for nut specifications.

[2]The tabulated value of ϕ applies when the load combinations of Section 1605.2 of the IBC, ACI 318-14 5.3 or ACI 318-11 9.2, as applicable, are used in accordance with ACI 318-14 17.3.3 or ACI 318-11 D.4.3, as applicable. If the load combinations of ACI 318-11 Appendix C are used, the appropriate value of ϕ must be determined in accordance with ACI 318-11 D.4.4. Values correspond to ductile steel elements.

[3]The tabulated value of ϕ applies when the load combinations of Section 1605.2 of the IBC, ACI 318-14 5.3 or ACI 318-11 9.2, as applicable are used in accordance with ACI 318-14 17.3.3 or ACI 318-11 D.4.3, as applicable. If the load combinations of ACI 318-11 Appendix C are used, the appropriate value of ϕ must be determined in accordance with ACI 318-11 D.4.4. Values correspond to brittle steel elements.

[4]In accordance with ACI 318 D.5.1.2 and D.6.1.2 the calculated values for nominal tension and shear strength for ASTM A193 Grade B8/B8M Class 1 stainless steel threaded rods are based on limiting the specified tensile strength of the anchor steel to $1.9f_y$ or 393 MPa (57,000 psi).

TABLE 9—STEEL DESIGN INFORMATION FOR METRIC REINFORCING BARS[1]

DESIGN INFORMATION		SYMBOL	UNITS	NOMINAL REINFORCING BAR SIZE (Ø)							
				Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø32
Rebar nominal outside diameter		d	mm (inch)	10.0 (0.394)	12.0 (0.472)	14.0 (0.551)	16.0 (0.630)	20.0 (0.787)	25.0 (0.984)	28.0 (1.102)	32.0 (1.260)
Rebar effective cross-sectional area		A_{se}	mm² (inch²)	78.5 (0.122)	113.1 (0.175)	153.9 (0.239)	201.1 (0.312)	314.2 (0.487)	490.9 (0.761)	615.8 (0.954)	804.2 (1.247)
DIN 488 BSt 500	Nominal strength as governed by steel strength (for a single anchor)	N_{sa}	kN (lbf)	43.0 (9,710)	62.0 (13,985)	84.5 (19,035)	110.5 (24,860)	173.0 (38,845)	270.0 (60,695)	338.5 (76,135)	442.5 (99,440)
		V_{sa}	kN (lbf)	26.0 (5,825)	37.5 (8,390)	51.0 (11,420)	66.5 (14,915)	103.0 (23,305)	162.0 (36,415)	203.0 (45,680)	265.5 (59,665)
	Reduction factor for seismic shear	$\alpha_{V,seis}$	-	0.70		0.80					
	Strength reduction factor for tension[2]	ϕ	-	0.65							
	Strength reduction factor for shear[2]	ϕ	-	0.60							

For **pound-inch** units: 1 mm = 0.03937 inches, 1 N = 0.2248 lbf. For **SI:** 1 inch = 25.4 mm, 1 lbf = 4.448 N.

[1]Values provided for reinforcing bar material types based on minimum specified strengths and calculated in accordance with ACI 318-14 Eq. 17.4.1.2 and Eq. 17.5.1.2b or ACI 318-11 Eq. D-2 and Eq. D-29, as applicable.
[2]The tabulated value of ϕ applies when the load combinations of Section 1605.2 of the IBC or ACI 318-14 5.3 or ACI 318-11 9.2, as applicable, are used in accordance with ACI 318-14 17.3.3 or ACI 318-11 D.4.3, as applicable. If the load combinations of ACI 318-11 Appendix C are used, the appropriate value of ϕ must be determined in accordance with ACI 318-11 D.4.4. Values correspond to brittle steel elements.

TABLE 10—CONCRETE BREAKOUT DESIGN INFORMATION FOR METRIC THREADED ROD AND REINFORCING BARS[1]

DESIGN INFORMATION	SYMBOL	UNITS	NOMINAL ROD DIAMETER / REINFORCING BAR SIZE											
			M10 or Ø10	M12	Ø12	Ø14	M16 or Ø16	M20 or Ø20	M24	Ø25	M27	Ø28	M30	Ø32
Effectiveness factor for cracked concrete	$k_{c,cr}$	SI -	17 (7.1)											
Effectiveness factor for uncracked concrete	$k_{c,uncr}$	SI -	24 (10.0)											
Minimum embedment	$h_{ef,min}$	mm (inch)	60 (2.4)	70 (2.8)	70 (2.8)	70 (2.8)	80 (3.2)	90 (3.6)	96 (3.8)	100 (3.9)	108 (4.3)	112 (4.4)	120 (4.7)	128 (5.0)
Maximum embedment	$h_{ef,max}$	mm (inch)	200 (7.8)	240 (14.8)	240 (14.8)	280 (11.0)	320 (12.6)	400 (15.8)	480 (18.8)	500 (19.6)	540 (21.4)	560 (22.0)	600 (23.6)	640 (25.2)
Minimum anchor spacing	s_{min}	mm (inch)	50 (2.0)	60 (2.4)	60 (2.4)	70 (3.7)	80 (3.2)	100 (4.0)	120 (4.8)	125 (4.9)	135 (5.3)	140 (5.5)	150 (5.9)	160 (6.3)
Minimum edge distance	c_{min}	mm (inch)	5d where d is nominal outside diameter of the anchor; or see Section 4.1.9 of this report for design with reduced minimum edge distances:											
			45 (1.75)								70 (2.75)			
Minimum member thickness	h_{min}	mm (inch)	h_{ef} + 30 (h_{ef} + 1 1/4)	h_{ef} + 2d_o where d_o is hole diameter; for installation parameters see Table 12 of this report										
Critical edge distance—splitting (for uncracked concrete only)	c_{ac}	mm (inch)	See Section 4.1.10 of this report											
Strength reduction factor for tension, concrete failure modes, Condition B[2]	ϕ	-	0.65											
Strength reduction factor for shear, concrete failure modes, Condition B[2]	ϕ	-	0.70											

For **pound-inch** units: 1 mm = 0.03937 inch, 1 N = 0.2248 lbf. For **SI:** 1 inch = 25.4 mm, 1 lbf = 4.448 N.

[1]Additional setting information is described in the installation instructions, Figure 4 of this report.
[2]Condition A requires supplemental reinforcement, while Condition B applies where supplemental reinforcement is not provided or where pryout governs, as set forth in ACI 318-14 17.3.3 or ACI 318-11 D.4.3, as applicable. The tabulated value of ϕ applies when the load combinations of Section 1605.2 of the IBC ACI 318-14 5.3 or ACI 318-11 9.2, as applicable, are used in accordance with ACI 318-14 17.3.3 or ACI 318-11 D.4.3, as applicable. If the load combinations of ACI 318-11 Appendix C are used, the appropriate value of ϕ must be determined in accordance with ACI 318-11 D.4.5.

TABLE 11—BOND STRENGTH DESIGN INFORMATION FOR METRIC THREADED RODS AND REINFORCING BARS[1]

DESIGN INFORMATION		SYMBOL	UNITS	NOMINAL ROD DIAMETER						
				M10	M12	M16	M20	M24	M27	M30
Minimum embedment		$h_{ef,min}$	mm (inch)	60 (2.4)	70 (2.8)	80 (3.2)	90 (3.6)	96 (3.8)	108 (4.3)	120 (4.7)
Maximum embedment		$h_{ef,max}$	mm (inch)	200 (7.8)	240 (14.8)	320 (12.6)	400 (15.8)	480 (18.8)	540 (21.4)	600 (23.6)
110°F (43°C) Maximum long-term service temperature; 140°F (60°C) maximum short-term service temperature[3,5] with Threaded Rods	Characteristic bond strength in cracked concrete[6,9]	$\tau_{k,cr}$	N/mm^2 (psi)	8.3 (1205)	8.3 (1205)	8.3 (1205)	8.3 (1205)	8.3 (1205)	8.3 (1205)	8.3 (1205)
	Characteristic bond strength in cracked concrete, short-term loading only[9]		N/mm^2 (psi)	8.3 (1205)	8.3 (1205)	8.3 (1205)	8.3 (1205)	8.3 (1205)	8.3 (1205)	8.3 (1205)
	Characteristic bond strength in uncracked concrete[6,8]	$\tau_{k,uncr}$	N/mm^2 (psi)	12.5 (1813)	12.1 (1755)	11.5 (1668)	11.1 (1610)	10.7 (1552)	10.5 (1523)	10.3 (1494)
	Characteristic bond strength in uncracked concrete, short-term loading only[8]		N/mm^2 (psi)	12.5 (1813)	12.1 (1755)	11.5 (1668)	11.1 (1610)	10.7 (1552)	10.5 (1523)	10.3 (1494)
110°F (43°C) Maximum long-term service temperature; 176°F (80°C) maximum short-term service temperature[4,5] with Threaded Rods	Characteristic bond strength in cracked concrete[6,9]	$\tau_{k,cr}$	N/mm^2 (psi)	6.1 (882)	6.1 (882)	6.1 (882)	6.1 (882)	6.1 (882)	6.1 (882)	6.1 (882)
	Characteristic bond strength in cracked concrete, short-term loading only[9]		N/mm^2 (psi)	6.1 (882)	6.1 (882)	6.1 (882)	6.1 (882)	6.1 (882)	6.1 (882)	6.1 (882)
	Characteristic bond strength in uncracked concrete[6,8]	$\tau_{k,uncr}$	N/mm^2 (psi)	9.1 (1320)	8.8 (1276)	8.4 (1218)	8.1 (1175)	7.8 (1131)	7.7 (1117)	7.5 (1088)
	Characteristic bond strength in uncracked concrete, short-term loading only[8]		N/mm^2 (psi)	9.1 (1320)	8.8 (1276)	8.4 (1218)	8.1 (1175)	7.8 (1131)	7.7 (1117)	7.5 (1088)

DESIGN INFORMATION		SYMBOL	UNITS	REINFORCING BAR SIZE							
				Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø32
Minimum embedment		$h_{ef,min}$	mm (inch)	60 (2.4)	70 (2.8)	70 (2.8)	80 (3.2)	90 (3.6)	100 (3.9)	112 (4.4)	128 (5.0)
Maximum embedment		$h_{ef,max}$	mm (inch)	200 (7.8)	240 (14.8)	280 (11.0)	320 (12.6)	400 (15.8)	500 (19.6)	560 (22.0)	640 (25.2)
110°F (43°C) Maximum long-term service temperature; 140°F (60°C) maximum short-term service temperature[3,5] with Rebars	Characteristic bond strength in cracked concrete[6,9]	$\tau_{k,cr}$	N/mm^2 (psi)	8.3 (1205)	8.1 (1171)	7.7 (1120)	7.7 (1120)	7.7 (1120)	7.7 (1120)	7.7 (1120)	7.7 (1120)
	Characteristic bond strength in cracked concrete, short-term loading only[9]		N/mm^2 (psi)	8.3 (1205)	8.1 (1171)	7.7 (1120)	7.7 (1120)	7.7 (1120)	7.7 (1120)	7.7 (1120)	7.7 (1120)
	Characteristic bond strength in uncracked concrete[6,8]	$\tau_{k,uncr}$	N/mm^2 (psi)	12.5 (1813)	12.1 (1755)	11.8 (1711)	11.5 (1668)	11.1 (1610)	10.6 (1537)	10.4 (1508)	10.2 (1479)
	Characteristic bond strength in uncracked concrete, short-term loading only[8]		N/mm^2 (psi)	12.5 (1813)	12.1 (1755)	11.8 (1711)	11.5 (1668)	11.1 (1610)	10.6 (1537)	10.4 (1508)	10.2 (1479)
110°F (43°C) Maximum long-term service temperature; 176°F (80°C) maximum short-term service temperature[4,5] with Rebars	Characteristic bond strength in cracked concrete[6,9]	$\tau_{k,cr}$	N/mm^2 (psi)	6.1 (882)	5.9 (848)	5.6 (814)	5.6 (814)	5.6 (814)	5.6 (814)	5.6 (814)	5.6 (814)
	Characteristic bond strength in cracked concrete, short-term loading only[9]		N/mm^2 (psi)	6.1 (882)	5.9 (848)	5.6 (814)	5.6 (814)	5.6 (814)	5.6 (814)	5.6 (814)	5.6 (814)
	Characteristic bond strength in uncracked concrete[6,8]	$\tau_{k,uncr}$	N/mm^2 (psi)	9.1 (1320)	8.8 (1276)	8.6 (1247)	8.4 (1218)	8.1 (1175)	7.8 (1131)	7.6 (1102)	7.4 (1073)
	Characteristic bond strength in uncracked concrete, short-term loading only[8]		N/mm^2 (psi)	9.1 (1320)	8.8 (1276)	8.6 (1247)	8.4 (1218)	8.1 (1175)	7.8 (1131)	7.6 (1102)	7.4 (1073)

Permissible installation conditions[7]	Dry concrete	Anchor Category		1							
		ϕ_d		0.65							
	Water-saturated concrete, Water-filled hole (flooded)	Anchor Category		2							
		ϕ_{ws}, ϕ_{wf},		0.55							
	Underwater (submerged)	Anchor Category		2					3		
		ϕ_{uw}		0.55					0.45		
Reduction factor for seismic tension		$\alpha_{N,seis}$		1.0							

For **pound-inch** units: 1 mm = 0.03937 inch, 1 MPa = 145.0 psi. For **SI:** 1 inch = 25.4 mm, 1 psi = 0.006894 MPa.

[1]Bond strength values correspond to normal-weight concrete compressive strength f'_c = 2,500 psi (17.2 MPa). For concrete compressive strength, f'_c between 2,500 psi and 8,000 psi (17.2 MPa and 55.2 MPa), the tabulated characteristic bond strength may be increased by a factor of $(f'_c / 2{,}500)^{0.23}$ [For **SI:** $(f'_c / 17.2)^{0.23}$]. See Section 4.1.8 of this report for bond strength determination.

[2]The modification factor for bond strength of adhesive anchors in lightweight concrete shall be taken as given in ACI 318-14 17.2.6 or ACI 318-11 D.3.6, as applicable.

[3]The maximum short-term service temperature may be increased to 162°F (72°C) provided characteristic bond strengths are reduced by 3 percent. Long-term and short-term temperatures meet the requirements of Section 8.5 of ACI 355.4 and Table 8.1, Temperature Category B.

[4]Long-term and short-term temperatures meet the requirements of Section 8.5 of ACI 355.4 and Table 8.1, Temperature Category A.

[5]Short-term elevated concrete temperatures are those that occur over brief intervals, e.g. as a result of diurnal cycling. Long-term concrete temperatures are roughly constant over significant periods of time.

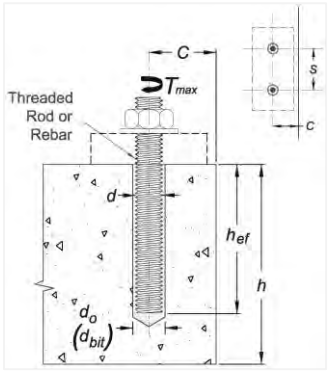
[6]Characteristic bond strengths are for sustained loads including dead and live loads.

[7]Permissible installation conditions include dry concrete, water-saturated concrete, water-filled holes and underwater. Water-filled holes include applications in dry or water-saturated concrete where the drilled holes contain standing water at the time of anchor installation. For installation instructions see Figure 4 of this report.

[8]Bond strength values for uncracked concrete are applicable for structures assigned to Seismic Design Categories A and B only.

[9]For structures assigned to Seismic Design Categories C, D, E or F, the tabulated bond strength values for cracked concrete do not require an additional reduction factor applied for seismic tension ($\alpha_{N,seis}$ = 1.0), where seismic design is applicable. See Section 4.1.11 of this report for requirements for seismic design.

TABLE 12—INSTALLATION PARAMETERS FOR THREADED RODS AND REINFORCING BARS FOR POST-INSTALLED ADHESIVE ANCHORS



PARAMETER	SYMBOL	UNITS	FRACTIONAL NOMINAL ROD DIAMETER (inch) / REINFORCING BAR SIZE								
			3/8 or #3	1/2 #4	5/8 or #5	3/4 or #6	7/8 or #7	1 or #8	#9	1 1/4	#10
Threaded rod outside diameter	d	inch (mm)	0.375 (9.5)	0.500 (12.7)	0.625 (15.9)	0.750 (19.1)	0.875 (22.2)	1.000 (25.4)	-	1.250 (31.8)	-
Rebar nominal outside diameter	d	inch (mm)	0.375 (9.5)	0.500 (12.7)	0.625 (15.9)	0.750 (19.1)	0.875 (22.2)	1.000 (25.4)	1.125 (28.7)	-	1.250 (31.8)
Carbide drill bit nominal size[6]	d_{bit} (d_o)	inch	7/16	9/16 5/8	11/16 or 3/4[5]	7/8	1	1 1/8	1 3/8	1 3/8	1 1/2
Minimum embedment	$h_{ef,min}$	inch (mm)	2 3/8 (60)	2 3/4 (70)	3 1/8 (79)	3 1/2 (89)	3 1/2 (89)	4 (102)	4 1/2 (114)	5 (127)	5 (127)
Maximum embedment	$h_{ef,max}$	inch (mm)	7 1/2 (191)	10 (254)	12 1/2 (318)	15 (381)	17 1/2 (445)	20 (508)	22 1/2 (572)	25 (635)	25 (635)
Minimum member thickness	h_{min}	inch (mm)	h_{ef} + 1 1/4 (h_{ef} + 30)		h_{ef} + $2d_o$						
Minimum anchor spacing	s_{min}	inch (mm)	1 7/8 (48)	2 1/2 (64)	3 1/8 (79)	3 3/4 (95)	4 3/8 (111)	5 (127)	5 5/8 (143)	6 1/4 (159)	6 1/4 (159)
Minimum edge distance	c_{min}	inch (mm)	1 7/8 (48)	2 1/2 (64)	3 1/8 (79)	3 3/4 (95)	4 3/8 (111)	5 (127)	5 5/8 (143)	6 1/4 (159)	6 1/4 (159)
Max. torque[1]	T_{max}	ft-lbs	15	30	60	105	125	165	200	280	280
Max. torque[1,2] (low strength rods)	T_{max}	ft-lbs	5	20	40	60	100	165	-	280	-
Minimum edge distance, reduced[4]	$c_{min,red}$	inch (mm)	1 3/4 (45)	1 3/4 (45)	1 3/4 (45)	1 3/4 (45)	1 3/4 (45)	1 3/4 (45)	2 3/4 (70)	2 3/4 (70)	2 3/4 (70)
Max. torque, reduced[1]	$T_{max,red}$	ft-lbs	7 [5][3]	14	27	47	56	74	90	126	126

PARAMETER	SYMBOL	UNITS	METRIC NOMINAL ROD DIAMETER / REINFORCING BAR SIZE											
			M10 Ø10	M12 Ø12	Ø14	M16 Ø16	M20 Ø20	M24	Ø25	M27	Ø28	M30	Ø32	
Threaded rod outside diameter	d	mm (inch)	10 (0.39)	12 (0.47)	-	16 (0.63)	20 (0.79)	24 (0.94)	-	27 (1.06)	-	30 (1.18)	-	
Rebar nominal outside diameter	d	mm (inch)	10.0 (0.394)	12.0 (0.472)	14.0 (0.551)	16.0 (0.630)	20.0 (0.787)	-	25.0 (0.984)	-	28.0 (1.102)	-	32.0 (1.260)	
Carbide drill bit nominal size[6]	d_{bit} (d_o)	mm	12 14	14 16	18	18 20	24 25	28	32	32	35	35	38	
Minimum embedment	$h_{ef,min}$	mm (inch)	60 (2.4)	70 (2.8)	70 (2.8)	80 (3.2)	90 (3.6)	96 (3.8)	100 (3.9)	108 (4.3)	112 (4.4)	120 (4.7)	128 (5.0)	
Maximum embedment	$h_{ef,max}$	mm (inch)	200 (7.8)	240 (14.8)	280 (11.0)	320 (12.6)	400 (15.8)	480 (18.8)	500 (19.6)	540 (21.4)	560 (22.0)	600 (23.6)	640 (25.2)	
Minimum member thickness	h_{min}	mm (inch)	h_{ef} + 30 (h_{ef} + 1 1/4)		h_{ef} + $2d_o$									
Minimum anchor spacing	s_{min}	mm (inch)	50 (2.0)	60 (2.4)	70 (3.7)	80 (3.2)	100 (4.0)	120 (4.8)	125 (4.9)	135 (5.3)	140 (5.5)	150 (5.9)	160 (6.3)	
Minimum edge distance	c_{min}	mm (inch)	50 (2.0)	60 (2.4)	70 (3.7)	80 (3.2)	100 (4.0)	120 (4.8)	125 (4.9)	135 (5.3)	140 (5.5)	150 (5.9)	160 (6.3)	
Max. torque[1]	T_{max}	N-m	20	40	60	80	120	160	160	180	180	200	300	
Max. torque[1,3] (low strength rod)	T_{max}	N-m	7	20	-	40	100	160	-	180	-	200	-	
Minimum edge distance, reduced[4]	$c_{min,red}$	mm (inch)	45 (1 3/4)	45 (1 3/4)	45 (1 3/4)	45 (1 3/4)	45 (1 3/4)	45 (1 3/4)	45 (1 3/4)	45 (1 3/4)	70 (2 3/4)	70 (2 3/4)	70 (2 3/4)	
Max. torque, reduced[1]	$T_{max,red}$	N-m	9 [7][3]	18	27	36	54	72	72	81	81	90	135	

For **pound-inch** units: 1 mm = 0.03937 inch, 1 N-m = 0.7375 ft-lbf. For **SI:** 1 inch = 25.4 mm, 1 ft-lbf = 1.356 N-m.

[1]Torque may not be applied to the anchors until the full cure time of the adhesive has been achieved.
[2]These torque values apply to ASTM A36 / F1554 Grade 36 carbon steel threaded rods; ASTM F1554 Grade 55 carbon steel threaded rods; and ASTM A193 Grade B8/B8M (Class 1) stainless steel threaded rods.
[3]These torque values apply to ASTM A193 Grade B8/B8M (Class 1) stainless steel threaded rod only.
[4]See Section 4.1.9 of this report for requirements of anchors installed at reduced edge distances.
[5]Either drill bit size listed is acceptable for threaded rod 5/8-inch diameter and rebar size No. 5.
[6]For any case, it must be possible for the steel anchor element to be inserted into the cleaned drill hole without resistance.
[7]The DEWALT DustX+ extraction system can be used to automatically clean holes drilled in concrete with a hammer-drill; drilling in dry concrete is required.

FIGURE 2—PURE110+ EPOXY ADHESIVE ANCHOR SYSTEM INCLUDING TYPICAL STEEL ANCHOR ELEMENTS

TABLE 13 —DEVELOPMENT LENGTHS FOR COMMON REINFORCING BAR CONNECTIONS PROVIDED FOR ILLUSTRATION[1,2,3,7,8]

FRACTIONAL REINFORCING BARS											
DESIGN INFORMATION	**SYMBOL**	**REFERENCE STANDARD**	**UNITS**	**NOMINAL REBAR SIZE (US)**								
				#3	**#4**	**#5**	**#6**	**#7**	**#8**	**#9**	**#10**	**#11**
Nominal rebar diameter	d_b	ASTM A615/A706, Grade 60 (f_y = **60 ksi**)	in. (mm)	0.375 (9.5)	0.500 (12.7)	0.625 (15.9)	0.750 (19.1)	0.875 (22.2)	1.000 (25.4)	1.128 (28.6)	1.270 (32.3)	1.410 (35.8)
Nominal rebar area	A_b		in^2 (mm^2)	0.11 (71)	0.20 (127)	0.31 (198)	0.44 (285)	0.60 (388)	0.79 (507)	1.00 (645)	1.27 (817)	1.56 (1006)
Development length in f'_c = **2,500 psi** concrete[4,5]	l_d	ACI 318-14 25.4.2.3 or ACI 318-11 12.2.3 as applicable	in. (mm)	12.0 (305)	14.4 (366)	18.0 (457)	21.6 (549)	31.5 (800)	36.0 (914)	40.6 (1031)	45.7 (1161)	50.8 (1290)
Development length in f'_c = **3,000 psi** concrete[4,5]			in. (mm)	12.0 (305)	13.1 (334)	16.4 (417)	19.7 (501)	28.8 (730)	32.9 (835)	37.1 (942)	41.7 (1060)	46.3 (1177)
Development length in f'_c = **4,000 psi** concrete[4,5]			in. (mm)	12.0 (305)	12.0 (305)	14.2 (361)	17.1 (434)	24.9 (633)	28.5 (723)	32.1 (815)	36.2 (920)	40.1 (1019)
Development length in f'_c = **6,000 psi** concrete[4,5]			in. (mm)	12.0 (305)	12.0 (305)	12.0 (305)	13.9 (354)	20.3 (516)	23.2 (590)	26.2 (666)	29.5 (750)	32.8 (832)
Development length in f'_c = **8,000 psi** concrete[4,5]			in. (mm)	12.0 (305)	12.0 (305)	12.0 (305)	12.1 (307)	17.6 (443)	20.1 (511)	22.7 (577)	25.6 (649)	28.4 (721)

METRIC REINFORCING BARS												
DESIGN INFORMATION	**SYMBOL**	**REFERENCE STANDARD**	**UNITS**	**NOMINAL REBAR SIZE (EU)**								
				Ø10	**Ø12**	**Ø14**	**Ø16**	**Ø20**	**Ø24**	**Ø25**	**Ø28**	**Ø32**	**Ø34**	**Ø36**
Nominal rebar diameter	d_b	DIN 488, BSt 500 (BS 4449: 2005) (f_y = **72.5 ksi**)	mm (in)	10 (0.394)	12 (0.472)	14.0 (0.551)	16 (0.630)	20 (0.787)	24 (0.945)	25 (0.984)	28 (1.102)	32 (1.260)	34 (1.339)	36 (1.417)
Nominal rebar area	A_b		mm^2 (in^2)	78.5 (0.12)	113 (0.18)	154 (0.23)	201 (0.31)	314 (0.49)	452 (0.70)	491 (0.76)	616 (0.96)	804 (1.25)	908 (1.41)	1018 (1.58)
Development length in f'_c = **2,500 psi** concrete[4,6]	l_d	ACI 318-14 25.4.2.3 or ACI 318-11 12.2.3 as applicable	mm (in)	348 (13.7)	417 (16.4)	487 (19.2)	556 (21.9)	870 (34.2)	1044 (41.1)	1087 (42.8)	1217 (47.9)	1392 (54.8)	1479 (58.2)	1566 (61.6)
Development length in f'_c = **3,000 psi** concrete[4,6]			mm (in)	318 (12.5)	381 (15.0)	445 (17.5)	508 (20.0)	794 (31.3)	953 (37.5)	992 (39.1)	1112 (43.8)	1271 (50.0)	1351 (53.2)	1429 (56.3)
Development length in f'_c = **4,000 psi** concrete[4,6]			mm (in)	305 (12.0)	330 (13.0)	385 (15.2)	439 (17.3)	688 (27.1)	825 (32.5)	859 (33.8)	963 (37.9)	1100 (43.3)	1170 (46.0)	1238 (48.7)
Development length in f'_c = **6,000 psi** concrete[4,6]			mm (in)	305 (12.0)	305 (12.0)	314 (12.4)	359 (14.2)	562 (22.1)	674 (26.4)	702 (27.6)	786 (30.9)	899 (35.4)	955 (37.6)	1011 (39.8)
Development length in f'_c = **8,000 psi** concrete[4,6]			mm (in)	305 (12.0)	305 (12.0)	305 (12.0)	311 (12.3)	486 (29.1)	584 (23.0)	608 (23.9)	681 (26.8)	778 (30.6)	827 (32.6)	875 (34.5)

DESIGN INFORMATION	**SYMBOL**	**REFERENCE STANDARD**	**UNITS**	**NOMINAL REBAR SIZE (CA)**					
				10M	**15M**	**20M**	**25M**	**30M**	**35M**
Nominal rebar diameter	d_b	CAN/CSA G30.18, Grade 400 (f_y = **58 ksi**)	mm (in)	11.3 (0.445)	16.0 (0.630)	19.5 (0.768)	25.2 (0.992)	29.9 (1.177)	35.7 (1.406)
Nominal rebar area	A_b		mm^2 (in^2)	100 (0.16)	200 (0.31)	300 (0.46)	500 (0.77)	700 (1.09)	1000 (1.56)
Development length in f'_c = **2,500 psi** concrete[4,6]	l_d	ACI 318-14 25.4.2.3 or ACI 318-11 12.2.3 as applicable	mm (in)	315 (12.4)	445 (17.5)	678 (26.7)	876 (34.5)	1041 (41.0)	1242 (48.9)
Development length in f'_c = **3,000 psi** concrete[4,6]			mm (in)	305 (12.0)	407 (16.0)	620 (24.4)	800 (31.5)	950 (37.4)	1135 (44.7)
Development length in f'_c = **4,000** psi concrete[4,6]			mm (in)	305 (12.0)	353 (13.9)	536 (21.1)	693 (27.3)	823 (32.4)	983 (38.7)
Development length in f'_c = **6,000 psi** concrete[4,6]			mm (in)	305 (12.0)	305 (12.0)	438 (17.3)	566 (22.3)	672 (26.4)	802 (31.6)
Development length in f'_c = **8,000 psi** concrete[4,6]			mm (in)	305 (12.0)	305 (12.0)	379 (14.9)	490 (19.3)	582 (22.9)	695 (27.4)

For **SI**: 1 inch ≡ 25.4 mm, 1 lbf = 4.448 N, 1 psi = 0.006897 MPa; for **pound-inch** units: 1 mm = 0.03937 inches, 1 N = 0.2248 lbf, 1 MPa = 145.0 psi.

[1]Calculated development lengths in accordance with Section 4.2.2 of this report and ACI 318-14 25.4.2.3 or ACI 318-11 12.2.3, as applicable, for reinforcing bars are valid for static, wind, and earthquake loads.

[2]Calculated development lengths in SDC C through F must comply with ACI 318-14 Chapter 18 or ACI 318-11 Chapter 21, as applicable, and Section 4.2.4 of this report. The value of f'_c used to calculate development lengths shall not exceed 2,500 psi psi for post-installed reinforcing bar applications in SDC's C, D, E and F.

[3]For Class B splices, minimum length of lap for tension lap splices is 1.3l_d in accordance with ACI 318-14 25.5.2 and ACI 318-11 12.15.1, as applicable.

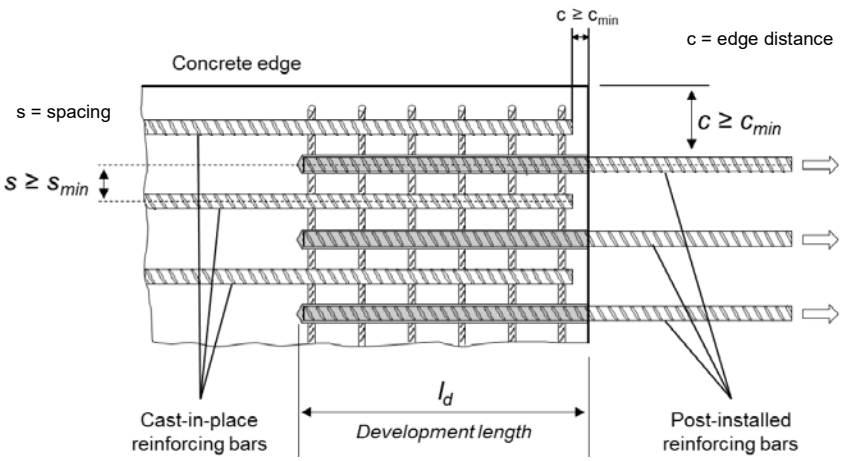
[4]For lightweight concrete, λ = 0.75; therefore multiply development lengths by 1.33 (increase development length by 33 percent), unless the provisions of ACI 318-14 25.4.2.4 or ACI 318-11 12.2.4 (d), as applicable, are met to permit alternate values of λ (e.g for sand-lightweight concrete, λ = 0.85; therefore multiply development lengths by 1.18). Refer to ACI 318-14 19.2.4 or ACI 318-11 8.6.1, as applicable.

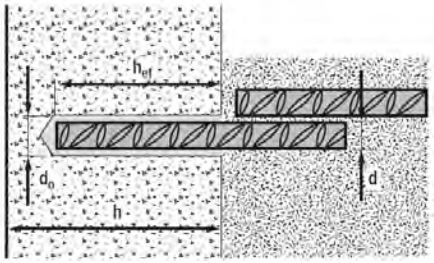
[5] $\left(\frac{c_b+K_{tr}}{d_b}\right)$ = 2.5, ψ_t=1.0, ψ_e=1.0, ψ_s=0.8 for $d_b \le$ #6,1.0 for $d_b >$ #6. Refer to ACI 318-14 25.4.2.4 or ACI 318-11 12.2.4, as applicable.

[6] $\left(\frac{c_b+K_{tr}}{d_b}\right)$ = 2.5, ψ_t=1.0, ψ_e=1.0, ψ_s=0.8 for $d_b \le$ 19 mm, 1.0 for $d_b >$ 19 mm. Refer to ACI 318-14 25.4.2.4 or ACI 318-11 12.2.4, as applicable.

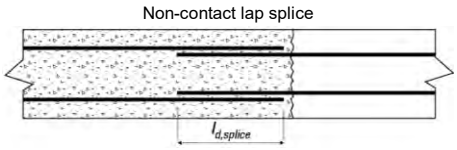
[7]Minimum f'_c of 24 MPa is required under ADIBC Appendix L, Section 5.1.1.

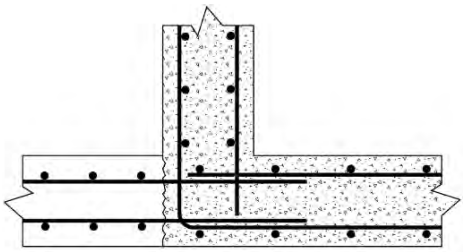
[8]Calculations may be performed for other steel grades and concrete compressive strengths per ACI 318-14 Chapter 25 or ACI 318-11 Chapter 12, as applicable.



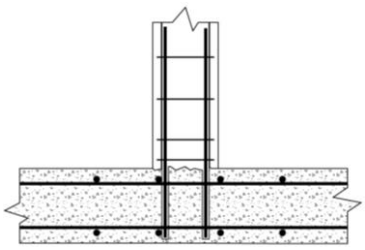


d_b = nomial bar diameter, d_o = nominal hole diameter
h_{ef} = effective embedment, h = member thickness

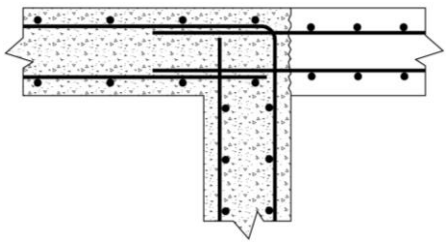




TENSION LAP SPLICE WITH EXISTING REINFORCEMENT FOR FOOTING AND FOUNDATION EXTENSIONS



TENSION DEVELOPMENT OF COLUMN, CAP OR WALL DOWELS



TENSION LAP SPLICE WITH EXISTING FLEXURAL REINFORCEMENT FOR SLAB AND BEAM EXTENSIONS

FIGURE 3—INSTALLATION DETAIL FOR POST-INSTALLED REINFORCING BAR CONNECTIONS (Top Pictures), EXAMPLES OF DEVELOPMENT LENGTH APPLICATION DETAILS FOR POST-INSTALLED REINFORCING BAR CONNECTIONS PROVIDED FOR ILLUSTRATION (Bottom Pictures)

TABLE 14—INSTALLATION PARAMETERS FOR COMMON POST-INSTALLED REINFORCING BAR CONNECTIONS[3]

FRACTIONAL REINFORCING BARS											
PARAMETER	SYMBOL	UNITS	NOMINAL REBAR SIZE (US)								
			#3	#4	#5	#6	#7	#8	#9	#10	#11
Nominal hole diameter[1]	d_o	in.	$^7/_{16}$	$^5/_8$	$^3/_4$	$^7/_8$	1	$1^1/_8$	$1^3/_8$	$1^1/_2$	$1^3/_4$
Effective embedment[2]	h_{ef}	in.	$2^3/_8$ to $7^1/_2$	$2^3/_4$ to 10	$3^1/_8$ to $12^1/_2$	$3^1/_2$ to 15	$3^1/_2$ to $17^1/_2$	4 to 20	$4^1/_2$ to $22^1/_2$	5 to 25	$5^1/_2$ to $27^1/_2$
Nominal hole diameter[1]	d_o	in.	$^1/_2$	$^5/_8$	$^3/_4$	1	$1^1/_8$	$1^1/_4$	$1^3/_8$	$1^1/_2$	$1^3/_4$
Effective embedment[2]	h_{ef}	in.	$7^1/_2$ to $22^1/_2$	10 to 30	$12^1/_2$ to $37^1/_2$	15 to 45	$17^1/_2$ to $52^1/_2$	20 to 60	$22^1/_2$ to $67^1/_2$	25 to 75	$27^1/_2$ to $82^1/_2$

METRIC REINFORCING BARS												
PARAMETER	SYMBOL	UNITS	NOMINAL REBAR SIZE (EU)									
			Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32	Ø34	Ø36
Nominal hole diameter[1]	d_o	mm	14	16	18	20	25	32	32	35	40	42	45
Effective embedment[2]	h_{ef}	mm	60 to 600	70 to 720	75 to 840	90 to 1200	95 to 1440	100 to 1500	100 to 1500	112 to 1680	128 to 1920	136 to 2040	144 to 2160

PARAMETER	SYMBOL	UNITS	NOMINAL REBAR SIZE (CA)					
			10M	15M	20M	25M	30M	35M
Nominal hole diameter[1]	d_o	in.	$^9/_{16}$	$^3/_4$	1	$1^1/_4$	$1^1/_2$	$1^3/_4$
Effective embedment[2]	h_{ef}	mm	70 to 678	80 to 960	90 to 1170	100 to 1512	120 to 1794	140 to 2100

For **SI**: 1 inch ≡ 25.4 mm,; for **pound-inch** units: 1 mm = 0.03937 inches.

[1]For any case, it must be possible for the reinforcing bar (rebar) to be inserted into the cleaned drill hole without resistance.
[2]Consideration should be given regarding the commercial availability of carbide drill bits (including hollow drill bits) and diamond core drill bits, as applicable, with lengths necessary to achieve the effective embedments for post-installed reinforcing bar connections.
[3]The DEWALT DustX+ extraction system can be used to automatically clean holes drilled in concrete with a hammer-drill; drilling in dry concrete is required.

Pure110+ Instruction Card

DESCRIPTION:
Pure110+ is a high strength, 100% solids epoxy adhesive which is formulated for use in anchoring and rebar connection applications by trained professionals. Refer to installation instructions and SDS for additional detailed information.

PRECAUTION:
Safety glasses and dust masks should be used when drilling holes into concrete, stone and masonry. Wear gloves and safety glasses when handling and dispensing adhesive. Do not sand the adhesive and create silica dust which could be inhaled. Avoid skin and eye contact. Use a NIOSH-approved chemical mask to avoid respiratory discomfort if working indoors or in a confined area, or if sensitive to adhesive odors. Wash hands or other affected body parts with soap and water if skin contact occurs. Flush eyes with plenty of water and seek immediate medical attention if eye contact occurs. Move to fresh air if adhesive odor begins to cause discomfort.

IMPORTANT! Before using, read and review Safety Data Sheet (SDS).
This product contains crystalline silica and as supplied does not pose a dust hazard. IARC classifies crystalline silica (quartz sand) as a Group I carcinogen based upon evidence among workers in industries where there has been long-term and chronic exposure (via inhalation) to silica dust; e.g. mining, quarry, stone crushing, refractory brick and pottery workers. This product does not pose a dust hazard; therefore, this classification is not relevant. However, if reacted (fully cured) product is further processed (e.g. sanded, drilled) be sure to wear proper respiratory and eye protection to avoid health risk.

HANDLING AND STORAGE:
Store in a cool, dry, well ventilated area at temperatures between 41°F (5°C) and 86°F (30°C). Do not freeze. Store and keep away from flame, heat and light. Keep partially used containers closed when not in use. Protect from damage.

Note expiration date on product label before use. Do not use expired product. Partially used cartridges may be stored with hardened adhesive in the attached mixing nozzle. **Note:** if the cartridge is reused, attach a new mixing nozzle and discard initial quantity of anchor adhesive as described in installation instructions.

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[V.] Pure110+ epoxy system selection table

Dispensers			Cartridges			Mixing nozzles
Tool	Size	Cat.#	Type	Size	Cat.#	Cat.#
Manual	10 fl.oz.	08437	Quik-shot (coaxial)	9 fl.oz.	08310SD	PFC1640600
Cordless		DCE560D1				
Manual	13 fl.oz.	08298	Dual tube	13 fl.oz.	08313SD	08609
Cordless		DCE593D1				
Pneumatic		08497SD				
Manual	20 fl.oz.	08298	Dual tube	20 fl.oz.	08320SD	08609
Cordless		DCE593D1				
Pneumatic		08497SD				
Manual	21 fl.oz.	08409	Dual tube	21 fl.oz.	08321SD	08609
Pneumatic		08413				
Cordless		DCE591D1				
Pneumatic	51 fl.oz.	08438	Dual tube	51 fl.oz.	08351SD	08609

[VI.] Gel (working) times and curing times for adhesive

Temperature of base material		Gel (working) time	Full curing time
41°F	5°C	120 minutes	48 hours
50°F	10°C	90 minutes	24 hours
68°F	20°C	25 minutes	8 hours
86°F	30°C	20 minutes	8 hours
95°F	35°C	15 minutes	6 hours
104°F	40°C	12 minutes	4 hours
110°F	43°C	10 minutes	4 hours

Linear interpolation for intermediate base material temperatures is possible.

[III.] Hole cleaning tools and accessories for Adhesive Anchors[1,2,3,4,5,6,7]

Fractional anchor sizes									Metric anchor sizes							
Rod dia. (inch)	Rebar size (No.)	Drill bit size (inch)	Brush size (inch)	Brush length (inches)	Wire brush (Cat. #)	Plug size (inch)	Piston plug (Cat. #)		Rod dia. (mm)	Rebar size (Ø)	Drill bit size (inch)	Brush size (mm)	Brush length (mm)	Wire brush (Cat. #)	Plug size (mm)	Piston plug (Cat. #)
3/8	3	7/16	7/16	6 3/4	08284	N/A	N/A	Wire brush	10	-	12	12	170	DFC1670100	N/A	N/A
1/2	-	9/16	9/16	6 3/4	08285	N/A	N/A	Brush extension	12	10	14	14	170	DFC1670150	N/A	N/A
-	4	5/8	5/8	6 3/4	08275	N/A	N/A	Drill chuck adaptor	-	12	16	16	200	DFC1670200	N/A	N/A
5/8	5	11/16	11/16	7 7/8	08286	11/16	08258	SDS adaptor	16	14	18	18	200	DFC1670250	18	08259
		3/4	3/4	7 7/8	08278	3/4	08259		-	16	20	20	300	DFC1670300	20	08259
3/4	6	7/8	7/8	7 7/8	08287	7/8	08300	Compressed air nozzle	20	20	25	25	300	DFC1670400	25	08301
7/8	7	1	1	11 7/8	08288	1	08301		24	-	28	28	300	DFC1670450	28	08303
1	8	1 1/8	1 1/8	11 7/8	08289	1 1/8	08303	Std. piston plug	27	25	32	32	300	DFC1670500	32	08307
1 1/4	9	1 3/8	1 3/8	11 7/8	08290	1 3/8	08305		30	28	35	35	300	DFC1670550	35	08305
-	10	1 1/2	1 1/2	11 7/8	08291	1 1/2	08309		-	32	38	38	300	DFC1670600	38	08309

[1]If the DEWALT DustX+ extraction system is used to automatically clean the holes during drilling, standard hole cleaning (brushing and blowing following drilling) is not required.
[2]Holes are drilled with hammer-drill (i.e. rotary impact drills or rock drills with a carbide drill bit, including the use of hollow drill bits).
[3]For any case, it must be possible for the anchor to be inserted into the cleaned drill hole without resistance.
[4]A brush extension (Cat. #08282) must be used with a steel wire brush for holes drilled deeper than the listed brush length.
[5]Brush adaptors for power tool connections are available for drill chuck (Cat.# 08296) and SDS (Cat.# 08283).
[6]A plastic extension tube (Cat# 08281 or 8297) or flexible extension hose (Cat.# PFC1640600) or equivalent approved by DEWALT must be used if the bottom or back of the anchor hole is not reached with the mixing nozzle only.
[7]All overhead (i.e upwardly inclined) installations require the use of piston plugs where one is tabulated together with the anchor size (see table). N/A = Not applicable.
All horizontal installations require the use of piston plugs where one is tabulated together with the anchor size and where the embedment depth is greater than 8 inches.
A plastic extension tube (Cat# 08281 or 08297) or equivalent approved by DEWALT must be used with piston plugs.
The use of piston plugs is also recommended for underwater installations where one is tabulated together with the anchor size.

[IV.] Installation parameters - Specifications for installation of threaded rods and reinforcing bars for Adhesive Anchors

Anchor property / Setting information	Nominal threaded rod / reinforcing bar size										
	3/8" or #3	1/2"	#4	5/8" or #5	3/4" or #6	7/8" or #7	1" or #8	#9	1 1/4"	#10
d = Threaded rod outside diameter (in.)	0.375	0.500		0.625	0.750	0.875	1.000	-	1.250	-
d = Nominal rebar diameter (in.)	0.375	0.500		0.625	0.750	0.875	1.000	1.125	-	1.250
d_{bit} (d_o) = Nominal ANSI drill bit size (in.)	7/16	9/16	5/8	11/16 or 3/4	7/8	1	1 1/8	1 3/8	1 3/8	1 1/2
$h_{ef,min}$ = Minimum embedment (inches)	2 3/8	2 3/4		3 1/8	3 1/2	3 1/2	4	4 1/2	5	5
$h_{ef,max}$ = Maximum embedment (inches)	4 1/2	10		12 1/2	15	17 1/2	20	22 1/2	25	25
h_{min} = Minimum member thickness (inches)	h_{ef} + 1 1/4			h_{ef} + 2d_o, where d_o is hole diameter						
s_{min} = Minimum spacing (inches)	1 7/8	2 1/2		3 1/8	3 3/4	4 3/8	5	5 5/8	6 1/4	6 1/4
c_{min} = Minimum edge distance (inches)	1 7/8	2 1/2		3 1/8	3 3/4	4 3/8	5	5 5/8	6 1/4	6 1/4
T_{max} = Maximum torque (ft.-lb.)[1]	15	33		60	105	125	165	165	280	280
T_{max} = Maximum torque (ft.-lb.) for A36/Grade 36 and Grade 55 carbon steel rods and Grade B8/B8M (Class 1) stainless rods[2]	5	20		40	60	100	165	-	280	-
$c_{min,red}$ = Minimum edge distance, reduced (inches)	1 3/4	1 3/4		1 3/4	1 3/4	1 3/4	1 3/4	2 3/4	2 3/4	2 3/4
$T_{max,red}$ = Maximum torque (ft.-lb.), reduced edge[1]	7 [5][3]	14		27	47	56	74	90	126	126

Anchor property / Setting information	Nominal threaded rod / reinforcing bar size													
	M10	Ø10	M12	Ø12	Ø14	M16	Ø16	M20	Ø20	M24	Ø25	M27	Ø28	M30	Ø32
d = Threaded rod outside diameter (mm)	10		12		-	16		20		24	-	27	-	30	-
d = Nominal rebar diameter (mm)	10		12		14	16		20		-	25	-	28	-	32
d_{bit} (d_o) = Nominal ISO drill bit size (mm)	12	14	14	16	18	18	20	24	25	28	32	32	35	35	38
$h_{ef,min}$ = Minimum embedment (mm)	60		70		70	80		90		96	100	108	112	120	128
$h_{ef,max}$ = Maximum embedment (mm)	200		240		280	320		400		480	500	540	560	600	640
h_{min} = Minimum member thickness (mm)	h_{ef} + 1 1/4				h_{ef} + 2d_o, where d_o is hole diameter										
s_{min} = Minimum spacing (mm)	50		60		70	80		100		120	125	135	140	150	160
c_{min} = Minimum edge distance (mm)	50		60		70	80		100		120	125	135	140	150	160
T_{max} = Maximum torque (N-m)[1]	20		40		60	80		120		160	160	180	180	200	300
T_{max} = Maximum torque (N-m), Grade B8/B8M SS[1,3]	7		20		-	40		100		160	-	180	-	200	-
$c_{min,red}$ = Minimum edge distance (mm), reduced	45		45		45	45		45		45	45	45	70	70	70
$T_{max,red}$ = Maximum torque (N-m), reduced edge[1]	9 [7][3]		18		27	36		54		72	72	81	81	90	135

[1]Torque may not be applied to the anchors until the full cure time of the adhesive has been achieved.
[2]These torque values apply to ASTM A 36 / F 1554 Grade 36 carbon steel threaded rods; ASTM F 1554 Grade 55 carbon steel threaded rods; and ASTM A 193 Grade B8/B8M (Class 1) stainless steel threaded rods or equivalent. Torque may not be applied to the anchors until the full cure time of the adhesive has been achieved.
[3]These torque values apply to ASTM A 193 Grade B8/B8M (Class 1) stainless steel threaded rod only.

FIGURE 4—MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS (MPII)

Pure110+ Instruction Card (continued)

Installation instructions for Adhesive Anchors in solid base material – For any application not covered by this document please contact DEWALT

SELECT HAMMER DRILLING AS SUITABLE FOR APPLICATION

HAMMER DRILLING

1. Drill a hole into the base material with rotary hammer drill (i.e. percussion drill) and a carbide drill bit to the size and embedment required by the selected steel hardware element (see Table III). Tolerances of carbide drill bits including hollow drill bits must meet ANSI Standard B212.15.

Precaution: Wear suitable eye and skin protection. Avoid inhalation of dusts during drilling and/or removal (*see dust extraction equipment by DEWALT to minimize dust emissions*).

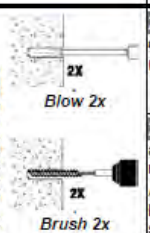
Notes: In case of standing water in the drilled hole (flooded hole condition), all the water has to be removed from the hole (e.g. vacuum, compressed air, etc.) prior to cleaning.

Drilling in dry concrete is recommended when using hollow drill bits (vacuum must be on).

→ ***Go to Step 3 for holes drilled with DustX+™ extraction system (no further hole cleaning is required). Otherwise go to Step 2a for hole cleaning instructions.***

→ *In the case of an underwater (submerged) installation condition go to Step 2uw-i for separate specific hole cleaning instructions.*

HOLE CLEANING DRY OR WET HOLES



2a. Starting from the bottom or back of the drilled anchor hole, blow the hole clean a minimum of *two* times (**2x**).

Use a compressed air nozzle (min. 90 psi) for all sizes of anchor rod and reinforcing bar (rebar)

2b. Determine wire brush diameter (see Table III) for the drilled hole and attach the brush with adaptor to a rotary drill tool or battery screw gun. Brush the hole with the selected wire brush a minimum of *two* times (**2x**).

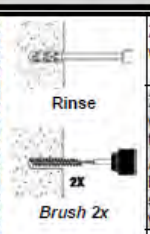
A brush extension (supplied by DEWALT) must be used for holes drilled deeper than the listed brush length. The wire brush diameter must be checked periodically during use; the brush should resist insertion into the drilled hole, if not the brush is too small and must be replaced with the proper brush diameter (i.e. new wire brush).

2c. **Repeat Step 2a** again by blowing the hole clean a minimum of *two* times (**2x**).

When finished the hole should be clean and free of dust, debris, oil or other foreign material.

→ **Next go to Step 3.**

HOLE CLEANING UNDERWATER INSTALLATION



2uw-i. Starting from the bottom or back of the drilled anchor hole, rinse/flush the hole clean with air/water (air/water line pressure) until clear water comes out.

2uw-ii. Determine wire brush diameter (see Table III) for the drilled hole and attach the brush with adaptor to a rotary drill tool. Brush the hole with the selected wire brush a minimum of *two* times (**2x**).

A brush extension (supplied by DEWALT) must be used for holes drilled deeper than the listed brush length. The wire brush diameter must be checked periodically during use; The brush should resist insertion into the drilled hole, if not the brush is too small and must be replaced with the proper brush diameter (i.e. new wire brush).

2uw-ii. **Repeat Step 2uw-i** again by rinse/flushing the hole clean with air/water.

When finished the hole should be clean and free of dust, debris, oil or other foreign material.

→ **Next go to Step 3.**

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FOLLOW STEPS #1 THROUGH #10 FOR RECOMMENDED INSTALLATION

PREPARING

3. Check adhesive expiration date on cartridge label. Do not use expired product. Review Safety Data Sheet (SDS) before use. Cartridge adhesive temperature must be between 50°F - 110°F (10°C - 43°C) when in use; for overhead applications cartridge adhesive temperature must be between 50°F - 90°F (10°C - 32°C) when in use. For best experience, suggested minimum cartridge adhesive temperature is 68°F (20°C) when in use. Review published gel (working) and cure times. Consideration should be given to the reduced gel (working) time of the adhesive in warm temperatures. For the permitted range of the base material temperature see Table II.

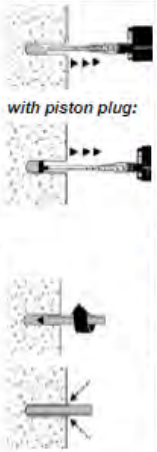
Attach a supplied mixing nozzle to the cartridge. Do not modify the mixer in any way and make sure the mixing element is inside the nozzle. Load the cartridge into the correct dispensing tool.

Note: Always use a new mixing nozzle with new cartridges of adhesive and also for all work interruptions exceeding the published gel (working) time of the adhesive.

4. Prior to inserting an anchor rod or rebar into the drilled hole, the position of the embedment depth has to be marked on the anchor. Verify anchor element is straight and free of surface damage.

5. Adhesive must be properly mixed to achieve published properties. Prior to dispensing adhesive into the drilled hole, separately dispense at least three full strokes of adhesive through the mixing nozzle until the adhesive is a consistent *red* color. Review and note the published gel (working) and cure times prior to injection of the mixed adhesive into the cleaned anchor hole (see Table II).

INSTALLATION



6. Fill the cleaned hole approximately two-thirds full with mixed adhesive starting from the bottom or back of the anchor hole. A plastic extension tube must be used with the mixing nozzle if the bottom or back of the anchor hole is not reached with the mixing nozzle only (see Table III). Slowly withdraw the mixing nozzle as the hole fills to avoid creating air pockets or voids.

Note: Piston plugs must be used with and attached to mixing nozzle and extension tube for overhead (i.e. upwardly inclined) installations and horizontal installations with anchor rod sizes as indicated in Table III. Insert piston plug to the back of the drilled hole and inject as described in the method above. During injection of the adhesive the piston plug will be naturally extruded from the drilled hole by the adhesive pressure. The use of piston plugs is also recommended for underwater installations where one is tabulated together with the anchor size (see Table III).

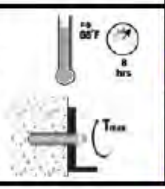
Attention! *Do not install anchors overhead without proper training, and installation hardware provided by DEWALT; contact DEWALT prior to use.*

7. The anchor should be free of dirt, grease, oil or other foreign material. Push clean threaded rod or reinforcing bar into the anchor hole while turning slightly to ensure positive distribution of the adhesive until the embedment depth is reached. Observe the gel (working) time.

8. Ensure that the anchor element is installed to the specified embedment depth. Adhesive must completely fill the annular gap at the concrete surface. Following installation of the anchor element, remove excess adhesive. Protect the anchor element threads from fouling with adhesive.

For all installations the anchor element must be restrained from movement throughout the specified curing period (where necessary) through the use of temporary wedges, external supports, or other methods. Minor adjustments to the position of the anchor element may be performed during the gel (working) time only.

CURING & FIXTURE



9. Allow the adhesive anchor to cure to the specified full curing time prior to applying any load (see Table IV).

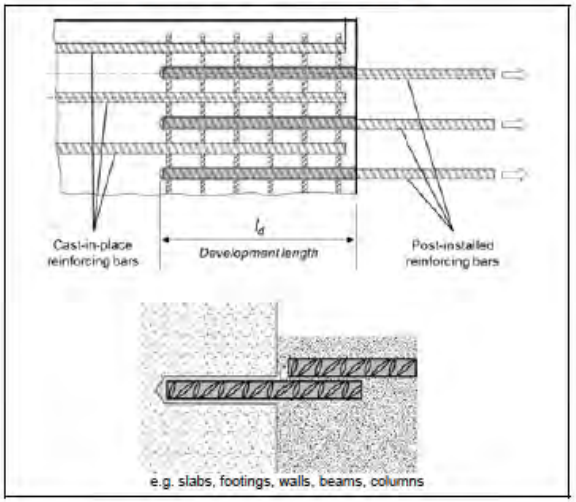
Note: Do not disturb, torque or load the anchor until it is fully cured.

10. After full curing of the adhesive anchor, a fixture can be installed to the anchor and tightened up to the maximum torque (shown in Table III) by using a calibrated torque wrench.

Note: Take care not to exceed the maximum torque for the selected anchor.

FIGURE 4—MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS (MPII) (Continued)

Pure110+ Post-installed Rebar Connections



[V.] Pure110+ epoxy system selection table

Dispensers			Cartridges			Mixing nozzles
Tool	Size	Cat.#	Type	Size	Cat.#	Cat.#
Manual	10 fl.oz.	08437	Quik-shot (coaxial)	9 fl.oz.	08310SD	PFC1640600
Cordless		DCE560D1				
Manual	13 fl.oz.	08298	Dual tube	13 fl.oz.	08313SD	08609
Cordless		DCE593D1				
Pneumatic		08497SD				
Manual	20 fl.oz.	08298	Dual tube	20 fl.oz.	08320SD	08609
Cordless		DCE593D1				
Pneumatic		08497SD				
Manual	21 fl.oz.	08409	Dual tube	21 fl.oz.	08321SD	08609
Pneumatic		08413				
Cordless		DCE591D1				
Pneumatic	51 fl.oz.	08438	Dual tube	51 fl.oz.	08351SD	08609

[VI.] Gel (working) times and curing times for adhesive

Temperature of base material		Gel (working) time	Full curing time
41°F	5°C	120 minutes	48 hours
50°F	10°C	90 minutes	24 hours
68°F	20°C	25 minutes	8 hours
86°F	30°C	20 minutes	8 hours
95°F	35°C	15 minutes	6 hours
104°F	40°C	12 minutes	4 hours
110°F	43°C	10 minutes	4 hours

Linear interpolation for intermediate base material temperatures is possible.

[VII.] Hole cleaning tools and accessories for Post-installed Rebar Connections[1,2,3,4,5,6,7]

Fractional reinforcing bar sizes							Metric reinforcing bar sizes										
Rebar size (No.)	Drill bit size (inch)	Brush size (inch)	Brush length (inches)	Wire brush (Cat.#)	Plug size (inch)	Piston plug (Cat.#)	Rebar size (Ø)	(M)	Drill bit size (mm)	(inch)	Brush size (mm)	(inch)	Brush length (mm)	Wire brush (Cat.#)		Plug size (mm)	(inch)	Piston plug (Cat.#)
3	7/16	7/16	6 3/4	08284	N/A	N/A	10	10	14	9/16	14	9/16	170	DFC1670150	08285	N/A		N/A
	1/2	1/2	6 3/4	08285	N/A	N/A	12	-	16	-	16	-	200	DFC1670200	-	16	-	N/A
4	5/8	5/8	6 3/4	08275	5/8	N/A	14	-	18	-	18	-	200	DFC1670250	-	18	-	N/A
5	3/4	3/4	7 7/8	08278	3/4	PFC1691520	-	15	-	3/4	-	3/4	200	-	08278	-	3/4	PFC1691520
6	7/8	7/8	7 7/8	08287	7/8	PFC1691530	16	-	20	-	20	-	300	DFC1670300	-	20	-	PFC1691520
	1	1	11 7/8	08288	1	PFC1691540	20	20	25	1	25	1	300	DFC1670400	08288	25	1	PFC1691540
7	1	1	11 7/8	08288	1	PFC1691540	24	-	32	-	32	-	300	DFC1670500	-	32	-	PFC1691555
	1 1/8	1 1/16	11 7/8	08289	1 1/8	PFC1691550	25	25	32	1 1/4	32	1 1/4	300	DFC1670500	08290	32	1 1/4	PFC1691555
8	1 1/8	1 1/16	11 7/8	08289	1 1/8	PFC1691550	28	-	35	-	35	-	300	DFC1670550	-	35	-	PFC1691560
	1 1/4	1 1/4	11 7/8	08276	1 1/4	PFC1691555	-	30	-	1 1/2	-	1 1/2	300	-	08291	-	1 1/2	PFC1691570
9	1 3/8	1 3/8	11 7/8	08290	1 3/8	PFC1691560	32	-	40	-	40	-	300	DFC1670600	-	40	-	PFC1691570
10	1 1/2	1 1/2	11 7/8	08291	1 1/2	PFC1691570	34	-	42	-	42	-	300	DFC1670605	-	42	-	PFC1691575
11	1 3/4	1 3/4	11 7/8	08299	1 3/4	PFC1691580	-	35	-	1 3/4	-	1 3/4	300	-	08299	-	1 3/4	PFC1691580
							36	-	45	-	45	-	300	DFC1670610	-	45	-	PFC1691580

Wire brush
Brush extension
Drill chuck adaptor
SDS adaptor
Rebar connection premium piston plug
Compressed air nozzle
DustX+™ system

[1]If the DEWALT DustX+ extraction system is used to automatically clean the holes during drilling, standard hole cleaning (brushing and blowing following drilling) is not required.
[2]Holes are drilled with hammer-drilling (i.e. rotary impact drills or rock drills with a carbide drill bit, including the use of hollow drill bits) or core-drilling (i.e. core drill with a diamond core drill bit).
[3]For any case, it must be possible for the reinforcing bar to be inserted into the cleaned hole without resistance.
[4]A brush extension (Cat.# 08282) must be used with a steel wire brush for holes drilled deeper than the listed brush length.
[5]Brush adaptors for power tool connections are available for drill chuck (Cat.# 08296) and SDS (Cat.# 08283).
[6]A flexible extension tube (Cat.# 08297) or flexible extension hose (Cat.# PFC1640600) or equivalent approved by DEWALT must be used with the mixing nozzle if the bottom or back of the anchor hole is not reached with the mixing nozzle only.
[7]All overhead (i.e upwardly inclined) installations require the use of piston plugs during where one is tabulated together with the anchor size (see table). N/A = Not applicable.
All horizontal installations require the use of piston plugs where one is tabulated together with the anchor size and where the embedment depth is greater than 8 inches.
A flexible extension tube (Cat.# 08297) or flexible extension hose (Cat.# PFC1640600) or equivalent approved by DEWALT must be used with piston plugs.

[VIII.] Installation parameters - Specifications for installation of reinforcing bars for Post-installed Rebar Connections

FRACTIONAL REINFORCING BARS

PARAMETER	SYMBOL	UNITS	NOMINAL REBAR SIZE (US)								
			#3	#4	#5	#6	#7	#8	#9	#10	#11
Nominal hole diameter[1]	d_o	in.	7/16	1/2	5/8	3/4	7/8	1	1 1/8	1 1/2	1 3/4
Effective embedment[2]	h_{ef}	in.	2 3/8 to 7 1/2	2 3/4 to 10	3 1/8 to 12 1/2	3 1/2 to 15	3 1/2 to 17 1/2	4 to 20	4 1/2 to 22 1/2	5 to 25	5 1/2 to 27 1/2
Nominal hole diameter[1]	d_o	in.	1/2	5/8	3/4	1	1 1/8	1 1/4	1 3/8	1 1/2	1 3/4
Effective embedment[2]	h_{ef}	in.	7 1/2 to 22 1/2	10 to 30	12 1/2 to 37 1/2	15 to 45	17 1/2 to 52 1/2	20 to 60	22 1/2 to 67 1/2	25 to 75	27 1/2 to 82 1/2

METRIC REINFORCING BARS

PARAMETER	SYMBOL	UNITS	NOMINAL REBAR SIZE (EU)										
			Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø32	Ø34	Ø36
Nominal hole diameter[1]	d_o	mm	14	16	18	20	25	32	32	36	40	42	45
Effective embedment[2]	h_{ef}	mm	60 to 600	70 to 720	75 to 840	90 to 1200	95 to 1440	100 to 1500	100 to 1500	112 to 1680	128 to 1920	136 to 2040	144 to 2160

PARAMETER	SYMBOL	UNITS	NOMINAL REBAR SIZE (CA)					
			10M	15M	20M	25M	30M	35M
Nominal hole diameter[1]	d_o	mm	7/16	3/4	1	1 1/4	1 1/2	1 3/4
Effective embedment[2]	h_{ef}	mm	70 to 678	80 to 960	90 to 1170	100 to 1512	120 to 1794	140 to 2100

For SI: 1 inch ≡ 25.4 mm.; for pound-inch units: 1 mm = 0.03937 inches.
[1]For any case, it must be possible for the reinforcing bar (rebar) to be inserted into the cleaned drill hole without resistance.
[2]Consideration should be given regarding the commercial availability of carbide drill bits (including hollow drill bits) and diamond core drill bits, as applicable, with lengths nessessary to achieve the effective embedments for post-installed reinforcing bar connections.

FIGURE 4—MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS (MPII) (Continued)

Pure110+ Post-installed Rebar Connections (cont.)

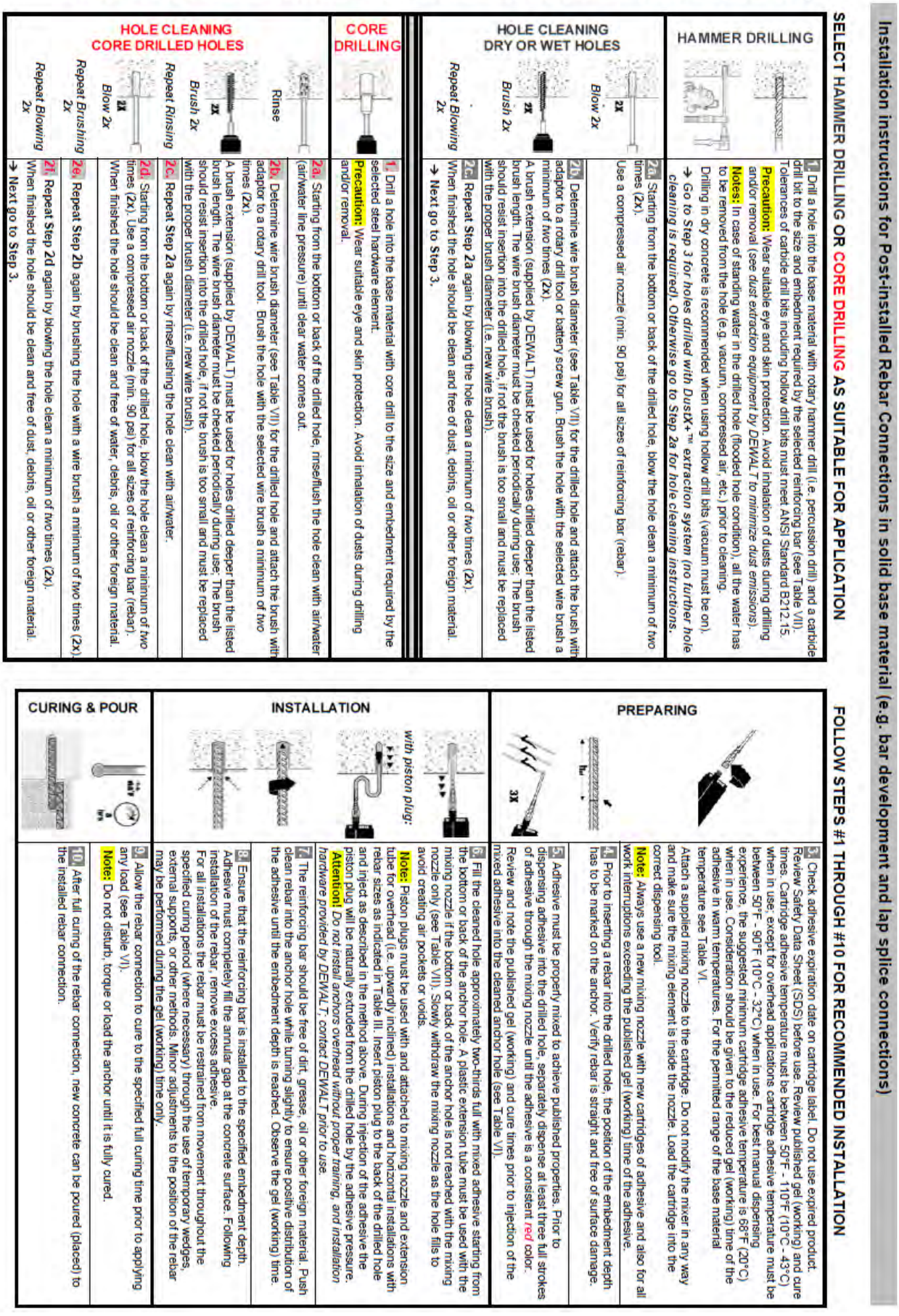


FIGURE 4—MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS (MPII) (Continued)

ICC-ES Evaluation Report

ESR-3298 LABC and LARC Supplement

Issued July 2017
Revised February 2018
This report is subject to renewal July 2018.

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DIVISION: 03 00 00—CONCRETE
Section: 03 16 00—Concrete Anchors

DIVISION: 05 00 00—METALS
Section: 05 05 19—Post-Installed Concrete Anchors

REPORT HOLDER:

DEWALT
701 EAST JOPPA ROAD
TOWSON, MARYLAND 21286
(800) 524-3244
www.DEWALT.com
anchors@DEWALT.com

EVALUATION SUBJECT:

PURE110+® EPOXY ADHESIVE ANCHOR SYSTEM AND POST-INSTALLED REINFORCING BAR CONNECTION SYSTEM IN CRACKED AND UNCRACKED CONCRETE (DEWALT / POWERS)

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that the Pure110+ Epoxy Adhesive Anchor System and Post-Installed Reinforcing Bar Connection System in cracked and uncracked concrete, described in ICC-ES master evaluation report ESR-3298, have also been evaluated for compliance with the codes noted below as adopted by Los Angeles Department of Building and Safety (LADBS).

Applicable code editions:

- 2017 *City of Los Angeles Building Code* (LABC)
- 2017 *City of Los Angeles Residential Code* (LARC)

2.0 CONCLUSIONS

The Pure110+ Epoxy Adhesive Anchor System and Post-Installed Reinforcing Bar Connection System in cracked and uncracked concrete, described in Sections 2.0 through 7.0 of the master evaluation report ESR-3298, comply with LABC Chapter 19, and LARC, and are subjected to the conditions of use described in this report.

3.0 CONDITIONS OF USE

The Pure110+ Epoxy Adhesive Anchor System and Post-Installed Reinforcing Bar Connection System described in this evaluation report must comply with all of the following conditions:

- All applicable sections in the master evaluation report ESR-3298.
- The design, installation, conditions of use and labeling of the Pure110+ Epoxy Adhesive Anchor System and Post-Installed Reinforcing Bar Connection System are in accordance with the 2015 *International Building Code®* (2015 IBC) provisions noted in the master evaluation report ESR-3298.
- The design, installation and inspection are in accordance with additional requirements of LABC Chapters 16 and 17, as applicable.
- Under the LARC, an engineered design in accordance with LARC Section R301.1.3 must be submitted.
- The allowable and strength design values listed in the master evaluation report and tables are for the connection of the steel anchors and post-installed reinforcing bars to the concrete. The connection between the steel anchors or post-installed reinforcing bars and the connected members shall be checked for capacity (which may govern).

This supplement expires concurrently with the master report, reissued July 2017, revised February 2018.

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ICC-ES Evaluation Report

ESR-3298 FBC Supplement

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DIVISION: 03 00 00—CONCRETE
Section: 03 16 00—Concrete Anchors

DIVISION: 05 00 00—METALS
Section: 05 05 19—Post-Installed Concrete Anchors

REPORT HOLDER:

DEWALT
701 EAST JOPPA ROAD
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EVALUATION SUBJECT:

PURE110+® EPOXY ADHESIVE ANCHOR SYSTEM AND POST-INSTALLED REINFORCING BAR CONNECTION SYSTEM IN CRACKED AND UNCRACKED CONCRETE (DEWALT / POWERS)

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that the Pure110+ Epoxy Adhesive Anchor System and Post-Installed Reinforcing Bar Connections in Cracked and Uncracked Concrete, recognized in ICC-ES master evaluation report ESR-3298, has also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2017 *Florida Building Code—Building*
- 2017 *Florida Building Code—Residential*

2.0 CONCLUSIONS

The Pure110+ Epoxy Adhesive Anchor System and Post-Installed Reinforcing Bar Connections in Cracked and Uncracked Concrete**,** described in Sections 2.0 through 7.0 of the master evaluation report ESR-3298, complies with the *Florida Building Code—Building* and the *Florida Building Code—Residential*, provided the design and installation are in accordance with the 2015 *International Building Code®* provisions noted in the master report.

Use of the Pure110+ epoxy adhesive anchors and Post-Installed Reinforcing Bar Connections with stainless steel threaded rod materials and reinforcing bars has also been found to be in compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* and the *Florida Building Code—Residential.*,

For products falling under Florida Rule 9N-3, verification that the report holder's quality-assurance program is audited by a quality-assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official, when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the master report, reissued July 2017, revised February 2018.

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EucoRepair V100

Single-Component, Low Shrinkage, Vertical/Overhead Repair Mortar

EUCLID CHEMICAL

Description

EUCOREPAIR V100 is a single-component, quick-setting, low shrinkage repair mortar formulated with unique polymers and fiber reinforcement for trowel applied vertical and overhead repairs requiring high performance.

Primary Applications

- Vertical and overhead repairs
- Resurfacing of damaged/deteriorated concrete
- Marine structures, tunnels and dams
- Parking structures & bridges
- Above and below grade applications

Features/Benefits

- Single-component for easy mixing and handling
- Excellent freeze-thaw resistance for difficult climates
- Polymer modified with fiber reinforcement
- Contains an integral corrosion inhibitor
- Low permeability helps protect rebar from corrosion
- High bond strength provides excellent adhesion

Technical Information

Typical Engineering Data @ 75°F (24°C), 50% RH

Property	Results	
Compressive Strength ASTM C 109 modified, 2" (5 cm) cubes, psi (MPa)	3 hours 1 day 7 days 28 days	2,000 (13.8) 3,000 (20.7) 4,500 (31.0) 6,000 (41.4)
Split Tensile Strength ASTM C 496, psi (MPa)	1 day 7 days 28 days	>200 (1.4) >250 (1.7) >400 (2.8)
Flexural Strength ASTM C 348, psi (MPa)	1 day 7 days 28 days	>400 (2.8) >500 (3.4) >600 (4.1)
Bond Strength ASTM C 882, psi (MPa)	7 days 28 days	>1,400 (9.7) >1,800 (12.4)
Modulus of Elasticity ASTM C 469, psi (MPa)	28 days	2.65×10^6 (1.83×10^4)
Length Change ASTM C 157 modified (3"x3"x11.25" specimens)	28 days	-0.020%
Unit Weight	~ 120 lb/ft³ (1,922 kg/m³)	
Set Times	Initial: ~ 20 min.	Final: ~ 35 min.

Appearance: EucoRepair V100 is a free-flowing powder designed to be mixed with water. After mixing and placing, the color may appear darker than the surrounding concrete. While this color will lighten as the EucoRepair V100 cures and dries out, the repair may always appear darker than the surrounding concrete.

Packaging/Yield

EucoRepair V100 is packaged in 46 lb (21 kg) moisture resistant bags, and 46 lb (21 kg) pails. **Yield:** 0.45 ft³ (0.013 m³) per 46 lb (21 kg) bag/pail when mixed with 1 gal (3.79 L) of water.

19215 Redwood Road • Cleveland, OH 44110
800-321-7628 t • 216-531-9596 f

www.euclidchemical.com

Coverage

One unit of EucoRepair V100 will cover approximately 10.5 ft^2 (1.0 m^2) when placed at an average depth of 1/2" (13 mm).

Shelf Life

1 year in original, unopened package

Directions for Use

Surface Preparation: Concrete surfaces must be structurally sound, free of loose or deteriorated concrete and free of dust, dirt, paint, efflorescence, oil and all other contaminants. Mechanically abrade the surface to achieve a surface profile equal to CSP 5 - 7 in accordance with ICRI Guideline 310.2. Properly clean profiled area. **Priming:** Clean and prime exposed steel with DURALPREP AC. Concrete should be primed with a spray or brush coat of DURALPREP AC. The primer coat of DURALPREP AC must be allowed to thoroughly dry prior to the application of EucoRepair V100. Alternatively, a Saturated Surface Dry (SSD) concrete surface can be primed with a scrub coat of EucoRepair V100. The repair must be made before the scrub coat dries out.

Mixing: Single bags may be mixed with a drill and "jiffy" type mixer. Use a paddle type mortar mixer for large jobs. All materials should be in the proper temperature range of 60°F (16°C) to 90°F (32°C). Add the appropriate amount of water, 0.9 to 1 gal (3.40 to 3.79 L)/bag into a clean mixing vessel, then add the dry product. Mix for 3 to 5 minutes. Do not mix more material than can be placed within 15 minutes.

Placement: Place in 1/8" to 4" (3 to 100 mm) lifts for vertical surfaces and 1/8" to 2" (3 to 50 mm) lifts for overhead applications. Trowel into place and allow to reach final set before the next lift. If additional lifts are required, score the surface of the placed mortar before it reaches final set.

Finishing: Finish the repair material to the desired texture. Do not add additional water to the surface during the finishing operation. Use EUCOBAR evaporation retarder.

Curing and Sealing: Curing is required. Cure with a Euclid Chemical high solids, water-based curing compound. (NOTE: A SOLVENT BASED CURING COMPOUND SHOULD NOT BE USED ON THIS PRODUCT). Under hot, windy or direct sunlight situations, apply a second coat of curing compound after the first has dried. If a curing compound is not desired, wet cure for a minimum of three days.

Clean-Up

Clean tools and equipment with water before the material hardens.

Precautions/Limitations

- Do not allow repairs to freeze until the material has reached a minimum of 1,000 psi (7 MPa) compressive strength.
- In adverse temperatures, follow ACI recommendations for hot/cold weather concrete practices.
- Use only potable water for mixing.
- Minimum application thickness 1/8" (3 mm).
- Minimum surface and ambient temperature 45°F (7°C) and rising at time of application.
- For optimum results, condition material to 65°F to 85°F (18°C to 29°C) at least 24 hours prior to use.
- Do not use a solvent based curing compound on this product.
- In all cases, consult the Safety Data Sheet before use.

WARRANTY: The Euclid Chemical Company ("Euclid") solely and expressly warrants that its products shall be free from defects in materials and workmanship for one (1) year from the date of purchase. Unless authorized in writing by an officer of Euclid, no other representations or statements made by Euclid or its representatives, in writing or orally, shall alter this warranty. EUCLID MAKES NO WARRANTIES, IMPLIED OR OTHERWISE, AS TO THE MERCHANTABILITY OR FITNESS FOR ORDINARY OR PARTICULAR PURPOSES OF ITS PRODUCTS AND EXCLUDES THE SAME. If any Euclid product fails to conform with this warranty, Euclid will replace the product at no cost to Buyer. Replacement of any product shall be the sole and exclusive remedy available and buyer shall have no claim for incidental or consequential damages. Any warranty claim must be made within one (1) year from the date of the claimed breach. Euclid does not authorize anyone on its behalf to make any written or oral statements which in any way alter Euclid's installation information or instructions in its product literature or on its packaging labels. Any installation of Euclid products which fails to conform with such installation information or instructions shall void this warranty. Product demonstrations, if any, are done for illustrative purposes only and do not constitute a warranty or warranty alteration of any kind. Buyer shall be solely responsible for determining the suitability of Euclid's products for the Buyer's intended purposes.

NOMAFLEX®

Polypropylene Joint Filler

Nomaflex® is a performance engineered foam that sets a new standard for the protection of concrete expansion and contraction joints. It is a closed cell extruded polypropylene foam that performs better, installs faster, and adds more value to the installed job.

2017 WINNER

MIP
most innovative products
AT WORLD OF CONCRETE

PERFORMANCE

Nomaflex is a closed cell polypropylene foam that can be used in residential, commercial, civil, municipal and industrial applications. It will not absorb water and extends the service life of concrete by acting as an insulator to contraction and expansion joints. Nomaflex does not impede sealant cure time and can be used without a bond breaker.

Nomaflex resists oils, gas, salts, acetone and other chemicals. It does not leach like other products and is not sticky. Nomaflex complies with ASTM D 545 and D 1751 test methods for extrusion, compression recovery and water absorption.

INSTALLATION

Nomaflex is a flexible yet semi-rigid foam that can be passed across wet pours without breaking. It transports easily and is light enough that one person can easily carry multiple bundles.

Nomaflex can be used with all hot-pour or cold-applied sealants and prevents 3-sided sealant adhesion. When using sealants, Nomaflex should be installed 1/2" below the concrete surface to allow space for joint sealant. Nomaflex is compatible with plastic edge caps and should be installed prior to pouring concrete. Nomaflex can be used as a form and should be installed against any edge where concrete is poured and an expansion joint is required. Spray adhesives can also be used with Nomaflex.

VALUE

Nomaflex is waterproof and can be stored outside. It will not break or flake due to weather elements. Nomaflex lasts longer and is 100% recyclable. Installers have the added benefit of a lower installed cost when using Nomaflex.

Features

- Natural bond breaker
- Ultra lightweight
- Flexible, bends to 12" diameter
- Moisture resistant
- Can be stored outside
- Traditional methods used for installation
- Can be used with hot-pour and cold-applied sealants
- Clean product
- Inert
- Recyclable
- Reusable
- Made in USA

NOMACO®

NOMAFLEX®

PHYSICAL PROPERTIES

Property	Value	ASTM Test Methods
Water Absorption	<1%	D 545, D 1751
Compression Strength	35-50 psi	D 545, D 1751, D 1752
Compression Recovery	>80%	D 545, D 1751, D 1752
Freeze Thaw Resistance	No Change	C 666 (300 cycles)
Heat Resistance	392°F +/- 5°F	D 5249
UV Weathering	No Change	D 4329 (1000 hrs. Cycle A)
Extrusion	<0.1 in.	D 545, D 1751, D 1752
Density	>3.5 lbs./cu.ft.	D 545, D 1751, D 1752
Boiling in Hydrochloric Acid	No disintegration	D 545, D 1752
Expansion in Boiling Water	<1% expansion	D 545, D 1752
100% Recyclable	N/A	N/A

PRODUCT INFORMATION

Product	Linear Ft/ Unit	Unit	Feet per Pack	# of 10 Packs per Skid	Linear Ft / Pallet 5’	10’
1/2” x 3-1/2”	5' / 10'	Bundle of 10	50 / 100	104	5,200	10,400
1/2” x 4”	5' / 10'	Bundle of 10	50 / 100	96	4,800	9,600
1/2” x 5”	5' / 10'	Bundle of 10	50 / 100	72	3,600	7,200
1/2” x 6”	5' / 10'	Bundle of 10	50 / 100	64	3,200	6,400
1/2" x 8"	5' / 10'	Bundle of 10	50 / 100	48	2,400	4,800
3/4” x 3-1/2”	5' / 10'	Bundle of 10	50 / 100	78	3,900	7,800
3/4” x 4”	5' / 10'	Bundle of 10	50 / 100	72	3,600	7,200
3/4” x 5”	5' / 10'	Bundle of 10	50 / 100	54	2,700	5,400
3/4” x 6”	5' / 10'	Bundle of 10	50 / 100	48	2,400	4,800
3/4" x 8"	5' / 10'	Bundle of 10	50 / 100	36	1,800	3,600
1" x 3-1/2”	5' / 10'	Bundle of 10	50 / 100	52	2,600	5,200
1” x 4”	5' / 10'	Bundle of 10	50 / 100	48	2,400	4,800
1” x 5”	5' / 10'	Bundle of 10	50 / 100	36	1,800	3,600
1” x 6”	5' / 10'	Bundle of 10	50 / 100	32	1,600	3,200
1" x 8"	5' / 10'	Bundle of 10	50 / 100	24	1,200	2,400

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TWO COMPONENT
ACRYLIC POLYMER MODIFIED
TOPPING AND UNDERLAYMENT
OVERHEAD AND WALL REPAIRS

PATCHCRETE®

***Bonds to Virtually Any Concrete Surface**
***Light Gray to Blend with Existing Concrete**
***Improved Bond and Compressive Strength**

PRODUCT DESCRIPTION

PATCHCRETE is a two component polymer modified concrete repair, topping, and underlayment material. The **PATCHCRETE** liquid is a high solids content Acrylic Polymer. The **PATCHCRETE Powder #1005** is a portland cement based mix with graded silica and special chemical additives. Polymer modified concrete gives improved bonding, improved chemical resistance, improved water resistance and improved tensile, compressive and flexural strengths.

This high strength portland cement/acrylic polymer combination provides a smooth durable semi-resilient surface which can be used as a finished floor in most applications. **PATCHCRETE** is easy to mix and apply, requiring no special tools. It is suitable for use as a screedable topping and underlayment, or as a floor, wall or overhead repair material when mixed to a stiffer trowelable consistency. **PATCHCRETE** has been approved by the USDA for use in most processing plants and may be used where there is exposure to potable water. Use of **PATCHCRETE** can help your project earn LEED Credits. Contact factory for details.

PRODUCT APPLICATIONS

PATCHCRETE is designed to be used both as a topping or underlayment and as a wall, floor, and overhead patching and repair material when mixed to a stiffer consistency. For use as an underlayment, mix to the consistency of a thick pancake batter. Use **PATCHCRETE** to level and smooth rough or rained on concrete. **PATCHCRETE** may be used to level low areas inside or outside. It will bond to and may be used to level virtually any concrete surface.

Mixed as a repair material, **PATCHCRETE** may be used to repair walls, floors, tilt panels, driveways, sidewalks, precast members, etc. **PATCHCRETE** may be applied from featheredge to 2-1/2 inches. Suitable for interior or exterior applications. Suitable for application where there is rubber tired forklift and vehicle traffic.

PRODUCT FEATURES

- Outstanding Bonding
- Improved Water Resistance
- Interior or Exterior Use
- From Featheredge to 2-1/2 inches
- May Be Used as Screedable Underlayment
- May Be Used as a Trowelable Repair Material
- Improved Compressive Strength
- No Moist Curing Required
- High Solids Acrylic Polymer
- May Be Stained or Used With Integral Color
- May Be Used for Stenciled and Decorative Concrete
- LEED Credits Applicable

PRODUCT TEST RESULTS

WORKING TIME: Approximately 25 minutes
COLOR: Light Gray, also available in White
INITIAL SET: 4 Hours

SCREEDABLE CONSISTENCY: (1 bag to 1 gallon)
Compressive Strength (ASTM C-109, Air Cured)
7 Days - 4120 PSI 28 Days - 5500 PSI

Flexural Strength (ASTM C-348, Air Cured)
7 Days - 1260 PSI 28 Days - 1535 PSI

Slant Shear Bond (ASTM C-1042, Air Cured)
28 Days - 1250 PSI

TROWELABLE CONSISTENCY: (1 bag to .8 gallon)
Compressive Strength (ASTM C-109, Air Cured)
7 Days - 4550 PSI 28 Days - 6000 PSI

Flexural Strength (ASTM C-348, Air Cured)
7 Days - 1360 PSI 28 Days - 1720 PSI

Slant Shear Bond (ASTM C-1042, Air Cured)
28 Days - 1550 PSI

SURFACE PREPARATION - All surfaces must be clean and structurally sound; free of dust, grease, oil, paint, sealers, etc. Pores of the concrete surface must be open to permit proper bonding, especialy on fresh "green" concrete. Any necessary surface preparation may be done by shotblasting, scarifying, sandblasting or acid etching. If acid etch is used, be sure to neutralize surface, clean and brush thoroughly. For heavy traffic applications, mechanical abrasion of the surface is recommended. Concrete surfaces should be surface saturated but dry to touch (SSD).

Do not bridge cracks with **PATCHCRETE**. They will "telegraph" through. Fill cracks prior to placement of **PATCHCRETE**. Expansion joints should be extended through the **PATCHCRETE**. For surfaces with low porosity, **EP-200 EPOXY PRIMER** can be used per installation instructions on the **EP-200** Literature.

MIXING - PATCHCRETE may be mixed in a mortar mixer, with a heavy duty low-to-medium speed drill or by hand. Always use a clean mixing container. Place **PATCHCRETE Acrylic Polymer #1003** in container and add **PATCHCRETE Powder #1005**, mixing while adding powder. DO NOT ADD WATER. Added water will reduce strength and bonding. Mix for 2 to 3 minutes until a smooth, lump-free mixture is obtained. Mixing time should not exceed 3 minutes. DO NOT OVERMIX and DO NOT entrap air while mixing.

USE OF AGGREGATE - For areas with a thickness over 1/2", aggregate should be added to **PATCHCRETE**. Add 1 part by volume of 3/8" pea gravel to 2 parts by volume of **PATCHCRETE**. DO NOT ADD WATER.

USE AS UNDERLAYMENT OR TOPPING - For use as an underlayment, mix to desired screedable consistency, no more liquid than 1 bag to 1 gallon of polymer. As an underlayment, apply from featheredge to 2-1/2". Material may be screeded for low places or spread into place with a squeegee. When using as a wearing surface topping, install at least 3/8" thick. DO NOT FEATHEREDGE as a wearing surface topping. For areas over 1/2" in depth aggregate is required.

USE AS A TROWELABLE NON-SAG REPAIR MATERIAL- For floor, wall and overhead repairs, mix about 3/4 to 7/8 of liquid polymer to a bag of powder to get a stiffer, trowelable non-sag consistency. Make a trial batch to get desired consistency. Lubricate trowel with polymer to prevent dragging. For wall applications such as coating or filling concrete block, **PATCHCRETE** may be applied with a hopper gun and then floated smooth.

INSTALLATION - To insure proper bonding, use **P-100 PRIMER** or apply a bond slurry coat scrubbed into the surface. The **P-100 PRIMER** will give more reliable and consistent results. Allow the **P-100 PRIMER** to dry (30-45 minutes) and install **PATCHCRETE** material. Material may be applied up to 24 hours after the **P-100 PRIMER**. **The P-100 PRIMER** will re-emulsify one time and may be used for inside and outside applications.

The bond slurry coat is a syrup-like consistency mix of **PATCHCRETE** Powder and **PATCHCRETE** Acrylic Polymer. Scrub the slurry coat into the SSD surface. Place **PATCHCRETE** and smooth and spread while slurry coat is still damp. **DO NOT LET SLURRY COAT DRY.** Screed off to get a smooth flat surface. Use a trowel for touch-up and featheredging. DO NOT OVERTROWEL. Lubricate trowel with polymer to prevent dragging. The **#1003 Polymer** makes the materials darker. Less polymer will give a lighter finished surface. For best results, smooth and spread into place and touch-up as needed. A latex film will form when **PATCHCRETE** begins to set. This is normal and will disappear.

Normally floor coverings may be applied the next day. With thick applications or cold or damp weather, another day may be required. No heavy traffic should be permitted for 4 to 5 days. When used as an underlayment, always follow the directions of floor covering manufacturers concerning maximum moisture content and perform required tests. Over interior plywood floors, use two coats of **P-100 PRIMER** applied at right angles. Allow **P-100 PRIMER** to dry between coats. Floor must be rigid and sound. Anchor metal lathe into wood. This will help hold the **PATCHCRETE** in place.

PATCHCRETE is more resistant to moisture penetration than regular concrete. Breathable water based sealers may be applied over **PATCHCRETE** as soon as 24 hours. Paints and coatings may be applied over **PATCHCRETE** as you would over concrete. For solvent based sealers and coatings, wait 3-4 days for the **PATCHCRETE** to harden. For non-breathable coatings, ensure moisture has left **PATCHCRETE**. A simple poly test can be performed over the deepest areas. Always follow manufacturer recommendations and testing for applying over fresh concrete.

PRECAUTIONS - Do not use below 40°F. The best temperature to use is 60°-90°F. **DO NOT LET PATCHCRETE ACRYLIC POLYMER #1003 FREEZE**. Always make a trial installation first under actual job conditions to be sure you get the desired results before using on larger areas.

CONTAINS SILICA SAND AND FREE SILICA. Do not breathe dust. Avoid inhalation by wearing respirator. Continuous exposure and inhalation may cause silicosis and crystalline silica is classified as a known human carcinogen.

CURING - In general, **PATCHCRETE** will air cure without any need for curing products. However, care should be taken in areas where **PATCHCRETE** is exposed to wind or direct sunlight, sometimes these can cause cracking as the top dries before the bottom has cured. For these fast drying situations, the **PATCHCRETE** should be covered with damp burlap or plastic for 48 hours.

COVERAGE - PATCHCRETE Powder #1005 is packaged in 45 lb. moisture resistant bags. **PATCHCRETE Acrylic Polymer #1003** is packaged in 1 gallon jugs, 4 to a carton. One 45 lb. bag of **PATCHCRETE Powder #1005** and one gallon of **PATCHCRETE Acrylic Polymer #1003** will cover 45 sq. ft. at 1/8" thickness.

CONTAINS PORTLAND CEMENT. Avoid eye contact or prolonged contact with skin. Wash thoroughly after handling. In case of eye contact, flush with plenty of water for at least 15 minutes. Consult a physician immediately. Keep out of the reach of children.

LIMITED WARRANTY

Lyons Manufacturing, Inc. warrants the high quality of its products. However, because of many factors beyond our control in their use, such as job conditions, workmanship, etc., the liability of all parties making and selling this product is expressly limited to the refund of the purchase price or replacement of the Lyons material used. Lyons Manufacturing, Inc. will replace any product proven to have a manufacturing defect, FOB Factory, provided Lyons Manufacturing, Inc. is notified of such defect within one (1) year from the date of shipment from the factory. This warranty is in lieu of all other warranties, express or implied. Lyons Manufacturing, Inc. makes no warranty of suitability of its products for any particular application and sells its products upon the condition that customer shall conduct their own test to determine the suitability of the products for their purposes. Under no circumstances will Lyons Manufacturing, Inc. be liable for economic, special, incidental or consequential damages or losses of any kind.

Scan Here For More Information

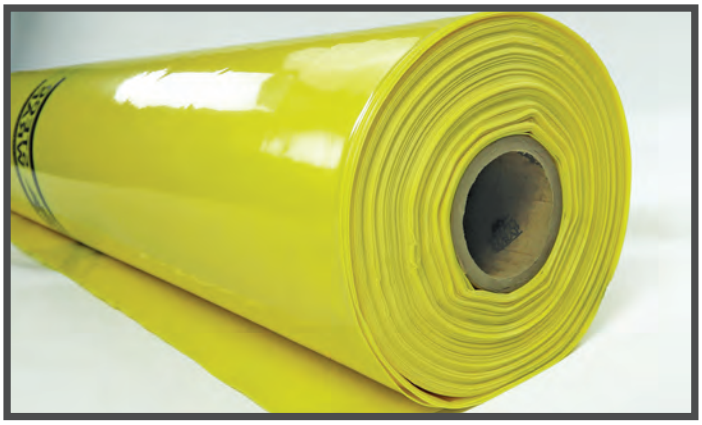
LYONS MANUFACTURING, INC.
8900 Forney Road ◆ Dallas, TX 75227-4505 ◆ 214/381-8100
www.lyonsmanufacturing.com

STEGO® WRAP 15-MIL VAPOR BARRIER

A STEGO INDUSTRIES, LLC INNOVATION | VAPOR RETARDERS 07 26 00, 03 30 00 | VERSION: JAN 28, 2025

1. PRODUCT NAME

STEGO WRAP 15-MIL VAPOR BARRIER



2. MANUFACTURER

Stego Industries, LLC
216 Avenida Fabricante, Suite 101
San Clemente, CA 92672
Sales, Technical Assistance
Ph: (877) 464-7834
contact@stegoindustries.com
stegoindustries.com

3. PRODUCT DESCRIPTION

USES: Stego Wrap 15-Mil Vapor Barrier is used as a below-slab vapor barrier.

COMPOSITION: Stego Wrap 15-Mil Vapor Barrier is a multi-layer plastic extrusion manufactured with only high grade prime, virgin, polyolefin resins.

ENVIRONMENTAL FACTORS: Stego Wrap 15-Mil Vapor Barrier can be used in systems for the control of soil gases (radon), and sulfates.

4. TECHNICAL DATA

TABLE 1: PHYSICAL PROPERTIES OF STEGO WRAP 15-MIL VAPOR BARRIER

PROPERTY	TEST	RESULTS
Under Slab Vapor Retarders	ASTM E1745 Class A, B & C – Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs	Exceeds Class A, B & C
Water Vapor Permeance	ASTM F1249 – Test Method for Water Vapor Transmission Rate Through Plastic Film and Sheeting Using a Modulated Infrared Sensor	0.0086 perms
Permeance After Conditioning (ASTM E1745 Sections 7.1.2 - 7.1.5)	ASTM E154 Section 8, F1249 – Permeance after wetting, drying, and soaking ASTM E154 Section 11, F1249 – Permeance after heat conditioning ASTM E154 Section 12, F1249 – Permeance after low temperature conditioning ASTM E154 Section 13, F1249 – Permeance after soil organism exposure	0.0098 perms 0.0091 perms 0.0097 perms 0.0095 perms
Methane Transmission Rate	ASTM D1434 – Standard Test Method for Determining Gas Permeability Characteristics of Plastic Film and Sheeting	192.8 GTR* (mL(STP)/m^2*day)
Radon Diffusion Coefficient	K124/02/95	8.8 x 10^{-12} m^2/second
Puncture Resistance	ASTM D1709 – Test Method for Impact Resistance of Plastic Film by Free-Falling Dart Method	2,266 grams
Tensile Strength	ASTM D882 – Test Method for Tensile Properties of Thin Plastic Sheeting	70.6 lbf/in
Thickness		15 mil
Roll Dimensions	width x length: area:	14' x 140' 1,960 ft^2
Roll Weight		147 lb

Note: perm unit = grains/(ft^2*hr*in-Hg)
*GTR = Gas Transmission Rate

Continued...
Note – legal notice on page 2.

STEGO® WRAP 15-MIL VAPOR BARRIER

A STEGO INDUSTRIES, LLC INNOVATION | VAPOR RETARDERS 07 26 00, 03 30 00 | VERSION: JAN 28, 2025

5. INSTALLATION

UNDER SLAB: Unroll Stego Wrap 15-Mil Vapor Barrier over an aggregate, sand, or tamped earth base. Overlap all seams a minimum of 6 inches and tape using Stego® Tape or Stego® Crete Claw® Tape. All penetrations must be sealed using a combination of Stego Wrap and Stego accessories.

Stego Wrap should be installed below 110°F. Do not exceed 7 days between Stego Wrap installation and concrete placement or full protection from UV and weather exposure. Please review technical data sheets for Stego accessory products for installation/application temperature ranges.

For additional information, please refer to Stego's complete installation instructions.

6. AVAILABILITY & COST

Stego Wrap 15-Mil Vapor Barrier is available through our network of building supply distributors. For current cost information, contact your local Stego® distributor or Stego Sales Representative.

7. WARRANTY

Stego believes to the best of its knowledge, that specifications and recommendations herein are accurate and reliable. However, since site conditions are not within its control, Stego does not guarantee results from the use of the information provided herein. Stego does offer a limited warranty on Stego Wrap 15-Mil Vapor Barrier. Please see **stegoindustries.com/legal**

8. MAINTENANCE AND STORAGE

Maintenance: Inspect after installation. Repair visible damage with Stego Tape or recommended accessories.
Storage and Handling: Store in original packaging in a cool, dry place. Handle with care to avoid damage.

Please refer to the Safety Data Sheet (SDS) for detailed safety, storage, and handling procedures.

9. TECHNICAL SERVICES

Technical advice, custom CAD drawings, and additional information can be obtained by contacting Stego or by visiting the website.

Email: contact@stegoindustries.com
Contact Number: (877) 464-7834
Website: **stegoindustries.com**

10. FILING SYSTEMS: stegoindustries.com

DATA SHEETS ARE SUBJECT TO CHANGE. FOR MOST CURRENT VERSION, VISIT STEGOINDUSTRIES.COM

Stego Industries, LLC ("Stego") Intellectual Property, Installation, Warranty, and State Approval Information: stegoindustries.com/legal.
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UNDER-SLAB VAPOR BARRIER

PART 1 – GENERAL

1.1 SUMMARY

A. Products supplied under this section:
   1. Vapor barrier and installation accessories for installation under concrete slabs.

B. Related sections:
   1. Section 03 30 00 Cast-in-Place Concrete
   2. Section 07 26 00 Vapor Retarders

1.2 REFERENCES

A. ASTM International:
   1. ASTM E1745-17 Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs.
   2. ASTM E1643-18a Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs.

B. Technical Reference - American Concrete Institute (ACI):
   1. ACI 302.2R-06 Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials.
   2. ACI 302.1R-15 Guide to Concrete Floor and Slab Construction.

1.3 SUBMITTALS

A. Quality control/assurance:
   1. Summary of test results per paragraph 9.3 of ASTM E1745.
   2. Manufacturer's samples and literature.
   3. Manufacturer's installation instructions for placement, seaming, penetration prevention and repair, and perimeter seal per ASTM E1643.
   4. All mandatory ASTM E1745 testing must be performed on a single production roll per ASTM E1745 Section 8.1.

PART 2 – PRODUCTS

2.1 MATERIALS

A. Vapor barrier shall have all of the following qualities:
   1. Maintain permeance of less than 0.01 Perms [grains/(ft^2 · hr · inHg)] as tested in accordance with mandatory conditioning tests per ASTM E1745 Section 7.1 (7.1.1-7.1.5).
   2. Other performance criteria:
      a. Strength: ASTM E1745 Class A.
      b. Thickness: 15 mils minimum
   3. Provide third party documentation that all testing was performed on a single production roll per ASTM E1745 Section 8.1

B. Vapor barrier products:
   1. Basis of Design: Stego Wrap Vapor Barrier (15-mil) by Stego Industries LLC., (877) 464-7834 www.stegoindustries.com.
   2. No substitutions.

2.2 ACCESSORIES

A. Seams:
   1. Stego Tape by Stego Industries LLC, (877) 464-7834 www.stegoindustries.com.

B. Sealing Penetrations of Vapor barrier:
   1. Stego Mastic by Stego Industries LLC, (877) 464-7834 www.stegoindustries.com.
   2. Stego Tape by Stego Industries LLC, (877) 464-7834 www.stegoindustries.com.

C. Perimeter/edge seal:
   1. Stego Crete Claw by Stego Industries LLC, (877) 464-7834 www.stegoindustries.com.
   2. Stego Term Bar by Stego Industries LLC, (877) 464-7834 www.stegoindustries.com.
   3. StegoTack Tape (double-sided sealant tape) by Stego Industries LLC, (877) 464-7834 www.stegoindustries.com.

D. Penetration Prevention:
   1. Beast Foot by Stego Industries LLC, (877) 464-7834 www.stegoindustries.com.
   2. Beast Form Stake by Stego Industries LLC, (877) 464-7834 www.stegoindustries.com.

E. Vapor Barrier-Safe Screed System
   1. Beast Screed by Stego Industries, LLC, (877) 464-7834 www.stegoindustries.com.
   2. Beast Hook by Stego Industries, LLC, (877) 464-7834 www.stegoindustries.com.

PART 3 – EXECUTION

3.1 PREPARATION

A. Ensure that subsoil is approved by Architect or Geotechnical Engineer.
   1. Level and compact base material.

3.2 INSTALLATION

A. Install vapor barrier in accordance ASTM E1643.
   1. Unroll vapor barrier with the longest dimension parallel with the direction of the concrete placement and face laps away from the expected direction of the placement whenever possible.
   2. Extend vapor barrier to the perimeter of the slab. If practicable, terminate it at the top of the slab, otherwise (a) at a point acceptable to the structural engineer or (b) where obstructed by impediments, such as dowels, waterstops, or any other site condition requiring early termination of the vapor barrier. At the point of termination, seal vapor barrier to the foundation wall, grade beam or slab itself.
      [Specifier note: The perimeter seal can be handled several ways. When sealing to the slab, Crete Claw is the best option. When sealing to a stem wall or wall, the best option is to use StegoTack Tape or both StegoTack Tape and Stego Term Bar.]
      a. Seal vapor barrier to the entire slab perimeter using Stego Crete Claw, per manufacturer's instructions.

      OR

      b. Seal vapor barrier to the entire perimeter wall or footing/grade beam with double sided StegoTack Tape, or both Stego Term Bar and StegoTack Tape, per manufacturer's instructions. Ensure the concrete is clean and dry prior to adhering tape.
   3. Overlap joints 6 inches and seal with manufacturer's seam tape.
   4. Apply seam tape/Crete Claw to a clean and dry vapor barrier.
   5. Seal all penetrations (including pipes) per manufacturer's instructions.
   6. For interior forming applications, avoid the use of non-permanent stakes driven through vapor barrier. Use Beast Form Stake and Beast Foot as a vapor barrier-safe forming system. Ensure Beast Foot's peel-and-stick adhesive base is fully adhered to the vapor barrier.
   7. If non-permanent stakes must be driven through vapor retarder, repair as recommended by vapor retarder manufacturer.
   8. Use reinforcing bar supports with base sections that eliminate or minimize the potential for puncture of the vapor barrier.
   9. Repair damaged areas with vapor barrier material of similar (or better) permeance, puncture and tensile.
   10. For vapor barrier-safe concrete screeding applications, install Beast Screed (vapor barrier-safe screed system) per manufacturer's instructions prior to placing concrete.

END OF SECTION

APPENDIX E

CMMP

Contaminated Media Management Plan

PROPOSED BLOCK 290 WEST
NW 21ST AVENUE AND NW PETTYGROVE STREET
PORTLAND, OREGON 97209

AUGUST 31, 2020

SUBMITTED TO:
GUARDIAN REAL ESTATE SERVICES
760 SE 9TH AVENUE, SUITE 2200
PORTLAND, OREGON 97205

GEO CONSULTANTS NORTHWEST
2839 SE MILWAUKIE AVENUE
PORTLAND, OREGON 97202

PROJECT 1294-06

GEO CONSULTANTS NORTHWEST

August 31, 2020

Guardian Real Estate Services
760 SE 9th Avenue, Ste. 2200
Portland, OR 97205

Subject: Contaminated Media Management Plan
Proposed Block 290 West
NW 21ST Avenue and NW Pettygrove Street
GCN Project 1294-06

GEO Consultants NW (GCN) has prepared this Contaminated Media Management Plan (CMMP) for the proposed Block 290 West project located northwest of the NW 21ST Avenue and NW Pettygrove Street in Portland, Oregon.

The primary purpose of this CMMP is to guide construction activities to minimize risks to worker health/safety and the environment, and guide handling and disposal of contaminated soil and water encountered during construction.

This CMMP is intended to satisfy Oregon Department of Environmental Quality (DEQ), should this agency need to be notified if contamination, reportable to DEQ, is discovered during construction. DEQ has primary jurisdiction over such discoveries.

This CMMP is also intended to satisfy the City of Portland and Multnomah County, should these agencies have any concerns about implementation of the CMMP.

GCN is pleased to continue supporting your environmental and geotechnical needs.

Very respectfully,

David Rankin, PG, RG, LHG, LEG, CEG, DNR-QE
Principal
Project Manager – Geotechnical/Environment Disciplines

Expires 06/2021

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Figure 2: Historical Map

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Attachment – 2020 Oregon DEQ Clean Fill Determinations

CONTAMINATED MEDIA MANAGEMENT PLAN
PROPOSED BLOCK 290 WEST
NW 21ST AVENUE AND NW PETTYGROVE STREET
PORTLAND, OREGON

1.0 INTRODUCTION

This CMMP, prepared by GEO Consultants NW (GCN), will be used to plan and implement construction activities needed to minimize risks to worker health/safety and the environment, and outlines procedures for handling and disposal of contaminated soil and water encountered during construction.

Following completion of construction, a post-construction report will be submitted to the Owner for forwarding to all parties engaged in the proposed Block 290 West. If Oregon Department of Environmental Quality (DEQ) was notified of contamination discoveries during construction, DEQ may request a copy of our post-construction report.

2.0 PROPERTY

Block 290 consists of two tax lots: TL 102 (Block 290 East) and 103 (Block 290 West). Block 290 West (or "Property") is a 200 by 200-foot area located at the northeast corner of NW 21st Avenue and NW Pettygrove Street in Portland, Oregon (refer to Figure 1 and 2).

Currently there is a T-shaped former truck maintenance building and paved parking on the two-block site, as shown on Figure 2. By our observations of the interior and exterior areas of the west one-half of the facility, it appears that the building primarily consists of a high-ceiling single-story structure with concrete walls, floor slab and roof. The roof is also capped with asphalt pavement. Within this west one-half of the building, there are no apparent elevators but there is a mezzanine level with offices/storage/restrooms and a basement area which contains a mess/meeting hall, large mechanical room, HVAC room and other areas.

Subsurface soil explorations on both blocks indicate that soils consist of medium dense to dense brown silty SAND to SAND with some silt with very dense sandy GRAVEL, which was encountered about 30 feet below the ground surface (bgs). Groundwater in the vicinity is mapped at a depth of about 40 feet bgs. Borings drilled on the site during the wet winter months revealed groundwater levels from 50 to 55 feet bgs.

The existing building, pavement and appurtenances will need to be demolished and removed to make way for future redevelopment.

Present plans for Block 290 West include redevelopment into a new seven-story mixed use building. The new building will include one story of below grade parking.

3.0 SUBSURFACE CONDITIONS

In the 2014 GeoDesign investigation previously mentioned, eight (8) direct push borings (DP-1 through DP-8) and one soil boring (B-1) were completed within Block 290 West.

Soil borings indicated a 2 to 6-inch thick layer of pavement underlain by 3 to 22 inches of crushed rock (note DP-2 was found to have no crushed rock). Soil consisting of silt was encountered beneath the crushed rock layer ranging in depths up to 3 to 6 feet. Underlying the silt is sand with varying

amounts of silt to the depths of the borings. Within boring B-1, dense to very dense alluvial gravel was found to underlie the alluvial silt and sand layer.

Groundwater was not encountered the explorations but is anticipated to be at least 40 to 50 feet below the ground surface based on nearby well logs. We anticipate the depth to groundwater near the Property will fluctuate during seasonal periods.

4.0 EXISTING NATURE/EXTENT OF CONTAMINATION

Due to the former use of the Property, some "areas of interest" (shown on Figure 2) of Block 290 West contain soil contaminated with motor fuel (principally diesel but also gasoline), motor oil, waste oil and other products (anti-freeze, etc.) used during truck fueling and maintenance. The record suggests that most of the underground storage tanks (USTs) have been removed, some of the USTs were decommissioned in-place in accordance with DEQ guidance at the time of decommissioning, and results of the UST removal or in-place decommissioning were reported to Oregon DEQ. Most of the USTs were issued a "no further action" (NFA) letter by Oregon DEQ after the UST removal report(s) were reviewed.

Soil borings have been drilled in many areas shown on Figure 2 and 2A. Groundwater monitoring wells were installed in several of the borings.

The results of past explorations/testing (refer to Figures 2 and 2A) and Oregon DEQ UST files suggest that the UST removal and subsequent soil cleanup was relatively thorough for the era in which the work was performed. Our experience with assessing properties with decommissioned USTs, particularly those USTs decommissioned over 20 years ago, suggests a good chance pockets of soil contamination exist at contaminant concentrations above current DEQ guidance. We find that the pockets are more frequently found when the USTs are decommissioned and left in-place. These pockets may exist within or near all "areas on interest" (see Figure 2) from just below the existing pavement and up to depths of 10 to 18 feet, near the base former UST excavations base ~10 to 18 feet (possibly below the excavation bases). There may also be pockets of contamination along the shallow remote fill ports and/or the piping which connected the ports to the UST nests, particularly if the piping was not removed during the UST removal in the 1990's.

Particularly for gasoline and solvents found/suspected in soil, vapor intrusion into future buildings also is a significant concern, per recent Oregon DEQ guidance.

Within the area designated as Block 290 West, there are two primary historically known and/or suspected "areas of interest" or environmental concern (see Figure 2 and 2A attached). Besides the known areas of contaminated soil, the precise locations of the suspected contaminated soil are not known but anticipated based on the locations of historic truck maintenance and fueling operations. Most of the areas are underground storage tanks (USTs) sites and, both inside/outside the building, underground piping connected to the USTs. We suspect that all of the USTs identified in the historic record were removed in-place – if discovered during building demolition, the USTs should be removed to confirm "clean" conditions per DEQ guidance. There may be some stormwater dry wells on the Property – all dry wells should be removed per DEQ

guidance. There are some above-ground tanks, inside the existing building as shown on Figure 2 – these include detergent storage, possible distiller, and others. There are also below-ground miscellaneous use containment tanks such as oil/water separators and two open water collection drains located within the "parts washing" area of the building – these underground tanks (and the above-ground tanks) will be removed during demolition following applicable DEQ and City guidance.

All areas of known and suspected soil contamination will be explored using a track-mounted excavator. Additional soil sampling/testing may be necessary to confirm the concentration and extent of contamination, or for including the application for a permit to dispose of contaminated soils at a landfill (e.g., Waste Management's Hillsboro, Oregon location) licensed by DEQ to receive the waste soil.

Contaminated soil will be removed in accordance with Oregon DEQ guidance and a site-specific Contaminated Media Management Plan (CMMP), which we prepared and will be included in the Project Manual. The excavated areas within Block 290 West either will be located within the planned deep excavation for the future below-grade parking or will be backfilled with engineered structural fill.

5.0 ANALYSIS & CONCLUSION

Based on the above information developed for the proposed Block 290 West, this CMMP (as part of the Special Provisions incorporated into project specifications) are recommended to guide Property-specific handling of contaminated soil and groundwater, if discovered during construction. Presented below are details related to:

1. Required Contractor submittals.
2. Discovery, handling, and disposition of contaminated soil and groundwater.

In this document, Andersen Construction (and their agents) is identified as the Owner and the successful bidding contractor is identified as the Contractor.

This CMMP assumes that the Contractor shall provide the necessary means and methods to detect potentially contaminated conditions, protect their worker's safety, protect the public and the environment, notify the Owner of the discovery of such conditions, and properly handle (including disposal) contaminated materials.

This CMMP assumes that the Owner shall have a representative on Property to receive Contractor notification of the detection of potentially contaminated conditions, characterize potentially contaminated media, identify proper handling/disposal of such media, and relay handling/disposal requirements to the Contractor for implementation by the Contractor.

5.1 REQUIRED CONTRACTOR SUBMITTALS

At least 14 days prior to construction, the Contractor is required to:

- Submit documentation that all workers designated to work in contaminated areas discovered during construction are properly trained and medically monitored per OR-OHSA and OHSA rules.
- Submit a Property-specific health and safety plan. The Contractor's health and safety plan, shall include the following requirements, at a minimum:
    - A health and safety plan (HASP) will be required to perform excavation within contaminated areas. The HASP shall be prepared in accordance with the requirements identified above. OSHA regulation 29 CFR Part 1910.120 includes the provision for Hazardous Waste Site Operations and Emergency Response (HAZWOPER) training, including a health and safety program, for employees working in hazardous waste cleanup areas. The City and Contractors shall develop and be responsible for implementation of their own Property-specific health and safety plan for site workers in accordance with these and any other applicable requirements
- To mitigate potential risks to workers, during all soil disturbing activities in contaminated areas, care shall take to minimize worker exposure to soil. During all soil disturbing activities, personnel shall: a) remove soil and dust from clothing to the extent practicable following soil disturbance, b) wash hands prior to the consumption of any food or beverage, and c) refrain from eating, smoking, or drinking while in contaminated portions of the Property. Techniques that may be useful for mitigating exposure include wetting soil to minimize airborne dust, providing washing stations for removing soil from skin, and removing dust from clothes to the extent possible at the end of work shifts.
- A condition of no visible airborne dust shall be maintained always during construction, maintenance, and landscaping activities in contaminated areas.
- As determined by the Owner, an air sample shall be collected from breathing space that is representative of a worst-case worker exposure scenario. The air sample shall be analyzed for contaminants of interest (to be designated by Owner). If contaminants are detected in an air sample at a concentration that exceeds the Occupational Safety and Health Administration (OSHA) Permissible Exposure Level (PEL), additional protective measures shall be taken, including increasing the level of worker protection and Property controls.
- The following submittals are equally applicable to construction work conducted at non-contaminated sites and are recommended for this Property.
    - Submit a Surface Water Pollution Prevention Plan (SWPPP), or equivalent, or, if Owner has a SWPPP, adopt the Owner's SWPPP and identify the project erosion control lead contact company/person prior to construction. The SWPPP shall comply with the requirements of current Oregon DEQ and City Code).
- The Contractor may choose to adopt the Owner's SWPPP, if available. However, in so doing the Contractor assumes full responsibility for assuring compliance of the SWPPP with all regulatory requirements and for the implementation of all requirements contained within the SWPPP.

- The Contractor shall be solely responsible for any damages, fines, or delays incurred because of Contractor actions in implementing storm and erosion control measures.
- Submit a Spill Prevention, Containment, and Countermeasure (SPCC) Plan, or equivalent, prior to the start of construction activity. The Contractor shall be responsible for prevention, containment, and cleanup of releases of oil, fuel and other petroleum products used in the Contractor's operations. All such prevention, containment and cleanup costs shall be borne by the Contractor.
- The Contractor is advised that discharge of oil from equipment or facilities into state waters or onto adjacent land is not permitted under state water quality regulations.
- The Contractor shall, at a minimum, take the following measures regarding oil spill prevention, containment and cleanup:
- Fuel hoses, lubrication equipment, hydraulically operated equipment, oil drums, and other equipment and facilities shall be inspected regularly for drips, leaks, or signs of damage, and shall be maintained and stored properly to prevent spills. Proper security shall be maintained to discourage vandalism.
- All land-based oil and products storage tanks shall be diked or have secondary containment or be located to prevent spills from escaping to the ground or water.
- All visible floating oils shall be immediately contained with booms, dikes, or other appropriate means and removed from the water prior to discharge into state waters. All visible oils on land shall be immediately contained using dikes, straw bales, or other appropriate means and removed using sand, ground clay, sawdust, or other absorbent material, which shall be properly disposed of by the Contractor. Waste materials shall be temporarily stored in drums or other leak-proof containers after cleanup and during transport to disposal. Waste materials shall be disposed of by the Contractor off Property and at an approved facility.
- In the event of any oil or product discharges into public waters, or onto land with a potential for entry into public waters, the Contractor shall immediately notify the following agencies at their listed 24-hour response numbers:
    - Oregon DEQ NW Regional Office: (503) 229-5263
    - U.S. Coast Guard: (503) 240-9301

5.2 DISCOVERY OF CONTAMINATION

This section is intended to provide guidance to the Contractor in the instance contamination is encountered. This section will assist regarding:

1. definition
2. identification
3. handling

4. characterization/disposal of known contaminated soil (see Section 2) and contaminated soil and groundwater that may be encountered during construction activities at the Property.

5.2.1 DEFINITION OF CONTAMINATION

During construction, much of the surficial undocumented FILL will be removed. DEQ has established and is the process of updating guidance for determining whether waste fill can be used as "clean fill" for off- Property disposal. If the FILL and native soils removed from the Property do not meet the DEQ thresholds for clean fill, there may be a need for special handling/disposal (e.g., additional testing to confirm clean fill conditions and, if not clean, disposal at a location acceptable to DEQ or a local Subtitle D landfill). Details are presented in Attachment A.

The following is text partially excerpted from 2014 Revised Draft Oregon DEQ Clean Fill Determination (Internal Management Directive). See Attachment A for details.

Per DEQ guidance, "clean fill" is defined as "material consisting of soil, rock, concrete, brick, building block, tile or asphalt paving, which do not contain contaminants which could adversely impact the waters of the State or public health." [OAR 340-093-0030(18)]. Asphalt paving means "asphalt which has been applied to the land to form a street, road, path, parking lot, highway, or similar paved surface and that is weathered, consolidated, and does not contain visual evidence of fresh oil." [OAR 340-093-0030(9)].

Clean fill still must be managed so that, when placed or disposed, it will not create an adverse impact on groundwater, surface water, or public health or safety. [340-093-0050(3)(c)]. If generators of clean fill plan to place the material in wetlands or other waters of the state, DEQ Solid Waste staff should direct them to the Army Corps of Engineers and the Department of State Lands to obtain the appropriate permits.

To determine if the material is a "clean fill", Oregon DEQ draft guidance includes the following sequence of steps:

1. The fill must be characterized for "chemical quality". This includes working with DEQ to evaluate the source of the soil proposed for use as clean fill placed above current and plausible high surface water levels, related to the Clean Water Act and associated State waterway rules. There may also be a need to work with DEQ to determine if the fill must be placed above current and plausible high groundwater levels. Previous evaluations of historic uses of the Property, soil and groundwater conditions, and nature and extent of contamination have already been conducted and reviewed by DEQ. TPH, PAH and total lead testing already conducted may need to be supplemented with testing of the stockpile of soil designated for disposal as clean fill. If no additional testing is needed, additional steps need to be taken (see below)
2. Does the soil meet the definition of "clean fill" found at the beginning of this Section of the CMMP? If yes, move to the next step.
3. Does the material appear chemically stained or does it have a chemical smell? If no, move to the next step.

4. Does it contain a listed or characteristic hazardous waste? If no, move to the next step.
5. Does it contain a chemical that exceeds clean fill table values? A set of representative and statistically significant test results may show that the average concentration of the removed soil is considered "clean fill" but that some individual test results indicate chemical concentrations more than clean fill table values (see Attachment A).

5.2.2 IDENTIFICATION OF CONTAMINATION

Historic uses of the proposed Block 290 West and surrounding properties have been identified. Soil and groundwater testing conducted to date has revealed a reliable sense of the extent/type of contamination on the Property. Not all areas soil and groundwater have been tested. As a result, contaminated conditions may be encountered during construction of Property improvements. As a result, soil and groundwater that exhibits the following characteristics shall initially be designated as potentially contaminated by the Contractor according to the following guidelines:

- Soil or groundwater exhibits unusual chemical odor and/or shows measurable deflection when screened with a PID/FID
- Soil or groundwater exhibits unusual staining, commonly grayish green or black for petroleum- contaminated soil.
- Soil creates a sheen when placed in water or groundwater surface contains a sheen.

Personnel that may contact contaminated soil shall review this CMMP to familiarize themselves with the guidance provided herein prior to beginning activities that require disturbance or management of potentially contaminated soil and/or groundwater.

All soil/groundwater determined to be potentially contaminated during construction, shall be treated as contaminated and shall be handled and characterized as described in this SMP.

The Contractor shall be responsible for all matters related to work safety and for detection of contaminated soil and groundwater encountered during the construction as they relate to worker safety and environmental protection. The Contractor shall ensure the protection of the safety and health of construction workers and other authorized persons at the work site from exposure to potential toxic materials. As part of the Contractor's safety program, workers shall be instructed by a specialist on basic methods or techniques to assist workers in detecting hazardous soils or groundwater during construction of this project.

The Contractor shall monitor soils, groundwater and waste materials by instructing workers in observing and reporting (to the Owner) questionable materials and odors, such as refuse, oily sheen or color on soils or water, and oily or chemical odors. If unexpected hazardous or contaminated materials are encountered, the Contractor shall:

1. Stop all work in that area.
2. Notify the Owner immediately. The Owner is responsible for notifying DEQ.
3. Ensure no contaminated material is hauled from the Property.

4. Remove the Contractor's work force from the immediate area of the contaminated area, leaving all machinery and equipment. Before leaving the work area, appropriate precautions will be taken to ensure that the materials encountered (e.g., oil or liquids with oily sheen) will not be allowed to discharge to waters of the State.
5. Secure the area from access by the public until the Owner has approved the Contractor's plans for handling the contamination in accordance with the Contractor's Site- Specific Health & Safety Plan, this CMMP (modified as necessary to reflect the specific conditions encountered) and special instructions provided through communications between the Owner and DEQ.

Following completion of any further testing necessary to determine the nature of the materials involved, the Owner will determine how the material shall be handled and disposed. Although the actual procedures used in resuming the work shall depend upon the nature and extent of the questionable material, the following alternate methods of operation are foreseen as possible:

- Contractor to resume work as before the work suspension.
- Contractor to move its operations to another portion of the Property until measures to eliminate any hazardous conditions can be developed and approved by the appropriate regulatory agencies.
- The Owner will direct the Contractor to dispose of the excavated material at an approved legal landfill site or Owner-approved facility. In the case of groundwater, provide adequate treatment, discharge, or disposal off-Property at an approved facility.
- The Owner will terminate the Contract.

5.2.3 CONTAMINATED SOIL AND GROUNDWATER

Any soil that is contaminated shall require special handling and disposal. Contaminated soil shall be excavated in a manner that prevents co-mingling of contaminated and uncontaminated soil. Movement of excavation equipment over or through contaminated soil shall be minimized.

Soil Stockpiling

Excavated contaminated soil shall be stockpiled or placed in drop boxes prior to off-Property transport. Contaminated stockpiles shall be placed on asphalt or concrete surfaces or, if asphalt and concrete are unavailable, stockpiles shall be placed on two layers of plastic sheeting (minimum 6-mil). Stockpiles shall be surrounded by berms to prevent discharge of runoff.

Stockpiles of contaminated soil shall be covered when soil is not being added or removed to prevent run-on and runoff. Contaminated soil stockpiles shall also remain covered and beamed during periods of strong winds, at night, and during weekends. If dust from the contaminated stockpiles or drop boxes is visible, they shall be covered or watered to minimize the dust.

Loading and Hauling

Transport of soil shall be in accordance with local, state and federal regulations.

Trucks shall be loaded in a manner that prevents the spilling or tracking of contaminated soil. Loose material falling onto the exterior of the truck shall be removed before the truck leaves the loading area. Trucks should not be loaded with wet soil that would result in free liquids coming off the truck during transport. Plastic sheeting lining can be used. Also, check with the receiving landfill for minimum requirements to receive wet soil.

On-Property truck routes shall be established to minimize or prevent movement of trucks over contaminated areas. All trucks shall be covered before they leave the loading area. The Contractor shall be responsible for ensuring that loaded truck weights are within acceptable limits.

Trucks shall be decontaminated prior to leaving contaminated areas. Decontamination will consist of sweeping loose soil with brooms and removing significant quantities of adhered soil using hand tools. Trucks that have driven over contaminated unpaved areas shall pass through a wheel wash before entering public rights-of-way.

Owner Involvement

The Owner may collect and analyze samples of soil and/or water produced during below-grade construction activities to verify the quality of the soil and/or water, and to determine if the Contractor's disposal methods follow applicable permits, or applicable waste handling regulations.

If testing indicates the handling methods are unacceptable for soil/water quality parameters that the Contractor is required to control or shall have reasonably anticipated the bid, including but not limited to, concentrations and types of contaminants, the Contractor shall bring the handling methods into conformance with the requirements at no additional expense to the Owner. The Owner reserves the right to suspend the Contractor's work or prohibit the removal/disposal soil or water failing to meet the requirements until the Contractor demonstrates conformance with the removal/disposal requirements.

The Owner may collect and analyze samples of water produced during dewatering activities to verify the quality of the water, and to determine if the Contractor's disposal methods follow applicable permits, or water quality regulations.

If testing indicates the discharge is unacceptable for water quality parameters that the Contractor is required to control or shall have reasonably anticipated in the bid, including but not limited to, turbidity and suspended solids, the Contractor shall bring the discharge into conformance with the requirements at no additional expense to the Owner. The Owner reserves the right to suspend the Contractor's work or prohibit the discharge of water failing to meet the requirements until the Contractor demonstrates conformance with the discharge requirements.

On as-built drawings, the Contractor shall identify the locations where contaminated soil and groundwater was discovered during construction.

Contaminated soil/water shall be disposed of at an off-Property facility that is permitted to accept the waste. Contaminated soil/water shall be profiled prior to removal from the Property. Soil/water shall be profiled by Owner, according to the following guidelines:

1. Soil and water profiling will be required prior to disposal. The Owner will be considered the hazardous material generator for contaminated soil and water at the Property. The

Owner will not be considered the generator for hazardous substances that are a result of the Contractor's or others' operations or negligence.

2. The Owner will be presented with waste authorization forms and bills of lading for Owner signature prior to the removal of any contaminated soil/water from the Property.
3. Samples shall be collected from stockpiled soil and contained water in general accordance with the most recently promulgated version of the U.S. Environmental Protection Agency's (EPA) "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846" and Oregon DEQ regulations/guidance. Soil samples shall be collected at least a few inches below the surface of the pile to ensure that the soil is adequately characterized.
4. Soil shall be submitted to an Oregon-accredited analytical laboratory for analysis of gasoline- diesel-, and heavy oil-range hydrocarbons by Northwest Methods NWTPH-GRX and NWTPH- Ds (with silica gel cleanup); volatile organic compounds by EPA Method 5035/8260B, and RCRA-8 metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) by EPA 6000/7000 series methods. Other contaminants may need to be evaluated.
5. If diesel- or heavy oil-range hydrocarbons are detected, soil and water shall be submitted for follow-up analysis of SVOCs by EPA Method 8270C-SIM and polychlorinated biphenyls by EPA Method 8082.
6. Additional analyses may be necessary, depending on the results of the analyses designated above and the requirements of the waste recipient (e.g., landfill, incinerator, biotreatment facility, etc.).
7. Stockpiled soil shall be tested at the frequency described below, unless otherwise prescribed by DEQ:

• 0 – 100 cubic yards of soil	Minimum of three samples
• 101 – 500 cubic yards of soil	Minimum of five samples
• 501 – 1,000 cubic yards of soil	Minimum of seven samples
• >1,000 cubic yards of soil	One sample for every 100 cubic yards

The following criteria will be used to identify appropriate disposal facilities:

1. If organic contaminants are not detected and metal concentrations are less than Oregon background levels, the soil may be managed as clean fill and disposed of on- or off-Property at a location specified by the Owner.
2. If metals are detected above Oregon background levels or organic chemicals are detected at levels exceeding the laboratory method reporting limit, the soil shall be transported off-Property to a permitted disposal facility. The Contractor shall coordinate with the Owner to profile the soil and to identify appropriate disposal facilities.
3. Most contaminated soil can likely be disposed of at Waste Management's Hillsboro Landfill in Hillsboro, Oregon; however, highly contaminated material may have to be transported

to Waste Management's Arlington Landfill in Arlington, Oregon or the Roosevelt Regional Landfill in Klickitat County, Washington.

Soil that is transported off-Property shall be tracked by the Contractor and Owner. The Contractor will be required by the Owner to show that a proper bill of lading has been prepared prior to off-Property transport of the soil.

All recovered potentially contaminated groundwater should be temporarily stored on-Property in storage tanks. The water may ultimately be treated on-Property, disposed of off-Property, or discharged under permit.

Hazardous Waste

If significant quantities of hazardous waste are encountered at this Property, it is likely that construction will need to be halted pending a reevaluation of the Property. Refer to Section 3.2.2.

The following is a summary of regulations applicable to such waste:

If the quantity of hazardous waste projected to be generated meets the requirements for a Conditionally Exempt Generator (CEG), in accordance with 40 CFR 261.5, store hazardous wastes on-Property for no more than 180 days, with the total stored not to exceed 1000 kg (2,200 pounds) at any one time. All hazardous waste containers shall be in good condition, sealed and labeled with the words "Hazardous Waste" and the accumulation start and end dates. All employees involved in the handling and/or management of hazardous wastes shall comply with the federal and State regulatory requirements for hazardous waste management.

If the quantity of hazardous waste generated in each month exceeds the CEG limits, immediately comply with the requirements for small and large quantity generators, as set forth below, and for the remainder of the calendar year. Within 30 days of such exceedance, complete additional documentation and training required because of this change in status.

If the quantity of hazardous waste projected to be generated meets the requirements for a Small Quantity Generator (SQG) or a Large Quantity Generator (LQG), prepare a Hazardous Waste Contingency Plan, in accordance with 40 CFR 262.34 and 265.51. Maintain a copy of the Contingency Plan on-Property always during construction activities, readily available to employees and inspectors. Employees handling hazardous wastes shall receive hazardous waste training as specified in 40 CFR 262.34 and 265.16. On-Property storage of hazardous waste shall comply with the requirements of 40 CFR 262 and 265, OAR 340-102-034 and all other applicable federal, State and local laws and regulations. Submit monthly records of hazardous waste generation, transportation and disposal to the Owner by the 15th day of the following month. A Certified Hazardous Materials Manager (CHMM) in good standing and with experience managing the hazardous wastes associated with the Project shall be available to oversee and direct hazardous waste management at the Property.

If hazardous waste is to be treated on-Property, all treatment activities shall comply with 40 CFR 262.34 and 268, and ORS 466.095. No on-Property hazardous waste treatment may begin prior to receipt of Owner approval.

6.0 LIMITATIONS

GCN has performed this work in general accordance with generally accepted professional practices using the standard of the industry today, for the nature and conditions of the work completed in the same locality and at the same time as the work was performed, and with the terms and conditions as set forth in our proposal.

In preparing this report, GCN has reviewed historical records, conducted interviews with persons identified herein, conducted an on-Property visual inspection of the Guardian Real Estate Services, and performed sampling/testing of soil. We have examined and relied upon documents referenced in the report and on oral statements made by certain individuals. GCN has not conducted an independent examination of the facts contained in referenced materials and statements. We have assumed that these documents are genuine, and that the information provided in these documents and statements is true and accurate. GCN shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time the report was prepared. Facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time the work was performed. This report does not include other services not specifically in the scope of work for this project. Conclusions were made within the operative constraints of the scope of work, budget, and schedule for this project.

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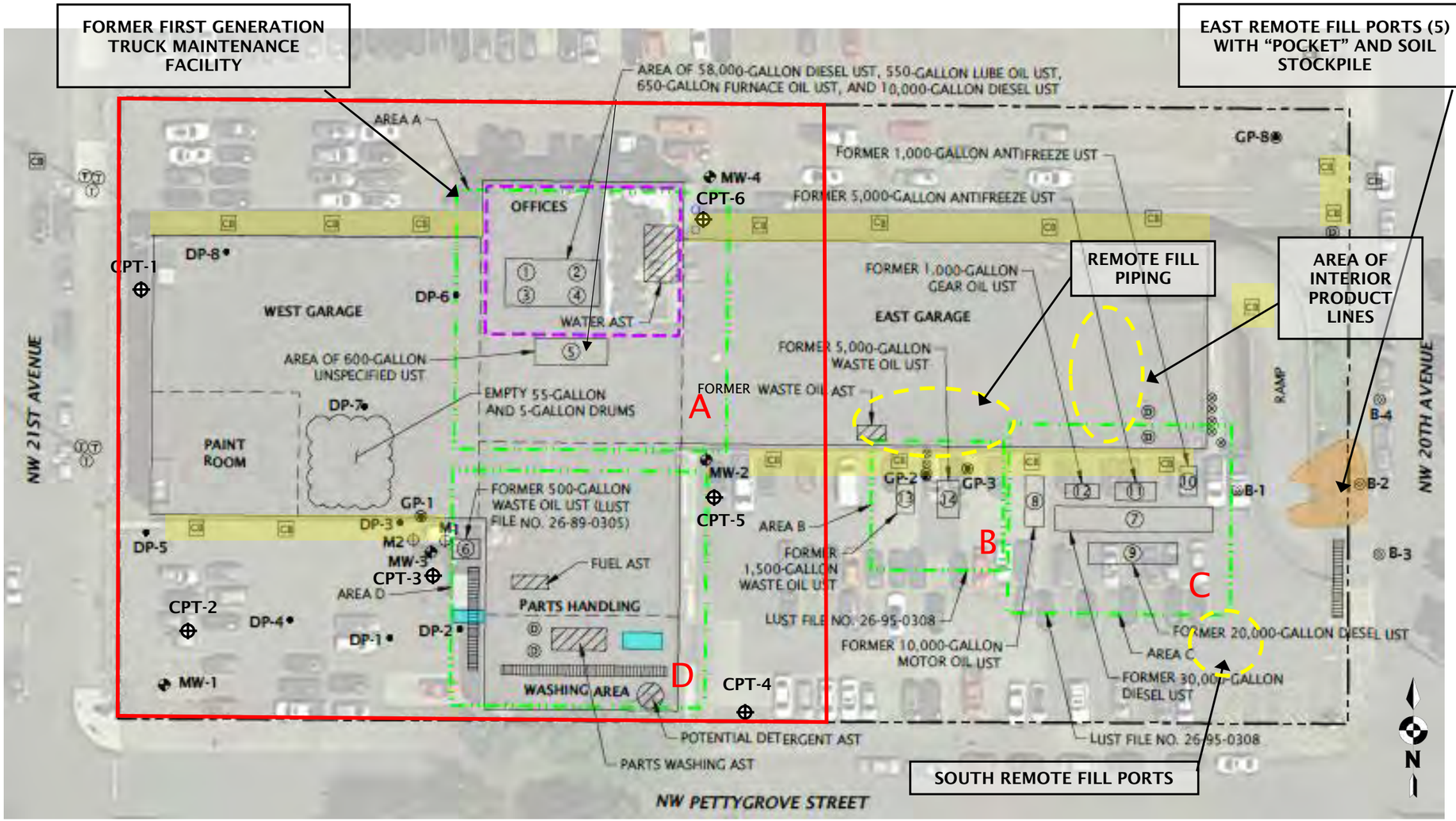
IMAGE FROM USGS TOPOVIEW
NW PETTYGROVE STREET AND NW 20TH AVENUE, PORTLAND
LAT 45.533 N LON 122.693 W; T1N, R1E, SEC33

N

GEO CONSULTANTS NORTHWEST	PROJECT 1294-06	**GUARDIAN REAL ESTATE SERVICES** **GUARDIAN BLOCK 290 WEST**	
2839 SE Milwaukie Avenue Portland, OR 97202	AUG 2020 Drawn By:tac	**SITE VICINITY**	**FIGURE 1**



LEGEND:

- DP-1 ● DIRECT-PUSH BORING (GEODESIGN 2014)
- GP-1 ● DIRECT-PUSH BORING (GEODESIGN 2007 - 2010)
- B-1 ◎ BORING (BEI 1996)
- MW-1 ⊕ MONITORING WELL (BEI 1991)
- M1 ⊕ BORING (BEI 1990)
- CB CATCH BASIN
- ⊕ CPT-1 (GCN, 2020)
- T POLE-MOUNTED TRANSFORMER
- TRENCH DRAIN
- AST
- D DRUM
- FORMER STANDPIPES
- OIL/WATER SEPARATOR OR TRICELERATOR
- VENT PIPE
- (1) UST NUMBER
- APPROXIMATE BASEMENT LOCATION
- A AREAS OF INTEREST FROM KEI REPORT (2015)
- AREA OF IMPACTED SOIL (BEI 1996)
- PROJECT SITE BOUNDARY
- POSSIBLE LOCATION OF DRY WELLS (~4 TOTAL)
- OTHER AREAS OF INTEREST
- PROPERTY OUTLINE

SOURCE: BASE DRAWING PROVIDED BY GEODESIGN "SITE PLAN – HISTORICAL BORING LOCATIONS", 2019 WITH GCN CPT LOCATION OVERLAY

SCALE: 1 INCH = 30 FEET (PRINTED ON 11X17)

UST = UNDERGROUND STORAGE TANK
AST = ABOVE-GROUND STORAGE TANK

GEO CONSULTANTS NORTHWEST	PROJECT 1294-06	GUARDIAN REAL ESTATE SERVICES BLOCK 290 WEST	
2839 SE Milwaukie Portland, OR 97202	AUG 2020	HISTORICAL MAP	FIGURE 2
	Drawn By:dkr		

A AREAS OF INTEREST FROM KEI REPORT (2015) - REFER TO FIGURE 2

DP-X DIRECT-PUSH BORING (GEODESIGN 2019)

EXISTING BASEMENT AREA - REFER TO FIGURE 2

SCALE: 1 INCH = 40 FEET (PORTRAIT PRINT ON 8.5 X 11)

SOURCE: BASE DRAWING PROVIDED BY GEODESIGN "SITE PLAN – HISTORICAL BORING LOCATIONS", 2019 WITH GCN CPT LOCATION OVERLAY

N

GEO CONSULTANTS NORTHWEST	PROJECT 1294-06	**GUARDIAN REAL ESTATE SERVICES GUARDIAN BLOCK 290 WEST**	
2839 SE Milwaukie Avenue Portland, OR 97202	AUG 2020	**HISTORICAL MAP SUPPLEMENT**	**FIGURE 2A**
	Drawn By:dkr		

Clean Fill Determinations

Materials Management
700 NE Multnomah St.
Suite 600
Portland, OR 97232
Phone: 503-229-5696
800-452-4011
Fax: 503-229-5850
Contact: Heather Kuoppamaki
Kuoppamaki.heather@deq.state.or.us
www.oregon.gov/DEQ

DEQ is a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.

DEQ
State of Oregon
Department of
Environmental
Quality

Documents can be provided upon request in an alternate format for individuals with disabilities or in a language other than English for people with limited English skills. To request a document in another format or language, call DEQ in Portland at 503-229-5696, or toll-free in Oregon at 1-800-452-4011, ext. 5696; or email deqinfo@deq.state.or.us.

Disclaimer

This directive is intended solely as guidance for DEQ employees. It does not constitute rulemaking by the Environmental Quality Commission and may not be relied upon to create an enforceable right or benefit, substantive or procedural, enforceable at law or in equity, by any person. With written managerial approval, DEQ employees may deviate from this directive. DEQ anticipates revising this directive from time to time as conditions warrant.

Document Development

Prepared By: Heather Kuoppamaki

Reviewed By: Audrey O'Brien

Approved By: _____ Date: February 21, 2019

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1. Intent/Purpose/Statement of Need

DEQ often receives requests to determine or confirm whether solid waste qualifies as clean fill. Oregon Administrative Rules define clean fill and allow DEQ to exempt clean fill from regulation as solid waste in many instances. It is important to note that clean fill that is mixed with solid waste is considered to be solid waste. This directive describes the screening criteria DEQ Materials Management staff uses to evaluate whether material meets DEQ's definition of clean fill for purposes of reuse or disposal.

2. Applicability

DEQ Materials Management staff are to use this Internal Management Directive to determine whether a waste material is clean fill or needs to be regulated as a solid waste.

3. Summary

This directive lays out a process and provides screening values that DEQ Materials Management staff should use to prepare and review clean fill determinations.

Section 7 of this directive describes the process that DEQ Materials Management staff will use to make clean fill determinations. Section 8 provides information on how the clean fill screening levels were determined, and information on how and when the screening levels can be updated. Tables 1 and 2 provide clean fill screening levels.

4. Background and Definitions

Clean fill – As defined in DEQ regulations, clean fill means "material consisting of soil, rock, concrete, brick, building block, tile or asphalt paving, which do not contain contaminants that could adversely impact the waters of the state or public health." Clean fill does not include "putrescible wastes, construction and demolition wastes and industrial solid wastes." [OAR 340-093-0030(18)]. This definition is clarified in the following subsections of the regulations:

> Asphalt paving means "asphalt which has been applied to the land to form a street, road, path, parking lot, highway, or similar paved surface and that is weathered, consolidated, and does not contain visual evidence of fresh oil." [OAR 340-093-0030(9)].
>
> Clean fill that has been separated from construction and demolition waste is considered clean fill [OAR 340-093-0030(26)].

Clean fill land disposal sites – DEQ's Materials Management Program does not regulate clean fill land disposal sites that are managed correctly. If solid waste is accepted at such a clean fill land disposal site, the facility is then subject to permit requirements and possible enforcement action by DEQ. This is stated in the following regulations:

> A disposal site does not include a site that is used by the owner or person in control of the premises to dispose of soil, rock, concrete or other similar non-decomposable clean fill material, unless the site is used by the public either directly or through a collection service [OAR 340-093-0030(38)].
>
> A person owning or controlling a land disposal site used exclusively for the disposal of clean fill may be exempt from DEQ solid waste permitting requirements. Clean fill still must be managed so that, when placed or disposed, it will not create an adverse impact on groundwater, surface water, or public health or safety. [OAR 340-093-0050(3)(c)].

Permit exemptions - Persons owning or controlling a land disposal site used exclusively for the disposal of clean fill, are specifically exempted from the requirements to obtain a DEQ solid waste permit. Such persons must comply with all other provisions of OAR chapter 340, divisions 93 through 97 and other applicable laws, rules, and regulations regarding solid waste disposal. The exemption does not apply if the materials have been contaminated such that the Department determines that their nature, amount or location may create an adverse impact on groundwater, surface water or public health or safety [based on OAR 340-093-0050(3)(c)]. Additional information on receiving DEQ approval at an exempt site is provided in OAR 340-093-0080:

> A person wishing to obtain an exemption from the requirement to obtain a solid waste permit for disposal of an inert waste in specified locations may submit a request to the Department. The applicant must demonstrate that the waste is substantially the same as "clean fill." The request shall include but not be limited to the following information:
>
> > (a) The exact location (including a map) at which the waste is to be disposed of and a description of the surrounding area;
> >
> > (b) The monthly rate of disposal;
> >
> > (c) A copy of the Safety Data Sheet (or equivalent, if a Safety Data Sheet is not available) for all applicable raw materials used at the facility generating the waste;
> >
> > (d) A description of the process generating the waste and how that process fits into the overall operation of the facility;
> >
> > (e) Documentation that the waste is not hazardous as defined in OAR 340, division 101. The procedure for making a hazardous waste determination is in OAR 340-102-0011;
> >
> > (f) A demonstration that the waste is inert, stable, non-putrescible, and physically similar to soil, rock, concrete, brick, building block, tile, or asphalt paving;
> >
> > (g) A demonstration that the waste will not discharge constituents which would adversely impact the waters of the state or public health.

5. Abbreviations Used in This Directive

DEQ – Oregon Department of Environmental Quality

ECO SSL – EPA Ecological Soil Screening Level

EPA – United States Environmental Protection Agency

IMD – Internal Management Directive

OAR – Oregon Administration Rule

RBC – Oregon DEQ Risk Based Concentration

RSL – EPA Regional Screening Level

USGS – United States Geological Survey

VOC – Volatile Organic Compound

6. Updates to 2014 Directive

This 2018 update makes the following changes to the clean fill IMD-

- The format is modified to meet DEQ's IMD format guidelines.
- Modifies language to reflect rule requirements.
- Clarifies and expands some of the guidance language.
- Updates the clean fill tables to:
  - include EPA groundwater protection SSLs (adjusted to reflect Oregon DEQ dilution attenuation factor),
  - remove the DEQ chemical-specific calculation for leaching to groundwater [since these are now provided by the EPA soil screening levels (SSL)],
  - incorporate updated DEQ risk based concentrations (RBCs) and EPA regional screening levels (RSLs), and
  - include screening ecological benchmarks developed by Oak Ridge National Laboratory.
- Updates links to Oregon DEQ's new web pages.

- Removes lanthanum, niobium, technetium, tellurium, titanium, and tungsten from Table 1 as they are not commonly detected in soils in Oregon, and are generally not contaminants of interest at sites investigated in Oregon.

7. Directive

7.1. Who can make clean fill determinations

7.1.a. Generator

When generators of excavated materials (or their consultants) ask how they can make their own clean fill determinations, DEQ Materials Management staff should explain that, when presented with a permit-exemption application, DEQ evaluates whether a material is clean fill according to the process outlined in this IMD.

A generator always has the option to do their own statistical analysis and make site-specific clean fill decisions based on the material generated.

7.1.b. DEQ Materials Management

DEQ Materials Management staff should encourage the generators of material (or their consultants) to make their own clean fill determination based on this IMD, including the clean fill screening levels provided in Table 1 and Table 2. If generators want to use different risk assumptions or would like DEQ to review clean fill determinations and provide approval, direct them to apply for a permit exemption (OAR 340-093-0080) and pay any associated fees.

7.1.c. DEQ Cleanup

If a generator is remediating a site under our Cleanup Program, DEQ Materials Management staff should involve DEQ's project manager for the site. Under cleanup statutes, DEQ may exempt the onsite reuse of materials from regulation under solid waste statutes, provided that substantive requirements are met. [See ORS 465.315 (3) and (4)]

7.2. Placement Locations

7.2.a. Physiographic Provinces

The clean fill values shown in Table 1 take into account naturally occurring concentrations of metals and metalloids in the various physiographic provinces within Oregon (Figure 1). These concentrations are compiled from DEQ Cleanup Program's background metals technical report[1]. Clean fill generated in one physiographic province may not qualify as clean fill in another physiographic province with lower background metals concentrations. The material must be below the clean fill screening levels in both the province in which it is generated and the province in which it is disposed.

[1] DEQ. 2013. Development of Oregon Background Metals Concentrations in Soil, Technical Report. March. https://www.oregon.gov/deq/FilterDocs/DebORbackgroundMetal.pdf

7.2.b. In-Water Locations

The clean fill determination process applies only to terrestrial (upland) reuse or disposal. The Clean Water Act and associated state water quality rules, rather than the solid waste rules, govern the filling of wetlands or waters of the state.

If generators of clean fill plan to place the material in wetlands or other waters of the state, DEQ Materials Management staff should direct them to the Army Corps of Engineers and the Oregon Department of State Lands.

7.2.c. Clean Fill Land Disposal Sites

If any solid wastes are be disposed of at a site that accepts clean fill, the site is no longer exempt from DEQ solid waste permitting requirements.

7.3. Clean Fill Evaluation

The clean fill definition in OAR 340-093-0030 refers to material type as well as the presence of contaminants that could adversely impact waters of the state and human health. Both parts of the definition must be satisfied for the material to be considered clean fill.

(1) The material type is limited to soil, rock, concrete, brick, building block, tile or asphalt paving and does not consist of putrescible wastes, construction and demolition wastes and industrial solid wastes.

(2) The contaminants may **not** adversely impact waters of the state or public health. The clean fill screening level tables are based on background concentrations (for metals) and risk screening levels published by Oregon DEQ and EPA.

The steps to conduct a clean fill determination are described below. These steps are also shown in Figure 2.

7.3.a. Material description

The first step in performing a clean fill determination is to check that the material meets the general material definition. To do this, determine whether the material:

- Consists of soil, rock, concrete, brick, building block, tile or asphalt paving; and,
- Does not include putrescible wastes, construction and demolition wastes, or industrial solid wastes

In addition, specific material attributes should be considered. Some examples:

- Asphalt paving must be used, be weathered material (not fresh asphalt) and consist of large, intact chunks. Ground up asphalt is not clean fill.
- Concrete, brick, blocks or tile must be unpainted, unless the materials have been evaluated for hazardous constituents, and concentrations of those constituents are below clean fill screening levels.

- If filler material used in the production of concrete, brick, building block, or tile has the potential to impact waters of the state or public health, the material is not clean fill.

Material that is determined to not be clean fill is solid waste. It may be disposed under a location-specific permit exemption, a solid waste letter authorization, or in a permitted landfill. The material also potentially may be reused under the authority of a Beneficial Use Determination.

7.3.b. Contaminants Evaluation

The second step in conducting a clean fill determination is to evaluate the risk from contaminants in the material. This is based on the presence of staining or odor, known hazardous substances, and laboratory analysis of the material for contaminants of potential concern.

Staining or odor

If the material appears chemically stained or has a chemical smell it is not clean fill. Chemicals that stain or produce odors indicate the material contains contaminants that could impact waters of the state or public health.

Hazardous waste

If the material contains a listed or characteristic hazardous waste it is not clean fill, even if the chemical concentrations are below clean fill table values. The generator may use alternative management methods such as "contained-in" determinations[2] to decide the ultimate disposal of the material.

Characterize the fill for chemical characterization

DEQ Materials Management staff should determine whether applicants adequately characterized the chemical quality of fill materials.

DEQ review must ensure that the applicant proposes and conducts an adequate sampling program to characterize the material. Sampling programs should be based on an understanding of the historical site use, processes that were used at the site, spatial variability of site soils, and potential chemicals that were handled, used, or stored at the site. Sampling programs should include: how samples are collected (in-situ or ex-situ), where samples are collected to obtain representative results, types of samples collected (discrete or composite), the number of samples collected, and the constituents the samples are being analyzed for. The sampling program should depend on the size, condition, spatial variability of the soils, and history of the area the generator will excavate (or has excavated).

Because designing a sampling program to collect representative data for heterogeneous materials is potentially complex, DEQ staff should refer generators to sampling guidance such as EPA

[2] DEQ, 2015. Conducting Contained-In Determinations for Environmental Media, Internal Management Directive. https://www.oregon.gov/deq/Filtered%20Library/IMDEnvMediaContainedinDet.pdf

(1986)[3], EPA (2002)[4], ITRC (2012)[5] or to an experienced consultant when asked "how many samples should I collect?" during the pre-application period.

Examples of site considerations:

An applicant would need to collect fewer samples along a long stretch of highway through a single land use (such as agricultural fields with similar crops) than in areas where land use changes frequently.

Materials from agricultural lands should be tested for metals and pesticides/herbicides at a minimum. Materials from a facility whose history is uncertain may require testing for a larger list of analytes. Historical site information may be available in an environmental site assessment conducted in accordance with standard practices (for instance, ASTM E1903)[6].

If the material is sediment that is being dredged and will be placed upland, DEQ Materials Management staff should work with DEQ Water Quality staff to determine if sampling done for the 401 water quality certification or dredging permits is sufficient to adequately characterize the sediment that will be placed upland.

7.3.c. Compare chemical concentrations to clean fill screening levels

Once an appropriate sampling and analysis program has been completed, the results should be compared to clean fill screening levels. These levels are provided in Tables 1 and 2. When reviewing the results, make sure the laboratory method detection limit (MDL) is lower than the screening table value.

If the contaminant concentrations in the material do not exceed clean fill screening levels defined in the tables, the material is clean fill, provided the other criteria described in this IMD are also met, such as absence of staining or odor.

Note that the material may be clean fill even if there are some exceedances of these screening levels. For instance, if an appropriate statistical analysis[7] demonstrates that the concentration of the contaminants are very close to clean fill screening values, DEQ may determine that the material can be considered to be clean fill in certain cases.

If a clean fill determination cannot be made, the party may contact DEQ to discuss other options, such as a permit exemption, disposal under a solid waste letter authorization, and disposal at a permitted landfill.

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[3] EPA, 1986. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846), Chapter 9, https://www.epa.gov/sites/production/files/2015-10/documents/chap9_0.pdf

[4] EPA, 2002. Guidance on Choosing a Sampling Design for Environmental Data Collection, EPA QA/G-5S. https://www.epa.gov/sites/production/files/2015-06/documents/g5s-final.pdf

[5] ITRC, 2012. Incremental Sampling Methodology, Technical and Regulatory Guidance. February. https://www.itrcweb.org/ism-1/pdfs/ISM-1_021512_Final.pdf

[6] ASTM, 2011. Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process, E1903-11. http://www.astm.org/Standards/E1903.htm

[7] Calculating a 90% Upper Confidence Limit is usually an appropriate statistical method. https://www.epa.gov/land-research/proucl-software

8. Derivation of clean fill screening levels

8.1. Table 1

The values in Table 1 are based on the following:

- DEQ's technical report on background metals concentrations in soil[8]
- DEQ and EPA ecological screening levels[9],[10]
- Ecological screening benchmarks developed by Oak Ridge National Laboratory[11]
- DEQ RBCs for residential soils[12]
- EPA RSLs for residential soils[13]
- Calculations based on USGS data[14]

In the case of background metals concentrations exceeding human health or ecological screening values, the background metal values are shown. Otherwise, the lowest of human or ecological screening values are used.

In the case of metals for which background concentration levels are not available, DEQ used data compiled by USGS to calculate an estimated background value. DEQ used ProUCL to calculate a nonparametric 95% Upper Prediction Limit.

The background concentration of lead for the Portland Basin appears to include anthropogenic influences (it is 79 mg/kg compared to no more than about 36 mg/kg in the rest of the state). Therefore, DEQ used the background lead concentration from the South Willamette Basin province as a background concentration for lead (28 mg/kg) for the Portland Basin.

8.2. Table 2

Values in Table 2 are based on the lowest of the following:

- Residential soil concentrations from DEQ's Risk-Based Decision Making table
- EPA's residential soil Regional Screening Level

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[8] DEQ. 2013. Development of Oregon Background Metals Concentrations in Soil, Technical Report. March. https://www.oregon.gov/deq/FilterDocs/DebORbackgroundMetal.pdf

[9] DEQ, 1998. Guidance for Ecological Risk Assessment: Levels I, II, III, IV. April. https://www.oregon.gov/deq/FilterDocs/GuidanceEcologicalRisk.pdf

[10] EPA, Interim Ecological Soil Screening Level Documents. Website accessed September 6, 2018: https://www.epa.gov/chemical-research/interim-ecological-soil-screening-level-documents

[11] Oak Ridge National Laboratory, https://www.lanl.gov/environment/protection/eco-risk-assessment.php

[12] DEQ, 2018. Risk-Based Concentrations for Individual Chemicals. May. https://www.oregon.gov/deq/FilterDocs/RBDMTable.pdf

[13] EPA, 2018. Regional Screening Levels (RSLs) – Generic Tables. May. http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm

[14] USGS, 2013. Geochemical and Mineralogical Data for Soils of the Conterminous United States. https://pubs.usgs.gov/ds/801/pdf/ds801.pdf

- EPA's risk-based soil screening levels (SSL) for protection of groundwater, multiplied by 60. EPA uses a dilution attenuation factor (DAF) of 1 in the calculation of their SSLs; DEQ uses a default DAF of 60. Therefore the EPA SSL is multiplied by 60 to be consistent with DEQ methodology.
- For chemicals where DEQ and EPA have both calculated a screening level for groundwater protection, the DEQ level is used.
- DEQ's Ecological Screening Level Values
- EPA's Ecological Soil Screening Levels
- Ecological screening benchmarks developed by Oak Ridge National Laboratory[15]

8.3. Modifications

If any of the references screening levels are updated and the clean fill guidance has not been updated to reflect the new screening levels, generators can calculate their own, updated, clean fill screening levels based on the methods discussed above.

9. Review Schedule

This Directive and its referenced clean fill screening tables should be reviewed and updated when DEQ or EPA risk-based screening levels change.

[15] Oak Ridge National Laboratory, https://www.lanl.gov/environment/protection/eco-risk-assessment.php

10. Record of Revisions to IMD

Revision	Date	Changes	Editor
0	07/15/2014	New document	Bill Mason
1	07/23/2014	a. Corrected URL in footnote 1 b. Corrected OAR reference on page 3	Bill Mason
2	07/12/2018	a. Incorporated new RBCs, RSLs and SSLs b. Updated formatting c. See Section 6 for all changes	Heather Kuoppamaki
3	11/7/2018	Grammatical/typographical review	Julie Miller
4	4/3/2019	Minor edits in Tables 1 and 2. Fix footnotes in Table 1, remove Chromium III from Table 2	Heather Kuoppamaki
5	6/17/2019	Minor edits in Tables 1 and 2. Add CAS numbers and BaP equivalents to Table 2.	Heather Kuoppamakirecordof

Table 1 - Clean fill screening levels for province specific and background metals. All concentrations in mg/kg

	Statewide	Province* Background / Clean Fill Value										
Elements	**Clean Fill Value**	**Basin and Range**	**Blue Mountains**	**Cascade Range**	**Coast Range**	**Deschutes-Columbia Plateau**	**High Lava Plains**	**Klamath Mountains**	**Owyhee Uplands**	**South Willamette Valley**	**Portland Basin**	**Note**
Antimony		0.86	1.3d d	0.67	0.55	1.3	0.35	0.59	1.3 d	0.39	0.56	a
Arsenic		12	14	19	12	6.8	7.2	12	17	18	8.8	a
Barium		790	950	630	840	700	790	630	970	730	790	a
Beryllium		2.4	2.6	2.1	2.8	2.6	2.6	1.4	2	2.6	2	a
Bismuth	20											c
Cadmium		0.81	0.69	0.54	0.54	0.4	0.78	0.52	N/A	1.6	0.63	a
Chromium (total)		100	190	200	240	170	140	890	120	100	76	a
Cobalt	43											b
Copper		110	120	73	100	29	62	110	50	140	34	a
Lead		29	21	34	34	18	21	36	30	28	28 **	a
Lithium	35											b
Manganese		1,600	1,800	2,100	2,100	1,300	1,500	3,000	1,200	2,900	1,800	a
Mercury		0.28	1.4	0.24	0.11	0.04	0.06	0.17	0.75	0.07	0.23	a
Molybdenum	2.1											b
Nickel		66	92	110	160	78	75	630	53	50	47	a
Selenium		0.41	0.93	0.52	1.5	0.46	0.54	0.8	0.49	0.68	0.71	a
Silver		0.42	0.51	0.17	0.41	0.82	0.68	0.16	2.2	0.33	0.82	a
Strontium (stable)	4,700											b
Thallium		0.22	N/A	2.8	5.4	4.6	0.21	0.31	N/A	5.7	5.2	a
Tin (inorganic)	50											c
Uranium	5											c
Vanadium		270	400	280	260	300	220	290	190	370	180	a
Zinc		130	160	170	140	130	140	140	120	200	180	a

Notes:

a - Table 4, Development of Oregon Background Metals Concentrations in Soil, Technical Report, DEQ (2013), https://www.oregon.gov/deq/FilterDocs/DebORbackgroundMetal.pdf. Background concentrations (a or d), when available, are used for the clean fill value. When background concentrations are not available, risk screening values are used.

b - 95% Upper Prediction Limit calculated using USGS data for Oregon, Smith, D.B., Cannon, W.F., Woodruff, L.G., Solano, Federico, Kilburn, J.E., and Fey, D.L., 2013, Geochemical and mineralogical data for soils of the conterminous United States: U.S. Geological Survey Data Series 801, 19 p., http://pubs.usgs.gov/ds/801/

c - Table 1, Guidance for Ecological Risk Assessment, Level II Screening Level Values, DEQ (2001), https://www.oregon.gov/deq/FilterDocs/GuidanceEcologicalRisk.pdf. Only used if ecotoxicological benchmarks from Oak Ridge National Laboratory are not available.

d - Ecotoxicological screening benchmarks developed by Oak Ridge National Laboratory: https://www.lanl.gov/environment/protection/eco-risk-assessment.php

e - Regional Screening Levels, EPA (May 2018), Residential soil. http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm

* - Province boundaries are presented in Figure 1

** - The background concentration of lead for the Portland Basin appears to include anthropogenic influences (it is 79 mg/kg compared to no more than about 36 mg/kg in the rest of the state). Therefore, DEQ used the background lead concentration from the South Willamette Basin province as a background concentration for lead for the Portland Basin.

Last updated by Heather Kuoppamaki, DEQ-NWR, on June 17, 2019

Table 2 - Clean fill screening levels for organics and other selected constituents. All concentrations in mg/kg

Chemical Name	CAS	Clean Fill Value	Note
Acenaphthene	83-32-9	0.25	g
Acenaphthylene	208-96-8	120	g
Acephate	30560-19-1	0.32	b
Acetaldehyde	75-07-0	0.031	b
Acetochlor	34256-82-1	17	b
Acetone	67-64-1	1.2	g
Acetone Cyanohydrin	75-86-5	2,800,000	a
Acetonitrile	75-05-8	1.6	b
Acetophenone	98-86-2	35	b
Acetylaminofluorene, 2-	53-96-3	0.0043	b
Acrolein (Propenal)	107-02-8	0.0005	b
Acrylamide	79-06-1	0.00066	b
Acrylic Acid	79-10-7	0.025	b
Acrylonitrile	107-13-1	0.00036	d
Adiponitrile	111-69-3	8,500,000	a
Alachlor	15972-60-8	0.052	b
Aldicarb	116-06-3	0.29	b
Aldicarb Sulfone	1646-88-4	0.26	b
Aldrin	309-00-2	0.023	d
Allyl Alcohol	107-18-6	0.0025	b
Allyl Chloride	107-05-1	0.014	b
Aluminum Phosphide	20859-73-8	31	a
Ametryn	834-12-8	9.6	b
Aminobiphenyl, 4-	92-67-1	0.0009	b
Aminophenol, m-	591-27-5	37	b
Aminophenol, o-	95-55-6	1.8	b
Aminophenol, p-	123-30-8	9	b
Amitraz	33089-61-1	160	a
Ammonium Perchlorate	7790-98-9	55	a
Ammonium polyphosphate	68333-79-9	3,800,000	a
Ammonium Sulfamate	7773-06-0	16,000	a
Amyl Alcohol, tert-	75-85-4	0.078	b
Aniline	62-53-3	0.28	b
Anthracene	120-12-7	6.8	g
Anthraquinone, 9,10-	84-65-1	0.84	b
Antimony Pentoxide	1314-60-9	39	a
Antimony Tetroxide	1332-81-6	31	a
Antimony Trioxide	1309-64-4	280,000	a
Aroclor 1016	12674-11-2	1.1	g
Aroclor 1221	11104-28-2	0.0048	b
Aroclor 1232	11141-16-5	0.0048	b
Aroclor 1242	53469-21-9	0.041	g
Aroclor 1248	12672-29-6	0.0073	g
Aroclor 1254	11097-69-1	0.041	g
Aroclor 1260	11096-82-5	0.24	a
Aroclor 5460	11126-42-4	35	a
Arsenic III	7440-38-2	10	e
Arsine	7784-42-1	0.27	a
Asulam	3337-71-1	11	b
Atrazine	1912-24-9	0.012	b
Auramine	492-80-8	0.037	b

Table 2 - Clean fill screening levels for organics and other selected constituents. All concentrations in mg/kg

Chemical Name	CAS	Clean Fill Value	Note
Avermectin B1	65195-55-3	25	a
Azinphos-methyl	86-50-0	1	b
Azobenzene	103-33-3	0.056	b
Azodicarbonamide	123-77-3	410	b
Benfluralin	1861-40-1	56	b
Benomyl	17804-35-2	51	b
Bensulfuron-methyl	83055-99-6	60	b
Bentazon	25057-89-0	7.2	b
Benzaldehyde	100-52-7	0.25	b
Benzene	71-43-2	0.023	d
Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	0.013	b
Benzenethiol (thiophenol)	108-98-5	0.66	b
Benzidine	92-87-5	0.000038	d
Benzo(a)anthracene	56-55-3	0.73	g
Benzo(a)pyrene (BaP equivalents)	50-32-8	0.11	a
Benzo(b)fluoranthene	205-99-2	1.1	a
Benzo(g,h,i)perylene	191-24-2	25	g
Benzo(j)fluoranthene	205-82-3	0.42	a
Benzo(k)fluoranthene	207-08-9	11	a
Benzoic Acid	65-85-0	1	g
Benzotrichloride	98-07-7	0.0004	b
Benzyl Alcohol	100-51-6	29	b
Benzyl Chloride	100-44-7	0.0059	b
Bidrin (Dicrotophos)	141-66-2	0.0084	b
Bifenox	42576-02-3	46	b
Biphenthrin	82657-04-3	950	a
Biphenyl, 1,1'-	92-52-4	0.52	b
Bis(2-chloro-1-methylethyl) ether (Bis(2-chloroisopropyl) ether)	108-60-1	16	b
Bis(2-chloroethoxy)methane	111-91-1	0.78	b
Bis(2-chloroethyl)ether (dichloroethyl ether)	111-44-4	0.00019	d
Bis(2-ethylhexyl)phthalate (DEHP)	117-81-7	0.02	g
Bis(chloromethyl)ether	542-88-1	0.000001	b
Bisphenol A	80-05-7	3,200	a
Boron And Borates Only	7440-42-8	0.5	e
Boron Trichloride	10294-34-5	160,000	a
Boron Trifluoride	7637-07-2	3,100	a
Bromate	15541-45-4	0.051	b
Bromine	7726-95-6	10	e
Bromo-2-chloroethane, 1-	107-04-0	0.00013	b
Bromo-3-fluorobenzene, 1-	1073-06-9	0.28	b
Bromo-4-fluorobenzene, 1-	460-00-4	0.26	b
Bromoaniline, 4-	106-40-1	100	e
Bromobenzene	108-86-1	2.5	b
Bromochloromethane	74-97-5	1.3	b
Bromodichloromethane	75-27-4	0.002	d
Bromoform (tribromomethane)	75-25-2	0.046	d
Bromomethane	74-83-9	0.083	d
Bromophos	2104-96-3	9	b
Bromopropane, 1-	106-94-5	3.8	b
Bromoxynil	1689-84-5	0.031	b

Table 2 - Clean fill screening levels for organics and other selected constituents. All concentrations in mg/kg

Chemical Name	CAS	Clean Fill Value	Note
Bromoxynil Octanoate	1689-99-2	0.13	b
Butadiene, 1,3-	106-99-0	0.00059	b
Butanoic acid, 4-(2,4-dichlorophenoxy)-	94-82-6	25	b
Butanol, N-	71-36-3	25	b
Butyl alcohol, sec-	78-92-2	300	b
Butyl benzyl phthlate	85-68-7	14	b
Butylate	2008-41-5	27	b
Butylated hydroxyanisole	25013-16-5	17	b
Butylated hydroxytoluene	128-37-0	6	b
Butylbenzene, n-	104-51-8	190	b
Butylbenzene, sec-	135-98-8	350	b
Butylbenzene, tert-	98-06-6	96	b
Butylphthalyl Butylglycolate	85-70-1	19,000	b
Cacodylic Acid	75-60-5	6.6	b
Calcium Cyanide	592-01-8	78	a
Calcium pyrophosphate	7790-76-3	3,800,000	a
Caprolactam	105-60-2	150	b
Captafol	2425-06-1	0.043	b
Captan	133-06-2	1.3	b
Carbaryl	63-25-2	100	b
Carbazole	86-74-8	79	g
Carbofuran	1563-66-2	2.2	b
Carbon Disulfide	75-15-0	0.81	g
Carbon Tetrachloride	56-23-5	0.013	d
Carbonyl Sulfide	463-58-1	31	b
Carbosulfan	55285-14-8	72	b
Carboxin	5234-68-4	60	b
Ceric oxide	1306-38-3	1,300,000	a
Chloral Hydrate	302-17-0	24	b
Chloramben	133-90-4	4.2	b
Chloranil	118-75-2	0.009	b
Chloraniline, 3-	108-42-9	20	e
Chlordane, alpha-	5103-71-9	0.27	g
Chlordane, gamma-	5103-74-2	2.2	g
Chlordane, technical	57-74-9	0.91	d
Chlordecone (Kepone)	143-50-0	0.0072	b
Chlorfenvinphos	470-90-6	1.9	b
Chlorimuron, Ethyl-	90982-32-4	36	b
Chlorine	7782-50-5	0.0084	b
Chlorine Dioxide	10049-04-4	2,300	a
Chlorite (Sodium Salt)	7758-19-2	2,300	a
Chloro-1,1-difluoroethane, 1-	75-68-3	3,100	b
Chloro-1,3-butadiene, 2- (Chloroprene)	126-99-8	0.00059	b
Chloro-2-methylaniline HCl, 4-	3165-93-3	0.009	b
Chloro-2-methylaniline, 4-	95-69-2	0.024	b
Chloroacetaldehyde, 2-	107-20-0	0.0035	b
Chloroacetamide	79-07-2	2	e
Chloroacetophenone, 2-	532-27-4	43,000	a
Chloroaniline, p- (4-Chloroaniline)	106-47-8	0.0096	b
Chlorobenzene	108-90-7	2.4	g
Chlorobenzene sulfonic acid, p-	98-66-8	28	b

Table 2 - Clean fill screening levels for organics and other selected constituents. All concentrations in mg/kg

Chemical Name	CAS	Clean Fill Value	Note
Chlorobenzilate	510-15-6	0.06	b
Chlorobenzoic Acid, p-	74-11-3	7.8	b
Chlorobenzotrifluoride, 4-	98-56-6	7.2	b
Chlorobutane, 1-	109-69-3	16	b
Chlorodibromomethane (dibromochloromethane)	124-48-1	0.0024	d
Chlorodifluoromethane	75-45-6	2,600	b
Chloroethanol, 2-	107-07-3	4.9	b
Chloroform	67-66-3	0.0034	d
Chloromethane	74-87-3	2.2	d
Chloromethyl Methyl Ether	107-30-2	0.000084	b
Chloronaphthalene, Beta-	91-58-7	230	b
Chloronitrobenzene, o-	88-73-3	0.013	b
Chloronitrobenzene, p-	100-00-5	0.066	b
Chlorophenol, 2-	95-57-8	0.39	g
Chlorophenol, 3-	108-43-0	7	e
Chlorophenol, 4-	106-48-9	50	e
Chloropicrin	76-06-2	0.015	b
Chlorothalonil	1897-45-6	3	b
Chlorotoluene, o-	95-49-8	14	b
Chlorotoluene, p-	106-43-4	14	b
Chlorozotocin	54749-90-5	0.0000043	b
Chlorpropham	101-21-3	38	b
Chlorpyrifos	2921-88-2	7.2	b
Chlorpyrifos Methyl	5598-13-0	32	b
Chlorsulfuron	64902-72-3	50	b
Chlorthal-dimethyl	1861-32-1	9	b
Chlorthiophos	60238-56-4	4.4	b
Chromium (VI)	18540-29-9	0.04	b
Chrysene	218-01-9	3.1	g
Clofentezine	74115-24-5	820	a
Copper Cyanide	544-92-3	390	a
Cresol, m- (3-Methylphenol)	108-39-4	0.69	g
Cresol, o- (2-Methylphenol)	95-48-7	0.67	g
Cresol, p-	106-44-5	90	b
Cresol, p-chloro-m-	59-50-7	100	b
Cresols	1319-77-3	78	b
Crotonaldehyde, trans-	123-73-9	0.00049	b
Cumene	98-82-8	96	d
Cupferron	135-20-6	0.037	b
Cyanazine	21725-46-2	0.0025	b
Cyanogen	460-19-5	78	a
Cyanogen Bromide	506-68-3	7,000	a
Cyanogen Chloride	506-77-4	3,900	a
Cyclohexane	110-82-7	780	b
Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	0.96	b
Cyclohexanone	108-94-1	20	b
Cyclohexene	110-83-8	2.8	b
Cyclohexylamine	108-91-8	60	b
Cyfluthrin	68359-37-5	1,600	a
Cyhalothrin/karate	68085-85-8	63	a

Table 2 - Clean fill screening levels for organics and other selected constituents. All concentrations in mg/kg

Chemical Name	CAS	Clean Fill Value	Note
Cyromazine	66215-27-8	150	b
Dalapon	75-99-0	7.2	b
Daminozide (Alar)	1596-84-5	0.057	b
Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'-(BDE-209)	1163-19-5	440	a
Demeton	8065-48-3	2.5	a
Di(2-ethylhexyl)adipate	103-23-1	280	b
Diallate	2303-16-4	0.048	b
Diammonium phosphate	7783-28-0	3,800,000	a
Diazinon	333-41-5	3.9	b
Dibenz(a,h)anthracene	53-70-3	0.11	a
Dibenzo(a,e)pyrene	192-65-4	0.042	a
Dibenzofuran	132-64-9	0.002	e
Dibenzothiophene	132-65-0	72	b
Dibromo-3-chloropropane, 1,2-	96-12-8	0.0000084	b
Dibromobenzene, 1,3-	108-36-1	0.31	b
Dibromobenzene, 1,4-	106-37-6	7.2	b
dibromoethane, 1,2- (EDB)	106-93-4	0.00012	d
Dibromomethane (Methylene Bromide)	74-95-3	0.13	b
Dibutyl phthalate (Di-n-butyl phthalate)	84-74-2	0.011	g
Dibutyltin Compounds	E1790660	19	a
Dicalcium phosphate	7757-93-9	3,800,000	a
Dicamba	1918-00-9	9	b
Dichloro-2-butene, 1,4-	764-41-0	0.00004	b
Dichloro-2-butene, cis-1,4-	1476-11-5	0.000037	b
Dichloro-2-butene, trans-1,4-	110-57-6	0.000037	b
Dichloroacetic Acid	79-43-6	0.019	b
Dichloroaniline, 2,4-	554-00-7	100	e
Dichloroaniline, 3,4-	95-76-1	10	e
Dichlorobenzene, 1,2-	95-50-1	0.92	g
Dichlorobenzene, 1,3-	541-76-1	0.74	g
Dichlorobenzene, 1,4-	106-46-7	0.057	d
Dichlorobenzidine, 3,3'-	91-94-1	0.17	d
Dichlorobenzophenone, 4,4'-	90-98-2	28	b
Dichlorodifluoromethane (Freon-12)	75-71-8	18	b
Dichlorodiphenyldichloroethane, 4,4- (DDD)	72-54-8	0.0063	g
Dichlorodiphenyldichloroethene, 4,4- (DDE)	72-55-9	0.01	e
Dichlorodiphenyltrichloroethane, 4,4- (DDT)	50-29-3	0.01	e
Dichloroethane, 1,1-	75-34-3	0.044	d
Dichloroethane, 1,2- (EDC)	107-06-2	0.0028	d
Dichloroethylene, 1,1-	75-35-4	6.7	d
Dichloroethylene, 1,2- (mixture)		2,500	e
Dichloroethylene, 1,2-cis-	156-59-2	0.63	d
Dichloroethylene, 1,2-trans-	156-60-5	7	d
Dichloromethane	75-09-2	0.14	d
Dichlorophenol, 2,4-	120-83-2	1.4	b
Dichlorophenol, 3,4-	95-77-2	20	e
Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	2.3	d
Dichloropropane, 1,2-	78-87-5	0.017	b
Dichloropropane, 1,3-	142-28-9	7.8	b
Dichloropropanol, 2,3-	616-23-9	0.78	b

Table 2 - Clean fill screening levels for organics and other selected constituents. All concentrations in mg/kg

Chemical Name	CAS	Clean Fill Value	Note
Dichloropropene, 1,3-	542-75-6	0.01	b
Dichlorvos	62-73-7	0.0049	b
Dicyclopentadiene	77-73-6	0.13	b
Dieldrin	60-57-1	0.0045	g
Diethanolamine	111-42-2	0.49	b
Diethyl phthalate	84-66-2	100	e
Diethylene Glycol Monobutyl Ether	112-34-5	7.8	b
Diethylene glycol monoethyl ether	111-90-0	14	b
Diethylformamide	617-84-5	0.25	b
Diethylstilbestrol	56-53-1	0.0016	a
Difenzoquat	43222-48-6	5,200	a
Diflubenzuron	35367-38-5	20	b
Difluoroethane, 1,1- (DFE)	75-37-6	1,700	b
Difluoropropane, 2,2-	420-45-1	8,400	b
Dihydrosafrole	94-58-6	0.011	b
Diisopropyl ether (DIPE)	108-20-3	22	b
Diisopropyl Methylphosphonate	1445-75-6	27	b
Dimagnesium phosphate	7782-75-4	3,800,000	a
Dimethipin	55290-64-7	5.8	b
Dimethoate	60-51-5	0.59	b
Dimethoxybenzidine, 3,3'-	119-90-4	0.0035	b
Dimethyl methylphosphonate	756-79-6	0.58	b
Dimethyl phthalate	131-11-3	10	g
Dimethylamino azobenzene [p-]	60-11-7	0.0013	b
Dimethylaniline HCl, 2,4-	21436-96-4	0.0072	b
Dimethylaniline, 2,4-	95-68-1	0.013	b
Dimethylaniline, N,N-	121-69-7	0.054	b
Dimethylbenz(a)anthracene, 7,12-	57-97-6	0.00046	a
Dimethylbenzidine, 3,3'-	119-93-7	0.0026	b
Dimethylformamide	68-12-2	0.72	b
Dimethylhydrazine, 1,1-	57-14-7	0.000056	b
Dimethylhydrazine, 1,2-	540-73-8	0.00000039	b
Dimethylphenol, 2,4-	105-67-9	20	e
Dimethylphenol, 2,6-	576-26-1	0.78	b
Dimethylphenol, 3,4-	95-65-8	1.3	b
Dimethylterephthalate	120-61-6	29	b
Dimethylvinylchloride	513-37-1	0.0066	b
Di-n-hexylphthalate	84-75-3	3,100	e
Dinitrobenzene, 1,2-	528-29-0	0.11	b
Dinitrobenzene, 1,3-	99-65-0	0.072	g
Dinitrobenzene, 1,4-	100-25-4	0.11	b
Dinitro-o-cresol, 4,6-	534-52-1	0.16	b
Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5	46	b
Dinitrophenol, 2,4-	51-28-5	2.6	b
Dinitrotoluene Mixture, 2,4/2,6-	E1615210	0.009	b
Dinitrotoluene, 2,4-	121-14-2	0.019	b
Dinitrotoluene, 2,6-	606-20-2	0.0089	d
Dinitrotoluene, 2-Amino-4,6-	35572-78-2	1.8	b
Dinitrotoluene, 4-Amino-2,6-	19406-51-0	1.8	b
Dinitrotoluene, Technical grade	25321-14-6	0.0084	b
Dinoseb	88-85-7	7.8	b

Table 2 - Clean fill screening levels for organics and other selected constituents. All concentrations in mg/kg

Chemical Name	CAS	Clean Fill Value	Note
Di-N-propylnitrosamine (N-nitrosodi-N-propylamine)	621-64-7	0.00094	d
Dioxane, 1,4-	123-91-1	0.0023	d
Diphenamid	957-51-7	310	b
Diphenyl Ether	101-84-8	0.2	b
Diphenyl Sulfone	127-63-9	2.2	b
Diphenylamine	122-39-4	10	g
Diphenylhydrazine, 1,2-	122-66-7	0.015	b
Dipotassium phosphate	7758-11-4	3,800,000	a
Diquat	85-00-7	50	b
Direct Black 38	1937-37-7	0.076	a
Direct Blue 6	2602-46-2	0.073	a
Direct Brown 95	16071-86-6	0.081	a
Disodium phosphate	7558-79-4	3,800,000	a
Disulfoton	298-04-4	0.056	b
Dithiane, 1,4-	505-29-3	5.8	b
Diuron	330-54-1	0.9	b
Dodine	2439-10-3	130	b
Endosulfan, (alpha-beta)		0.64	g
Endothall	145-73-3	5.5	b
Endrin	72-20-8	0.0014	g
Epichlorohydrin	106-89-8	0.027	b
Epoxybutane, 1,2-	106-88-7	0.55	b
EPTC	759-94-4	24	b
Ethanol	64-17-5	4,000	e
Ethanol, 2-(2-methoxyethoxy)-	111-77-3	9.6	b
Ethephon	16672-87-0	1.3	b
Ethion	563-12-2	0.51	b
Ethoxyethanol Acetate, 2-	111-15-9	1.5	b
Ethoxyethanol, 2-	110-80-5	4.1	b
Ethyl Acetate	141-78-6	1.9	b
Ethyl Acrylate	140-88-5	0.19	b
Ethyl Chloride (Chloroethane)	75-00-3	310	d
Ethyl Ether (Diethyl ether)	60-29-7	53	b
Ethyl Methacrylate	97-63-2	9	b
Ethylbenzene	100-41-4	0.22	d
Ethylene Cyanohydrin	109-78-4	17	b
Ethylene Diamine	107-15-3	25	b
Ethylene Glycol	107-21-1	490	b
Ethylene Glycol Monobutyl Ether	111-76-2	25	b
Ethylene Oxide	75-21-8	0.0000084	b
Ethylene Thiourea	96-45-7	0.022	b
Ethyleneimine	151-56-4	0.0000031	b
Ethylphthalyl Ethyl Glycolate	84-72-0	7,800	b
Ethyl-p-nitrophenyl phosphonate (EPN)	2104-64-5	0.17	b
Fenamiphos	22224-92-6	0.0002	e
Fenpropathrin	39515-41-8	170	b
Fenvalerate	51630-58-1	1,600	a
Fluometuron	2164-17-2	11	b
Fluoranthene	206-44-0	10	g
Fluorene	86-73-7	3.7	g

Table 2 - Clean fill screening levels for organics and other selected constituents. All concentrations in mg/kg

Chemical Name	CAS	Clean Fill Value	Note
Fluoride	16984-48-8	3,100	a
Fluorine (Soluble Fluoride)	7782-41-4	30	e
Fluridone	59756-60-4	5,100	a
Flurprimidol	56425-91-3	190	b
Flusilazole	85509-19-9	130	a
Flutolanil	66332-96-5	2,500	b
Fluvalinate	69409-94-5	630	a
Folpet	133-07-3	23	b
Fomesafen	72178-02-0	9.6	b
Fonofos	944-22-9	2.8	b
Formaldehyde	50-00-0	0.002	d
Formic Acid	64-18-6	0.0078	b
Fosetyl-AL	39148-24-8	40,000	b
Furan	110-00-9	0.44	b
Furazolidone	67-45-8	0.0023	b
Furfural	98-01-1	0.49	b
Furium	531-82-8	0.0041	b
Furmecyclox	60568-05-0	0.072	b
Generic Diesel/Heating Oil		1,100	c
Generic Gasoline		31	d
Generic Mineral/Insulating Oil		2,800	c
Glufosinate, Ammonium	77182-82-2	1.6	b
Glutaraldehyde	111-30-8	24	b
Glycidyl	765-34-4	0.02	b
Glyphosate	1071-83-6	530	b
Guanidine	113-00-8	2.7	b
Guanidine Chloride	50-01-1	1,300	a
Guanidine Nitrate	506-93-4	9	b
Haloxyfop, Methyl	69806-40-2	0.5	b
Heptachlor	76-44-8	0.017	d
Heptachlor Epoxide	1024-57-3	0.0042	d
Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	0.13	a
Heptanal, n-	111-71-7	0.084	b
Heptane, N-	142-82-5	1	e
Hexabromobenzene	87-82-1	14	b
Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2	13	a
Hexachlorobenzene	118-74-1	0.018	d
Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	0.1	b
Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	0.1	b
Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	0.1	b
Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	0.0001	b
Hexachlorobutadiene	87-68-3	0.016	b
Hexachlorocyclohexane, (technical-BHC)	608-73-1	0.009	b
Hexachlorocyclohexane, alpha- (alpha-HCH or alpha-BHC)	319-84-6	0.0063	d
Hexachlorocyclohexane, Beta- (beta-BHC)	319-85-7	0.009	b
Hexachlorocyclohexane, gamma- (gamma-BHC or Lindane)	58-89-9	0.0095	g
Hexachlorocyclopentadiene	77-47-4	0.078	b
Hexachlorodibenzo-p-dioxin, Mixture	0	0.0001	a

Table 2 - Clean fill screening levels for organics and other selected constituents. All concentrations in mg/kg

Chemical Name	CAS	Clean Fill Value	Note
Hexachloroethane	67-72-1	0.022	d
Hexachlorophene	70-30-4	19	a
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	0.016	b
Hexamethylene Diisocyanate, 1,6-	822-06-0	0.013	b
Hexamethylphosphoramide	680-31-9	0.11	b
Hexane, N-	110-54-3	600	b
Hexanedioic Acid	124-04-9	590	b
Hexanone, 2-	591-78-6	0.36	g
Hexazinone	51235-04-2	18	b
Hexythiazox	78587-05-0	30	b
Hydramethylnon	67485-29-4	1,100	a
Hydrazine	302-01-2	0.000013	b
Hydrazine Sulfate	10034-93-2	0.23	a
Hydrogen Chloride	7647-01-0	28,000,000	a
Hydrogen Cyanide	74-90-8	0.88	d
Hydrogen Fluoride	7664-39-3	3,100	a
Hydrogen Sulfide	7783-06-4	2,800,000	a
Hydroquinone	123-31-9	0.052	b
Imazalil	35554-44-0	0.9	b
Imazaquin	81335-37-7	1,400	b
Imazethapyr	81335-77-5	2,500	b
Indeno[1,2,3-cd]pyrene	193-39-5	1.1	a
Iodine	7553-56-2	4	e
Iprodione	36734-19-7	13	b
Isobutyl Alcohol	78-83-1	72	b
Isophorone	78-59-1	1.6	b
Isopropalin	33820-53-0	55	b
Isopropanol	67-63-0	5	b
Isopropyl Methyl Phosphonic Acid	1832-54-8	26	b
Isoxaben	82558-50-7	120	b
JP-7	E1737665	430,000,000	a
Lactofen	77501-63-4	280	b
Lactonitrile	78-97-7	0.049	b
Lead acetate	301-04-2	0.11	b
Lead Phosphate	7446-27-7	82	a
Lead subacetate	1335-32-6	0.12	b
Lewisite	541-25-3	0.0023	b
Linuron	330-55-2	6.6	b
Lithium Perchlorate	7791-03-9	55	a
Malathion	121-75-5	6	b
Maleic Anhydride	108-31-6	23	b
Maleic Hydrazide	123-33-1	130	b
Malononitrile	109-77-3	0.025	b
Mancozeb	8018-01-7	46	b
Maneb	12427-38-2	8.4	b
MCPA ((4-chloro-2-methylphenoxy)acetic acid)	94-74-6	0.097	d
MCPB	94-81-5	1.6	b
MCPP	93-65-2	0.28	b
Mephosfolan	950-10-7	0.16	b
Mepiquat Chloride	24307-26-4	12	b

Table 2 - Clean fill screening levels for organics and other selected constituents. All concentrations in mg/kg

Chemical Name	CAS	Clean Fill Value	Note
Mercaptobenzothiazole, 2-	149-30-4	1.1	b
Mercuric Chloride (and other Mercury salts)	7487-94-7	23	a
Mercury (methyl)	22967-92-6	0.0002	e
Merphos	150-50-5	2.3	a
Merphos Oxide	78-48-8	0.084	b
Metalaxyl	57837-19-1	20	b
Methacrylonitrile	126-98-7	0.026	b
Methamidophos	10265-92-6	0.013	b
Methanol	67-56-1	250	b
Methidathion	950-37-8	0.43	b
Methomyl	16752-77-5	6.6	b
Methoxy-5-nitroaniline, 2-	99-59-2	0.032	b
Methoxychlor	72-43-5	5.1	g
Methoxyethanol Acetate, 2-	110-49-6	0.025	b
Methoxyethanol, 2-	109-86-4	0.35	b
Methyl Acetate	79-20-9	250	b
Methyl Acrylate	96-33-3	0.53	b
Methyl Ethyl Ketone (2-Butanone)	78-93-3	72	b
Methyl Hydrazine	60-34-4	0.000078	b
Methyl Iodide	74-88-4	0.038	g
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	9.7	g
Methyl Isocyanate	624-83-9	0.035	b
Methyl Methacrylate	80-62-6	18	b
Methyl Methanesulfonate	66-27-3	0.0096	b
Methyl Parathion	298-00-0	0.44	b
Methyl Phosphonic Acid	993-13-5	14	b
Methyl Styrene (Mixed Isomers)	25013-15-4	2.3	b
Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.11	d
Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2	0.22	b
Methyl-2-Pentanol, 4-	108-11-2	84	b
Methyl-5-nitroaniline, 2- (5-Nitro-o-toluidine)	99-55-8	0.28	b
Methylaniline Hydrochloride, 2-	636-21-5	0.016	b
Methylarsonic acid	124-58-3	3.5	b
Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7	13	a
Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	5.4	a
Methylcholanthrene, 3-	56-49-5	0.0055	a
Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	0.11	b
Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	0.16	b
Methylenebisbenzenamine, 4,4'-	101-77-9	0.013	b
Methylenediphenyl Diisocyanate	101-68-8	850,000	a
Methylnaphthalene, 1-	90-12-0	0.36	b
Methylnaphthalene, 2-	91-57-6	11	b
Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	0.00019	b
Methylstyrene, Alpha-	98-83-9	72	b
Metolachlor	51218-45-2	190	b
Metribuzin	21087-64-9	9	b
Metsulfuron-methyl	74223-64-6	110	b
Mineral oils	8012-95-1	140,000	b
Mirex	2385-85-5	0.036	a

Table 2 - Clean fill screening levels for organics and other selected constituents. All concentrations in mg/kg

Chemical Name	CAS	Clean Fill Value	Note
Molinate	2212-67-1	1	b
Monoaluminum phosphate	13530-50-2	3,800,000	a
Monoammonium phosphate	7722-76-1	3,800,000	a
Monocalcium phosphate	7758-23-8	3,800,000	a
Monochloramine	10599-90-3	7,800	a
Monomagnesium phosphate	7757-86-0	3,800,000	a
Monomethylaniline	100-61-8	0.84	b
Monopotassium phosphate	7778-77-0	3,800,000	a
Monosodium phosphate	7558-80-7	3,800,000	a
Myclobutanil	88671-89-0	340	b
N,N'-Diphenyl-1,4-benzenediamine	74-31-7	19	a
Naled	300-76-5	1.1	b
Naphtha, High Flash Aromatic (HFAN)	64742-95-6	2,300	a
Naphthalene	91-20-3	0.077	d
Naphthylamine, 2-	91-59-8	0.012	b
Napropamide	15299-99-7	780	b
Nickel Acetate	373-02-4	2.7	b
Nickel Carbonate	3333-67-3	670	a
Nickel Carbonyl	13463-39-3	820	a
Nickel Hydroxide	12054-48-7	820	a
Nickel Oxide	1313-99-1	840	a
Nickel Refinery Dust	E715532	820	a
Nickel Subsulfide	12035-72-2	0.41	a
Nickelocene	1271-28-9	670	a
Nitrate	14797-55-8	130,000	a
Nitrite	14797-65-0	7,800	a
Nitroaniline, 2-	88-74-4	4.8	b
Nitroaniline, 3-	99-09-2	70	e
Nitroaniline, 4-	100-01-6	0.096	b
Nitrobenzene	98-95-3	0.0055	b
Nitrocellulose	9004-70-0	780,000	b
Nitrofurantoin	67-20-9	37	b
Nitrofurazone	59-87-0	0.0032	b
Nitroglycerin	55-63-0	0.051	b
Nitroguanidine	556-88-7	29	b
Nitromethane	75-52-5	0.0084	b
Nitrophenol, 4-	100-02-7	7	e
Nitropropane, 2-	79-46-9	0.000032	b
Nitropyrene, 4-	57835-92-4	0.2	b
Nitrosodiethanolamine, N-	1116-54-7	0.00034	b
Nitrosodiethylamine, N-	55-18-5	0.0000037	b
Nitrosodimethylamine, N-	62-75-9	0.0000016	b
Nitroso-di-N-butylamine, N-	924-16-3	0.00033	b
Nitrosodiphenylamine, N- (Diphenylnitrosamine)	86-30-6	10	d
Nitrosomethylethylamine, N-	10595-95-6	0.000012	b
Nitrosomorpholine [N-]	59-89-2	0.00017	b
Nitroso-N-ethylurea, N-	759-73-9	0.000013	b
Nitroso-N-methylurea, N-	684-93-5	0.0000028	b
Nitrosopiperidine [N-]	100-75-4	0.00026	b
Nitrosopyrrolidine, N-	930-55-2	0.00084	b

Table 2 - Clean fill screening levels for organics and other selected constituents. All concentrations in mg/kg

Chemical Name	CAS	Clean Fill Value	Note
Nitrotoluene, m-	99-08-1	0.096	b
Nitrotoluene, o-	88-72-2	0.018	b
Nitrotoluene, p-	99-99-0	0.24	b
Nonane, n-	111-84-2	4.5	b
Norflurazon	27314-13-2	110	b
Octabromodiphenyl Ether	32536-52-0	190	a
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	16	g
Octamethylpyrophosphoramide	152-16-9	0.58	b
Octyl Phthalate, di-N-	117-84-0	0.91	g
Oryzalin	19044-88-3	0.9	b
Oxadiazon	19666-30-9	29	b
Oxamyl	23135-22-0	6.6	b
Oxyfluorfen	42874-03-3	2.6	b
Paclobutrazol	76738-62-0	28	b
PAHs - High Molecular Weight	0	1.1	f
PAHs - Low Molecular Weight	0	29	f
Paraquat Dichloride	1910-42-5	72	b
Parathion	56-38-2	26	b
Pebulate	1114-71-2	27	b
Pendimethalin	40487-42-1	960	b
Pentabromodiphenyl Ether	32534-81-9	100	b
Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9	5.2	b
Pentachlorobenzene	608-93-5	1.4	b
Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	0.06	b
Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	0.06	b
Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	0.06	b
Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	0.06	b
Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	0.000018	b
Pentachloroethane	76-01-7	0.019	b
Pentachloronitrobenzene	82-68-8	0.09	b
Pentachlorophenol	87-86-5	0.066	d
Pentaerythritol tetranitrate (PETN)	78-11-5	1.7	b
Pentane, n-	109-66-0	600	b
Perchlorate and perchlorate salts	14797-73-0	55	a
Perfluorobutane sulfonic acid (PFBS)	375-73-5	7.8	b
Perfluorobutanesulfonate	45187-15-3	7.8	b
Permethrin	52645-53-1	3,200	a
Phenacetin	62-44-2	0.58	b
Phenanthrene	85-01-8	5.5	g
Phenmedipham	13684-63-4	1,300	b
Phenol	108-95-2	0.79	g
Phenol, 2-(1-methylethoxy)-, methylcarbamate	114-26-1	1.5	b
Phenothiazine	92-84-2	0.84	b
Phenyl Isothiocyanate	103-72-0	0.1	b
Phenylenediamine, m-	108-45-2	1.9	b
Phenylenediamine, o-	95-54-5	0.01	b
Phenylenediamine, p-	106-50-3	0.32	b
Phenylmercuric Acetate	62-38-4	0.03	b
Phenylphenol, 2-	90-43-7	25	b
Phorate	298-02-2	0.2	b

Table 2 - Clean fill screening levels for organics and other selected constituents. All concentrations in mg/kg

Chemical Name	CAS	Clean Fill Value	Note
Phosgene	75-44-5	0.31	a
Phosmet	732-11-6	4.9	b
Phosphine	7803-51-2	23	a
Phosphoric Acid	7664-38-2	3,000,000	a
Phosphorus, White	7723-14-0	0.09	b
Phthalic Acid, P-	100-21-0	410	b
Phthalic Anhydride	85-44-9	510	b
Picloram	1918-02-1	23	b
Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3	0.078	b
Picric Acid (2,4,6-Trinitrophenol)	88-89-1	5	b
Pirimiphos, Methyl	29232-93-7	0.049	b
Polybrominated biphenyls	59536-65-1	0.018	a
Polychlorinated biphenyls (Total PCBs)		0.23	c
Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9	850,000	a
Polyphosphoric acid	8017-16-1	3,800,000	a
Potassium Cyanide	151-50-8	160	a
Potassium Perchlorate	7778-74-7	55	a
Potassium Perfluorobutane Sulfonate	29420-49-3	1,300	a
Potassium Silver Cyanide	506-61-6	390	a
Potassium tripolyphosphate	13845-36-8	3,800,000	a
Prochloraz	67747-09-5	0.11	b
Profluralin	26399-36-0	96	b
Prometon	1610-18-0	7.2	b
Prometryn	7287-19-6	54	b
Propachlor	1918-16-7	9	b
Propanil	709-98-8	2.7	b
Propargite	2312-35-8	0.66	b
Propargyl Alcohol	107-19-7	0.49	b
Propazine	139-40-2	18	b
Propham	122-42-9	13	b
Propiconazole	60207-90-1	320	b
Propionaldehyde	123-38-6	0.2	b
Propyl benzene	103-65-1	72	b
Propylene	115-07-1	360	b
Propylene Glycol	57-55-6	4,900	b
Propylene Glycol Dinitrate	6423-43-4	390,000	a
Propylene Glycol Monomethyl Ether	107-98-2	39	b
Propylene Oxide	75-56-9	0.0034	b
Propyzamide	23950-58-5	72	b
Pyrene	129-00-0	10	g
Pyridine	110-86-1	0.41	b
Quinalphos	13593-03-8	2.6	b
Quinoline	91-22-5	0.0047	b
Quizalofop-ethyl	76578-14-8	110	b
Refractory Ceramic Fibers	E715557	43,000,000	a
Resmethrin	10453-86-8	1,900	a
Ronnel	299-84-3	220	b
Rotenone	83-79-4	250	a
Safrole	94-59-7	0.0035	b

Table 2 - Clean fill screening levels for organics and other selected constituents. All concentrations in mg/kg

Chemical Name	CAS	Clean Fill Value	Note
Selenious Acid	7783-00-8	390	a
Selenium Sulfide	7446-34-6	390	a
Sethoxydim	74051-80-2	840	b
Silica (crystalline, respirable)	7631-86-9	4,300,000	a
Silver Cyanide	506-64-9	7,800	a
Simazine	122-34-9	0.018	b
Sodium acid pyrophosphate	7758-16-9	3,800,000	a
Sodium Acifluorfen	62476-59-9	130	b
Sodium aluminum phosphate (acidic)	7785-88-8	3,800,000	a
Sodium aluminum phosphate (anhydrous)	10279-59-1	3,800,000	a
Sodium aluminum phosphate (tetrahydrate)	10305-76-7	3,800,000	a
Sodium Azide	26628-22-8	310	a
Sodium Cyanide	143-33-9	78	a
Sodium Diethyldithiocarbamate	148-18-5	0.011	b
Sodium Fluoride	7681-49-4	3,900	a
Sodium Fluoroacetate	62-74-8	0.0049	b
Sodium hexametaphosphate	10124-56-8	3,800,000	a
Sodium Metavanadate	13718-26-8	78	a
Sodium Perchlorate	7601-89-0	55	a
Sodium polyphosphate	68915-31-1	3,800,000	a
Sodium trimetaphosphate	7785-84-4	3,800,000	a
Sodium tripolyphosphate	7758-29-4	3,800,000	a
Sodium Tungstate	13472-45-2	63	a
Sodium Tungstate Dihydrate	10213-10-2	63	a
Stirofos (Tetrachlorovinphos)	961-11-5	0.49	b
Strychnine	57-24-9	3.9	b
Styrene	100-42-5	1.2	g
Styrene-Acrylonitrile (SAN) Trimer		190	a
Sulfolane	126-33-0	0.26	b
Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9	3.9	b
Sulfur Trioxide	7446-11-9	1,400,000	a
Sulfuric Acid	7664-93-9	1,400,000	a
Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8	0.9	b
Tebuthiuron	34014-18-1	23	b
Temephos	3383-96-8	1,300	a
Terbacil	5902-51-2	4.5	b
Terbufos	13071-79-9	0.031	b
Terbutryn	886-50-0	1.1	b
Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47)	5436-43-1	3.2	b
Tetrachloroaniline, 2,3,5,6-	3481-20-7	20	e
Tetrachlorobenzene, 1,2,3,4-	634-66-2	10	e
Tetrachlorobenzene, 1,2,4,5-	95-94-3	0.47	b
Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	0.038	a
Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	0.0037	b
Tetrachlorodibenzodioxin (TCDD), 2,3,7,8- (dioxin)	1746-01-6	0.00000029	g
Tetrachloroethane, 1,1,1,2-	630-20-6	0.013	b
Tetrachloroethane, 1,1,2,2-	79-34-5	0.0018	b
Tetrachloroethylene (PCE)	127-18-4	0.18	g
Tetrachlorophenol, 2,3,4,6-	58-90-2	11	b

Table 2 - Clean fill screening levels for organics and other selected constituents. All concentrations in mg/kg

Chemical Name	CAS	Clean Fill Value	Note
Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	0.00027	b
Tetraethyl Dithiopyrophosphate	3689-24-5	0.31	b
Tetraethyl lead	78-00-2	0.00028	b
Tetrafluoroethane, 1,1,1,2-	811-97-2	5,600	b
Tetrahydrofuran	109-99-9	45	b
Tetrapotassium phosphate	7320-34-5	3,800,000	a
Tetrasodium pyrophosphate	7722-88-5	3,800,000	a
Tetryl (Trinitrophenylmethylnitramine)	479-45-8	1.5	g
Thallic Oxide	1314-32-5	1.6	a
Thallium (I) Nitrate	10102-45-1	0.78	a
Thallium (Soluble Salts)	7440-28-0	0.78	a
Thallium Acetate	563-68-8	0.0025	b
Thallium Carbonate	6533-73-9	0.005	b
Thallium Chloride	7791-12-0	0.78	a
Thallium Selenite	12039-52-0	0.78	a
Thallium Sulfate	7446-18-6	1.6	a
Thifensulfuron-methyl	79277-27-3	16	b
Thiobencarb	28249-77-6	33	b
Thiocyanates	E1790664	16	a
Thiocyanic Acid	463-56-9	16	a
Thiocyanomethylthio benzothiazole, 2- (TCMTB)	21564-17-0	200	b
Thiodiglycol	111-48-8	17	b
Thiofanox	39196-18-4	0.11	b
Thiophanate, Methyl	23564-05-8	0.34	b
Thiram	137-26-8	25	b
Titanium Tetrachloride	7550-45-0	140,000	a
Toluene	108-88-3	23	g
Toluene-2,4-diisocyanate	584-84-9	0.015	b
Toluene-2,5-diamine	95-70-5	0.0078	b
Toluene-2,6-diisocyanate	91-08-7	0.016	b
Toluic Acid, p-	99-94-5	1.4	b
Toluidine, o- (Methylaniline, 2-)	95-53-4	0.12	b
Toluidine, p-	106-49-0	0.066	b
Total Petroleum Hydrocarbons (Aliphatic High)	E1790670	140,000	b
Total Petroleum Hydrocarbons (Aliphatic Low)	E1790666	520	a
Total Petroleum Hydrocarbons (Aliphatic Medium)	E1790668	90	b
Total Petroleum Hydrocarbons (Aromatic High)	E1790676	2,500	a
Total Petroleum Hydrocarbons (Aromatic Low)	E1790672	1	b
Total Petroleum Hydrocarbons (Aromatic Medium)	E1790674	1.4	b
Toxaphene	8001-35-2	0.36	d
Tralomethrin	66841-25-6	470	a
Triacetin	102-76-1	27,000	b
Triadimefon	43121-43-3	30	b
Triallate	2303-17-5	0.06	b
Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5	3,800,000	a
Triasulfuron	82097-50-5	13	b
Tribenuron-methyl	101200-48-0	3.7	b

Table 2 - Clean fill screening levels for organics and other selected constituents. All concentrations in mg/kg

Chemical Name	CAS	Clean Fill Value	Note
Tribromobenzene, 1,2,4-	615-54-3	3.8	b
Tribromophenol, 2,4,6-	118-79-6	13	b
Tributyl Phosphate	126-73-8	1.5	b
Tributyltin Compounds	E1790678	19	a
Tributyltin oxide (TBTO)	56-35-9	19	a
Tricalcium phosphate	7758-87-4	3,800,000	a
Trichloro-1,2,2-trifluoroethane, 1,1,2- (Freon 113)	76-13-1	1,600	b
Trichloroacetic Acid	76-03-9	0.013	b
Trichloroaniline HCl, 2,4,6-	33663-50-2	0.44	b
Trichloroaniline, 2,4,5-	636-30-6	20	e
Trichloroaniline, 2,4,6-	634-93-5	0.22	b
Trichlorobenzene, 1,2,3-	87-61-6	1.3	b
Trichlorobenzene, 1,2,4-	120-82-1	0.2	b
Trichloroethane, 1,1,1-	71-55-6	190	d
Trichloroethane, 1,1,2-	79-00-5	0.0063	d
Trichloroethylene (TCE)	79-01-6	0.013	d
Trichlorofluoromethane (Freon 11)	75-69-4	52	g
Trichlorophenol, 2,4,5-	95-95-4	4	e
Trichlorophenol, 2,4,6-	88-06-2	2.4	d
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	4.1	b
Trichlorophenoxypropionic acid, -2,4,5	93-72-1	3.7	b
Trichloropropane, 1,1,2-	598-77-6	2.1	b
Trichloropropane, 1,2,3-	96-18-4	0.000019	b
Trichloropropene, 1,2,3-	96-19-5	0.019	b
Tricresyl Phosphate (TCP)	1330-78-5	900	b
Tridiphane	58138-08-2	7.8	b
Triethylamine	121-44-8	0.26	b
Triethylene Glycol	112-27-6	530	b
Trifluoroethane, 1,1,1-	420-46-2	7,800	b
Trifluralin	1582-09-8	5	b
Trimagnesium phosphate	7757-87-1	3,800,000	a
Trimethyl Phosphate	512-56-1	0.052	b
Trimethylbenzene, 1,2,3-	526-73-8	4.9	b
Trimethylbenzene, 1,2,4-	95-63-6	10	d
Trimethylbenzene, 1,3,5-	108-67-8	11	d
Trimethylpentene, 2,4,4-	25167-70-8	13	b
Tri-n-butyltin	688-73-3	4.9	b
Trinitrobenzene, 1,3,5-	99-35-4	10	g
Trinitrotoluene, 2,4,6- (TNT)	118-96-7	0.9	b
Triphenylphosphine Oxide	791-28-6	90	b
Tripotassium phosphate	7778-53-2	3,800,000	a
Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8	480	b
Tris(1-chloro-2-propyl)phosphate	13674-84-5	39	b
Tris(2,3-dibromopropyl)phosphate	126-72-7	0.0078	b
Tris(2-chloroethyl)phosphate	115-96-8	0.23	b
Tris(2-ethylhexyl)phosphate	78-42-2	170	a
Trisodium phosphate	7601-54-9	3,800,000	a
Uranium (Soluble Salts)	E715565	5	e
Urethane (Ethyl carbamate)	51-79-6	0.00034	b
Vanadium Pentoxide	1314-62-1	460	a

Table 2 - Clean fill screening levels for organics and other selected constituents. All concentrations in mg/kg

Chemical Name	CAS	Clean Fill Value	Note
Vernolate	1929-77-7	0.53	b
Vinclozolin	50471-44-8	0.96	b
Vinyl Acetate	108-05-4	5.2	b
Vinyl Bromide	593-60-2	0.0031	b
Vinyl Chloride	75-01-4	0.00057	d
Warfarin	81-81-2	0.35	b
Xylene, m-	108-38-3	11	b
Xylene, o-	95-47-6	1	e
Xylene, P-	106-42-3	11	b
Xylenes	1330-20-7	1.4	g
Zinc Cyanide	557-21-1	3,900	a
Zinc Phosphide	1314-84-7	23	a
Zineb	12122-67-7	170	b
Zirconium	7440-67-7	6.3	a

Notes:

a - Regional Screening Levels, EPA (May 2018), Residential soil. http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm

b - Regional Screening Levels, EPA (May 2018), groundwater protection (x60 to convert to Oregon dilution attenuation factor).

c - Risk Based Concentrations, DEQ (May 2018), Residential soil. https://www.oregon.gov/deq/FilterDocs/RBDMTable.pdf

d - Risk Based Concentrations, DEQ (May 2018), Leaching to groundwater.

e - Table 1, Guidance for Ecological Risk Assessment, Level II Screening Level Values, DEQ (2001), https://www.oregon.gov/deq/FilterDocs/GuidanceEcologicalRisk.pdf

f - Ecological Soil Screening Levels, EPA (2005, 2007), http://www.epa.gov/ecotox/ecossl/

g - Ecotoxicological screening benchmarks developed by Oak Ridge National Laboratory: https://www.lanl.gov/environment/protection/eco-risk-assessment.php

Last updated by Heather Kuoppamaki, DEQ-NWR, on June 17, 2019

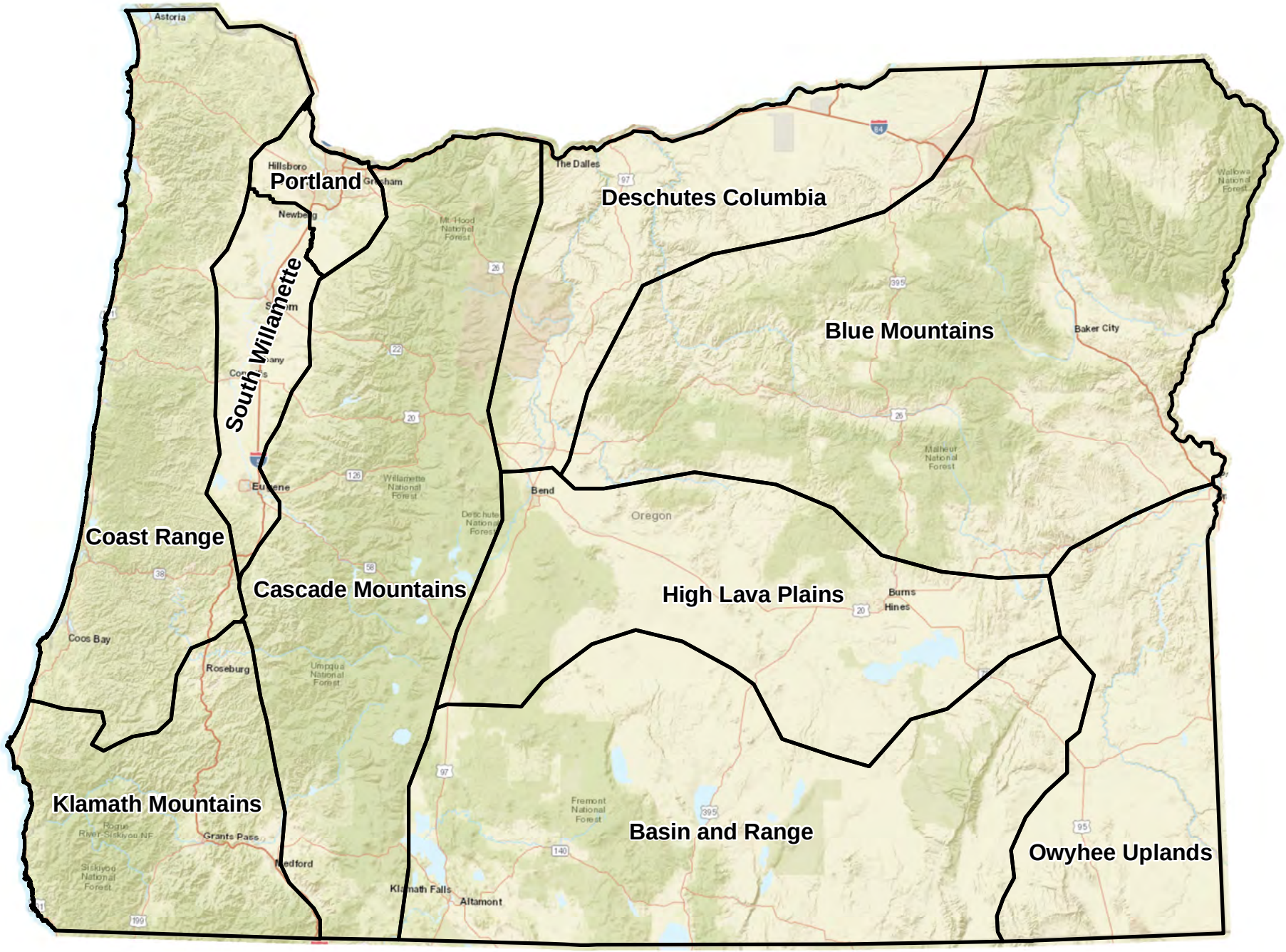
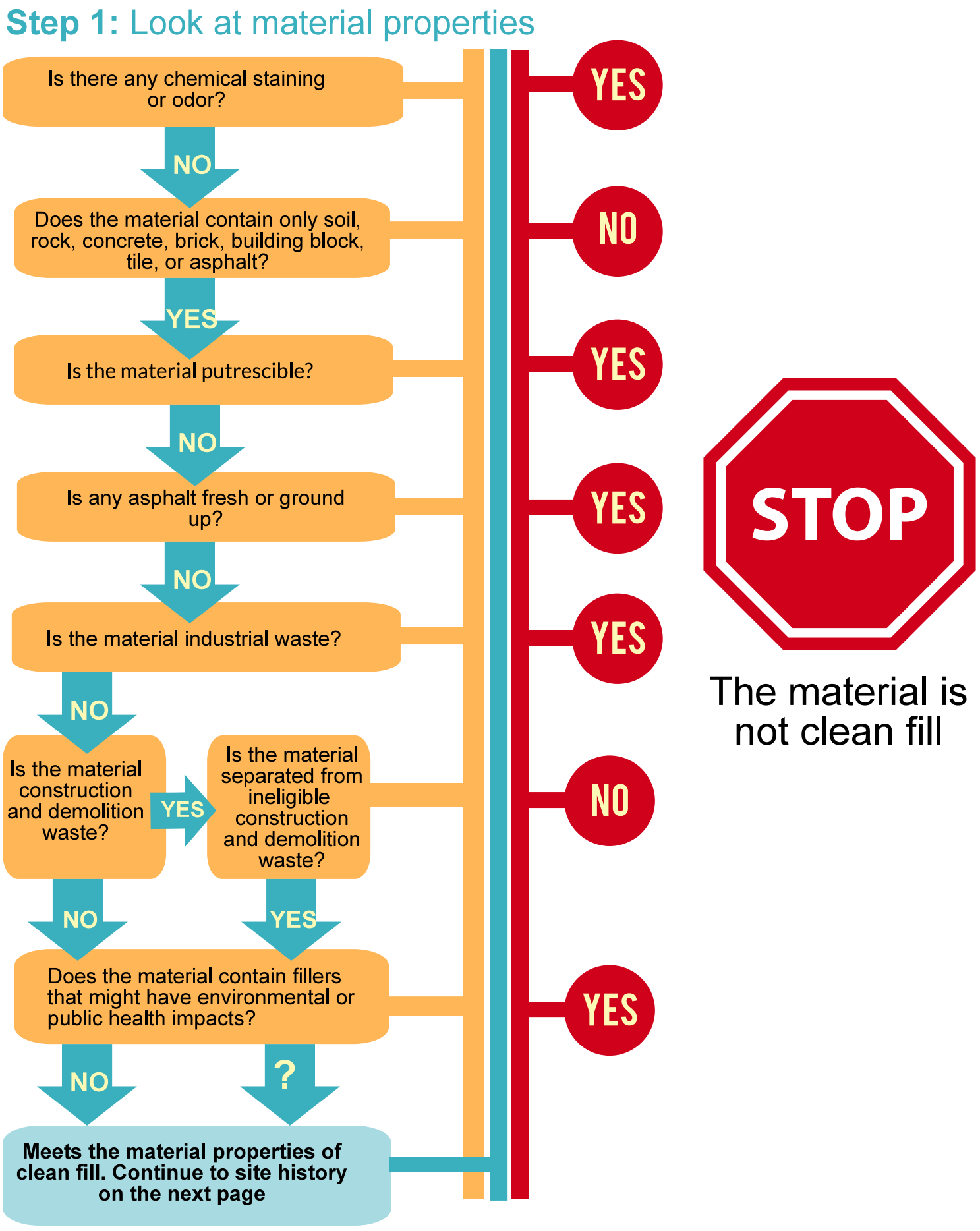


Figure 1. Physiographic Provinces of Oregon

Figure 2 - Clean Fill Evaluation Flow Chart



Step 2: Review site history

Does the material contain a listed or characteristic hazardous wastes?

YES

STOP

The material is not clean fill

NO

?

Does the material contain contaminants that could adversely impact waters of the state?

YES

? to at least one of the above

NO

Step 3: Conduct Sampling
See Section 7 for details

Does the material contain a chemical that exceeds clean fill screening levels?

YES

Do a statistical analysis. See Section 7 for details. Does the statistical analysis show concentrations above clean fill screening levels?

NO

The material is clean fill

YES

STOP

The material is not clean fill

APPENDIX F

PHOTO LOG

Photo 1. From 5/21/20. View of center of Block 290, looking north towards vicinity of presumed decommissioned monitoring well MW-3.

TRUE NORTH GEOTECHNICAL	Guardian Real Estate Services Slabtown Square Development Portland, Oregon	Project # 22-0061-9
219 West 4th Street Vancouver, WA 98660 360-984-6584	May 2025	Photo Log

Photo 2. From 3/17/2022. View of shoring installation in NW Corner of Property, looking west-southwest.

TRUE NORTH GEOTECHNICAL	Guardian Real Estate Services Slabtown Square Development Portland, Oregon	Project # 22-0061-9
219 West 4th Street Vancouver, WA 98660 360-558-0005	May 2025	Photo Log

Photo 3. From 3/22/22. View of sidewall on NE portion of Property, piles N20-22. PCS transported to Hillsboro Landfill.

Photo 4. From 3/23/22. View of shoring installation on southwest portion of Property, looking west.

Photo 5. From 3/31/2022. From SE corner of Property. Looking west.

TRUE NORTH GEOTECHNICAL	Guardian Real Estate Services Slabtown Square Development Portland, Oregon	Project # 22-0061-9
219 West 4th Street Vancouver, WA 98660 360-984-6584	May 2025	Photo Log

Photo 6. From 4/15/2022. View of NE corner of Property.

Photo 7. From 4/22/2022. From SW corner of Property looking NE.

Photo 8. From 4/22/2022. View of NW corner sidewalls (piles N1 and N2).

Photo 9. From 5/9/2022. View of vapor barrier being placed over subgrade in NW corner, looking W-NW.

Photo 10. From 5/10/2022. View of SW portion of Property, backfilled with compacted recycled concrete.

Photo 11. From 5/10/2022. View of stockpile collected in east portion of Property.

Photo 12. From 5/16/2022. View of construction proceedings in SW portion of property.

Photo 13. From 5/17/2022. View of stockpile collected in east portion of Property.

Photo 14. From 5/18/2022. View of E-SE subgrade of Property.

Photo 15. From 11/11/2022. View of oil-water separator near center east Property line.

Photo 16. From 12/21/22. View of Drywell 5 in NE portion of Property.

Photo 17. From 1/17/23. View of PCS with roadway of NW Pettygrove.

APPENDIX G

2022 UNIVERSAL APPLICATORS

REPORT

Report for the
Department of Environmental Quality

Cleanup Activity at the Property of:

Block 290 LLC/Slabtown Square Owner LLC

located at:
1417 NW 20th Ave, Portland, OR 97209
Prepared by:
Universal Applicators, Inc.

December 29, 2022

DEQ Log No. 26-22-0860

Universal Applicators, Inc.
10350 N. Vancouver Way Suite 329 Portland, OR 97217
503-236-6359 800-200-1377 FAX: 503-233-9804
CCB# 65928 www.universalap.com

Report for the Department of Environmental Quality
Cleanup Activity at the Property of:
Block 290 LLC/Slabtown Square Owner LLC
Located at 1417 NW 20th Ave, Portland, Oregon 97209
Prepared by: Universal Applicators, Inc.
DEQ Log No. 26-22-0860
December 29, 2022

Report Contents

Certification, Checklist, and Cost Summary

Report Narrative

Maps: Location Map
Site Map
Rainfall Map

Matrix Score Sheet

Well Logs

Lab Reports/COCs

Receipts

Photos

Matrix Check List

Universal Applicators, Inc.
10350 N. Vancouver Way Suite 329 Portland, OR 97217
503-236-6359 800-200-1377 FAX: 503-233-9804
CCB# 65928 www.universalap.com

Remediation Certification

December 29, 2022

Block 290 LLC/Slabtown Square Owner LLC
1417 NW 20th Ave
Portland, OR 97209
DEQ Log Number: 26-22-0860

Type of Project: Soil Matrix Cleanup

Universal Applicators Inc. has performed cleanup services at the above property and certifies that the work performed meets the appropriate requirements of the Oregon Administrative Rules (OAR) 340-122-205 through 340-122-360 and OAR Chapter 340 Division 177.

Based on information and belief formed after reasonable inquiry, services performed under this certification were conducted in compliance with all applicable federal, state and local laws.

Universal Applicators Inc. is insured as required by OAR 340-163-0050

Signed: _____ **Date: 12/29/2022**
Name: Greg Babcock, Officer

Universal Applicators Inc.,
Service Provider License Number: 16488, Expiration Date: 3/15/2023

Attachments:
Project Report
Project Checklist
Project Cost Summary

The Report and attached forms are an integral part of this Certification

Universal Applicators, Inc.
10350 N. Vancouver Way Suite 329 Portland, OR 97217
503-236-6359 800-200-1377 FAX: 503-233-9804
CCB# 65928 www.universalap.com

December 29, 2022

Block 290 LLC/Slabtown Square Owner LLC
1417 NW 20th Ave
Portland, OR 97209
DEQ Log Number: 26-22-0860

Universal Applicators, Inc.

Licensed Bonded and Insured as required by OAR 340-163-0050

Company Qualifications

License	Number	Expiration
State of Oregon Contractor's Board	65928	04/17/2023
State of Washington Contractor's Registration	UNIVEAI087J1	04/10/2023
Oregon DEQ UST Cleanup Service Provider	12630	04/20/2023
Oregon DEQ Heating Oil Tank Service Provider	16488	03/15/2023

Personnel Qualifications

R. Greg Babcock, Company President/UST Cleanup Supervisor

DEQ-Licensed Services	Number	Expiration
Decommissioning	10435	06/25/2023
HOT Supervisor Services	17746	03/06/2023

Jesse Keyes, UST Cleanup Supervisor

DEQ-Licensed Services	Number	Expiration
HOT Supervisor Services	25914	05/17/2023

James Braddock, Cathodic Protection

DEQ-Licensed Services	Number	Expiration
Cathodic Protection	27503	10/30/2023

SPILL/RELEASE REPORT

1 - GENERAL INFORMATION **OERS No.** _____

a. Company/Individual Name: Block 290/Slabtown Square

b. Address: 1417 NW 20th Ave
Portland OR 97209

c. Company Contact Person: Tamara Holden

d. Phone Number(s): 503-802-3600

e. Report Prepared by: Jesse Keyes Phone: 503-804-4749

f. Specific on-site location of the release (and address if different from above):

Please provide a map of the site showing area(s) where the release occurred, any sample collection locations, location of roads/ditches/surface water bodies, etc.

2 - RELEASE INFORMATION (discovery date)

a. Date/Time Release started: 11/13/22 Date/Time stopped: 12/13/22

b. Release was reported to (specify Date/Time/Name of Person contacted where applicable):

ODEQ 11/13/22 Gerald Gamolo

OERS _____

NRC _____

Other (describe): _____

c. Person(s) reporting release: Jesse Keyes/Universal Applicators, Inc.

d. Name, quantity and physical state (gas, liquid, solid or semi-solid) of material(s) released:
oil & oily solids, contaminated soil

Please attach copies of material safety data sheets (MSDS) or constituent profiles for released material(s).

e. The release affected: ___Air ___Groundwater ___Surface Water __X__Soil ___Sediment

f. Name and distance to nearest surface water body(s), even if unaffected (include locations of creeks, streams, rivers and ditches that discharge to surface water on maps):
.48 miles northeast to Willamette River

Has the release reached the surface water identified above?: ___Yes __X__No
Could the release potentially reach the surface water identified above? ___Yes __X__No
Explain: release was contained within concrete vault which had to be removed for redevelopment of property

g. Depth to nearest aquifer/groundwater: 20+' (over 20' to groundwater)
Is nearest aquifer/groundwater potable (drinkable)? ___Yes __X__No
Has the release reached the nearest aquifer/groundwater? ___Yes __X__No
Explain: _____

h. Release or potential release to the air occurred? ___Yes X No
Explain:

i. Was there a threat to public safety? ___Yes X No
j. Is there potential for future releases? ___Yes X No
Explain:

k. Describe other effects/impacts from release (emergency evacuation, fish kills, etc.):

N/A

l. Describe how the release occurred. Include details such as the release source, cause, contributing weather factors, activities occurring prior to or during the release, dates and times of various activities, first responders involved in containment activities, etc.:
Geotechnical survey of lot did not detect presence of (abandoned) oil-water separator vault. Vault was discovered in excavation. Digging was stopped and UAI was brought in to supervise removal of vault and contaminated soil. All oil, concrete and contaminated soil was removed.

3 - SITE INFORMATION

a. Adjacent land uses include (check all that apply and depict on site maps):
___Residential X Commercial X Light Industrial ___Heavy Industrial
___Agricultural ___Other (describe):
b. What is the population density surrounding the site: high
c. Is the site and/or release area secured by fencing or other means? X Yes ___ No
d. Soil types (check all that apply): ___alluvial ___ bedrock ___ clay ___ sandy
___silt ___ silty loam ___ artificial surface (cement/asphalt/etc.) sands & gravels
e. Describe site topography: flat, urban

4 - CLEANUP INFORMATION

a. Was site cleanup performed? X Yes ___No
If No, explain:

b. Who performed the site cleanup?
Company Name: Universal Applicators, Inc.
Address: 10350 N Vancouver Way, Ste 329
Portland OR 97217
Cleanup Supervisor: Jesse Keyes
Phone Number(s): 503-804-4749

c. Has all contamination been removed from the site? X Yes ___ No
If No, explain: _____

d. Estimated volume of contaminated soil removed: 242.17 tons
e. Estimated volume of contaminated soil left in place: N/A
f. Was a hazardous waste determination made for cleanup materials? ___ Yes X No
g. Based on the determination, are the cleanup materials hazardous wastes?
___ Yes X No If Yes, list all waste codes: _____
h. Was contaminated soil or water disposed of at an off-site location? X Yes ___ No
If yes, attach copies of receipts/manifests/etc., and provide the following information:
Facility Name: Hillsboro Landfill
Address: 3205 SE Minter Bridge
Hillsboro, OR 97123
Facility Contact: _____
Phone Number(s): 503-640-9427
i. Is contaminated soil or water being stored and/or treated on-site? ___ Yes X No
If yes, please describe the material(s), storage and/or treatment area, and methods utilized (attach additional sheets if necessary):

j. Describe cleanup activities including what actions were taken, dates and times actions were initiated and completed, volumes of contaminated materials that were removed, etc. (attach additional sheets or contractor reports if necessary or more convenient):
* Report attached with all details

5 - SAMPLING INFORMATION
Attach copies of all sample data and indicate locations of sample collection on maps.

a. Were samples of contaminated soil collected? ___ Yes X No ___ N/A
b. Were samples of contaminated water collected? ___ Yes X No ___ N/A
c. Were samples collected to show that all contamination had been removed?
X Yes ___ No ___ N/A
d. Describe sampling activities, results and discuss rationale for sampling methods:
Initial samples were not analyzed - Contamination was known to be diesel #2. Clean final soil samples were collected after excavation.

6 - ADDITIONAL INFORMATION

a. Provide a description or plan outlining the list of actions to be taken to prevent future releases from occurring.

N/A

7 - SPILL REPORT CHECKLIST

To ensure that you have gathered all the information requested by the Department in this Spill/Release Report, please complete the following checklist:

✓ Map(s), pre and post cleanup photos of the site showing buildings, roads, surface water bodies, ditches, waterways, point of the release, extent of contamination, areas of excavation and sample collection locations attached.

N/A Material Safety Data Sheet (MSDS), or constituent profiles for released material(s) attached. **Note: an MSDS is not required for motor fuels.**

✓ Sampling data/analytical results attached.

✓ Receipts/manifests (if any) for disposal of cleanup materials attached.

✓ Contractor reports (if any) attached.

If you would like to submit your report by e-mail an electronic version can be downloaded on the internet at this link: http://www.oregon.gov/deq/filterdocs/SpillReleaseReportForm.pdf. This form can then be submitted by e-mail to DOSPILLS@deq.state.or.us. Please ensure that emails submitted to DEQ are less than 8 MB each. Multiple emails can be submitted to the DEQ if a report has to be divided into smaller sections for transmittal.

I certify that based on information and belief formed after reasonable inquiry, the statements and information contained in this submittal are true, accurate and complete.

Signature: _____ Date: 12/29/22

Report Narrative

Background

On November 13, 2022, contamination was discovered inside an exposed oil-water separator vault located at 1417 NW 20th Ave in Portland, OR. The release was reported to DEQ and assigned file No. 26-22-0860. The block is being redeveloped and in the process of trenching for the placement of future utility lines, an abandoned concrete vault measuring approximately 14' long (east-west) and 5' wide (north-south) was uncovered with free product and contaminated soil contained within the walls of the vault. One sample of the product was analyzed for HCID and the results showed the liquid to be mostly diesel. The property owner contracted with Universal Applicators, Inc. (UAI) for a cleanup and certification under the Soil Matrix rules.

Site Geology and Hydrogeology

The subject property is located in Multnomah County in the Township and Range of T1NR1E, Section 33. A monitoring well located approximately 0.31 miles southeast of the site revealed a static water level of 47' below ground surface (bgs) in a well completed to a depth of 55' bgs. The report for the well indicated sand as the dominant soil type. Groundwater flow direction is assumed to be toward the north and east, consistent with the site topography and based on information contained in USGS Professional Paper 1424-B, "Hydrogeologic Framework of the Willamette Lowland Aquifer System, Oregon and Washington", Woodward, Gannett, and Vaccaro, 1998.

Matrix Score Calculation

Prior to cleanup activities, a Matrix score for determining the required cleanup level goal was calculated. (see Matrix Score Sheet)

A monitoring well located approximately 0.31 miles southeast of the site revealed a static water level of 47' below ground surface (bgs) in a well completed to a depth of 55' bgs. A seven (7) was assigned.

Mean Annual Precipitation was determined by examining weather service maps. A four (4) was assigned to this category.

Observing the soil type being that of sands in the monitoring well report, a ten (10) was assigned to the Native Soil Type category.

The remaining scores were determined by observing the area population and considering that the potential receptors are on city water and considering a worst case scenario. A score of seven (7) for Sensitivity of Uppermost Aquifer and ten (10) for Potential Receptors were assigned to these categories.

The total Matrix Score of 38 gives the site a Level II cleanup goal of 500 ppm of TPH allowable in the soil.

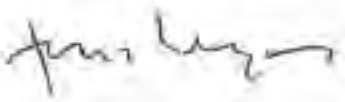
Cleanup & Final Sampling Activities

On November 22, 2022 approximately 50 gallons of oil and oily solids were pumped via vac-truck from the vault. Between November December 14, 2022, approximately 242.17 tons of contaminated soil, concrete, and re-bar were removed from the pit and transported off-site to Hillsboro Landfill for disposal. At no time was groundwater encountered on-site, either in borings or in excavation. Once the excavation was completed, soil samples were taken to determine the extent of any remaining TPH-impacted soil. The samples were placed into clean standard sample jars with Teflon-coated lids, labeled, put on ice and taken to Apex Laboratories in Tigard, OR under proper chain-of-custody for analysis using the NWTPH-Dx method. Samples were collected from the pit center and four (4) sidewalls of the excavation at a depth of 18' bgs. Sample G1-Pit Center-18' was collected from the pit center at a depth of 18' bgs and yielded a result of 31.7 parts-per-million (ppm) for total petroleum hydrocarbons (TPH) in the diesel range. Sample G2-North Wall-18' was collected from the north wall of the pit at a depth of 18' bgs and yielded a result of 39.4 ppm for TPH. Sample G3-East Wall-18' was collected from the east wall of the pit at a depth of 18' bgs and yielded a result of Non-Detect for TPH. Sample G4-South Wall-18' was collected from the south wall of the pit at a depth of 18' bgs and yielded a result of 32.3 ppm for TPH. Sample G5-West Wall-18' was collected from the west wall of the pit at a depth of 18' bgs and yielded a result of 29.0 ppm for TPH.

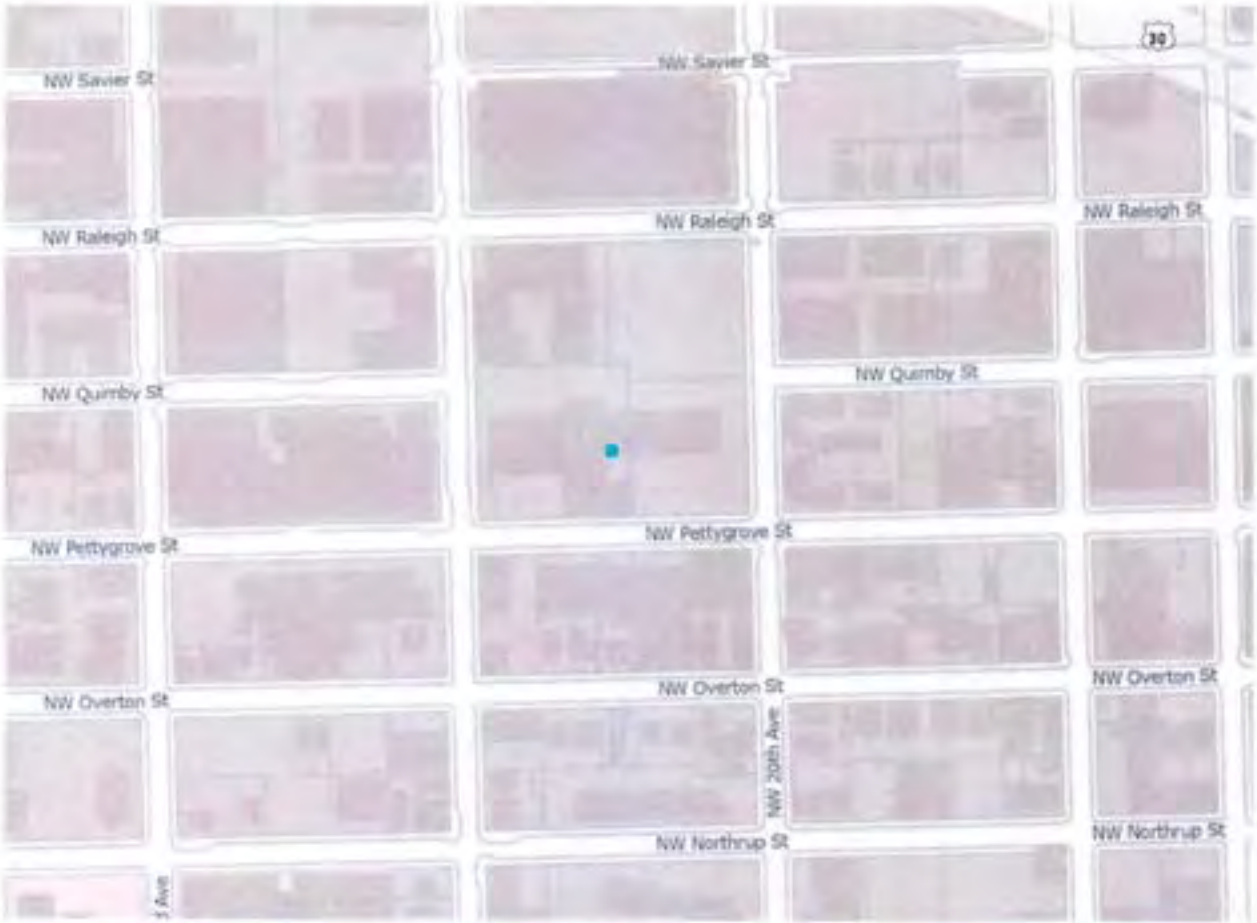
The site was backfilled and compacted to grade and trenching for the utility lines was allowed to resume.

UAI appreciates the opportunity to perform the supervision of this cleanup. Please contact us if there are any questions regarding this project.

Report Prepared by:

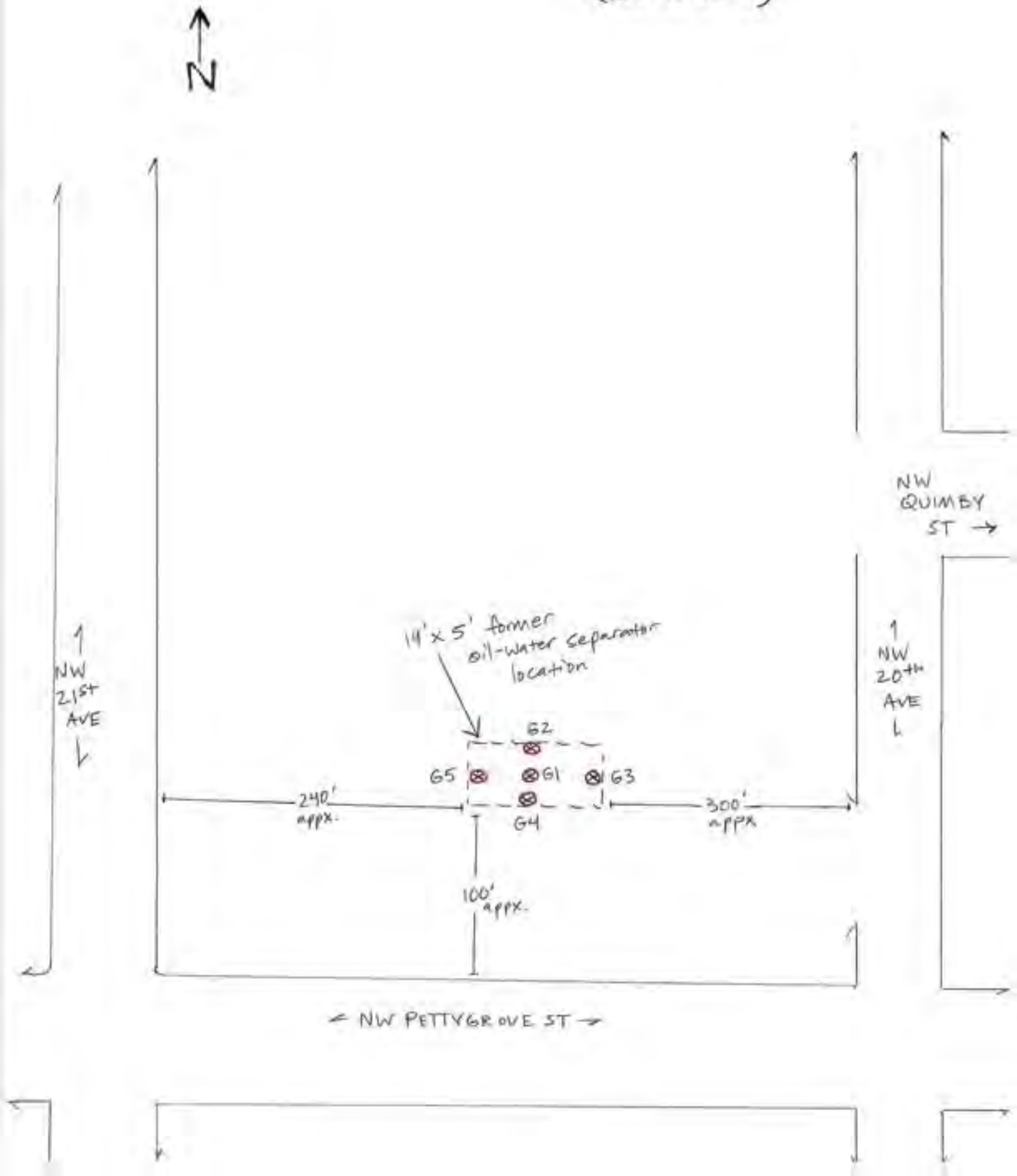


Jesse Keyes
Cleanup Supervisor

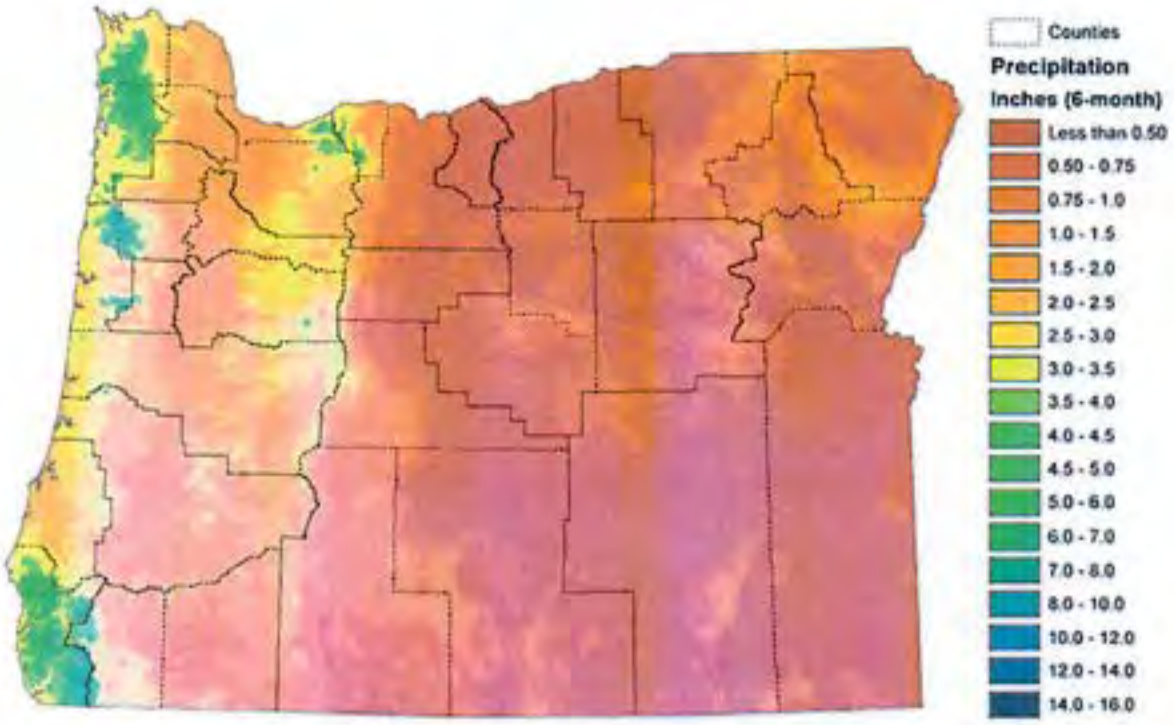

NW Savier St
NW Raleigh St
NW Quimby St
NW Pettygrove St
NW Overton St
NW Northrup St
NW 20th Ave
30

Forest Park
NORTHWEST PORTLAND
Willamette River
Peninsula Park
ARBOR LODGE
Alberta Park
Irving Park
OVERLOOK
NORTHE PORTLA
1417 NW 20th Ave.,
Portland, OR 97209
LLOYD DISTRICT
OLD TOWN
Laurelhurst Park
West Haven-Sylvan
Oregon Zoo
Portland
HAWTHORNE
HOSFORD-ABERNETHY
st Slope
30B
30
26
405
99E

SITE & SAMPLING MAP
(not to scale)



Oregon Rainfall Map



SOIL MATRIX SCORE SHEET

1.	Depth to Groundwater		7
	< 25 feet	(10)	
	25 - 50 feet	(7)	
	51 - 100 feet	(4)	
	> 100 feet	(1)	
2.	Mean Annual Precipitation		4
	> 45 inches	(10)	
	20 - 45 inches	(4)	
	< 20 inches	(1)	
3.	Native Soil Type		10
	Course sands, gravels	(10)	
	Silts, fine sands	(5)	
	Clays	(1)	
4.	Sensitivity of Uppermost Aquifer		7
	Sole Source	(10)	
	Current Potable	(7)	
	Future Potable	(4)	
	Non-potable	(1)	
5.	Potential Receptors		10
	Many, near	(10)	
	Medium	(5)	
	Few, far	(1)	
	TOTAL SCORE	=	**38**

MATRIX SCORE	Cleanup Level (ppm TPH)	
	Gasoline	Diesel
Level 1: > 40 pts.	40	100
Level 2: 25 - 40 pts.	80	**500**
Level 3: < 25 pts.	130	1000

Well Logs for Nearby Properties

(6 pages)

STATE OF OREGON MONITORING WELL REPORT

(as required by ORS 537.765 & OAR 690-240-090)

MULT 3260 NOV 16 1992

1 of 6

1N/1E/33ac

Start Card# 48369

(1) OWNER/PROJECT:

WELL NO.

Name: UNOCAL CORP.

Address: BOX 76

City: SEATTLE State: WA Zip: 98111

(2) TYPE OF WORK:

☒ New construction ☐ Repair ☐ Recondition

☐ Conversion ☐ Deepening ☐ Abandonment

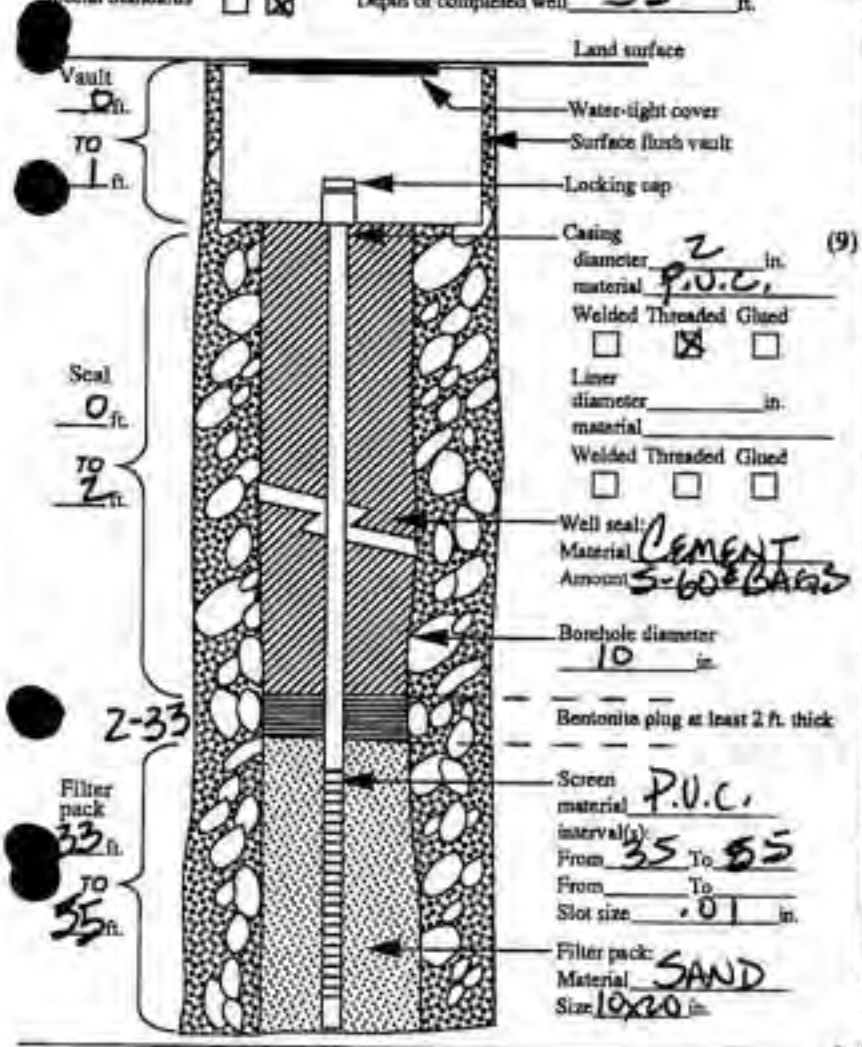
(3) DRILLING METHOD

☐ Rotary Air ☐ Rotary Mud ☐ Cable

☒ Hollow Stem Auger ☐ Other

(4) BORE HOLE CONSTRUCTION

Special Standards: Yes ☐ No ☒ Depth of completed well 55 ft.



(5) WELL TEST:

☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Permeability: Yield: GPM

Conductivity: PH:

Temperature of water: 55 (F) or C Depth artesian flow found: ft.

Was water analysis done? ☒ Yes ☐ No

By whom? BROWN + CALDWELL

Depth of strata to be analyzed. From ft. to ft.

Remarks:

Name of supervising Geologist/Engineer: DARCY BERRI

(6) LOCATION OF WELL By legal description

Well Location: County: MULT

Township: 1 (N) or S) Range: 1 (E) or W) Section: 33

1. SW 1/4 of NE 1/4 of above section.

2. Street address of well location: 930 N.W. 18th, PORTLAND OR

3. Tax lot number of well location: Lot 6-8 Block 159

4. ATTACH MAP WITH LOCATION IDENTIFIED.

(7) STATIC WATER LEVEL:

47 Ft. below land surface. Date: 10-29-92

Artesian Pressure lb/sq. in. Date:

(8) WATER BEARING ZONES:

Depth at which water was first found: 50

From	To	Est. Flow Rate	SWL

(9) WELL LOG:

Ground elevation:

Material	From	To	SWL
SAND	0	25	
GRAVEL, COBBLES	25	34.5	
SAND	34.5	42	
GRAVEL	42	45	
SAND	45	55	

Date started 10-29-92 Completed 10-29-92

(unbonded) Monitor Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to the best knowledge and belief.

Signed David Abernathy MWC Number 10025 Date 10-29-92

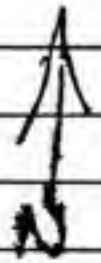
(bonded) Monitor Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

MWC Number: Signed: Date: 11/16/92

ORIGINAL & FIRST COPY-WATER RESOURCES DEPARTMENT SECOND COPY-CONSTRUCTOR THIRD COPY-CUSTOMER

* ~~XX~~ DAVE - ADD 2 - FLUSH MT.
WRENCHES TO YOUR DAILY.



LOVE JOY

#49369

Bill

JOB COST SUMMAR		
TOTAL SELLING PRICE		
TOTAL MATERIAL		
TOTAL LABOR		
INSURANCE		
SALES TAX		
MISC. COSTS		
TOTAL JOB COST		
GROSS PROFIT		
_____ LESS OVERHEAD COSTS % OF SELLING PRICE		
NET PROFIT		

JOB FOLDER Product 278 NEBS NEW ENGLAND BUSINESS SERVICE, INC., GROTON, MASS. 01471

JOB FOLDER

2 of 6

STATE OF OREGON

MONITORING WELL REPORT

(as required by ORS 537.765 & OAR 690-240-095)

111L-4327

1994 Start Card # G50558

1N/1E/33al

Instructions for completing this report are on the last page of this form.

3 of 6

(1) OWNER/PROJECT: WELL NO. B-26

Name Pacat Properties - Robert Steele

Address 100 California Street # 680

City San Francisco State CA. Zip 94111

(2) TYPE OF WORK:

☑ New construction ☐ Alteration (Repair/Recondition)

☐ Conversion ☐ Deepening ☐ Abandonment

(3) DRILLING METHOD

☑ Rotary Air ☐ Rotary Mud ☐ Cable

☐ Hollow Stem Auger ☑ Other temporary well points

(4) BORE HOLE CONSTRUCTION

Special Standards ☐ Yes ☑ No Depth of completed well 40' ft.

Land surface

Vault ___ ft. TO ___ ft.

Seal 0 ft. TO 40 ft.

Filter pack ___ ft. TO ___ ft.

Water-tight cover

Surface flush vault

Locking cap

Casing diameter N/A in. material ___ Welded ☐ Threaded ☐ Glued ☐

Liner diameter ___ in. material ___ Welded ☐ Threaded ☐ Glued ☐

Well seal: Material Hole plug Amount 12 Bags Grout weight ___

Borehole diameter 6 in.

Bentonite plug at least 3 ft. thick

Screen material N/A interval(s): From ___ To ___ From ___ To ___ Slot size ___ in.

Filter pack: Material N/A Size ___ in.

(5) WELL TEST:

☐ Pump ☑ Bailer ☐ Air ☐ Flowing Artesian

Permeability N/A Yield N/A GPM

Conductivity N/A PH N/A

Temperature of water 46' °F/C Depth artesian flow found ___ ft.

Was water analysis done? ☑ Yes ☐ No

By whom? Kyle Sattler

Depth of strata to be analyzed. From ___ ft. to ___ ft.

Remarks: ___

Name of supervising Geologist/Engineer Kyle Sattler

(6) LOCATION OF WELL By legal description

Well Location: County Multnomah

Township 1N (N or S) Range 1E (E or W) Section 33

1. NW 1/4 of NE 1/4 of above section,

2. Either Street address of well location 1232 NW Quimby, Portland OR.

or Tax lot number of well location ___

3. ATTACH MAP WITH LOCATION IDENTIFIED. Map shall include approximate scale and north arrow.

(7) STATIC WATER LEVEL:

38' Ft. below land surface. Date 8-23-94

Artesian Pressure ___ lb/sq. in. Date ___

(8) WATER BEARING ZONES:

Depth at which water was first found ___

From	To	Est. Flow Rate	SWL
38	40	NA	38

(9) WELL LOG: Ground elevation ___

Material	From	To	SWL
Reed Fill Cobbles	0	2	
Light Brown Silt	2	15	
Light Brown Silt	15	20	
Sand Bolded Fine Sand			
gravel & Sand with Cobbles	20	40	38

Date started 8-23-94 Completed 8-23-94

(unbonded) Monitor Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to the best knowledge and belief.

MWC Number 10259

Signed Robert A. Stubb Date 8-29-94

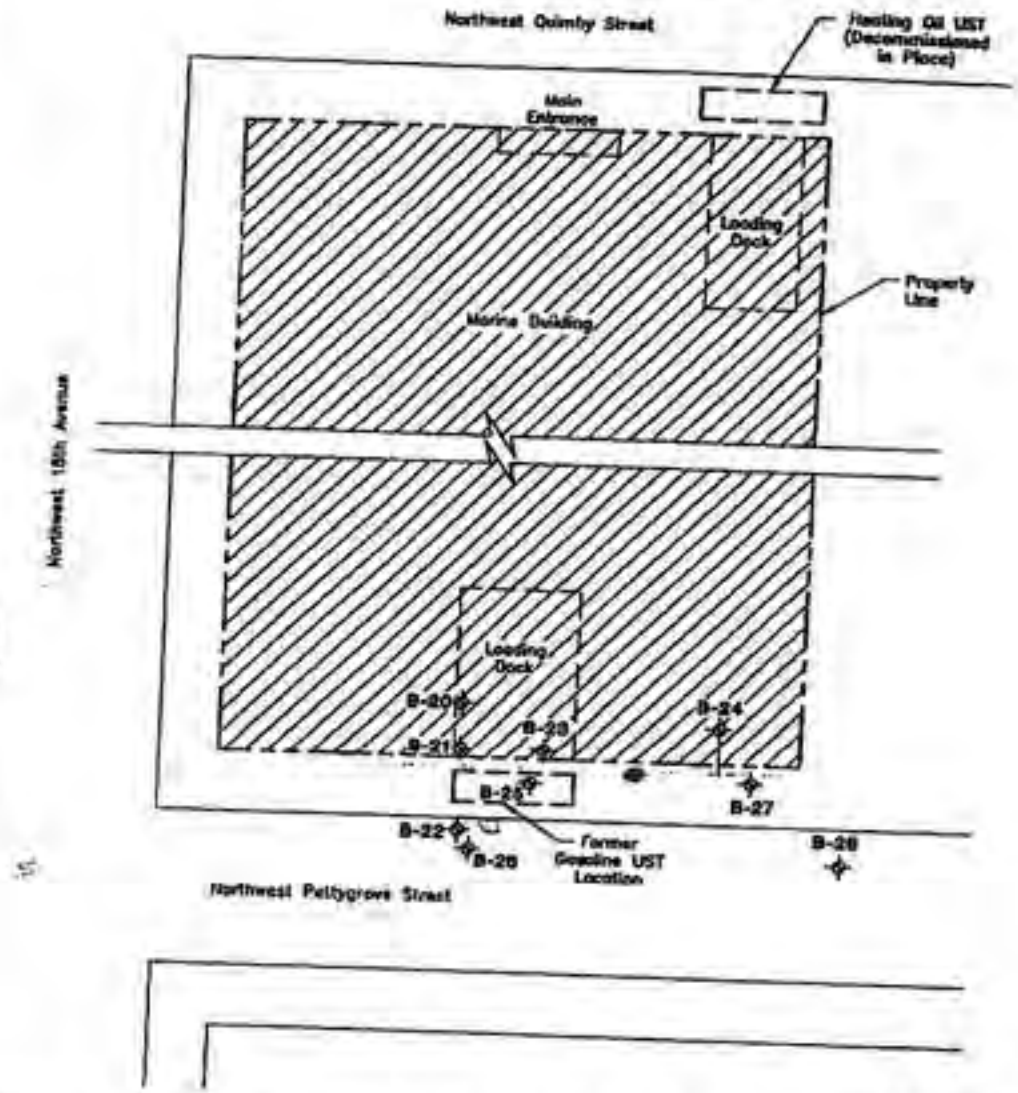
(bonded) Monitor Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

MWC Number 10054

Signed ___ Date 8-31-94

ORIGINAL & FIRST COPY-WATER RESOURCES DEPARTMENT SECOND COPY-CONSTRUCTOR THIRD COPY-CUSTOMER



EXPLANATION:

B-1 ✦ BORING BY GEOENGINEERS

Reference: Drawing entitled "Marine Building, 1732 N.W. Quimby Street, Portland, Oregon, Plate 2, Site Plan," dated March 1994, by RZA AGRA Inc.

Note: The locations of all features shown are approximate.

Geo Engineers

SITE PLAN-BORINGS BY GEOENGINEERS

FIGURE 2

STATE OF OREGON

MONITORING WELL REPORT

(as required by ORS 537.765 & OAR 690-240-095)

(MULT 4384)

OCT 17 1994

1N/1E/33da

Start Card # 65483

Instructions for completing this report are on the last page of this form.

WATER RESOURCES DEPT. SALEM, OREGON

5 of 6

(1) OWNER/PROJECT:

WELL NO. 65483

Name BURLINGTON NORTHERN

Address 9401 INDIAN CRK PKWY STE 1400

City KANSAS CITY State KS Zip 66210

(2) TYPE OF WORK:

☒ New construction ☐ Alteration (Repair/Recondition)

☐ Conversion ☐ Deepening ☐ Abandonment

(6) LOCATION OF WELL By legal description

Well Location: County MULTNOMAH

Township 1N (N or S) Range 1E (E or W) Section 33

1. NE 1/4 of SE 1/4 of above section.

2. Either Street address of well location NW FLANDERS ST & 12th AVE NW

or Tax lot number of well location N/A

3. ATTACH MAP WITH LOCATION IDENTIFIED. Map shall include approximate scale and north arrow.

(3) DRILLING METHOD

☒ Rotary Air ☐ Rotary Mud ☐ Cable

☐ Hollow Stem Auger ☐ Other

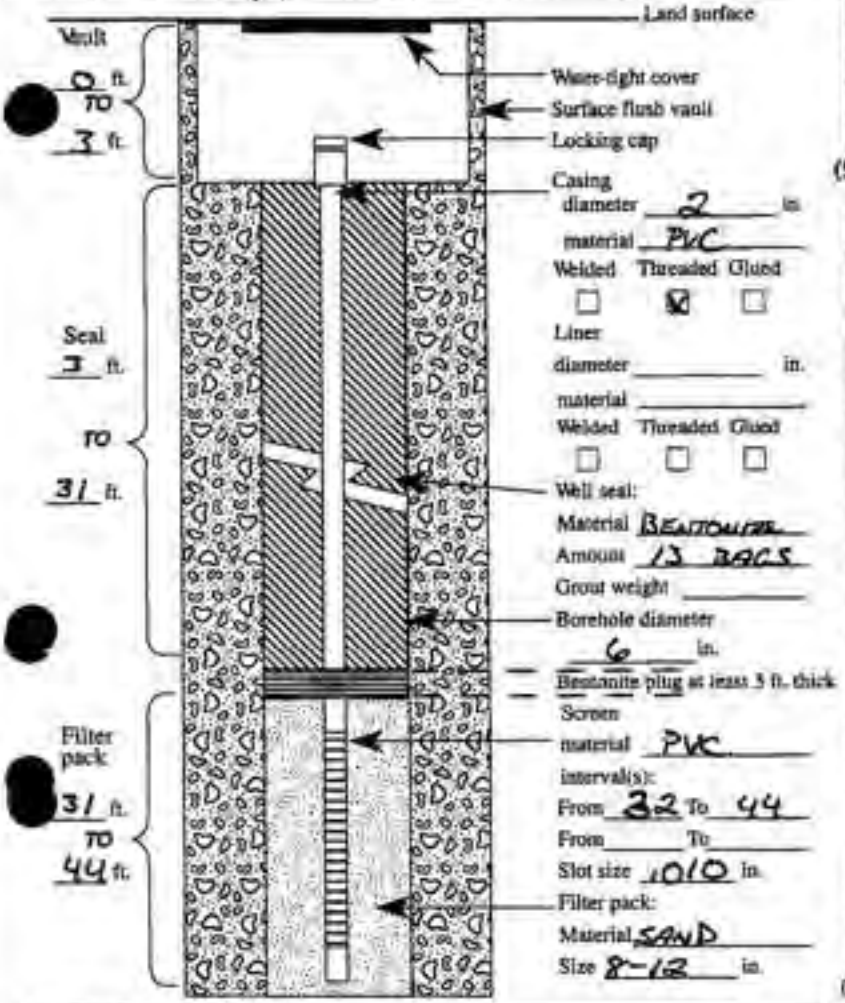
(7) STATIC WATER LEVEL:

32 ft. below land surface. Date 9-23-94

Artesian Pressure lb/sq. in. Date

(4) BORE HOLE CONSTRUCTION

Special Standards ☐ Yes ☒ No Depth of completed well 44 ft.



(8) WATER BEARING ZONES:

Depth at which water was first found 36

From	To	Est. Flow Rate	SWL
36	44		

(9) WELL LOG:

Ground elevation

Material	From	To	SWL
SILT & GRAVEL	0	36	
SAND & GRAVEL	36	44	

Date started 9-22-94 Completed 9-23-94

(5) WELL TEST:

☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Permeability Yield GPM

Conductivity PH

Temperature of water 56 °F/C Depth artesian flow found ft.

Was water analysis done? ☐ Yes ☒ No

By whom?

Depth of strata to be analyzed. From ft. to ft.

Remarks:

Name of supervising Geologist/Engineer JOHN BAKER

(unbonded) Monitor Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to the best knowledge and belief.

MWC Number 10071

Signed Date 9-23-94

(bonded) Monitor Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

MWC Number 10024

Signed Date 9-28-94

ORIGINAL & FIRST COPY-WATER RESOURCES DEPARTMENT SECOND COPY-CONSTRUCTOR THIRD COPY-CUSTOMER

RECEIVED
OCT 17 1994
WATER RESOURCES DEPT.
SALEM, OREGON

6 of 6

Site Map

EIC Environmental Investigation Corporation	Northwest Triangle Properties Burlington Northern Parking Lot NW 12th Avenue & NW Flanders Street Portland, Oregon
Project No: 3010.02	October 12, 1994

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

ANALYTICAL REPORT

Final soil samples (clean)

Wednesday, December 21, 2022
Jesse Keyes
Universal Applicators, Inc.
10350 N. Vancouver Way
Portland, OR 97217-7530

RE: A2L0771 - Block 290/Slabtown Square - [none]

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A2L0771, which was received by the laboratory on 12/20/2022 at 2:40:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: cobrien@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	4.8 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

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Cameron O'Brien, Project Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

ANALYTICAL REPORT

Universal Applicators, Inc.	Project: Block 290/Slabtown Square	
10350 N. Vancouver Way	Project Number: [none]	Report ID:
Portland, OR 97217-7530	Project Manager: Jesse Keyes	A2L0771 - 12 21 22 1110

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
G1-Pit Center-18'	A2L0771-01	Soil	12/13/22 00:00	12/20/22 14:40
G2-North Wall-18'	A2L0771-02	Soil	12/13/22 00:00	12/20/22 14:40
G3-East Wall-18'	A2L0771-03	Soil	12/13/22 00:00	12/20/22 14:40
G4-South Wall-18'	A2L0771-04	Soil	12/13/22 00:00	12/20/22 14:40
G5-West Wall-18'	A2L0771-05	Soil	12/13/22 00:00	12/20/22 14:40

Apex Laboratories

Cameron O'Brien, Project Manager

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503-718-2323
ORELAP ID: OR100062

ANALYTICAL REPORT

Universal Applicators, Inc	Project: Block 290/Slabtown Square	
10350 N. Vancouver Way	Project Number: [none]	Report ID:
Portland, OR 97217-7530	Project Manager: Jesse Keyes	A2L0771 - 12 21 22 1110

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
G1-Pit Center-18' (A2L0771-01)				**Matrix: Soil**		**Batch: 22L0731**		
Diesel	**31.7**	---	24.4	mg/kg dry	1	12/20/22 23:24	NWTPH-Dx	F-17
Oil	ND	---	48.8	mg/kg dry	1	12/20/22 23:24	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 76 %*	*Limits: 50-150 %*		*1*	*12/20/22 23:24*	*NWTPH-Dx*	
G2-North Wall-18' (A2L0771-02)				**Matrix: Soil**		**Batch: 22L0731**		
Diesel	**39.4**	---	24.7	mg/kg dry	1	12/20/22 23:45	NWTPH-Dx	F-17
Oil	ND	---	49.4	mg/kg dry	1	12/20/22 23:45	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 90 %*	*Limits: 50-150 %*		*1*	*12/20/22 23:45*	*NWTPH-Dx*	
G3-East Wall-18' (A2L0771-03)				**Matrix: Soil**		**Batch: 22L0731**		
Diesel	ND	---	24.8	mg/kg dry	1	12/21/22 00:26	NWTPH-Dx	
Oil	ND	---	49.6	mg/kg dry	1	12/21/22 00:26	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 90 %*	*Limits: 50-150 %*		*1*	*12/21/22 00:26*	*NWTPH-Dx*	
G4-South Wall-18' (A2L0771-04)				**Matrix: Soil**		**Batch: 22L0731**		
Diesel	**32.3**	---	24.7	mg/kg dry	1	12/21/22 00:46	NWTPH-Dx	F-17
Oil	ND	---	49.4	mg/kg dry	1	12/21/22 00:46	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 82 %*	*Limits: 50-150 %*		*1*	*12/21/22 00:46*	*NWTPH-Dx*	
G5-West Wall-18' (A2L0771-05)				**Matrix: Soil**		**Batch: 22L0731**		
Diesel	**29.0**	---	24.4	mg/kg dry	1	12/21/22 01:07	NWTPH-Dx	F-17
Oil	ND	---	48.7	mg/kg dry	1	12/21/22 01:07	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		*Recovery: 97 %*	*Limits: 50-150 %*		*1*	*12/21/22 01:07*	*NWTPH-Dx*	

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Apex Laboratories, LLC
6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: OR100062

ANALYTICAL REPORT

Universal Applicators, Inc.	Project: Block 290/Slabterra Square	
10350 N. Vancouver Way	Project Number: [none]	Report ID:
Portland, OR 97217-7530	Project Manager: Jesse Keyes	A2L0771 - 12 21 22 1110

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
G1-Pit Center-18' (A2L0771-01)				**Matrix: Soil**		**Batch: 22L0717**		
% Solids	80.2	—	1.00	%	1	12/21/22 05:35	EPA 8000D	
G2-North Wall-18' (A2L0771-02)				**Matrix: Soil**		**Batch: 22L0717**		
% Solids	79.5	—	1.00	%	1	12/21/22 05:35	EPA 8000D	
G3-East Wall-18' (A2L0771-03)				**Matrix: Soil**		**Batch: 22L0717**		
% Solids	79.7	—	1.00	%	1	12/21/22 05:35	EPA 8000D	
G4-South Wall-18' (A2L0771-04)				**Matrix: Soil**		**Batch: 22L0717**		
% Solids	80.3	—	1.00	%	1	12/21/22 05:35	EPA 8000D	
G5-West Wall-18' (A2L0771-05)				**Matrix: Soil**		**Batch: 22L0717**		
% Solids	80.3	—	1.00	%	1	12/21/22 05:35	EPA 8000D	

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Apex Laboratories, LLC
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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

ANALYTICAL REPORT

Universal Applicators, Inc.	Project: Block 290/Slabtown Square	
10350 N. Vancouver Way	Project Number: [none]	Report ID:
Portland, OR 97217-7530	Project Manager: Jesse Keyes	A2L0771 - 12 21 22 1110

QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22L0731 - EPA 3546 (Fuels)							Soil					
Blank (22L0731-BLK1)		Prepared: 12/20/22 15:50		Analyzed: 12/20/22 20:41								
NWTPH-Dx												
Diesel	ND	—	18.2	mg/kg wet	1	—	—	—	—	—	—	
Oil	ND	—	36.4	mg/kg wet	1	—	—	—	—	—	—	
Surr: o-Terphenyl (Surr)		*Recovery: 93 %*		*Limits: 50-150 %*			*Dilution: 1x*					
LCS (22L0731-BS1)		Prepared: 12/20/22 15:50		Analyzed: 12/20/22 21:01								
NWTPH-Dx												
Diesel	123	—	20.0	mg/kg wet	1	125	—	98	38 - 132%	—	—	
Surr: o-Terphenyl (Surr)		*Recovery: 100 %*		*Limits: 50-150 %*			*Dilution: 1x*					

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ANALYTICAL REPORT

Universal Applicators, Inc.	Project: Block 290/Slabtown Square	
10350 N. Vancouver Way	Project Number: [none]	Report ID:
Portland, OR 97217-7530	Project Manager: Jesse Keyes	A2L0771 - 12 21 22 1110

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22L0717 - Total Solids (Dry Weight)							**Soil**					

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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ANALYTICAL REPORT

Universal Applicators, Inc.	Project: Block 299/Slabtown Square	
10350 N. Vancouver Way	Project Number: [none]	Report ID:
Portland, OR 97217-7530	Project Manager: Jesse Keyes	A2L0771 - 12 21 22 1110

SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3546 (Fuels)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22L0731							
A2L0771-01	Soil	NWTPH-Dx	12/13/22 00:00	12/20/22 15:50	10.22g/5mL	10g/5mL	0.98
A2L0771-02	Soil	NWTPH-Dx	12/13/22 00:00	12/20/22 15:50	10.18g/5mL	10g/5mL	0.98
A2L0771-03	Soil	NWTPH-Dx	12/13/22 00:00	12/20/22 15:50	10.13g/5mL	10g/5mL	0.99
A2L0771-04	Soil	NWTPH-Dx	12/13/22 00:00	12/20/22 15:50	10.07g/5mL	10g/5mL	0.99
A2L0771-05	Soil	NWTPH-Dx	12/13/22 00:00	12/20/22 15:50	10.22g/5mL	10g/5mL	0.98

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22L0717							
A2L0771-01	Soil	EPA 8000D	12/13/22 00:00	12/20/22 16:54			NA
A2L0771-02	Soil	EPA 8000D	12/13/22 00:00	12/20/22 16:54			NA
A2L0771-03	Soil	EPA 8000D	12/13/22 00:00	12/20/22 16:54			NA
A2L0771-04	Soil	EPA 8000D	12/13/22 00:00	12/20/22 16:54			NA
A2L0771-05	Soil	EPA 8000D	12/13/22 00:00	12/20/22 16:54			NA

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ANALYTICAL REPORT

Universal Applicators, Inc.	Project: Block 290/Slabtown Square	
10350 N. Vancouver Way	Project Number: [none]	Report ID:
Portland, OR 97217-7530	Project Manager: Jesse Keyes	A2L0771 - 12 21 22 1110

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

F-17 No fuel pattern detected. The Diesel result represents carbon range C12 to C24, and the Oil result represents >C24 to C40.

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ANALYTICAL REPORT

Universal Applicators, Inc.	Project: Block 290/Slabtown Square	
10350 N. Vancouver Way	Project Number: [none]	Report ID:
Portland, OR 97217-7536	Project Manager: Jesse Keyes	AZL0771 - 12 21 22 1110

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported.

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or "" (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

"" Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) are not included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

"---" QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

"***" Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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ANALYTICAL REPORT

Universal Applicators, Inc.	Project: Block 290/Slabtown Square	
10350 N. Vancouver Way	Project Number: [none]	Report ID:
Portland, OR 97217-7530	Project Manager: Jesse Keyes	A2L0771 - 12 21 22 1110

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

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ORELAP ID: OR100062

ANALYTICAL REPORT

Universal Applicators, Inc.	Project: Block 290/Slabtown Square	
10350 N. Vancouver Way	Project Number: [none]	Report ID:
Portland, OR 97217-7530	Project Manager: Jesse Keyes	A2L0771 - 12 21 22 1110

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation)
EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

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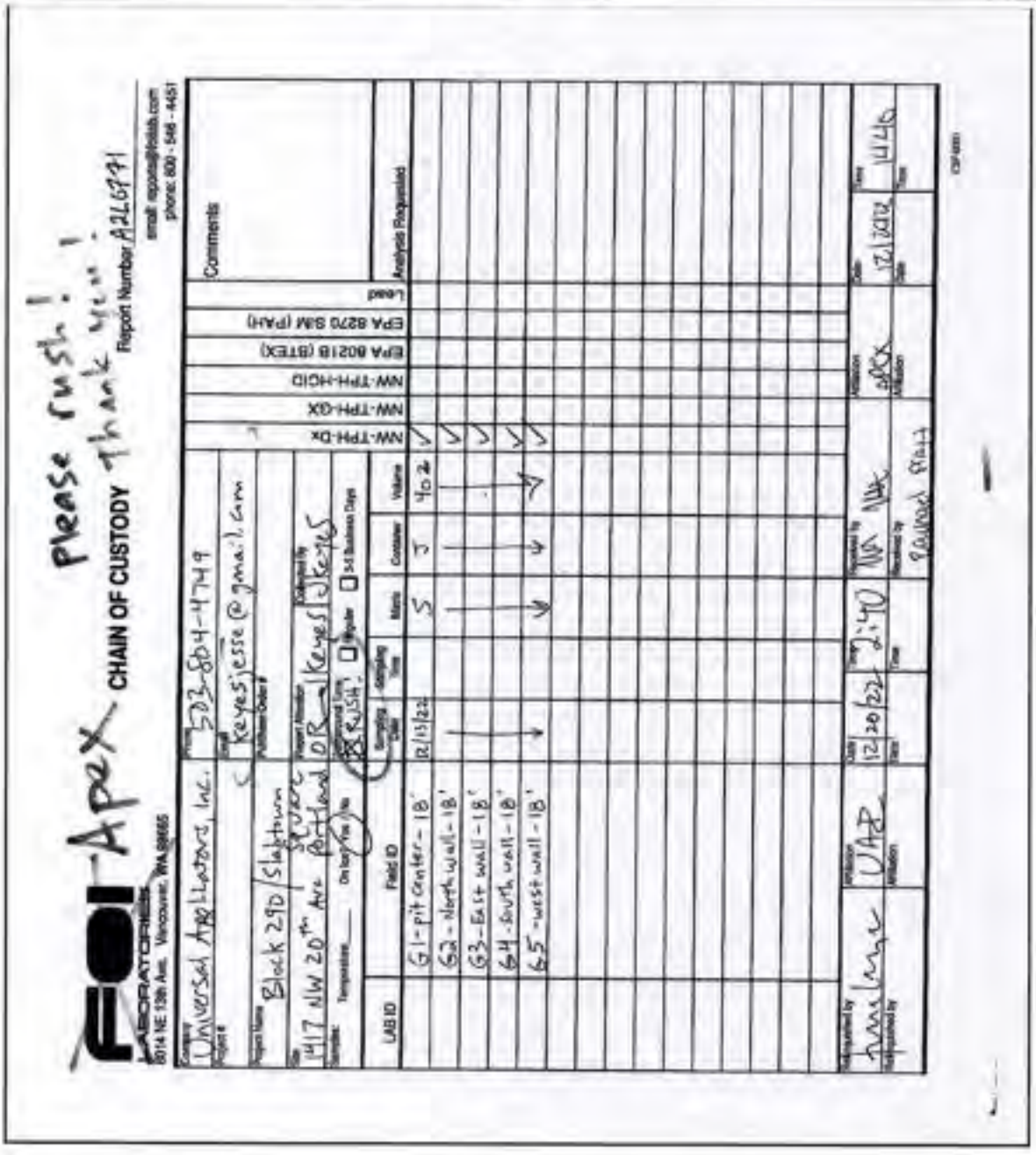
ORELAP ID: OR100062

ANALYTICAL REPORT

Universal Applicators, Inc.	Project: Block 290/Slabtown Square	
10350 N. Vancouver Way	Project Number: [none]	Report ID:
Portland, OR 97217-7530	Project Manager: Jesse Keyes	A2L0771 - 12 21 22 1110



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503-718-2323
ORELAP ID: OR100062

ANALYTICAL REPORT

Universal Applicators, Inc.	Project: **Block 290/Slabtown Square**	
10350 N. Vancouver Way	Project Number: **[none]**	**Report ID:**
Portland, OR 97217-7530	Project Manager: **Jesse Keyes**	**A2L0771 - 12 21 22 1110**

APEX LABS COOLER RECEIPT FORM

Client: Universal Applicators, Inc. Element WO#: A2L0771

Project/Project #: Block 290/Slabtown Square

Delivery Info:

Date/time received: 12/20/22 @ 1440 By: RMP

Delivered by: Apex___ Client X ESS___ FedEx___ UPS___ Swift___ Senvoy___ SDS___ Other___

Cooler Inspection Date/time inspected: 12/20/22 @ 1441 By: RMP

Chain of Custody included? Yes X No___ Custody seals? Yes___ No X

Signed/dated by client? Yes X No___

Signed/dated by Apex? Yes X No___

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	4.8						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	N						
Ice type: (Gel/Real/Other)	Gel						
Condition (In/Out):	In						

Cooler out of temp? (Y/N) Possible reason why:

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 12/20/22 @ 1510 By: ZAM

All samples intact? Yes X No___ Comments:

Bottle labels/COCs agree? Yes X No___ Comments: No time or date on containers. No time on COC.

COC/container discrepancies form initiated? Yes___ No X

Containers/volumes received appropriate for analysis? Yes X No___ Comments:

Do VOA vials have visible headspace? Yes___ No___ NA X

Comments

Water samples: pH checked: Yes___ No___ NA X pH appropriate? Yes___ No___ NA X

Comments:

Additional information:

Labeled by: ZAM Witness: RMP Cooler Inspected by: ZAM

Form V-003 R-01

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Cameron O'Brien, Project Manager

Cowlitz Clearsweep 11/22/22
50 gallons oily solids
vac-truck

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone 888-623-8316 | 4. Waste Tracking Number

5. Generator's Name and Mailing Address

Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name: CCS - R DIVISION OF PNE CORP | U.S. EPA ID Number: WAH000148643

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address: ORRCO, INC. 4160 N. SUTTLE ROAD PORTLAND, OR 97217 U.S.A. | U.S. EPA ID Number: ORD080076892

Facility's Phone: 503-367-5894

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1.			50		
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information

RECEIVING RECORDS | CCS JOB / PO # 55 | TRUCK #

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name | Signature | Month | Day | Year

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name | Signature | Month | Day | Year

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) | Month | Day | Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name | Signature | Month | Day | Year

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

Printed in USA by GC Labels 1-800-997-6966

TRANSPORTER #1

Reorder Part# MANIFEST-GENRW 913-997-6966

Cowlitz Clean Sweep
1121 Columbia Blvd

Longview, WA 98632

Time + Materials Billing

Bill to: Universal Applicators Inc
10350 N Vancouver Way
Suite 32
Portland, OR 97217

Job: UNI-Vac oil tank trench
1417 NW 20th Avenue
Portland, OR 97209

Contract#: Jessee
Our Job Number: 8922155

Bill#: 001
Page: 1
Invoice date: 12/5/22
Thru date: 12/5/22

G/L date	Tran	Description	P.O.#	Rate	Hours/Qty	Extension	Markup	Total
Phase: 00 Job Cost / Cost Type: 1 Labor								
	IC	Operator - ST		73.000	5.00	365.00		365.00
		Subtotal for Cost Type: 1 Labor			**5.00**	**365.00**	**0.00**	**365.00**
Phase: 00 Job Cost / Cost Type: 4 Equipment Owned								
	EQ	80 BBL Liquid Vac Truck		72.000	5.00	360.00		360.00
		Subtotal for Cost Type: 4 Equipment Owned			**5.00**	**360.00**	**0.00**	**360.00**
Phase: 00 Job Cost / Cost Type: 6 Other								
	IC	Fuel Surcharge		0.180	360.00	64.80		64.80
	IC	Protective Gear Level "D"		38.000	1.00	38.00		38.00
	IC	Disposal-Truck Washout		66.000	1.00	66.00		66.00
	IC	Disposal-XRF Analysis Testing		30.000	1.00	30.00		30.00
	IC	Disposal Oil/Solids, Sludge		2.220	50.00	111.00		111.00
		Subtotal for Cost Type: 6 Other			**413.00**	**309.80**	**0.00**	**309.80**
		Subtotal for Phase: 00 Job Cost			**423.00**	**1,034.80**	**0.00**	**1,034.80**
						Subtotal:		**1,034.80**

Notes for billing # 001

11/22/22
PO Jessee
Vacuum Oily Solids from Trench/Disposal
Portland, OR

Total:	**1,034.80**
Invoice Total:	**1,034.80**
Retention @	**0.00**
Current due:	**1,034.80**

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1666575

Customer Name LAUZON CONTRACTING LLC LAUZON
Ticket Date 11/16/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier FILLIUPS DUMP TRUCK
Vehicle# 19 Volume
Container
Driver Jeff
Check#
Billing # 0002733
Gen EPA ID

Grid

	Time	Scale	Operator	Inbound		
In	11/16/2022 12:20:04	Inbound 1	ecobb		Gross	51720 lb
Out	11/16/2022 12:41:12	Outbound	ecobb		Tare	24880 lb
					Net	26840 lb
					Tons	13.42

Comments

Consumer Comments? We want to know. Please call.

	Product	LO%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	13.42	Tons				MULT-IN
2	EVP-P-Standard Env	100		¢				MULT-IN

Total Tax
Total Ticket

Driver's Signature

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1666604

Customer Name LAUZON CONTRACTING LLC LAUZON
Ticket Date 11/16/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier FILLIUPS DUMP TRUCK
Vehicle# 19 Volume
Container
Driver Jeff
Check#
Billing # 0002733
Gen EPA ID

Grid

	Time	Scale	Operator	Inbound		
In	11/16/2022 14:36:10	Inbound 1	jdrury		Gross	57240 lb
Out	11/16/2022 14:36:10		jdrury		Tare	24880 lb
					Net	32360 lb
					Tons	16.18

Comments

Consumer Comments? We want to know. Please call.

	Product	LD#	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	16.18	Tons				MULT-IN
2	EVF-P-Standard Env	100		¶				

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Pht (503)-640-9427

Reprint
Ticket# 1666719

Customer Name	LAUZON CONTRACTING LLC LAUZON	Carrier	FILLIUPS DUMP TRUCK
Ticket Date	11/17/2022	Vehicle#	20 Volume
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	CAMERON
Hauling Ticket#		Check#	
Route		Billing #	0002733
State Waste Code		Gen EPA ID	
Manifest	na		
Destination		Grid	
PO			
Profile	137367OR (Non-Hazardous Contaminated Soil)		
Generator	168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE		

	Time	Scale	Operator	Inbound		
In	11/17/2022 13:06:55	Inbound 1	ECOBB		Gross	66620 lb
Out	11/17/2022 13:21:33	Outbound	jdrury		Tare	29060 lb
					Net	37560 lb
					Tons	18.78

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	18.78	Tons				MULT-IN
2	EVF-F-Standard Env	100		$				MULT-IN

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1667140

Customer Name LAUZON CONTRACTING LLC LAUZON
Ticket Date 11/22/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 137367OR (Non-Hazardous Contaminated Soil)
Generator 168-SLABTOWN SQUARE OWNER LLC SLABTOWN SQUARE OWNER LLC 2070 NW QUIMBY STREE

Carrier CASEDAY INC
Vehicle# 11-SOLO
Container
Driver CODY
Check#
Billing # 0002733
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	11/22/2022 15:04:54	Inbound 1	jbrown40		Gross	52580 lb
Out	11/22/2022 15:04:54		jbrown40		Tare	23240 lb
					Net	29340 lb
					Tons	14.67

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	14.67	Tons				MULT-IN
2	EVF-P-Standard Env	100		$				MULT-IN

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1667585

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 11/29/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 1345140R (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR F

Carrier universal applicator
Vehicle# MATT
Container
Driver
Chock#
Billing # 0001169
Gen EPA ID
Grid
Volume

	Time	Scale	Operator	Inbound		
In	11/29/2022 13:21:51	Inbound 1	JBROWN40		Gross	22040 lb
Out	11/29/2022 14:06:18	Outbound	jdrury		Tare	11880 lb
					Net	10160 lb
					Tons	5.08

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	5.08	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN
3	FUEL-Fuel Surcharg	100		%				MULT-IN

Total Tax
Total Ticket

Driver's Signature

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1667670

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 11/30/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 134514OR (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal applicator
Vehicle# alfredo Volume
Container
Driver
Check#
Billing # 0001169
Gen EPA ID
Grid

	Time	Scale	Operator	Inbound		
In	11/30/2022 10:18:51	Inbound 1	jbrown40		Gross	21600 lb
Out	11/30/2022 10:50:10	Outbound	jbrown40		Tare	12840 lb
					Net	8760 lb
					Tons	4.38

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	4.38	Tons				MULT-IN
2	EVP-P-Standard Env	100		%				MULT-IN
3	FUEL-Fuel Surcharg	100		%				MULT-IN

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1667700

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 11/30/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 1345140R (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal app
Vehicle# ALFREDO
Container
Driver
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	11/30/2022 12:34:08	Inbound 1	jbrown40		Gross	20460 lb
Out	11/30/2022 12:54:30	Outbound	JBROWN40		Tare	12500 lb
					Net	7960 lb
					Tons	3.98

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	3.98	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN
3	FUEL-Fuel Surcharg	100		%				MULT-IN

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1667719

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 11/30/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 134514OR (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal applicator
Vehicle# DAVE
Container
Driver
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	11/30/2022 13:50:37	Inbound 1	JDRURY		Gross	27020 lb
Out	11/30/2022 14:12:11	Outbound	JBROWN40		Tare	13960 lb
					Net	13060 lb
					Tons	6.53

Comments

Consumer Comments? We want to know. Please tell.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	6.53	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN
3	FUEL-Fuel Surcharg	100		%				MULT-IN

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1667801

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/01/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 134514OR (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal app
Vehicle# 5
Container
Driver ANDREW
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/01/2022 10:29:07	Inbound 1	jbrown40		Gross	22200 lb
Out	12/01/2022 10:41:50	Outbound	jdrury		Tare	14180 lb
					Net	8020 lb
					Tons	4.01

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	4.01	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				
3	FUEL-Fuel Surcharg	100		%				

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1667825

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/01/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 134514OR (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal applicator
Vehicle# 5
Container
Driver
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/01/2022 12:19:20	Inbound 1	ECOBB		Gross	23520 lb
Out	12/01/2022 12:36:35	Outbound	jbrown40		Tare	14040 lb
					Net	9480 lb
					Tons	4.74

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	4.74	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN
3	FUEL-Fuel Surcharg	100		%				MULT-IN

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1667851

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/01/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 1345140R (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal app
Vehicle# 5
Container
Driver dave
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/01/2022 14:44:47	Inbound 1	JBROWN40		Gross	20800 lb
Out	12/01/2022 15:03:39	Outbound	jbrown40		Tare	14300 lb
					Net	6500 lb
					Tons	3.25

Comments

Consumer Comments? We want to know. Please call.

	Product	LD#	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	3.25	Tons				MULT-IN
2	EVF-P-Standard Env	100		$				MULT-IN
3	FUEL-Fuel Surcharg	100		$				MULT-IN

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1667906

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/02/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 134514OR (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal app
Vehicle# ALFREDO
Container
Driver
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/02/2022 09:26:13	Inbound 2	jbrown40		Gross	22160 lb
Out	12/02/2022 09:41:47	Outbound	ECOBB		Tare	14040 lb
					Net	8120 lb
					Tons	4.06

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	4.06	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN
3	FUEL-Fuel Surcharg	100		%				MULT-IN

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1667908

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/02/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 1345140R (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal applicator
Vehicle# 5 Volume
Container
Driver
Check#
Billing # 0001169
Gen EPA ID
Grid

	Time	Scale	Operator	Inbound		
In	12/02/2022 09:33:04	Inbound 1	jdrury		Gross	22160 lb
Out	12/02/2022 09:47:15	Outbound	ECOBB		Tare	14400 lb
					Net	7760 lb
					Tons	3.88

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	3.88	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN
3	FUEL-Fuel Surcharg	100		%				MULT-IN

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1667932

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/02/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 134514OR (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal app
Vehicle# ALFREDO
Container
Driver
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/02/2022 11:28:19	Inbound 1	JBROWN40		Gross	20900 lb
Out	12/02/2022 11:46:55	Outbound	ECOBB		Tare	14240 lb
					Net	6660 lb
					Tons	3.33

Comments

Consumer Comments? We want to know. Please call.

	Product	LD#	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	3.33	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN
3	FUEL-Fuel Surcharg	100		%				MULT-IN

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1667942

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/02/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 134514OR (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR F

Carrier universal applicator
Vehicle# 5 Volume
Container
Driver
Check#
Billing # 0001169
Gen EPA ID
Grid

	Time	Scale	Operator	Inbound		
In	12/02/2022 12:05:51	Inbound 1	JDRURY		Gross	20100 lb
Out	12/02/2022 12:27:58	Outbound	ECOBB		Tare	14620 lb
					Net	5480 lb
					Tons	2.74

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	2.74	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN
3	FUEL-Fuel Surcharg	100		%				MULT-IN

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1667960

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/02/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 134514OR (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal app
Vehicle# alfredo
Container
Driver
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/02/2022 13:23:58	Inbound 2	jbrown40		Gross	22520 lb
Out	12/02/2022 13:43:31	Outbound	ECOBB		Tare	14300 lb
					Net	8220 lb
					Tons	4.11

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	4.11	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN
3	FUEL-Fuel Surcharg	100		%				MULT-IN

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1667970

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/02/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 134514OR (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal applicator
Vehicle# 5 Volume
Container
Driver
Check#
Billing # 0001169
Gen EPA ID
Grid

	Time	Scale	Operator	Inbound		
In	12/02/2022 14:14:05	Inbound 1	JDRURY		Gross	22120 lb
Out	12/02/2022 14:29:42	Outbound	JDRURY		Tare	14960 lb
					Net	7160 lb
					Tons	3.58

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	3.58	Tons				MULT-IN
2	EVF-P-Standard Env	100						MULT-IN
3	FUEL-Fuel Surcharg	100						MULT-IN

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# I668072

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/05/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 134514OR (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal applicator
Vehicle# 5 Volume
Container
Driver
Check#
Billing # 0001169
Gen EPA ID

Grid

	Time	Scale	Operator	Inbound		
In	12/05/2022 13:07:36	Inbound 1	jdrury		Gross	25040 lb
Out	12/05/2022 13:25:07	Outbound	JBROWN40		Tare	15420 lb
					Net	9620 lb
					Tons	4.81

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	4.81	Tons				MULP-IN
2	EVF-P-Standard Env	100		%				
3	FUEL-Fuel Surcharg	100		%				

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1668188

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/06/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 134514GR (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal applicator
Vehicle# 5
Container
Driver
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/06/2022 11:36:19	Inbound 1	JDRURY		Gross	33820 lb
Out	12/06/2022 12:21:50	Outbound	JDRURY		Tare	20980 lb
					Net	12840 lb
					Tons	6.42

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	6.42	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				
3	FUEL-Fuel Surcharg	100		%				

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1668539

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/09/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 134514OR (L502 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal app
Vehicle# 4
Container
Driver ALFREDO
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/09/2022 11:39:44	Inbound 1	jdrury		Gross	21880 lb
Out	12/09/2022 12:13:17	Outbound	JBROWN40		Tare	14360 lb
					Net	7520 lb
					Tons	3.76

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	3.76	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN
3	FUEL-Fuel Surcharg	100		%				MULT-IN

Total Tax
Total Ticket

Driver's Signature

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1668542

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/09/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 134514OR (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal app
Vehicle# 5
Container
Driver ANDREW
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/09/2022 11:54:04	Inbound 1	jdrury		Gross	26120 lb
Out	12/09/2022 12:18:24	Outbound	JBROWN40		Tare	15880 lb
					Net	10240 lb
					Tons	5.12

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	5.12	Tons				MULT-IN
2	EVP-P-Standard Env	100		%				MULT-IN
3	FUEL-Fuel Surcharg	100		%				MULT-IN

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1668564

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/09/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 134514OR (LP02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal app
Vehicle# 5
Container
Driver ANDREW
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/09/2022 14:44:43	Inbound 1	JBROWN40		Gross	24460 lb
Out	12/09/2022 14:57:42	Outbound	jdrury		Tare	15960 lb
					Net	8500 lb
					Tons	4.25

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	4.25	Tons				MULT-IN
2	EVP-P-Standard Env	100		%				
3	FUEL-Fuel Surcharg	100		%				

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1668573

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/10/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 1345140R (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal app
Vehicle# 5
Container
Driver ANDREW
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/10/2022 09:43:17	Inbound 1	jbrown40		Gross	26640 lb
Out	12/10/2022 10:07:30	Outbound	jbrown40		Tare	14800 lb
					Net	11840 lb
					Tons	5.92

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	5.92	Tons				MULT-IN
2	EVF-P-Standard Env	100		$				
3	FUEL-Fuel Surcharg	100		$				

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1668576

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/10/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 134514OR (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal app
Vehicle# 5
Container
Driver ANDREW
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/10/2022 11:40:59	Inbound 1	JDRURY		Gross	30500 lb
Out	12/10/2022 11:58:14	Outbound	jbrown40		Tare	14900 lb*
			* Manual Weight		Net	15600 lb
					Tons	7.80

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	7.80	Tons				MULT-IN
2	EVF-P-Standard Env	100		$				MULT-IN
3	FUEL-Fuel Surcharg	100		$				MULT-IN

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1668638

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/12/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 134514OR (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal app
Vehicle# 5
Container
Driver ANDREW
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/12/2022 09:56:24	Inbound 1	JDRURY		Gross	26320 lb
Out	12/12/2022 10:16:35	Outbound	ecobb		Tare	14920 lb
					Net	11400 lb
					Tons	5.70

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	5.70	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN
3	FUEL-Fuel Surcharg	100		%				MULT-IN

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1668674

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/12/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 134514OR (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal app
Vehicle# 5
Container
Driver DAVE
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/12/2022 11:59:36	Inbound 1	ECOBB		Gross	30280 lb
Out	12/12/2022 12:15:06	Outbound	ECOBB		Tare	15160 lb
					Net	15120 lb
					Tons	7.56

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	7.56	Tons				MULT-IN
2	EVF-P-Standard Env	100		$				
3	FUEL-Fuel Surcharg	100		$				

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1668695

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/12/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 134514OR (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR #

Carrier universal app
Vehicle# 5
Container
Driver ANDREW
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/12/2022 13:47:40	Inbound 1	JDRURY		Gross	30040 lb
Out	12/12/2022 14:04:17	Outbound	jdrury		Tare	15480 lb
					Net	14560 lb
					Tons	7.28

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	7.28	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				
3	FUEL-Fuel Surcharg	100		%				

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1668769

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/13/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 134514OR (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal app
Vehicle# 5
Container
Driver ANDREW
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/13/2022 09:27:16	Inbound 1	ECOBB		Gross	30560 lb
Out	12/13/2022 09:49:29	Outbound	jbrown40		Tare	15760 lb
					Net	14800 lb
					Tons	7.40

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	7.40	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				
3	FUEL-Fuel Surcharg	100		%				

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1668777

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/13/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO 103235
Profile 134514OR (LFOZ Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR F

Carrier universal app
Vehicle# 4
Container
Driver
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/13/2022 09:42:19	Inbound 2	jdrury		Gross	25380 lb
Out	12/13/2022 09:55:49	Outbound	jbrown40		Tare	14420 lb
					Net	10960 lb
					Tons	5.48

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	5.48	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN
3	FUEL-Fuel Surcharg	100		%				MULT-IN

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1668805

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/13/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 1345140R (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal app
Vehicle# 5
Container
Driver ANDREW
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/13/2022 11:29:34	Inbound 1	ECOBB		Gross	29080 lb
Out	12/13/2022 11:46:15	Outbound	ecobb		Tare	15860 lb
					Net	13220 lb
					Tons	6.61

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	6.61	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				
3	FUEL-Fuel Surcharg	100		%				

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Phr (503)-640-9427

Reprint
Ticket# 1668809

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/13/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 134514OR (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal app
Vehicle# 4
Container
Driver
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/13/2022 11:45:45	Inbound 1	ECOBB		Gross	27320 lb
Out	12/13/2022 12:00:35	Outbound	ecobb		Tare	14560 lb
					Net	12760 lb
					Tons	6.38

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	6.38	Tons				MULT-IN
2	ENVF-P-Standard Env	100		$				
3	FUEL-Fuel Surcharg	100		$				

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1668831

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/13/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 1345140R (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal app
Vehicle# 5
Container
Driver ANDREW
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/13/2022 13:17:19	Inbound 1	ECOBB		Gross	26580 lb
Out	12/13/2022 13:32:00	Outbound	JBROWN40		Tare	15860 lb
					Net	10720 lb
					Tons	5.36

Comments

Consumer Comments? We want to know. Please call.

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 Cont Soil Pet-RGC-	100	5.36	Tons				MULT-IN
2 EVF-P-Standard Env	100		%				
3 FUEL-Fuel Surcharg	100		%				

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1669840

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/13/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 1345140R (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal app
Vehicle# 4
Container
Driver
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/13/2022 13:58:24	Inbound 2	jdrury		Gross	27800 lb
Out	12/13/2022 14:18:00	Outbound	JBROWN40		Tare	14760 lb
					Net	13040 lb
					Tons	6.52

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	6.52	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				
3	FUEL-Fuel Surcharg	100		%				

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1668853

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/13/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 1345140R (LP02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal app
Vehicle# 5
Container
Driver ANDREW
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound
In	12/13/2022 15:19:33	Inbound 1	JDRURY	
Out	12/13/2022 15:36:40	Outbound	JBROWN40	

Gross	29780 lb
Tare	15920 lb
Net	13860 lb
Tons	6.93

Comments

Consumer Comments? We want to know. Please call.

	Product	LD#	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	6.93	Tons				MULT-IN
2	EVF-P-Standard Env	100		$				
3	FUEL-Fuel Surcharg	100		$				

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1668892

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/14/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO
Profile 134514OR (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal app
Vehicle# 4
Container
Driver alfrado
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/14/2022 09:01:55	Inbound 1	ecobb		Gross	28360 lb
Out	12/14/2022 09:15:08	Outbound	jdrury		Tare	14820 lb
					Net	13540 lb
					Tons	6.77

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	6.77	Tons				MULT-IN
2	EVE-P-Standard Env	100		%				
3	FUEL-Fuel Surcharg	100		%				

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1668907

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/14/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 1345140R (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal app
Vehicle# 5
Container
Driver dave
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/14/2022 09:54:31	Inbound 1	ecobb		Gross	30320 lb
Out	12/14/2022 10:11:48	Outbound	ECOBB		Tare	15900 lb
					Net	14420 lb
					Tons	7.21

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	7.21	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				MULT-IN
3	FUEL-Fuel Surcharg	100		%				MULT-IN

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1668924

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/14/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 1345140R (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal app
Vehicle# 4
Container
Driver
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/14/2022 11:25:14	Inbound 1	ECOBB		Gross	28580 lb
Out	12/14/2022 11:41:52	Outbound	JBROWN40		Tare	14840 lb
					Net	13740 lb
					Tons	6.87

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	6.87	Tons				MULT-IN
2	EVF-P-Standard Env	100		$				
3	FUEL-Fuel Surcharg	100		$				

Total Tax
Total Ticket

Driver's Signature

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Reprint
Ticket# 1668964

Customer Name UNIVERSALAPP UNIVERSAL APPLIC
Ticket Date 12/14/2022
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest NA
Destination
PO
Profile 134514OR (LF02 Diesel Fuel/Fuel Oil Contaminated Soil)
Generator 168-UNIVERSAL APPLICATORS INC UNIVERSAL APPLICATORS, INC VARIOUS GENERATOR P

Carrier universal app
Vehicle# 5
Container
Driver ANDREW
Check#
Billing # 0001169
Gen EPA ID
Grid

Volume

	Time	Scale	Operator	Inbound		
In	12/14/2022 15:18:36	Inbound 1	JDRURY		Gross	16760 lb
Out	12/14/2022 15:37:38	Outbound	jbrown40		Tare	14160 lb
					Net	2600 lb
					Tons	1.30

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	1.30	Tons				MULT-IN
2	EVF-P-Standard Env	100		%				
3	FUEL-Fuel Surcharg	100		%				

Total Tax
Total Ticket

Driver's Signature

SOIL MATRIX CHECKLIST

X 1. The release of petroleum has been reported to the DEQ (0220).

X 2. The matrix score sheet has been completed for this site, unless the site is cleaned up to the most stringent cleanup level (0320).

X 3. The required hydrocarbon identification test (NWTPH-HCID) has been performed (0335(3)), and, if detectable levels were found, the appropriate analytical method or methods have been used to measure the levels of contamination (0218).

X 4. A sketch has been made of this site (0345(1)) which clearly shows:

X a. The location of all buildings and other key features, both man-made and natural;

X b. The names of adjacent Avenues and properties;

X c. The location of all excavations including those that were for the removal of tanks and associated piping as well as those that were strictly for the removal of contaminated soils;

X d. The location of all product storage tanks, lines and dispensers, including those that were decommissioned as well as those that remain on the site; and

X e. All **soil** and water sample locations.

N/A 5. If any contaminated soil exceeding matrix limits has been left on site, the reason for leaving this soil has been explained and the requirements of 0340(1)(f) and 0355(4) have been met.

N/A 6. If water was present in the tank pit, the Department was notified, the water was pumped from the pit, and the requirements of 0340(4) have been met.

X 7. All **soil** and/or water samples have been collected, coded, stored and shipped as specified in the rules, and proper chain-of-custody forms have been filled out (0345).

N/A 8. If a release from a waste oil tank was discovered, at least one sample has been analyzed by the methods specified in 0218(1)(b)(D).

N/A 9. If a tank was decommissioned in place, the Department gave prior approval for a site-specific sampling plan (0340(5)).

X 10. A report has been prepared which includes a detailed description of everything that was observed and performed at the site, contains all of the information required by the rules (0360), and presents findings and recommendations which are consistent with Department regulations.

APPENDIX H

ECOLOGICAL RISK ASSESSMENT

Basic Site Information Checklist

(Appendix A1, "Conducting Ecological Risk Assessments", Oregon DEQ, September 2020)

General Site Information
ECSI File No. or LUST File No.: ECSI No. 6507
Site Name: Slabtown Square/Block 290 West Property
Site Location (address, city, and/or county): 2070 NW Quimby Street, Portland, Oregon 97209
Latitude/Longitude: 45.5332 N, -122.6941 W
Current Site Use: Multi-family residential units
Historical Site Use: Residential, commercial (1901-1944). Truck Maintenance facility (1967-1999).
Zoning: CM3–Commercial Mixed Use by City of Portland
Site Features: One six-story, 83,354 sq. ft mixed use building with underground parking and multi-family residential units on upper floors. Served by City of Portland water and sanitary sewer.
Chemicals of Interest: Diesel and heavy oil

Site Conditions – Provide Approximate Areas (acreage or square-feet)		
Site	**Within ¼ mile**	
No	No	**Terrestrial Open Habitat/Grasslands:** Dominated by short to medium-tall grasses, low to medium shrubs, or bare soil.
No	No	**Forest or Woodland Habitats:** Woodlands (maple, alder, aspen), conifer forest (Douglas fir, hemlock, cedar, spruce), mixed-woodland, juniper, pine (ponderosa, lodgepole)
No	No	**Wetland:** May be either tidal or non-tidal wetlands with emergent

		herbaceous plants.
No	No	**Riparian Zone:** Patches or linear strips of land adjacent to waterbodies (rivers, streams, waterbodies), or on nearby floodplains and terraces. May be impacted by periodic riverine flooding or perennial flowing water. May or may not also contain wetlands.
No	No	**Aquatic Open Water:** Ponds, lakes, reservoirs, rivers, creeks, streams, bays, estuaries, and nearshore marine and intertidal.
Yes	Yes	**Impermeable Surface:** Pavement, structures. The Site and surrounding areas are fully paved with asphalt and concrete.

Documentation (attached)

Aerial Site Vicinity Map(s). (**Figure 3**), Topographic Map. (**Figure 2**)

Site Plan identifying Site features. (**Figure 3**)

Figure illustrating former excavations, former UST locations, sample locations, and surface features. (**Figures 4-1 through 4-3**)

Aerial Map showing habitat types described above both within and adjacent to the Site by at least ¼ mile from Site boundary. (**Figure 7**)

Summary of known or potential contaminated soil, groundwater, migration pathways:

Known diesel and heavy oil remains in place on and off site deep beneath the subgrade sidewall of the building or pavement, capped by a vapor barrier below the concrete foundation.

- "Northeast corner" – heavy oil (ORO) encountered in sample S3 near pile N24 in the north sidewall of the building footprint at a depth of 3 feet bgs. Soil sample was non-detect for TPH for diesel and heavy oil.

- "Off Property within NW Pettygrove" - An approximate 50 square foot pocket of diesel and heavy oil confirmed by soil samples 150 through 156 collected from the sidewall of the utility excavation at depths ranging from 1 to 6 feet bgs.

Groundwater is found between 50 and 55 feet below ground surface. Groundwater historically impacted by the release. However, an NFA determination was prepared by ODEQ in October 2012 citing the low levels of PCE and TCE detected in groundwater from monitoring well MW-4. Source of chlorinated VOCs not known at the time and not detected at concentrations exceeding RBCs for the Groundwater Vapor Intrusion into Building exposure pathway under the most stringent of exposure scenarios, and because groundwater has not current or likely future beneficial use as drinking water, DEQ did not require further assessment and recommended monitoring wells be properly decommissioned.

No significant on-site exposure pathways have otherwise been identified for ecological receptors.

Checklist Completed By:
Name: Tima Carlson
Title: Project Geologist, True North Geotechnical
Expertise: RG, LG, CWRE
Date: February 18, 2025