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March 22, 2021

Jon K. Wactor, Esq.,  
Wactor & Wick, LLP  
3640 Grand Avenue, Suite 200  
Oakland, California 94612

Re: Cap Integrity and Groundwater Monitoring Report  
Former Walker Chevrolet Property, VCP No. SW1040  
633 Division Avenue  
Tacoma, Washington

TRC Project Number: 430528

Dear Mr. Wactor:

TRC is pleased to submit this *Cap Integrity and Groundwater Monitoring Report* documenting the completed pavement cap inspection and groundwater monitoring at the Former Walker Chevrolet property located at 633 Division Avenue in Tacoma, Washington (the subject property) for Wactor & Wick LLP on behalf its client Retail Opportunity Investment Corp. Four Corner Square, LLC (ROIC). The subject property contains a Washington State Department of Ecology (Ecology) Site, as defined under Ecology's Model Toxics Control Act (MTCA). This Site is enrolled in Ecology's Voluntary Cleanup Program (VCP) under VCP Project Number SW1040. The Cleanup Site ID for the Site is 5318 and the Facility Site ID is 347832.

The locations of the subject property and Site are indicated on Figure 1. TRC understands that the subject property was formerly an automotive retail business with auto service bays, fuel, paint booths, and waste oil underground storage tanks (USTs). The subject property and Site have recently undergone extensive redevelopment and are currently occupied by various retail shops and restaurants including Starbucks, Jimmy Johns, Rhein Haus Tacoma, and Stadium Thriftway, a retail grocery store.

## **BACKGROUND**

The Site has a conditional No Further Action (NFA) determination from Ecology that is contingent on provisions of an Environmental Covenant (EC) filed with Pierce County on December 12, 2017. The EC lists ongoing prohibitions and requirements that must be met by the current property owner, ROIC, to maintain the conditional NFA determination for the Site. As mandated by MTCA, long-term compliance monitoring is required if, as described below, containment is the selected cleanup action for the Site or portion of a Site. This Cap Integrity and Groundwater Monitoring Report has been prepared per the requirements of Washington Administrative Code (WAC) 173-340-820 and contains applicable elements of WAC 173-340-410(3), as described in Exhibit D of the EC.

The conditional NFA for the Site is based on containment of known areas of contaminated soil under a cap comprising portions of the existing building on the Site, which have been used by automotive businesses, and the asphalt- and concrete-paved surfaces on adjoining rights-of-way between the building and street curb lines near the southern portion of the building.

The 25,820-square-foot building occupies the majority of the 29,730-square-foot parcel. The building provides an impermeable cap that prevents potential contact with contaminated soil and minimizes potential stormwater infiltration and leaching of contaminants to groundwater. The pavement cap, which is exterior to the building cap, minimizes leaching of contaminants to groundwater. The extent and configuration of the building and pavement caps are illustrated on Figure 2.

This Cap Integrity and Groundwater Monitoring Report has been prepared to document the completed inspection of the caps, inspection of the monitoring well, and groundwater monitoring, that are required under the EC. The requirements are primarily described in Exhibit D of the EC, Cap Integrity and Groundwater Monitoring Plan, which is included in Attachment A.

## **CAP INSPECTION**

Per Ecology's requirements stated within the EC under Section 2.a. the Grantor shall maintain the integrity of the building and pavement caps. The primary purpose of the building cap is to prevent potential contact with contaminated soils and to minimize leaching of contaminants to groundwater. The primary purpose of the pavement cap is to minimize leaching of leaching of contaminants to groundwater. Per Section 2.a. of the EC, the following restrictions shall apply within the building and pavement cap areas:

The following EC restrictions apply to the building cap:

For the building cap, the Grantor shall not alter or remove the existing structures on the property in any manner that would expose contaminated soil, result in a release to the environment of contaminants, or create a new exposure pathway, without prior written approval of Ecology. Should the Grantor propose to remove all or a portion of the existing structure designated as a cap so that access to the underlying contamination is feasible, Ecology may require treatment or removal of the underlying contaminated soil.

The following EC restrictions apply to the pavement cap:

If the Grantor becomes aware of any activities proposed on the adjacent portions of the City of Tacoma right-of-way that will compromise the integrity of the cap including: drilling; digging; piercing the cap with sampling device, post, stake or similar device; grading; excavation; installation of underground utilities; or removal of the cap shall be reported to Ecology in writing within forty-eight (48) hours of notification. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to the cap.

TRC visited the Site on February 23, 2021 and performed a thorough on-foot inspection of the subject property to delineate the condition of the building and pavement caps and identify monuments or other permanent corner markers. Additionally, TRC photo-documented areas within the right-of-way along the west side of the pavement cap, adjacent to North First Street, and the east side of the pavement cap along Division Avenue. The photos show small landscaped areas installed as a requirement of property development by the City prior to the development of the EC that are present within the EC-defined pavement cap footprint. Figure 2 illustrates the outline of the pavement cap boundary required by the EC. Photos of the condition of the pavement cap are presented in Attachment B.

Notably, the shallowest remaining impacted soil in the area within the pavement cap footprint is documented in the *Remedial Investigation and Feasibility Study Former Walker Chevrolet Site* (Aspect Consulting, 2016) to be 15 feet or more below ground surface (bgs). That minimum depth to residual impacts in soil is below the point of compliance for direct human contact per WAC 173-340-740(5)(d) of MTCA. In addition, it appears that the remaining impacted soil remains under a paved patio area or beneath sidewalk. Due to the 15-ft. bgs or greater depth of the residual impacted soil and overlying pavement, the landscaped areas do not pose a risk of direct contact with impacted soil to workers maintaining the landscaped areas or to the public.

In addition to eliminating the direct contact exposure pathway, any residual soil contamination below the landscaped areas has not leached to groundwater. This finding is based on the empirical evidence of current groundwater sampling data, as described further in the Groundwater Monitoring section below. Therefore, the overlapping landscaped areas with the pavement cap footprint do not expose contaminated soil, result in a release to the environment of contaminants, or create a new exposure pathway.

## MONUMENT INSPECTION

In December 2019, Pace Engineers (Pace), under EPI's<sup>1</sup> direction, permanently marked the exterior corners of the pavement cap to ensure that the extent of the pavement cap remained clearly delineated with monuments or other permanent corner markers as required per Section 1.f. of the EC. The interior corners of the pavement cap are defined by the exterior corners and perimeter of the building cap, which is intact and is not required to be delineated by markers. Pace surveyed and set four markers that identify the exterior corner boundaries of the property cap annotated "A" through "D" as shown on Figure 2 and in Attachment B. The pavement cap exterior corner boundary markers are described below.

- Marker "A" is set lead and tack with a brass washer with a Northing of 709832.45 and an Easting of 1156493.60.
- Marker "B" is set nail with a brass washer with a Northing of 709791.98 and an Easting of 1156573.25.

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<sup>1</sup> Environmental Partners, Inc. (EPI) was acquired by TRC on December 27, 2019. For the purposes of this report, EPI and TRC are used synonymously.

- Marker “C” is set nail with a brass washer with 4-foot offset to ESE to EC corner with a Northing of 709739.81 and an Easting of 1156499.32.
- Marker “D” is set rebar and cap with a Northing of 709761.18 and an Easting of 1156457.26.

During the February 23, 2021 site visit TRC field staff located, inspected, and photographed the four pavement cap corner markers. The four markers identifying the exterior corners of the pavement cap area subject to conditions of the EC were noted to be in good condition and no maintenance or repairs are necessary at this time. Photographs of the EC pavement cap markers are included in Attachment B. Refer to Figure 2 and the Environmental Covenant Exhibit prepared by Pace in Attachment B for marker locations and coordinates.

## **GROUNDWATER MONITORING**

Monitoring well MW-11, located inside of a walk-in cooler in the Stadium Thriftway grocery store, is a required observation point in accordance with EC Section 2.c., which states that sampling MW-11 will take place at a 24-month interval to confirm the effectiveness of the building cap. Prior to the previous (October 2019) sampling event EPI prepared a Compliance Monitoring Plan (CMP) in accordance with the requirements of WAC 173-340-820 and contained the elements of WAC 173-340-410(3) to satisfy the requirements of the EC.

The first 24-month sampling event was performed by EPI on October 15, 2019, the timing of which was based on the official recording of the EC on December 12, 2017. The second 24-month groundwater monitoring event was performed by TRC on February 23, 2021. Groundwater sampling was performed following the requirements of the CMP, which is presented in Attachment C.

### **Sampling Methods**

Groundwater samples were collected using low-flow purging and sampling methods using a bladder pump equipped with new, single-use sample tubing and new, single-use Teflon-lined bladders. Purging and sampling were performed following “Technical Guidance on Low Flow Purging and Sampling” (Nielsen 2002) as cited in Exhibit D of the EC (Attachment A).

TRC field staff measured the depth to water and total depth of MW-11 prior to purging and sampling. The depth to groundwater at MW-11 was 51.09 feet below the top of casing (TOC) and the total depth was measured at 63.59 feet below TOC. The bladder pump intake was set at 58 feet below TOC to pump groundwater from the middle portion of the water column in the well. The pumping rate was set at less than 0.5 liters per minute (L/min) to be consistent with low flow purging and sampling techniques. An electronic water level indicator was used to periodically monitor the depth to groundwater during purging to mitigate excessive drawdown of the water level, as defined by the technical guidance.

Purge water stabilization was evaluated using a calibrated multi-parameter water meter equipped with an in-line flow-cell for monitoring field parameters (e.g. temperature, pH, specific conductance, dissolved oxygen, turbidity, and oxidation-reduction potential) during purging. Field parameter data were recorded on pre-printed field forms, which are provided in Attachment D. The groundwater sample was collected

after field parameter measurements stabilized to within their respective stabilization criteria in three consecutive readings. Approximately 1.8 wetted casing volumes were removed prior to stabilization.

Following field parameter stabilization, groundwater samples were collected directly from the pump discharge tubing at a flow rate of approximately 100 milliliters per minute or less. Samples collected for volatile organic compounds (VOC) and gasoline-range organics (GRO) analyses were collected in new, pre-labeled, laboratory-supplied 40 milliliter (mL) VOA vials with hydrochloric acid preservative. Samples collected for diesel-range organics (DRO) and oil-range organics (ORO) analyses were collected in new, pre-labeled, laboratory-supplied 500 mL amber glass bottles.

Filled sample bottles were immediately placed in a chilled cooler at 4 degrees Celsius or lower, and delivered to the Ecology-accredited analytical laboratory Friedman and Bruya, Inc. under standard chain-of-custody protocols. Groundwater samples were submitted for laboratory analysis for the following EC-defined Constituents of Concern (COCs) under standard laboratory turnaround times:

- VOCs by U.S. Environmental Protection Agency (EPA) Method 8260C;
- GRO by Northwest Total Petroleum Hydrocarbons as Gasoline (NWTPH-Gx) Method; and
- DRO and ORO by Northwest Total Petroleum Hydrocarbons as Diesel (NWTPH-Dx) Method.

### **MW-11 Analytical Results**

Analytical results for the February 23, 2021 groundwater monitoring event were compared to their respective Ecology MTCA Method A or B Cleanup Levels (CULs) as summarized in Table 1. Laboratory data sheets of the analytical results are presented in Attachment E.

- Trichloroethene (TCE) was detected at a concentration of 2.2 micrograms per liter ( $\mu\text{g/L}$ ), which is less than the MTCA Method A CUL of 5.0  $\mu\text{g/L}$ . Historical concentrations of TCE in samples from MW-11 range from 1.4  $\mu\text{g/L}$  to 4.6  $\mu\text{g/L}$  indicating that the current concentration of 2.2  $\mu\text{g/L}$  is within the normal concentration range for MW-11 groundwater and that groundwater conditions are stable at the Site.
- Chloroform was detected at a concentration of 1.2  $\mu\text{g/L}$ , which is less than the MTCA Method B CUL (carcinogenic) of 1.4  $\mu\text{g/L}$ . Chloroform was not detected at the Method Detection Limit (MDL) of 1.0  $\mu\text{g/L}$  during the previous, October 2019, sampling event.
- GRO, DRO, and ORO were not detected at their MDLs from the MW-11 sample; therefore, the sample did not exceed the MTCA Method A groundwater CULs for those petroleum hydrocarbon ranges.
- Benzene, toluene, ethylbenzene, and xylenes (BTEX) were not detected at their MDLs; therefore, the MW-11 sample did not exceed the MTCA Method A groundwater CULs for BTEX compounds.

The shallowest impacted soil remaining beneath the pavement cap at the Site is at 15-ft. bgs had detections of gasoline range organics, benzene, and xylene at concentrations exceeding MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses. The current groundwater sample from MW-11 confirmed that all petroleum hydrocarbon ranges and BTEX compounds were non-detect, which provides empirical evidence that residual petroleum hydrocarbon and BTEX concentrations present in soil under the pavement cap are not leaching to groundwater.

### **MW-11 Inspection Results**

TRC field staff inspected the condition of monitoring well MW-11 while conducting the scheduled groundwater sampling event on February 23, 2021, and noted that the well monument, watertight well cap, and lock were in good condition and did not require maintenance, repair, or replacement.

When measuring the well's total depth, TRC field staff noted a soft bottom potentially indicating accumulated solids in the sump of the PVC well casing. Upon purging MW-11, TRC observed moderately high turbidity levels, with a maximum of 89.2 nephelometric turbidity units (NTU) early in the well purging process. Turbidity readings quickly declined to less than 30 NTU and stabilized at a final measurement of 12.9 NTU. Turbidity values for the 2021 sampling event are significantly lower than those measured in 2019. This indicates that the well re-development performed in 2019 successfully reduced and maintained lower turbidity in groundwater from MW-11.

### **CONCLUSIONS AND RECOMMENDATIONS**

Based on the findings of the February 2021 groundwater sampling event and TRC's site inspection and documentation activities, TRC has the following conclusion and recommendations:

1. The building cap at the Subject Property is intact and unchanged since the last inspection and appears to meet the requirements described in the EC.
2. The pavement cap permanent corner boundary markers are present and are in good condition with no repairs or maintenance required.
3. Pavement appears to be absent at several small landscaped areas installed at the direction of the City prior to the development of the EC that are within the EC-defined pavement cap area. However, landscape maintenance workers and the public are protected from potential direct contact with residual contamination based on the 15-ft. bgs or greater depth to residual impacts in soil, which is covered primarily asphalt pavement, concrete sidewalk or by clean soil and landscaped vegetation. In addition, all petroleum hydrocarbon ranges and BTEX compounds were non-detect in the MW-11 groundwater sample indicating that residual petroleum hydrocarbon concentrations in soil beneath the pavement are not leaching to groundwater to a detectable degree at the Site. Thus, the landscaped areas within the pavement cap footprint do not expose contaminated soil, result in a release of contaminants to the environment, or create a new exposure pathway,

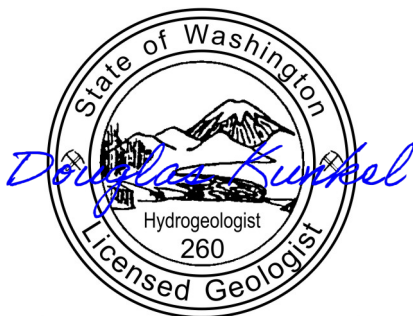
4. Analytical results for the groundwater sample from MW-11 are primarily non-detect with a detection of TCE at a concentration less than half the MTCA Method A CUL for groundwater. Chloroform was detected at a concentration less than its MTCA Method B CUL. All other EC-defined COCs were not detected at their MDLs. The February 2021 groundwater sample from well MW-11 demonstrates compliance with the MTCA CULs for the 24-month groundwater monitoring event detailed in Section 2.b. of the EC.
5. Empirical evidence (i.e., groundwater sample results for MW-11) demonstrates that groundwater beneath the Site complies with MTCA Method A and B CULs.
6. Groundwater monitoring at MW-11 should continue under the existing biannual sampling frequency. Inspections of the building cap, pavement cap, and pavement cap corner monuments should be performed during the biannual groundwater monitoring events.

## LIMITATIONS

To the extent that preparation of this *Cap Integrity and Groundwater Monitoring Report* has required the application of best professional judgment and the application of scientific principles, certain results of this work have been based on subjective interpretation. TRC makes no warranties express or implied, including and without limitation, warranties as to merchantability or fitness for a particular purpose. The information provided in this report is not to be construed as legal advice.

This *Cap Integrity and Groundwater Monitoring Report* was prepared solely for Wactor & Wick, LLP and its client ROIC, and the contents herein may not be used or relied upon by any other person without the express written consent and authorization of TRC.

Sincerely,



DOUGLAS C. KUNKEL

*Prepared by:*  
Douglas Kunkel, LG, LHG  
Principal Hydrogeologist

*Reviewed and approved by:*  
Keith Woodburne, LG  
Principal Geologist

## ENCLOSURES

### Table

Table 1 Summary of Groundwater Sample Analytical Results

### Figures

Figure 1 General Vicinity Map

Figure 2 Site Representation with Environmental Covenant Cap Locations

### Attachments

Attachment A Environmental Covenant, Exhibit D

Attachment B Pavement Cap Condition and Monument Photographs

Attachment C Compliance Monitoring Plan

Attachment D Field Data Sheets

Attachment E Laboratory Data Sheets

## REFERENCES

Aspect Consulting. 2016: *Remedial Investigation and Feasibility Study, Former Walker Chevrolet Site*, 633 Division Avenue, Tacoma, Washington. Prepared for David Shaw, Successor to Walker Chevrolet. July 25, 2016

The Nielsen Environmental Field School, Inc. (Nielsen). 2002: *Technical Guidance on Low Flow Purging and Sampling*.



**Table**

**Table 1**  
**Summary of Groundwater Sample Analytical Results**  
**Cap Integrity and Groundwater Monitoring Report**  
**Wactor & Wick, LLP**  
**633 Division Avenue Tacoma, Washington**

Sample Identification	Date Collected	Petroleum Hydrocarbons			Volatile Organic Compounds <sup>c</sup>									
		GRO <sup>a</sup>	DRO <sup>b</sup>	ORO <sup>b</sup>	PCE	TCE	tDCE	cDCE	Vinyl Chloride	Benzene	Toluene	Ethyl-benzene	Xylenes	Chloro-form
MW-11	10/15/2019	<100	<50	<250	<1	<b>2.0</b>	<1	<1	<0.2	<0.35	<1	<1	<2	<1
MW-11	2/23/2021	<100	<50	<250	<1	<b>2.2</b>	<1	<1	<0.2	<0.35	<1	<1	<2	<b>1.2</b>
<b>MTCA Method A or B Cleanup Levels for Groundwater<sup>d</sup></b>		<b>800/1,000<sup>e</sup></b>	<b>500</b>	<b>500</b>	<b>5.0</b>	<b>5.0</b>	<b>160<sup>f</sup></b>	<b>16<sup>f</sup></b>	<b>0.2</b>	<b>5.0</b>	<b>1000</b>	<b>700</b>	<b>1000</b>	<b>1.4<sup>f</sup></b>

Notes:

All results presented in micrograms per liter (µg/L).

- Bold** Bold results indicate that the compound was detected above the laboratory method detection limit.
- < Less than laboratory method detection limit
- a Analyzed by NWTPH-Gx.
- b Analyzed by NWTPH-Dx.
- c Analyzed by EPA Method 8260C.
- d Model Toxics Control Act (MTCA) Method A Cleanup Levels for Groundwater, Table 720-1, Washington Administrative Code (WAC) 173-340-900.
- e MTCA Method A Groundwater Cleanup Level is 800 µg/L when benzene is present in the sample and 1,000 µg/L when benzene is not detected.
- f MTCA Method B Groundwater Cleanup Level from Cleanup Levels and Risk Calculation (CLARC).

Compounds:

- GRO Gasoline-range organics
- DRO Diesel-range organics
- ORO Oil-range organics
- PCE Tetrachloroethene
- TCE Trichloroethene
- tDCE trans-1,2-Dichloroethene
- cDCE cis-1,2-Dichloroethene

## Figures



**NOTES:**

N

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)  
 TACOMA NORTH, WA  
 TACOMA SOUTH, WA  
 POVERTY BAY, WA  
 2017  
 SCALE = 1:24,000



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**FIGURE 1**  
 GENERAL VICINITY MAP

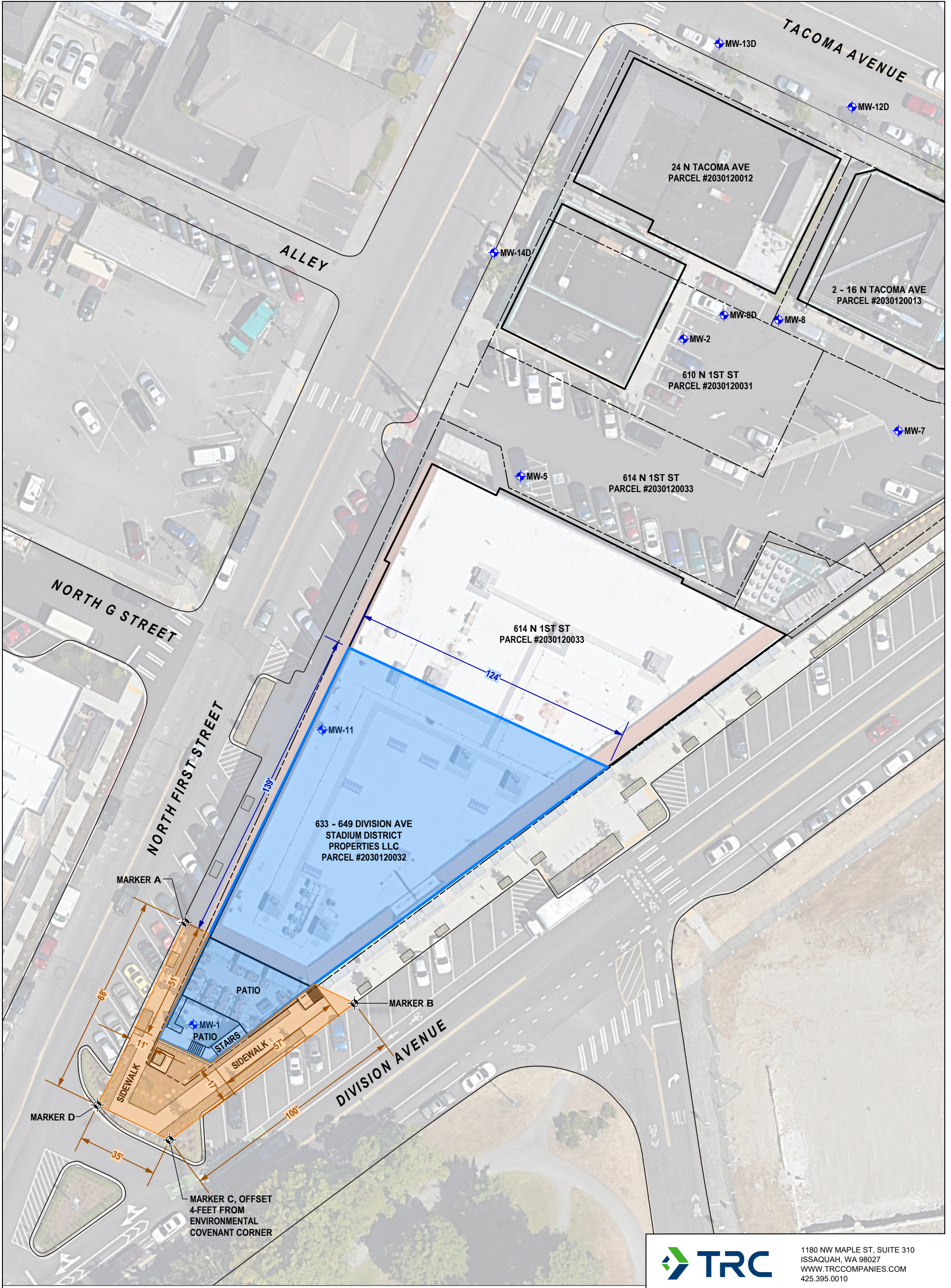
**REPORT**  
 CAP INTEGRITY AND  
 GROUNDWATER  
 MONITORING REPORT

**PREPARED FOR**  
 WACTOR & WICK

**LOCATION**  
 633 DIVISION AVENUE  
 TACOMA, WASHINGTON

**PROJECT NUMBER**  
 430528

**DATE** ..... 3/1/21  
**DRAWN BY** ..... VPB  
**REVIEWED BY** ..... DCK



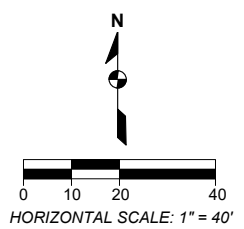
- NOTES:**
- PAVEMENT CAP
  - BUILDING CAP
  - PARCEL BOUNDARY (PIERCE COUNTY GIS)
  - MONITORING WELL LOCATION
  - ENVIRONMENTAL COVENANT MARKER LOCATION

BUILDING CAP LOCATIONS APPROXIMATED FROM EXHIBIT C (MAP ILLUSTRATING LOCATION OF RESTRICTIONS) BY ASPECT CONSULTING JULY 2017

AERIAL PHOTO: GOOGLE EARTH, MAY 2018

PARCEL BOUNDARIES APPROXIMATED FROM PIERCE COUNTY, WASHINGTON GIS MAPS

ALL SITE FEATURES ARE APPROXIMATED FROM FIGURES FROM ASPECT CONSULTING, PIERCE COUNTY GIS, AND GOOGLE EARTH AERIAL PHOTOGRAPHY



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**FIGURE 2**  
SITE REPRESENTATION WITH ENVIRONMENTAL COVENANT CAP LOCATIONS

<p><b>REPORT</b> CAP INTEGRITY AND GROUNDWATER MONITORING REPORT</p>	<p><b>PREPARED FOR</b> WACTOR &amp; WICK</p>
<p><b>LOCATION</b> 633 DIVISION AVENUE TACOMA, WASHINGTON</p>	<p><b>PROJECT NUMBER</b> 430528</p>
	<p><b>DATE</b> ..... 3/1/21</p> <p><b>DRAWN BY</b> ..... VPB</p> <p><b>REVIEWED BY</b> ..... DCK</p>

**Attachment A**  
**Environmental Covenant, Exhibit D**

## **Exhibit D**

### **CAP INTEGRITY AND GROUNDWATER MONITORING PLAN**

The Grantor shall maintain the building cap in accordance with Section 2.a, and shall not modify or remove the existing structure over the area designated as a cap, as illustrated in Exhibit C, without written authorization from Ecology. There are no inspection requirements for the building cap on the Property. The presence and condition of the pavement cap in the right-of-way will be observed during five-year periodic reviews.

The Grantor shall maintain MW-11 as an observation point in accordance with Section 2.c. MW-11 shall be sampled at a 24-month interval following receipt of Ecology's no further action (NFA) opinion letter to confirm the effectiveness of the building cap. As mandated by the Model Toxic Control Act, long-term compliance monitoring is required if containment is the selected cleanup action for a site or a portion of a site. The compliance monitoring plan must be prepared as per the requirements of WAC 173-340-820 and must contain the elements of WAC 173-340-410(3). The plan must require submittal of groundwater samples for the analysis of volatile organic compounds by EPA Method 8260 and total petroleum hydrocarbons by Methods NWTPH-Gx and NWTPH-Dx, or equivalent. Sample results shall be submitted to the Department of Ecology through the Environmental Information Management (EIM) database. A groundwater monitoring report must be submitted to Ecology after each sampling event.

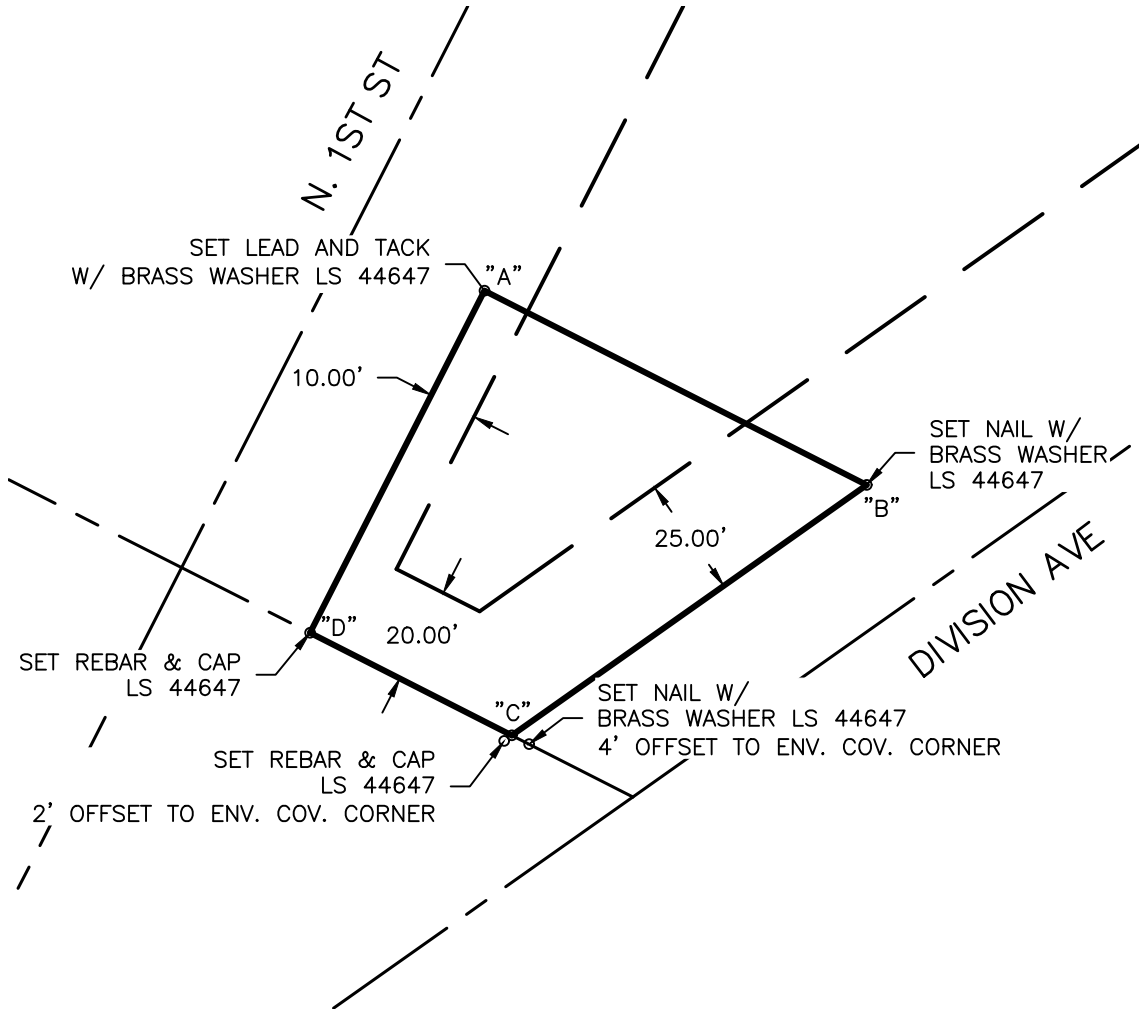
Groundwater samples will be collected following "Technical Guidance on Low Flow Purging and Sampling" (Nielson, 2002). Groundwater will be pumped from the middle portion of the water column in the well at a rate of less than 1.0 L/min. A water level indicator will be used to monitor the elevation of groundwater during pumping of the well to mitigate drops in the water level during pumping and sampling. A calibrated multi-parameter water meter will be used with a flow cell for monitoring groundwater (temperature, pH, specific conductance, dissolved oxygen, turbidity, and oxidation-reduction potential) during the pumping and sampling process (Appendix A).

The Department of Ecology will perform a five-year periodic review of the Site in accordance with Section 173-340-420, Washington Administrative Code of the Model Toxics Control Act.

**Attachment B**  
**Pavement Cap Condition and Monument**  
**Photographs**



# ENVIRONMENTAL COV. EXHIBIT



"A" NORTHING 709832.45  
EASTING 1156493.60

"B" NORTHING 709791.98  
EASTING 1156573.25

"C" NORTHING 709739.81  
EASTING 1156499.32

"D" NORTHING 709761.18  
EASTING 1156457.26



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Civil | Structural | Planning | Survey  
paceengrs.com



1"=40'

SCALE: 1"=40' FILE: V19564-BNDRY DATE: 12/19/19 JFS PROJ. NO.: 19564



Photograph 1: Pavement Cap Marker "A". View is toward the northeast.



Photograph 2: Pavement Cap Marker "A"



Photograph 3: Pavement Cap Marker "B". View is toward the north.



Photograph 4: Pavement Cap Marker "B"



Photograph 5: Pavement Cap Marker "C". Offset from the corner by 4-feet due to utility vault.



Photograph 6: Pavement Cap Marker "C"



Photograph 7: Pavement Cap Marker "D". View is toward east.



Photograph 8: Pavement Cap Marker "D"



Photograph 9: View looking NE along Division Ave.



Photograph 10: View looking N along 1<sup>st</sup> St.



Photograph 11: View looking SW along Division Ave.



Photograph 12: View looking N along 1<sup>st</sup> St.

**Attachment C**  
**Compliance Monitoring Plan**



## COMPLIANCE MONITORING PLAN

**DATE:** October 9, 2019

**TO:** Wactor & Wick LLP

**CC:** Ms. Anna Nguyen, Esq., Wactor & Wick LLP

**FROM:** Mr. Sean Trimble, L.G.

**RE:** Compliance Monitoring Plan  
Former Walker Chevrolet Property  
633 Division Avenue  
Tacoma, Washington

EPI Project Number: 48006.0

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### INTRODUCTION

Environmental Partners, Inc. (EPI) is pleased to submit this *Compliance Monitoring Plan* (CMP) documenting the planned inspection, groundwater monitoring, and reporting tasks at the Former Walker Chevrolet property located at 633 Division Avenue in Tacoma, Washington (the subject property). The subject property contains a Washington State Department of Ecology (Ecology) defined Site that is enrolled in Ecology's Voluntary Cleanup Program (VCP) under VCP Project Number SW1040. The Cleanup Site ID for the Site is 5318 and the Facility Site ID is 347832.

The location of the subject property and Site is indicated on Figure 1. EPI understands that the subject property was formerly an automotive retail business with auto service bays, fuel and waste oil underground storage tanks (USTs), and paint booths. The subject property and Site have undergone extensive redevelopment is currently occupied by various retail shops and restaurants including Starbucks, Jimmy Johns, Rhein Haus Tacoma, and Stadium Thriftway, a retail grocery store.

The Site has a conditional No Further Action (NFA) determination from Ecology that is contingent on provisions of an Environmental Covenant (EC) filed with Pierce County on December 12, 2017. The EC lists ongoing prohibitions and requirements that must be met by the current property owner, ROIC Tuo LLC (ROIC), to maintain the conditional NFA determination. As mandated by Ecology's Model Toxics Control Act (MTCA), long-term compliance monitoring is required if, as described below, containment is the selected cleanup action for the Site or portion of a Site. This CMP has been prepared per the requirements of Washington Administrative Code (WAC) 173-340-820 and contains elements of WAC 173-340-410(3), as described in Exhibit D of the EC. All work performed by EPI under this CMP will be confidential and will be performed under Wactor & Wick LLP oversight. Nothing will be submitted to any agency without Wactor & Wick LLP's advance approval.

The conditional NFA for the Site is based on containing known areas of contaminated soil under a cap comprising portions of the existing building on the Site, which have been used by automotive businesses, and the asphalt- and concrete-paved surfaces on adjoining rights-of-way between the building and street curb lines near the southern portion of the building. The 25,820-square-foot building occupies the majority of the 29,730-square-foot parcel. The building provides an impermeable cap that prevents potential contact with contaminated soil and minimizes leaching of contaminants to groundwater. The pavement cap minimizes leaching of contaminants to groundwater. The extents of the building and pavement caps are illustrated on Figure 2.

This CMP documents the planned work to implement the required inspection of the caps, groundwater monitoring, and reporting components of the EC, which are primarily described in Exhibit D of the EC, Cap Integrity and Groundwater Monitoring Plan (Attachment A).

## **SCOPE OF WORK**

The scope of work for this CMP is described below:

- Inspect the Site to evaluate compliance with conditions of the EC, including a good faith effort to locate and preserve any reference monuments and boundary markers used to define the areal extent of coverage of the EC;
- Inspect and document the condition of the building and pavement caps;
- Perform groundwater monitoring at existing well MW-11 per the planning documents; and
- Prepare and submit a Client review draft groundwater monitoring and cap, monument, and boundary marker inspection report to Wactor & Wick LLP for review and revision. Send final report to Ecology with Wactor & Wick LLP approval.

### **Inspection of the Site**

EPI personnel will inspect the Site for reference monuments and boundary markers used to delineate the areal extent of the cap as shown on Figure 2. In addition, personnel will inspect and evaluate if access to remedial action components described in the EC (e.g., monitoring wells, reference monuments, and boundary markers) is unencumbered.

### **Inspection and Document Condition of the Caps**

In accordance with the EC, EPI will verify that the building cap and building structures have not been altered or removed in any manner that would expose contaminated soil, result in a release of contaminants to the environment, or create a new exposure pathway. Any damage to the cap that would compromise the integrity of the cap (e.g., drilling; digging; piercing the cap with a post, stake or similar device; grading; excavation; installation of underground utilities; or removal of the cap) will be reported to Wactor & Wick LLP.

## Groundwater Monitoring

This task includes collecting a groundwater sample from monitoring well MW-11 to confirm the continued effectiveness of the building cap. The groundwater sample will be collected using low-flow purging and sampling methods and single-use sample tubing using a bladder pump following "Technical Guidance on Low Flow Purging and Sampling" (Nielsen 2002) as cited in Exhibit D of the EC (Attachment A). Groundwater will be pumped from the middle portion of the water column in the well at a rate of less than 1.0 liter per minute (L/min). A water level indicator will be used to monitor the depth to groundwater during pumping of the well to mitigate excessive decreases in the water level, as defined by the technical guidance, during purging and sampling.

Purge water stabilization will be evaluated using a calibrated multi-parameter water meter equipped with an in-line flow cell for monitoring field parameters (e.g., temperature, pH, specific conductance, dissolved oxygen, turbidity, and oxidation-reduction potential) during the pumping and sampling process. All such data will be recorded on field forms. Sampling procedures will be adjusted to take all reasonable measures to prevent the potential loss of volatiles during sample collection. The groundwater sample will be collected after these measurements have stabilized to within 10 percent in consecutive readings or three wetted casing volumes have been removed, whichever occurs first.

Samples will be collected directly from the discharge tubing and will occur at a flow rate of approximately 100 milliliters per minute or less. Samples collected for volatile organic compound (VOC) and gasoline-range organics (GRO) analyses will be retained in new, pre-labeled, laboratory-supplied 40 milliliter VOA vials with hydrochloric acid preservative. Samples collected for diesel-range organics (DRO) and oil-range organics (ORO) analyses will be retained in new, pre-labeled, laboratory-supplied 500 milliliter (mL) amber glass bottles, or equivalent.

Samples will be immediately placed in a chilled cooler at 4 degrees Celsius or lower, pending delivery to an accredited analytical laboratory. All samples will be handled and transported under standard chain-of-custody protocols. Groundwater samples will be submitted for fixed base laboratory analysis of the following analytes under standard laboratory turnaround time:

- VOCs by U.S. Environmental Protection Agency (EPA) Method 8260C;
- GRO by Northwest Total Petroleum Hydrocarbons as Gasoline (NWTPH-Gx) Method; and
- DRO and ORO by Northwest Total Petroleum Hydrocarbons as Diesel (NWTPH-Dx) Method.

## Groundwater Monitoring Report

Following completion of the inspection and groundwater monitoring at the subject property and receipt of laboratory data, EPI will prepare a *Groundwater Monitoring Report* (GMR) documenting sampling results from the MW-11 monitoring event, including depth to water, stabilized field parameter measurements, and laboratory data.

The GMR will also include documentation of inspection results and evaluations for access to remedial action components described in the EC, including monitoring wells, reference monuments, and boundary markers for delineation of the area of the Site that is subject to the EC. Results for inspection and evaluation of the condition of the building and pavement caps will also be documented in the GMR as described in the EC.

### **Schedule**

As noted in Exhibit D of the EC, groundwater sampling at MW-11 will be performed at 24-month intervals. The initial groundwater sampling and cap inspection event will be scheduled and performed within 2 weeks of Wactor & Wick LLP's approval of this CMP. Laboratory analyses for the MW-11 groundwater sample will be performed under standard turnaround time, which is commonly 2 weeks for most analyses.

The Client review draft GMR will be submitted to Wactor & Wick LLP for review and comment within 2 weeks of receipt of all laboratory data. EPI will incorporate Wactor & Wick LLP's revisions and comments into a final GMR within 1 week of receiving Client comments and revisions. The final GMR will be submitted to Ecology, with Wactor & Wick LLP approval, as required under the terms of the EC. In addition, with advanced approval from Wactor & Wick LLP, EPI will upload analytical and field parameter data to Ecology's Environmental Information Management (EIM) database, as required under the EC.

### **ENCLOSURES**

#### **Figures**

- Figure 1        General Vicinity Map
- Figure 2        Site Representation with Environmental Covenant Cap Locations

#### **Attachment A**

Exhibit D from the Stadium Retail LLC Environmental Covenant, electronically recorded in Pierce County, Washington, December 12, 2017

## Figures

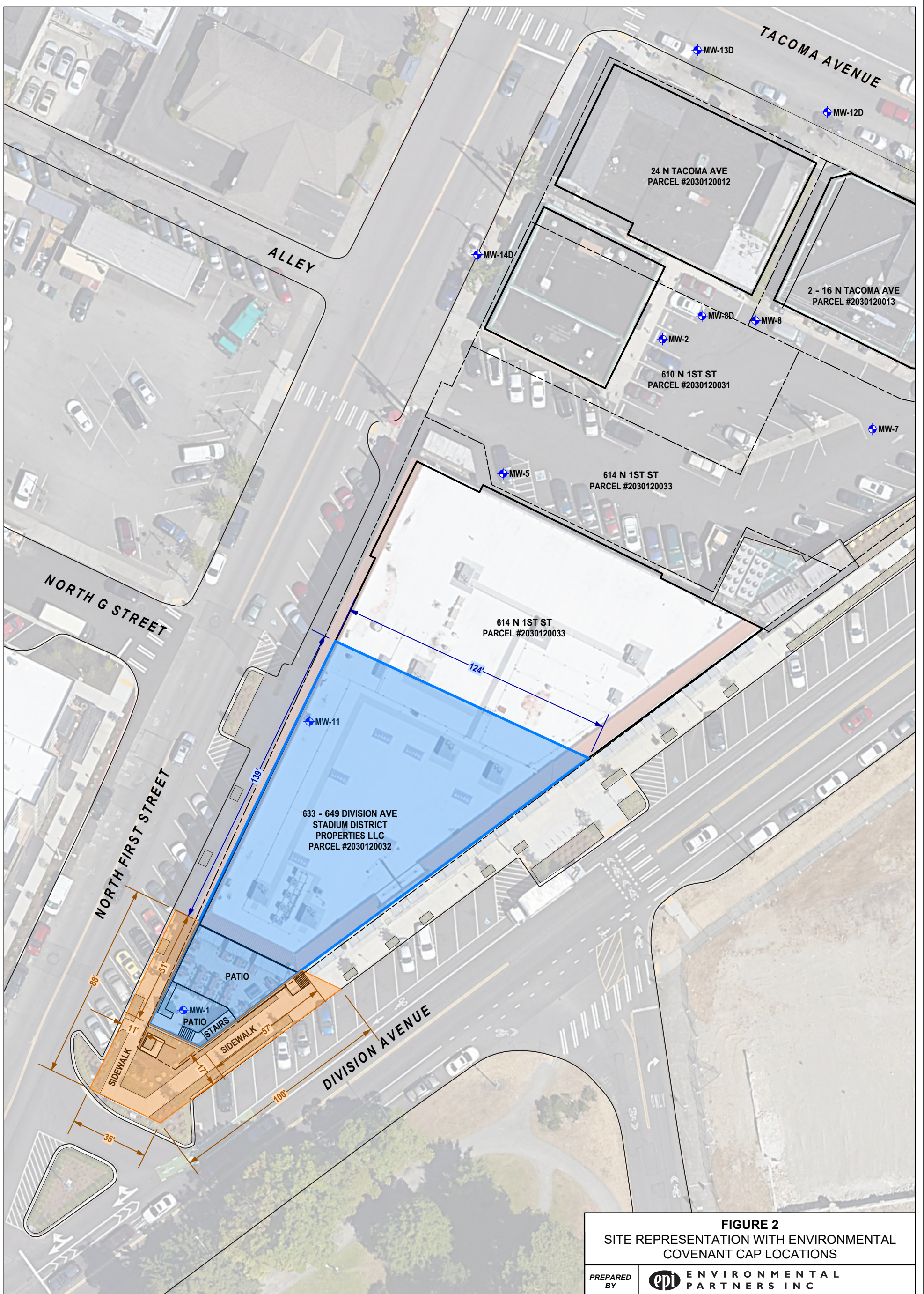


**FIGURE 1**  
GENERAL VICINITY MAP

PREPARED BY			
REPORT	COMPLIANCE MONITORING PLAN		
LOCATION	633 DIVISION AVENUE TACOMA, WASHINGTON		
PREPARED FOR	WACTOR & WICK LLP		
DATE	DRAWN BY	REVIEWED BY	PROJECT NUMBER
10/1/19	VPB	DCK	48006.0

**NOTES:**

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)  
 TACOMA NORTH, WA  
 TACOMA SOUTH, WA  
 POVERTY BAY, WA  
 2017  
 SCALE = 1:25,000



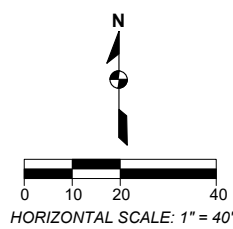
- NOTES:**
- PAVEMENT CAP
  - BUILDING CAP
  - PARCEL BOUNDARY (PIERCE COUNTY GIS)
  - MONITORING WELL LOCATION

BUILDING CAP LOCATIONS APPROXIMATED FROM EXHIBIT C (MAP ILLUSTRATING LOCATION OF RESTRICTIONS) BY ASPECT CONSULTING JULY 2017

AERIAL PHOTO: GOOGLE EARTH, MAY 2018

PARCEL BOUNDARIES APPROXIMATED FROM PIERCE COUNTY, WASHINGTON GIS MAPS

ALL SITE FEATURES ARE APPROXIMATED FROM FIGURES FROM ASPECT CONSULTING, PIERCE COUNTY GIS, AND GOOGLE EARTH AERIAL PHOTOGRAPHY



**FIGURE 2**  
SITE REPRESENTATION WITH ENVIRONMENTAL COVENANT CAP LOCATIONS

<b>PREPARED BY</b>	ENVIRONMENTAL PARTNERS INC		
<b>REPORT</b>	COMPLIANCE MONITORING PLAN		
<b>LOCATION</b>	633 DIVISION AVENUE TACOMA, WASHINGTON		
<b>PREPARED FOR</b>	WACTOR & WICK LLP		
<b>DATE</b> 10/1/19	<b>DRAWN BY</b> VPB	<b>REVIEWED BY</b> DCK	<b>PROJECT NUMBER</b> 48006.0

**Attachment A**  
**Exhibit D from the Stadium Retail LLC**  
**Environmental Covenant, electronically recorded in**  
**Pierce County, Washington, December 12, 2017**



## **Exhibit D**

### **CAP INTEGRITY AND GROUNDWATER MONITORING PLAN**

The Grantor shall maintain the building cap in accordance with Section 2.a, and shall not modify or remove the existing structure over the area designated as a cap, as illustrated in Exhibit C, without written authorization from Ecology. There are no inspection requirements for the building cap on the Property. The presence and condition of the pavement cap in the right-of-way will be observed during five-year periodic reviews.

The Grantor shall maintain MW-11 as an observation point in accordance with Section 2.c. MW-11 shall be sampled at a 24-month interval following receipt of Ecology's no further action (NFA) opinion letter to confirm the effectiveness of the building cap. As mandated by the Model Toxic Control Act, long-term compliance monitoring is required if containment is the selected cleanup action for a site or a portion of a site. The compliance monitoring plan must be prepared as per the requirements of WAC 173-340-820 and must contain the elements of WAC 173-340-410(3). The plan must require submittal of groundwater samples for the analysis of volatile organic compounds by EPA Method 8260 and total petroleum hydrocarbons by Methods NWTPH-Gx and NWTPH-Dx, or equivalent. Sample results shall be submitted to the Department of Ecology through the Environmental Information Management (EIM) database. A groundwater monitoring report must be submitted to Ecology after each sampling event.

Groundwater samples will be collected following "Technical Guidance on Low Flow Purging and Sampling" (Nielson, 2002). Groundwater will be pumped from the middle portion of the water column in the well at a rate of less than 1.0 L/min. A water level indicator will be used to monitor the elevation of groundwater during pumping of the well to mitigate drops in the water level during pumping and sampling. A calibrated multi-parameter water meter will be used with a flow cell for monitoring groundwater (temperature, pH, specific conductance, dissolved oxygen, turbidity, and oxidation-reduction potential) during the pumping and sampling process (Appendix A).

The Department of Ecology will perform a five-year periodic review of the Site in accordance with Section 173-340-420, Washington Administrative Code of the Model Toxics Control Act.

**Attachment D**  
**Field Data Sheets**

TRC Groundwater Sampling Field Data

10 of 2

Project Name:	633 DIVISION AVE		
Project Number:	430528		
Well ID:	MW-11	Date:	2021-02-23
Sample ID:	MW-11	Field Team: (Initials)	ES/RO
Field Conditions:	14 - Walk in cooler		

Purge Information

Well Diameter (in.)	2	Purge Method : Submersible pump	
Well Depth (ft.)	63.59	Bladder Pump	
Initial Depth to Water (ft.)	51.09	Peristaltic Pump	
Depth of Water Column	12.09	Other :	
1 Casing Volumes	2 gal	Start Time	0940
3 Casing Volume	6 gal	End Time	1052
(2"=0.163 x depth)		Total Gallons Purged	3.5
(4"=0.653 x depth)	Initial = 58	Final Depth to Water (ft.)	51.09

Time	Volume Gallons	pH	Conductivity mS/cm	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Depth to Water ft.	Appearance/Notes
0944		6.19	283.7	3.28	12.5	279.1	54.1	51.09	cloudy
0947		6.20	291.3	4.42	13.1	263.0	89.2	51.09	
0950		6.26	296.1	4.59	13.2	258.8	42.6	51.09	
0953		6.26	298.5	3.58	13.2	257.1	31.3	51.09	clear
0956		6.25	298.9	3.58	13.1	257.5	24.5	51.09	
0959		6.21	302.3	3.54	13.1	258.7	29.1	51.09	
1002		6.21	302.7	3.51	13.0	258.7	23.9	51.09	
1005		6.21	303.0	3.46	13.0	258.6	22.9	51.09	
1008		6.22	303.0	3.55	12.9	258.6	25.5	51.09	
1011		6.19	300.4	3.56	12.5	260.8	19.8	51.09	
1018		6.09	288.8	3.43	11.6	268.9	19.0	51.09	BATTERY CHANGE
1021		6.06	290.5	3.42	11.3	268.5	16.9	51.09	
1024		6.10	300.8	3.39	12.9	261.5	16.5	51.09	
1027		6.29	303.9	4.01	13.1	255.2	13.7	51.09	
Stabilization Criteria		± 0.1	± 3%	± 10% if > 0.5	± 3%	± 20 mV	± 10% if > 5 NTU	-	cont'd

Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailor / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments
DRO	1038	500 mL	AMB	
GRD	1038	40 mL	HCl	
VOL	1038	40 mL	HCl	

End Time 1045

Comments / Exceptions:

Presence of floating product? YES /  NO Presence of sinking product? YES /  NO

Initial 2 58 ft  
~ 60 ft skip and rise

to 63.59 - soft bottom

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

# TRC Groundwater Sampling Field Data

2012

<b>Project Name:</b>			
<b>Project Number:</b>			
Well ID:		Date	
Sample ID:		Field Team: (Initials)	
Field Conditions			

### Purge Information

Well Diameter (in.)		Purge Method : Submersible pump
Well Depth (ft.)		Bladder Pump
Initial Depth to Water (ft.)		Peristaltic Pump
Depth of Water Column		Other: :
1 Casing Volumes		Start Time
3 Casing Volume		End Time
(2"=0.163 x depth)		Total Gallons Purged
(4"=0.653 x depth)		Final Depth to Water (ft.)

Time	Volume Gallons	pH	Conductivity mS/cm	DO mg/L	Temp. °C	ORP mV	Turbidity NTU	Depth to Water ft.	Appearance/Notes
1030		6.29	304.5	3.99	13.1	256.1	13.1	51.09	
1033		6.26	305.9	3.96	13.1	258.0	12.9	51.09	
1038									SAMPLE
Stabilization Criteria		± 0.1	± 3%	± 10% if > 0.5	± 3%	± 20 mV	± 10% if > 5 NTU	--	--

### Sample Information

Sample Method(s) : Peristaltic pump / Submersible pump / Bladder Pump / Bailer / Other

Analysis	Time	Bottle Type	Preservative/Filtration	Comments

End Time

### Comments / Exceptions:

Presence of floating product? YES / NO      Presence of sinking product? YES / NO

.....

.....

.....

.....

.....

Notes: Where multiple visits are required to complete sampling, parameters are to be checked prior to sampling for each visit. Enter data under field comments.

**Attachment E**  
**Laboratory Data Sheets**

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.  
Yelena Aravkina, M.S.  
Michael Erdahl, B.S.  
Arina Podnozova, B.S.  
Eric Young, B.S.

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Seattle, WA 98119-2029  
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fbi@isomedia.com  
www.friedmanandbruya.com

March 4, 2021

Doug Kunkel, Project Manager  
TRC Environmental  
1180 NW Maple St, Suite 310  
Issaquah, WA 98027

RE: 430528-Wactor Tacoma, F&BI 102366

Dear Mr Kunkel:

Included are the results from the testing of material submitted on February 24, 2021 from the 430528-Wactor Tacoma, F&BI 102366 project. There are 10 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl  
Project Manager

Enclosures  
c: Cynthia Moon  
TRC0304R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on February 24, 2020 by Friedman & Bruya, Inc. from the TRC Environmental 430528-Wactor Tacoma, F&BI 102366 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID

102366 -01

TRC Environmental

MW-11

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/04/21  
Date Received: 02/24/21  
Project: 430528-Wactor Tacoma, F&BI 102366  
Date Extracted: 03/01/21  
Date Analyzed: 03/02/21

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE  
USING METHOD NWTPH-Gx**  
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 51-134)
MW-11 102366-01	<100	91
Method Blank 01-352 MB	<100	92



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/04/21

Date Received: 02/24/21

Project: 430528-Wactor Tacoma, F&BI 102366

Date Extracted: 02/24/21

Date Analyzed: 02/24/21

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS  
DIESEL AND MOTOR OIL  
USING METHOD NWTPH-D<sub>x</sub>**  
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 41-152)
MW-11 102366-01	<50	<250	93
Method Blank 01-487 MB2	<50	<250	98

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW-11	Client:	TRC Environmental
Date Received:	02/24/21	Project:	430528-Wactor Tacoma, F&BI 102366
Date Extracted:	02/24/21	Lab ID:	102366-01
Date Analyzed:	02/24/21	Data File:	022425.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	86	113
Toluene-d8	100	88	114
4-Bromofluorobenzene	97	88	112

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<5	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<5	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<5
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	1.2	1,1,2,2-Tetrachloroethane	<1
2-Butanone (MEK)	<20	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	2.2	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	TRC Environmental
Date Received:	Not Applicable	Project:	430528-Wactor Tacoma, F&BI 102366
Date Extracted:	02/24/21	Lab ID:	01-432 mb
Date Analyzed:	02/24/21	Data File:	022408.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	86	113
Toluene-d8	98	88	114
4-Bromofluorobenzene	94	88	112

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<5	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<5	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<5
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<1
2-Butanone (MEK)	<20	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/04/21

Date Received: 02/24/21

Project: 430528-Wactor Tacoma, F&BI 102366

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER  
SAMPLES FOR TPH AS GASOLINE  
USING METHOD NWTPH-G<sub>x</sub>**

Laboratory Code: 102337-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	110	120	15

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	105	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/04/21

Date Received: 02/24/21

Project: 430528-Wactor Tacoma, F&BI 102366

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER  
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS  
DIESEL EXTENDED USING METHOD NWTPH-D<sub>x</sub>**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	88	96	63-142	9

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/04/21

Date Received: 02/24/21

Project: 430528-Wactor Tacoma, F&BI 102366

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER  
SAMPLES FOR VOLATILES BY EPA METHOD 8260D**

Laboratory Code: 102335-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	
				Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	10	<1	110	10-172
Chloromethane	ug/L (ppb)	10	<10	83	25-166
Vinyl chloride	ug/L (ppb)	10	<0.2	92	36-166
Bromomethane	ug/L (ppb)	10	<5	135	47-169
Chloroethane	ug/L (ppb)	10	<1	93	46-160
Trichlorofluoromethane	ug/L (ppb)	10	<1	97	44-165
Acetone	ug/L (ppb)	50	<50	88	10-182
1,1-Dichloroethene	ug/L (ppb)	10	<1	106	58-142
Hexane	ug/L (ppb)	10	<5	95	38-152
Methylene chloride	ug/L (ppb)	10	<5	92	50-145
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	<1	96	61-136
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	97	61-136
1,1-Dichloroethane	ug/L (ppb)	10	<1	93	63-135
2,2-Dichloropropane	ug/L (ppb)	10	<1	101	36-154
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	94	63-134
Chloroform	ug/L (ppb)	10	<1	99	61-135
2-Butanone (MEK)	ug/L (ppb)	50	<20	100	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	<1	97	48-149
1,1,1-Trichloroethane	ug/L (ppb)	10	<1	98	60-146
1,1-Dichloropropene	ug/L (ppb)	10	<1	100	69-133
Carbon tetrachloride	ug/L (ppb)	10	<1	106	56-152
Benzene	ug/L (ppb)	10	<0.35	97	57-135
Trichloroethene	ug/L (ppb)	10	<1	99	66-135
1,2-Dichloropropane	ug/L (ppb)	10	<1	91	59-136
Bromodichloromethane	ug/L (ppb)	10	<1	92	61-150
Dibromomethane	ug/L (ppb)	10	<1	103	66-141
4-Methyl-2-pentanone	ug/L (ppb)	50	<10	104	10-185
cis-1,3-Dichloropropene	ug/L (ppb)	10	<1	95	52-147
Toluene	ug/L (ppb)	10	<1	94	50-137
trans-1,3-Dichloropropene	ug/L (ppb)	10	<1	89	53-142
1,1,2-Trichloroethane	ug/L (ppb)	10	<1	97	68-131
2-Hexanone	ug/L (ppb)	50	<10	103	10-185
1,3-Dichloropropane	ug/L (ppb)	10	<1	95	60-135
Tetrachloroethene	ug/L (ppb)	10	<1	102	10-226
Dibromochloromethane	ug/L (ppb)	10	<1	92	52-145
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	<1	100	62-135
Chlorobenzene	ug/L (ppb)	10	<1	101	63-130
Ethylbenzene	ug/L (ppb)	10	<1	95	60-133
1,1,1,2-Tetrachloroethane	ug/L (ppb)	10	<1	95	56-143
m,p-Xylene	ug/L (ppb)	20	<2	98	69-135
o-Xylene	ug/L (ppb)	10	<1	98	60-140
Styrene	ug/L (ppb)	10	<1	96	60-133
Isopropylbenzene	ug/L (ppb)	10	<1	95	65-142
Bromoform	ug/L (ppb)	10	<5	90	54-148
n-Propylbenzene	ug/L (ppb)	10	<1	93	58-144
Bromobenzene	ug/L (ppb)	10	<1	97	61-130
1,3,5-Trimethylbenzene	ug/L (ppb)	10	<1	92	59-134
1,1,2,2-Tetrachloroethane	ug/L (ppb)	10	<1	92	51-154
1,2,3-Trichloropropane	ug/L (ppb)	10	<1	94	53-150
2-Chlorotoluene	ug/L (ppb)	10	<1	91	66-127
4-Chlorotoluene	ug/L (ppb)	10	<1	93	65-130
tert-Butylbenzene	ug/L (ppb)	10	<1	91	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	10	<1	88	59-146
sec-Butylbenzene	ug/L (ppb)	10	<1	91	64-140
p-Isopropyltoluene	ug/L (ppb)	10	<1	93	65-141
1,3-Dichlorobenzene	ug/L (ppb)	10	<1	97	60-131
1,4-Dichlorobenzene	ug/L (ppb)	10	<1	98	60-129
1,2-Dichlorobenzene	ug/L (ppb)	10	<1	96	60-130
1,2-Dibromo-3-chloropropane	ug/L (ppb)	10	<10	84	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	10	<1	93	52-138
Hexachlorobutadiene	ug/L (ppb)	10	<1	92	60-143
Naphthalene	ug/L (ppb)	10	<1	88	44-164
1,2,3-Trichlorobenzene	ug/L (ppb)	10	<1	88	69-148

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/04/21

Date Received: 02/24/21

Project: 430528-Wactor Tacoma, F&BI 102366

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER  
SAMPLES FOR VOLATILES BY EPA METHOD 8260D**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	10	105	105	25-158	0
Chloromethane	ug/L (ppb)	10	82	80	45-156	2
Vinyl chloride	ug/L (ppb)	10	89	89	50-154	0
Bromomethane	ug/L (ppb)	10	138	130	55-143	6
Chloroethane	ug/L (ppb)	10	90	87	58-146	3
Trichlorofluoromethane	ug/L (ppb)	10	94	96	50-150	2
Acetone	ug/L (ppb)	50	80	78	22-155	3
1,1-Dichloroethene	ug/L (ppb)	10	101	102	67-136	1
Hexane	ug/L (ppb)	10	78	77	57-137	1
Methylene chloride	ug/L (ppb)	10	95	91	19-178	4
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	93	92	64-147	1
trans-1,2-Dichloroethene	ug/L (ppb)	10	93	95	68-128	2
1,1-Dichloroethane	ug/L (ppb)	10	91	91	74-135	0
2,2-Dichloropropane	ug/L (ppb)	10	94	95	55-143	1
cis-1,2-Dichloroethene	ug/L (ppb)	10	95	95	74-136	0
Chloroform	ug/L (ppb)	10	96	97	74-134	1
2-Butanone (MEK)	ug/L (ppb)	50	96	95	37-150	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	98	96	66-129	2
1,1,1-Trichloroethane	ug/L (ppb)	10	98	97	74-142	1
1,1-Dichloropropene	ug/L (ppb)	10	95	94	77-129	1
Carbon tetrachloride	ug/L (ppb)	10	101	101	75-158	0
Benzene	ug/L (ppb)	10	95	95	69-134	0
Trichloroethene	ug/L (ppb)	10	96	94	67-133	2
1,2-Dichloropropane	ug/L (ppb)	10	93	90	71-134	3
Bromodichloromethane	ug/L (ppb)	10	90	89	66-126	1
Dibromomethane	ug/L (ppb)	10	103	98	68-132	5
4-Methyl-2-pentanone	ug/L (ppb)	50	104	100	65-138	4
cis-1,3-Dichloropropene	ug/L (ppb)	10	93	91	74-140	2
Toluene	ug/L (ppb)	10	96	93	72-122	3
trans-1,3-Dichloropropene	ug/L (ppb)	10	88	86	80-136	2
1,1,2-Trichloroethane	ug/L (ppb)	10	94	93	75-124	1
2-Hexanone	ug/L (ppb)	50	103	99	60-136	4
1,3-Dichloropropane	ug/L (ppb)	10	96	92	76-126	4
Tetrachloroethene	ug/L (ppb)	10	99	98	76-121	1
Dibromochloromethane	ug/L (ppb)	10	92	90	84-133	2
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	99	95	82-115	4
Chlorobenzene	ug/L (ppb)	10	100	97	83-114	3
Ethylbenzene	ug/L (ppb)	10	94	93	77-124	1
1,1,1,2-Tetrachloroethane	ug/L (ppb)	10	95	95	84-127	0
m,p-Xylene	ug/L (ppb)	20	96	95	81-112	1
o-Xylene	ug/L (ppb)	10	97	95	81-121	2
Styrene	ug/L (ppb)	10	95	92	84-119	3
Isopropylbenzene	ug/L (ppb)	10	92	92	80-117	0
Bromoform	ug/L (ppb)	10	89	86	69-121	3
n-Propylbenzene	ug/L (ppb)	10	92	89	74-126	3
Bromobenzene	ug/L (ppb)	10	99	96	80-121	3
1,3,5-Trimethylbenzene	ug/L (ppb)	10	91	89	78-123	2
1,1,2,2-Tetrachloroethane	ug/L (ppb)	10	96	93	66-126	3
1,2,3-Trichloropropane	ug/L (ppb)	10	95	92	67-124	3
2-Chlorotoluene	ug/L (ppb)	10	92	89	77-127	3
4-Chlorotoluene	ug/L (ppb)	10	92	89	78-128	3
tert-Butylbenzene	ug/L (ppb)	10	91	90	80-123	1
1,2,4-Trimethylbenzene	ug/L (ppb)	10	88	86	79-122	2
sec-Butylbenzene	ug/L (ppb)	10	90	88	80-116	2
p-Isopropyltoluene	ug/L (ppb)	10	90	88	81-123	2
1,3-Dichlorobenzene	ug/L (ppb)	10	96	94	83-113	2
1,4-Dichlorobenzene	ug/L (ppb)	10	94	95	81-112	1
1,2-Dichlorobenzene	ug/L (ppb)	10	95	95	84-112	0
1,2-Dibromo-3-chloropropane	ug/L (ppb)	10	86	86	57-141	0
1,2,4-Trichlorobenzene	ug/L (ppb)	10	88	89	72-130	1
Hexachlorobutadiene	ug/L (ppb)	10	85	84	53-141	1
Naphthalene	ug/L (ppb)	10	91	90	64-133	1
1,2,3-Trichlorobenzene	ug/L (ppb)	10	90	89	65-136	1

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### **Data Qualifiers & Definitions**

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



102366

SAMPLE CHAIN OF CUSTODY

ME 02/24/01

vw1 / 5031

Page # 1 of 1

Report To Doug Kunkel

Company TRC

Address 1180 NW Maple St, Ste 310

City, State, ZIP Issaquah, WA 98027

Phone (206) 395-0018 email DKunkel@trccompanies.com

SAMPLERS (signature) Rebecca O'Dell

PROJECT NAME 430528-Wacter Tacoma

PO #

REMARKS

INVOICE TO

Project specific RIs? - Yes / No

TURNAROUND TIME  
 Standard turnaround  
 RUSH  
 Rush charges authorized by: \_\_\_\_\_

SAMPLE DISPOSAL  
 Archive samples  
 Other \_\_\_\_\_  
 Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED							Notes			
						NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082				
MW-11	O/A-G	2/23/01	1038	H2O	7	X	X			X						GR0 DR0/020, and VOCs

Friedman & Bryna, Inc.  
 3012 16th Avenue West  
 Seattle, WA 98119-2029  
 Ph. (206) 285-8282

SIGNATURE		PRINT NAME		COMPANY		DATE	TIME
Reinquinshed by:	<u>Rebecca O'Dell</u>	Rebecca O'Dell		TRC	2/24/01	0631	
Received by:	<u>Michael Edell</u>	Michael Edell		TRC	2/24/01	0631	
Reinquinshed by:							
Received by:							

Samples received at 4 °C