FEASIBILITY STUDY

Texaco Strickland Site

Prepared for: Strickland Real Estate Holdings, LLC and Chevron Environmental Management Company

Project No. 180357 • January 13, 2026 FINAL

Aspect
A Geosyntec Company

earth + water

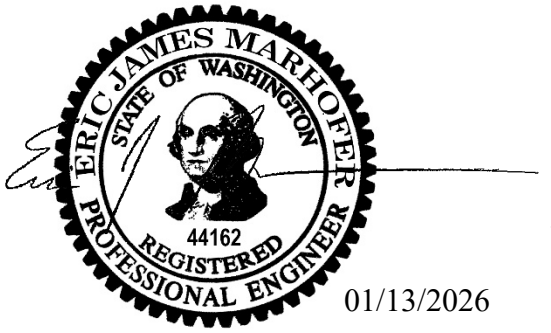
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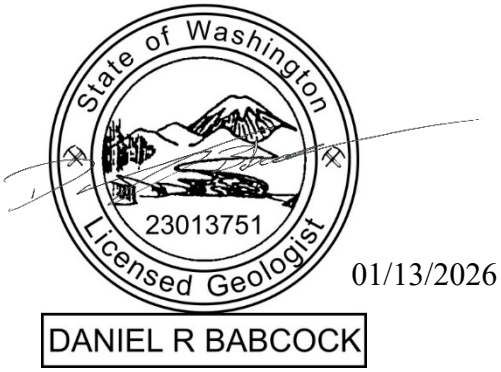
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01/13/2026



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Acronyms

AO	Agreed Order
ARAR	Applicable or relevant and appropriate requirement
Aspect	Aspect Consulting
BETX	benzene, ethylbenzene, toluene and xylenes
Bgs	Below ground surface
CEMC	Chevron Environmental Management Company
CFR	Code of Federal Regulations
CMS	Conceptual site model
COC	Contaminants of concern
cPAHs	Carcinogenic polycyclic aromatic hydrocarbons
CRA	Conestoga-Rovers & Associates
CUL	Cleanup level
DCA	Disproportionate cost analysis
DOH	Washington State Department of Health
EA	Environmental Associates, Inc.
Ecology	Washington Department of Ecology
EDB	1,2-dibromoethane
EDC	1,2-dichloroethane
EHD	Environmental Health Disparities
EPA	U.S. Environmental Protection Agency
FS	Feasibility Study
HEAL	Healthy Environmental Act for All
ISB	In Situ Bioremediation
ISCO	In Situ Chemical Oxidation
LNAPL	Light non-aqueous phase liquid
$\mu g/m^3$	micrograms per cubic meter
MNA	Monitored Natural Attenuation
MTBE	Methyl tert-butyl ether

MTCA	Model Toxics Control Act
NFA	No Further Action
NPV	Net present value
PCBs	polychlorinated biphenyls
PLIA	Washington State Pollution Liability Insurance Agency
PLPs	Potentially liable parties
PVI	Petroleum vapor intrusion
RAO	Remedial action objectives
RCW	Revised Code of Washington
RI/FS	Remedial Investigation/Feasibility Study
SREH	Strickland Real Estate Holdings, LLC
SVE	soil vapor extraction
TAP	Technical Assistance Program
TEE	Terrestrial Ecological Evaluation
TPH	Total petroleum hydrocarbons
TPHd	Diesel total petroleum hydrocarbons
TPHg	Gasoline total petroleum hydrocarbons
TPHo	Oil-range total petroleum hydrocarbons
UGS	US Geological Survey
UIC	Underground Injection Control
U.S.C.	United States Code
UST	Underground storage tank
VOC	volatile organic compound
WAC	Washington Administrative Code

Executive Summary

Aspect Consulting, a Geosyntec company (Aspect), has prepared this Feasibility Study (FS) for the Texaco Strickland Site (the Site), located at 6808 196th Street SW in Lynnwood, Washington (the Property).

Two potentially liable parties (PLPs), Strickland Real Estate Holdings, LLC (SREH) and Chevron Environmental Management Company (CEMC), entered into Agreed Order No. 14315 (the AO) with the Washington State Department of Ecology (Ecology) on August 28, 2018. On December 14, 2020, Ecology named Jiffy Lube International, Inc. (Jiffy Lube) as a third PLP for the Site. Jiffy Lube has not participated in any of the work discussed in this report.

In 2022, an interim cleanup action was performed at the Site resulting in the excavation and off-site disposal of soil contamination exceeding unrestricted cleanup levels (CULs) within the Property boundary to the extent practicable. A limited amount of soil contamination exceeding unrestricted CULs was left in place in the public right-of-way along the northern Property boundary and at depth (greater than 15 feet deep) along the western Property boundary. However, these residual soil impacts do not pose a risk to groundwater or air quality based on subsequent compliance monitoring results and current Property use. Soil contamination associated with the Jiffy Lube Site was fully removed during the Interim Action excavation (see Section 3.2.1).

This report documents the subsequent groundwater and vapor assessment activities performed since the Interim Action, presents an updated conceptual site model for the Site post-Interim Action, and evaluates a limited set of remedial alternatives to complete the cleanup action for the Site and achieve a no further action (NFA) opinion from Ecology.

Based on the results of the Interim Action and the nature and extent of residual soil impacts, active cleanup is considered complete to the extent practicable at this Site. Further excavation does not provide any appreciable benefits to human health or the environment over engineering and institutional controls to ensure ongoing protection of human health and the environment. Therefore, capping with an environmental covenant is recommended as the final remedy for the Site and is expected to satisfy the requirements of the AO and Washington Administrative Code (WAC) 173-340-360. A Cleanup Action Plan will be prepared under separate cover detailing the final remedy for the Site.

1 Introduction

Aspect Consulting, a Geosyntec company (Aspect), has prepared this Feasibility Study (FS) for the Texaco Strickland Site (the Site) located at 6808 196th Street SW in Lynnwood, Washington (the Property). The Site location is shown on Figure 1.

Under the Washington State Model Toxics Control Act (MTCA), a Site is defined as any area where a hazardous substance has been deposited, stored, disposed of, placed, or otherwise come to be located as the result of a release (Washington Administrative Code [WAC] 173-340-200). This Site was previously defined by the extent of petroleum hydrocarbons and related volatile organic chemicals (VOCs) in soil, groundwater, and vapor as described in the Remedial Investigation (RI) Report for the Site (Aspect, 2023a).

This Site is identified in Ecology's cleanup site database as the Texaco Strickland Site, Cleanup Site ID 12541, Facility ID 27496218, and underground storage tank (UST) site ID 6802. Contamination associated with the Site was previously considered to be commingled with contamination associated with another site located on the Property known as the Jiffy Lube Store 2068 (the Jiffy Lube Site; Cleanup Site ID 5805).

Two potentially liable parties (PLPs), Strickland Real Estate Holdings, LLC (SREH) and Chevron Environmental Management Company (CEMC), entered into Agreed Order No. 14315 (the AO) with the Washington State Department of Ecology (Ecology) on August 28, 2018. On December 14, 2020, Ecology named Jiffy Lube International, Inc. (Jiffy Lube) as a third PLP for the Site. Jiffy Lube has not participated in any of the work discussed in this report.

In 2022, an interim cleanup action was performed at the Site resulting in the excavation and off-site disposal of soil contamination exceeding MTCA Method A CULs to the extent practicable (Interim Action; Aspect, 2023b). A limited amount of soil contamination exceeding Method A CULs was left in place in the public right-of-way along the northern Property boundary and at depth (greater than 15 feet deep) along the western Property boundary. However, these residual soil impacts do not pose a risk to groundwater or air based on subsequent compliance monitoring results and current Property use.

1.1 Purpose and Objective

This FS documents the subsequent groundwater and vapor assessment activities performed since the Interim Action, presents an updated conceptual site model (CSM) for the Site post-Interim Action, and evaluates a limited set of remedial alternatives to complete the cleanup action for the Site and achieve a no further action (NFA) opinion from the Washington State Department of Ecology (Ecology).

2 Background

The following section includes general information, history and use of the Property, and a description of the current geologic setting following the Interim Action. A discussion of climate and environmental justice factors are also included for consideration in the FS.

2.1 Property History and Description

The Property is zoned as commercial and identified by Snohomish County Parcel Number 27042000200600. Based on the construction date of the service station building, the Property was first developed in approximately 1959. A review of historical documents has established the following operational history for the Site (Conestoga-Rovers & Associates [CRA], 2011; Aspect, 2019; Aspect, 2020):

- **1959 to 1977 – Texaco-branded Service Station:** The Property was initially developed with a Texaco-branded service station in 1959. Based on construction drawings, the service station consisted of two 4,000-gallon leaded gasoline USTs; one 6,000-gallon leaded gasoline UST; a single pump island with three pumps; associated product conveyance piping; an in-ground vehicle hoist; a 550-gallon used oil UST; and a 1,000-gallon heating oil UST.

  The three gasoline USTs were decommissioned and removed when the Property was converted to a Jiffy Lube/Equilon Lube oil facility in 1977 (Aspect, 2020). The 550-gallon waste oil and 1,000-gallon heating oil USTs remained in place until the 2022 Interim Action excavation when all remaining USTs on the Property were removed (Aspect, 2023b).

- **1977 to 2006 – Jiffy Lube/Equilon Lube Facilities:** In 1977, the Property was converted to an oil change and lube facility, which operated continuously until approximately 2006. During this time, two additional USTs were installed on the Property. According to Ecology's UST database, a 500-gallon used oil UST and a 3,000-gallon motor oil UST were installed in June of 1982. In 1995, these two USTs were decommissioned: the 500-gallon used oil UST was closed in place, and the 3,000-gallon motor oil UST was removed. All remaining USTs and soil contamination associated with the Jiffy Lube/Equilon Lube facilities were removed during the Interim Action excavation (Aspect, 2023c).

- **2006 to 2018 – Aloha Café:** In 2006, the building on the Property was renovated into a restaurant, Aloha Café, which operated until 2018.

- **2018 to Present –** The Property was vacated in 2018 to facilitate RI and cleanup activities. In September 2022, the building on the Property was demolished ahead of the Interim Action. Following the Interim Action excavation, the Property was backfilled with clean fill material. The Property is currently a vacant gravel lot.

2.2 Adjacent Property Description

A brief description of relevant historical and current uses of the surrounding properties is included below.

2.2.1 North – Upgradient 68th Center Property

A commercial strip mall is located to the north of the Property across 196th Street SW. This property (tax parcel 27041700307000) was historically occupied by a Shell-branded service station with confirmed releases of petroleum and impacts to soil and groundwater. Shell is pursuing an opinion through the Washington State Pollution Liability Insurance Agency's (PLIA's) Technical Assistance Program (TAP).

2.2.2 East – Edmonds Community College Property

The parcel to the east of the Property (tax parcel 27042000103100), across 68th Avenue West, is currently used as parking for Edmonds Community College. This parcel was previously occupied by an Exxon-branded service station, which had confirmed releases of petroleum hydrocarbons to soil and groundwater. A remedial excavation was conducted on the Property in 2005, and a NFA determination was issued by Ecology in 2007.

2.2.3 West – Strip Mall

The parcel to the west of the Property (tax parcel 27042000200800) is commercially occupied by a strip mall, where a dry cleaner (Slater's One Hour Cleaners) historically operated. According to city directory records, Slater's One Hour Cleaners operated from at least 1971 through at least 2013.

2.2.4 South – Chri-Mar Apartments

The parcels to the south of the Property (tax parcels 27042000201000 and 27042000200900) are occupied by a multi-family residential apartment building and operated as Chri-Mar Apartments. Chlorinated solvents in soil, groundwater, and soil gas were documented on this property as part of the environmental characterization work performed by Environmental Associates, Inc. (EA) on behalf of that property owner (EA, 2016a, 2016b, and 2018). Petroleum hydrocarbons were not detected in soil or groundwater at this property during the EA work in 2016 and 2018; however, benzene was detected in soil gas, indoor air, and outdoor air as part of the work performed by EA (EA, 2016a and 2018). In January 2023, a crawlspace ventilation system was installed at the Chri-Mar Apartment building to mitigate potential risks to indoor air quality during completion of the Interim Action and selection of a final remedy for the Site (see Section 4).

2.3 Geologic and Hydrogeologic Setting

Prior to the Interim Action, Site geology generally consisted of imported fill to depths up to 10 feet below ground surface (bgs) and Vashon till extending to the maximum depth explored at the Site of 40.5 feet bgs. The imported fill extended to depths of approximately 4 to 10 feet bgs and was encountered in all soil borings at the Site during investigation activities (Aspect, 2023a). Following the Interim Action excavation, imported fill on the Property now extends to depths of up to 28 feet bgs.

Beneath the fill, Vashon till was encountered in all soil borings at the Site during RI activities, which is consistent with the US Geological Survey (USGS) mapped geologic unit of the area (USGS, 1983). The till encountered during subsurface explorations had a variable composition and included silt (MH); sandy silt with gravel (ML); silty sand and silty sand with gravel (SM); sand with silt and sand with silt and gravel (SW/SP-SM); and sand with gravel (SP). The density of the till was consistent across the Site, ranging from medium dense at the fill-till interface and increasing in density to very dense within a few feet below the interface. The top few feet of till appears to have been weathered in place prior to being buried under fill material during redevelopment of the area in the early 20th century (Aspect, 2023a).

The majority of the subsurface explorations conducted during RI activities were completed using a hollow-stem auger drilling rig, and geotechnical information was collected for nearly all borings. Based on the observed blow counts, the weathered, medium dense top of till varied in thickness between 2.5 and 15 feet. The underlying unweathered till is differentiated based on the blow counts and inferred density during drilling. Boring logs from RI activities were provided in the RI Report (Aspect, 2023a).

Following the Interim Action excavation, groundwater is present at the Site in a surficial, unconfined, and potentially perched aquifer. Groundwater is encountered at depths ranging from 4 to 15 feet bgs. Consistent with the RI Report (Aspect, 2023a), groundwater flow at the Site is generally to the southwest, with minor seasonal variation.

2.4 Climate

This section presents a discussion of current and future climate considerations for the final remedy at the Site.

2.4.1 Current Climate

The Site's climate is characterized by mild temperatures and a rainy season, with considerable cloudiness during the winter. Average winter daytime temperatures are in the 40s (degrees Fahrenheit) and nighttime temperatures in the 30s or below. During the summer, daytime temperatures are in the 80s, with nighttime temperatures in the 50s. April to September is generally the dry season, with July being the driest month of the year. October to March is generally the rainy season, with more than 75 percent of the average annual precipitation falling during that time (NOAA, 2025).

2.4.2 Climate Change

Ecology has identified that preparing and adapting to climate change impacts, including rising sea levels, extreme precipitation events, severe drought, increased wildfire risk, and marine water acidification, is a critical challenge for the state. Assessing the vulnerability of a site remedy involves assessing the remedy's exposure to climate or weather hazards of concern and the remedy's sensitivity to those hazards. Ecology has identified environmental trends in the Pacific Northwest to assist in the evaluation of climate change projections relevant to the vulnerabilities of remedy selection and implementation (Ecology, 2023).

Based on the Site location and topography, climate change is not expected to result in increased landslide risk or adverse effects from sea level rise for this Site. Potential

effects of climate change at the Site include changes in weather, such as seasonal rainfall patterns and the magnitude and frequency of extreme storm events, which could increase flooding risk in some areas.

2.5 Environmental Justice Screening

This section presents a discussion of environmental justice considerations for the final remedy at the Site. Washington State is committed to reducing environmental and health disparities in the state and improving the health of all its residents. State and national studies have found that people of color and low-income people continue to be disproportionately exposed to environmental harms in the places they live. As a result, there is a higher risk of adverse health outcomes for those communities. This risk is amplified when overlaid on communities with preexisting social and economic barriers and environmental risks, creating cumulative environmental health impacts.

To address and prevent such environmental health disparities, Ecology requires RIs to include a determination of whether the population threatened by a contaminated site includes a likely vulnerable population or overburdened community (WAC 173- 340-350(6)(h)(iii)).

- Vulnerable populations are groups that are more likely to be at higher risk for poor health outcomes in response to environmental harms, due to: (i) adverse socioeconomic factors, such as unemployment, high housing and transportation costs relative to income, limited access to nutritious food and adequate health care, linguistic isolation, and other factors that negatively affect health outcomes and increase vulnerability to the effects of environmental harms; and (ii) sensitivity factors, such as low birth weight and higher rates of hospitalization. Vulnerable populations include, but are not limited to, racial or ethnic minorities, low-income populations, populations disproportionately impacted by environmental harms, and populations of workers experiencing environmental harms.

- An overburdened community is defined as a geographic area where vulnerable populations face multiple, combined environmental harms and health impacts and includes, but is not limited to, highly impacted communities. Highly impacted communities are communities designated by the Washington State Department of Health DOH based on cumulative impact analyses or a community located in census tracts that are fully or partially on "Indian country" as defined in 18 United States Code (U.S.C.) Sec. 1151.

In accordance with the legislation, this RI includes an environmental justice screening to determine whether the potentially exposed population includes a likely vulnerable population or overburdened community. This screening is conducted in accordance with the Healthy Environmental Act for All (HEAL) Act, Chapter 70A.02 RCW, WAC 173-340-200. Tools identified in “Implementation Memorandum No. 25: Identifying Likely Vulnerable Populations and Overburdened Communities under the Cleanup Regulations” (Ecology, 2024) were used to complete the environmental justice screening, including the Environmental Health Disparities (EHD) Index from the EHD Map maintained by the DOH (DOH, 2025a).

2.5.1 Environmental Health Disparities Index Results

The EHD Map is divided into communities based on census tracts, which vary in size from 2,000 to 8,000 people. Communities are assigned an environmental health disparity index using a 1 to 10 ranking scale, with 1 being low risk and 10 being high risk for environmental health disparities. The Site is in a single census tract 53061051500.

The Site had an overall EHD ranking of 6. This ranking is calculated based on environmental exposures, environmental effects, socioeconomic factors, and sensitive populations, as described below:

- Environmental exposures had a medium (7) ranking for the Site.
- Environmental effects had a medium (6) ranking due to lead risk from housing and proximity to wastewater discharge.
- Socioeconomic factors were ranked medium (7) due to a high percentage of the population living in poverty, transportation expense, unaffordable housing, and unemployment.
- Sensitive populations had a low (2) ranking due to high death rates from cardiovascular disease and high percentages of low birth weight.

2.5.2 Overall Screening Results

Ecology considers the potentially exposed population to include a likely vulnerable population or overburdened community if the population has a ranking of 9 or 10 on the EHD Index from DOH's EHD Map (Ecology, 2024). The results of the EHD ranking evaluation did not indicate any rankings higher than 7. Therefore, the potentially exposed population for this Site does not appear to include a likely vulnerable population or overburdened community.

3 Summary of Remedial Investigation and Interim Action

Prior to the Interim Action, an RI was completed for the Site in accordance with MTCA and the AO. The RI and Interim Action are briefly summarized in the following sections.

3.1 Remedial Investigation

Based on evaluation of prior environmental investigations and the RI investigation, the contaminated media at the Site included soil, groundwater, and soil gas. Contaminants of concern (COCs) were also detected in indoor air at the Chri-Mar Apartments at that time but considered to be present because of background sources. Site COCs and media of concern were defined in the RI Report as follows:

- Gasoline-, diesel-, and oil-range total petroleum hydrocarbons (TPHg, TPHd, and TPHo, respectively); benzene, toluene, ethylbenzene, and xylenes (BTEX); and naphthalene in soil and groundwater.
- Total petroleum hydrocarbons (TPH), benzene, and naphthalene in soil gas and potentially indoor air.

The nature and extent of contamination at the Site prior to the Interim Action is detailed in the RI Report (Aspect, 2023a). The Site was considered fully characterized with respect to the nature and extent of contamination at the conclusion of the RI, therefore an independent Interim Action was undertaken to remove the source of contamination.

3.2 Interim Action

Between August 2022 and January 2023, a remedial excavation was conducted as part of an independent Interim Action to remove contamination on the Property exceeding applicable CULs to the extent practicable. The results of the Interim Action are documented in the Interim Action Report (Aspect 2023b).

A total of 14,437 tons of petroleum-contaminated soil was permanently removed from the Site and trucked to Cadman's Everett facility as Class III petroleum-contaminated soil for permitted treatment and disposal. The soil removal action was performed to a maximum depth of 28 feet (minimum Elevation 423 feet) and extended to the northern and western Property lines. The previously defined extent of light non-aqueous phase liquid (LNAPL, or free product) was completely removed from the Site. The extent of residual TPH-related impacts in soil exceeding MTCA Method A CULs is shown on Figure 2.

3.2.1 Jiffy Lube Site Cleanup

This section summarizes the characterization and cleanup of the Jiffy Lube Store 2068 Site (Jiffy Lube Site; Cleanup Site ID #5805, Facility ID #27496218), formerly located on the Property. The nature and extent of soil and groundwater contamination associated with the Jiffy Lube Site was characterized during the Texaco Strickland Site RI (Aspect, 2023a). Soil contamination associated with the Jiffy Lube Site was fully removed during

the Interim Action excavation in 2022. Soil quality at the final extents of the Interim Action excavation were below MTCA Method A CULs for TPHo, as verified by the 115 confirmation soil samples collected at the final Interim Action excavation limits (Aspect, 2023b). As a result, an NFA was requested from Ecology for the Jiffy Lube Site in 2023 (Aspect, 2023c) pending confirmation groundwater monitoring results which confirmed compliance with cleanup levels as described in section 3.2.2.

3.2.2 Confirmation Groundwater Monitoring

Following the Interim Action excavation, confirmation groundwater monitoring was conducted at the Site to evaluate protectiveness of residual soil impacts with respect to groundwater. Six new monitoring wells (MW-18R, MW-25R, and MW-29 through MW-32) were installed in July 2023 to establish a post-Interim Action monitoring well network with a total of 11 monitoring wells (Aspect 2023d). Monitoring well locations are shown on Figure 3. Boring logs and well completion diagrams for new monitoring wells are included in Appendix A.

Quarterly confirmation groundwater monitoring was conducted from August 2023 through May 2024 at the Site. Groundwater monitoring results were below MTCA Method A CULs for four consecutive quarters as shown in Table 1. Laboratory analytical reports for confirmation sampling results are included in Appendix B for reference. Data validation reports are included as Appendix E.

Groundwater direction at the Site is predominantly to the southwest as illustrated on Figure 3. Depth to water at the Site ranged from approximately 6 to 14 feet bgs (or 433.19 feet to 445.15 feet above sea level) over the most recent of the four quarters of monitoring. Calculated groundwater elevations are summarized in Table 1.

4 Chri-Mar Building Ventilation System

Concurrently with the Interim Action, and out of an abundance of caution for public health concerns, a ventilation system was installed at the Chri-Mar apartment building to mitigate potential risks for indoor air quality. This section describes the construction of the ventilation system and subsequent compliance monitoring results.

4.1 Ventilation System Construction and Operational Monitoring

The ventilation system was installed in accordance with the Ventilation Work Plan (Aspect, 2023e) and included the following:

- Installing perforated piping on top of the bare soil in the crawl space.
- Installing a physical vapor barrier membrane (6-mil low density polyethylene [LDPE]) over top of the perforated piping and sealing the membrane to the building foundation walls.
- Installing a ventilation fan and riser piping from the perforated piping to the roofline on the building's north facing exterior wall.
- Supplying power to the ventilation fan.
- Installing a vacuum gauge and sample port in the riser piping, upstream of the fan inlet, to monitor performance.

Monthly operational monitoring was conducted between February 2023 and April 2024 to confirm the system was maintaining a vacuum below the vapor barrier membrane.

4.2 Performance Monitoring

Performance monitoring of the ventilation system was conducted in September and December 2023 in accordance with the Ventilation Work Plan. The results of indoor, crawlspace, and ambient air sampling were documented in the 4th Quarter 2023 and 1st Quarter 2024 Progress Reports for the Site (Aspect, 2024a and 2024b). The performance monitoring results were consistent with the conclusions in the Ecology-approved RI Report that indoor air exceedances 1) do not correlate with crawlspace exceedances, and 2) are not a result of vapor intrusion from the Site (Aspect, 2023a).

As a result of these performance monitoring results, the ventilation system was shut down in April 2024 to assess air quality under passive conditions post-Interim Action. In accordance with the Ventilation Work Plan, post-shutdown performance monitoring was conducted in June 2024, approximately 6 weeks after turning off the ventilation system.

The results of post-shutdown indoor, crawlspace, and ambient air sampling were documented in the 2nd Quarter 2024 Progress Report for the Site (Aspect, 2024c). The net concentration for TPH in crawlspace air samples exceeded the generic MTCA Method B cleanup level for unrestricted use; therefore, in accordance with Ecology

guidance for vapor assessments (Ecology, 2022), the sample with the highest TPH concentration was used to calculate a site-specific Method B air cleanup level for unrestricted use. The resulting site-specific TPH cleanup level was 636 micrograms per cubic meter ($\mu g/m^3$). Following correction for background air quality, the net concentrations of BTEX, naphthalene, and TPH in all crawlspace samples were below their respective Method B CULs and the site-specific TPH cleanup level for unrestricted use under passive venting conditions. Indoor air exceedances were limited to benzene and naphthalene and continued to be attributed to background sources within the building as described in the RI Report, not a result of vapor intrusion from the Site.

4.3 Confirmation Monitoring

Based on the results of post-shutdown sampling, there were no impacts to crawlspace or indoor air because of vapor intrusion from the Site. Therefore, the ventilation system remained off. Passive vent confirmation sampling was conducted in September and December of 2024 in accordance with the Ventilation Work Plan to confirm soil gas concentrations within the vent system were below applicable CULs for unrestricted use.

The results of passive vent confirmation sampling are summarized in Table 2, and further interpreted as follows:

- TPH was not detected above the site-specific unrestricted indoor air cleanup level, the vent sample, nor the ambient outdoor background air samples.
- BTEX and naphthalene were not detected above their respective unrestricted indoor air CULs in the vent sample.
- Benzene and naphthalene were detected ambient outdoor background air samples, which is consistent with historical results and previous assertions that benzene and naphthalene detections in indoor air samples are attributable to background sources.
- There were no detections of any contaminants above their respective unrestricted soil gas screening levels.

Laboratory analytical reports from confirmation vapor sampling are provided in Appendix C for reference. Data validation reports are included as Appendix E. As a reminder, summary tables and analytical reports from earlier performance monitoring events can be found in the previously referenced quarterly progress reports and RI Report.

4.4 Post-Interim Action Petroleum Vapor Intrusion Assessment

In addition to the confirmation monitoring results described in the previous section, a post-Interim Action petroleum vapor intrusion (PVI) assessment provides an additional line of evidence that there is no longer a risk of PVI for the Chri-Mar apartment building. The building is located outside the prescribed 30-foot lateral inclusion zone from documented residual soil contamination exceeding unrestricted MTCA Method A CULs following the Interim Action excavation (Aspect, 2023b). There are also no longer any groundwater impacts exceeding Method A CULs at the Site. Therefore, there is no longer a risk of PVI for the Chri-Mar apartment building based on Ecology's PVI screening guidance (Ecology, 2022).

5 Updated Conceptual Site Model

This section presents the updated CSM following the Interim Action cleanup activities, including the remaining COCs, nature and extent of residual contamination, and exposure pathway assessment for human health and ecological risks.

5.1 Contaminants of Concern and Affected Media

The remaining COCs retained for the Site are based on the occurrence of chemicals positively identified above MTCA Method A CULs following the Interim Action cleanup and monitoring activities summarized in Sections 3 and 4. The current confirmed COCs for this Site based on this criterion are:

- TPHg, BTEX, and naphthalene in soil.

Groundwater is no longer retained as an affected media based on the results of confirmation groundwater monitoring documented in Section 3.2.2.

Soil gas is retained as a potentially affected media due to residual soil contamination exceeding unrestricted cleanup levels at the Site. However, air (including indoor air) is not retained based on the results of confirmation ventilation system monitoring documented in Section 4.3.

For reference, TPHd and TPHo have not been detected at the Site above cleanup levels following the Interim Action cleanup activities (Aspect 2023b). Additionally, lead, 1,2-dibromoethane (EDB), 1,2-dichloroethane (EDC), methyl tert-butyl ether (MTBE), polychlorinated biphenyls (PCBs), and carcinogenic polycyclic aromatic hydrocarbons (cPAHs) were previously eliminated as potential COCs during the RI (Aspect, 2023a).

5.2 Nature and Extent of Contamination

This section describes the updated nature and extent of contamination at the Site based on the confirmation soil, groundwater, and vapor data collected since the Interim Action cleanup activities were completed.

5.2.1 Soil Impacts

As described in Section 3.2, residual soil impacts exceeding unrestricted Method A CULs following Interim Action cleanup activities are present in two areas of the Site:

1. TPHg, BTEX, and naphthalene remains in-place within the public right-of-way to the north of the Property boundary at a depth of approximately 4 to 9 feet bgs.
2. Low concentrations of benzene only remain in-place along the western Property boundary at a depth of approximately 16 to 25 feet bgs (below the seasonal low water table).

The extent of soil impacts is shown on Figure 2. Detailed analytical results were provided in the Interim Action Report (Aspect 2023b).

5.2.2 Groundwater Impacts

Based on the results of confirmation monitoring conducted at the Site following completion of the Interim Action, there are no impacts to groundwater exceeding MTCA Method A CULs. Therefore, groundwater is no longer considered an affected media at the Site.

5.2.3 Vapor Impacts

Based on the results of confirmation monitoring conducted for the Chri-Mar apartment building following completion on the Interim Action, there are no impacts to soil gas or indoor air exceeding applicable Method B CULs for unrestricted use.

Based on the lateral distribution of residual soil impacts exceeding Method A CULs at the Site, there is one other commercial building to the west of the Property located within the prescribed 30-foot lateral inclusion zone for consideration of PVI. However, given the depth of the soil impacts along the western Property boundary (over 15 feet bgs and below the water table) the building screens out for further PVI assessment based on vertical separation distance and a lack of soil impacts in the vadose zone (Ecology, 2022).

There currently aren't any further concerns for vapor impacts to air at the Site based on the current Property condition and use. The Property is a vacant gravel parking lot. The potential for vapor impacts will need to be considered if the Property is redeveloped.

5.3 Contaminant Fate and Transport

This section describes the contaminant fate and transport of COCs at the Site following the Interim Action excavation. Transport mechanisms for petroleum impacts include adsorption and advection through groundwater movement. Petroleum impacts from source areas were initially absorbed into the soil matrix around and below the historical USTs, pump islands, and product piping. The vertical distribution of the release above the water table was driven by gravity and facilitated by capillary forces. The horizontal distribution of the release was facilitated by water table fluctuations and groundwater flow to the southwest. However, the lateral migration of contamination was limited by the dense native till at the Site.

The LNAPL (free product) source and associated soil contamination within the Property boundary was removed during the Interim Action excavation. Residual soil impacts remain within the public right-of-way to the north and along the western Property boundary below the water table (Section 5.2.1).

Transport mechanisms for the residual COC impacts in soil at the Site include leaching to groundwater and diffusion to the vapor phase. Leaching to groundwater does not appear to be occurring based on confirmation groundwater monitoring results. Additionally, the potential for diffusion to the vapor phase does not pose a risk to air quality as discussed in Section 4.

5.4 Exposure Pathway Assessment

The two primary exposures associated with the presence of the COCs at the Site are human health and terrestrial ecological risk. The nature and extent of COCs in the affected media at a Site determines the potential exposure scenarios for both.

The potential exposure pathways that may affect human health are through contact with soil, groundwater, and vapor. The following sections provide a description of the potential exposure pathways considered in this assessment.

5.4.1 Soil Exposure Pathways

The two potential exposure pathways for soil are direct contact and leaching to groundwater as follows:

- **Direct-contact exposure pathway**: The direct-contact exposure pathway considers both dermal contact and ingestion of soil at the Site, to a maximum depth of 15 feet bgs. Residual soil impacts exist above unrestricted CULs at a depth of 4 to 9 feet within the public right-of-way to the north of the Property. However, the right-of-way remains capped with pavement for the sidewalk and roadway. While there is no risk of direct contact with residual soil impacts for the general public, there is a low risk of exposure for construction workers that may perform utility work in the right-of-way.
- **Soil leaching-to-groundwater transport pathway:** The soil leaching-to-groundwater transport pathway requires consideration of the highest beneficial use of groundwater at the Site in accordance with WAC 173-340-357(3)(d). The highest potential beneficial use of groundwater at the Site is drinking water. The highest potential use of groundwater at this Site is drinking water. Confirmation groundwater monitoring results following the Interim Action cleanup activities provide an empirical demonstration that the soil leaching-to-groundwater transport pathway is incomplete. Additionally, shallow residual soil impacts above the water table in the public right-of-way are capped with an impervious surface, which prevents soil leaching. Therefore, the risk of transport via the soil leaching-to-groundwater pathway is considered low and this transport pathway is considered incomplete.

5.4.2 Groundwater Exposure Pathways

The two potential exposure pathways for groundwater are groundwater-ingestion and groundwater-to-surface water as follows:

- **Groundwater-ingestion exposure pathway:** This groundwater exposure pathway considers ingestion of groundwater at the Site. The groundwater ingestion exposure pathway is considered incomplete and there is no risk of exposure for the following reasons:
    - There are no groundwater impacts exceeding Method A cleanup levels for unrestricted use based on confirmation groundwater monitoring results following Interim Action cleanup activities.

  - Potable water for the Property and surrounding properties is served by a municipal water supply.
  - DOH maintains a database of public drinking water wells/systems. DOH records list no such drinking water wells within a mile radius of the Property (DOH, 2025b).

- **Groundwater-to-surface water transport pathway:** Surface water not present on or in the vicinity of the Site. Additionally, there are no groundwater impacts exceeding Method A cleanup levels for unrestricted use based on confirmation groundwater monitoring results following Interim Action cleanup activities. Therefore, there is no risk of transport via the groundwater-to-surface water pathway and the pathway is considered incomplete.

5.4.3 Vapor Exposure Pathway

The vapor exposure pathway considers exposures to volatilized soil gas from chemicals dissolved in groundwater, sorbed to soil particles, or separate LNAPL (free product) in the subsurface. Residual soil impacts at the Site remain above unrestricted CULs at a depth of 4 to 9 feet within the public right-of-way to the north of the Property and at a depth of 16 to 25 feet along the western Property boundary. However, there are no buildings located within prescribed lateral and/or vertical screening distances for PVI (see Sections 4.4 and 5.2.3). Therefore, the vapor exposure pathway is considered incomplete and there is no risk of exposure based on current Property conditions. The potential for vapor exposure will need to be reevaluated if the Property is redeveloped with structures that encroach on areas of residual soil impacts exceeding unrestricted CULs.

5.5 Terrestrial Ecological Evaluation

The purpose of the Terrestrial Ecological Evaluation (TEE) is to assess the potential risk to terrestrial plants and/or animals that live entirely or primarily on affected land. This Site qualifies for a TEE exclusion under WAC 173-340-7491 (1)(c); "...there is less than 1.5 acres of contiguous undeveloped land on or withing 500 feet of any area of the Site." A copy of the TEE form documenting this exclusion was previously provided in the Ecology-approved RI Report for the Site (Aspect, 2023a).

6 Cleanup Requirements

This section presents the proposed cleanup standards by which evaluation of remedial action(s) will be measured. The areas to be addressed by remedial action(s) are also recapped below.

6.1 Applicable or Relevant and Appropriate Requirements

The most applicable or relevant and appropriate requirement (ARAR) for the Site is Ecology's MTCA CULs and regulations that address the implementation of a cleanup under MTCA (Chapter 173.105D Revised Code of Washington [RCW]; Chapter 173-340 WAC). Other potential ARARs include:

- Federal Clean Water Act (33 U.S. Code [U.S.C.] 1251)
- Federal Water Quality Standards (40 CFR Part 131)
- Occupational Safety and Health Act (29 Code of Federal Regulations [CFR] Subpart 1910.120)
- Water Pollution Control (Chapter 90.48 RCW)
- Water Resources Act of 1971 (Chapter 90.54 RCW)
- Water Quality Standards for Surface Waters of the State of Washington (Chapter 178-201A WAC)
- Hazardous Waste Management (Chapter 70.105 RCW)
- Dangerous Waste Regulations (Chapter 173-303 WAC)
- Solid Waste Management Reduction and Recycling (Chapter 70.95 RCW)
- Washington Industrial Safety and Health Act (Chapter 49.17 RCW)
- Archaeological Sites and Resources (Chapter 27.53 RCW)
- Washington Clean Air Act (Chapter 70.94 RCW)
- State Environmental Policy Act (Chapter 43.21C RCW, Chapter 173-802 WAC, and Chapter 197-11 WAC)
- Minimum Standards for Construction and Maintenance of Wells (Chapter 173-160 WAC)
- Underground Injection Control (UIC) Program (Chapter 173-218 WAC)
- Puget Sound Clean Air Agency Regulations (http://www.pscleanair.org)
- Permits from local municipalities, as required, for activities at the Site; examples include City of Lynnwood demolition, tree clearing, grading, and street use or right-of-way permits.

6.2 Cleanup Standards

Cleanup actions conducted in accordance with MTCA must comply with cleanup standards for the identified COCs and affected media as well as ARARs based on federal and state laws (WAC 173-340-710). Cleanup standards for the Site include establishing CULs and the points of compliance at which those CULs will be attained in soil, groundwater, and air. The following presents a discussion of recommended cleanup levels and points of compliance for the Site based on the nature and extent of contamination and exposure risks following the Interim Action cleanup activities.

6.2.1 Cleanup Levels

Recommended CULs for affected media at the Site are:

- **Soil.** MTCA Method A CULs for unrestricted use, except where empirical demonstration is used to demonstrate protection of groundwater.
- **Groundwater.** MTCA Method A CULs for protection of drinking water as a beneficial use.
- **Air.** MTCA Method B CULs for unrestricted use, including the site-specific cleanup level for TPH (636 µg/m3; see Section 4.2). Cleanup levels may be adjusted for a commercial scenario in accordance with WAC 173-340-750, if appropriate.

6.2.2 Points of Compliance

The standard points of compliance have been selected for the Site as:

- **Soil** ***for protection from direct contact*****.** Ground surface to a depth of 15 feet bgs.
- **Soil** ***for protection of groundwater***. Throughout the Site.
- **Groundwater** ***for protection of drinking water*****.** Extending vertically from the upper-most depth of the saturated zone to the lowest depth potentially affected.
- **Air** ***for protection from inhalation*****.** Ambient and indoor air throughout the Site.

When it is not practicable to achieve CULs in soil at the standard points of compliance, the cleanup action may involve containment of hazardous substances. In accordance with WAC 173-340-740(6)(f), remedies involving containment may still be determined to comply with cleanup standards, provided:

1. The selected remedy is permanent to the maximum extent practicable.
2. The cleanup action is protective of human health and the environment.
3. Appropriate institutional controls, including compliance monitoring and periodic reviews, are implemented.

6.3 Areas Requiring Remediation

Following Interim Action cleanup activities, the only area of the Site not currently in compliance with these cleanup standards is the residual soil impacts in the public right-of-way to the north of the Property at a depth of approximately 4 to 9 feet bgs (Figure 2). Soil impacts remaining in the vadose zone (above the water table) in this area exceed

unrestricted Method A CULs and pose a potential PVI risk for future redevelopment of the Property. Additionally, if the existing pavement cap is removed in the right-of-way, the residual impacts could pose a risk to construction workers through direct contact.

7 Detailed Evaluation and Selection of Remedial Alternatives

The FS considers the requirements under 173-340-350 WAC, Site-specific conditions, and the criteria defined in 173-340-360 WAC for screening and evaluation of potentially feasible remedial alternatives for the Site.

7.1 Remedial Action Objectives

Remedial action objectives (RAOs) for the Site are intended to comply with ARARs and protect human health and the environment. Based on the potential exposure pathways and areas requiring remediation at the Site, the following RAOs have been established for the remedial alternatives being considered for Site

- Protection from soil impacts in the vadose zone leaching to groundwater;
- Protection from direct contact with soil impacts; and
- Protection from inhalation of vapors from soil impacts in the vadose zone.

7.2 Identification and Evaluation of Remedial Technologies

This section identifies and screens applicable remedial technologies that may be effective cleanup action components for the Site based on the RAOs. The technologies that are retained through this screening process are used to develop the remedial alternatives in the following sections. Applicable remediation technologies for addressing the areas requiring further remediation at the Site include:

- **Institutional Controls.** Measures to limit or prohibit activities that may interfere with the integrity of a cleanup action or result in exposure to hazardous substances (e.g., limitations on the use of the Property or resources, such as an environmental covenant or maintenance requirements for engineering controls).
- **Engineering Controls.** Containment and/or mitigation systems designed to prevent or limit the movement of, or the exposure to, hazardous substances (e.g., paving/capping, vapor barriers).
- **Monitored Natural Attenuation (MNA).** Monitoring the reduction of contaminants through natural processes over time (e.g., biodegradation).
- **Soil Vapor Extraction (SVE).** Extracting contaminants in the form of soil vapor and introducing oxygen into the unsaturated zone to enhance microbial activity.
- **In Situ Chemical Oxidation (ISCO).** Injecting or mixing an oxidant, such as potassium permanganate or sodium persulfate, into the subsurface to react with and destroy contaminants.
- **In Situ Bioremediation (ISB).** Introducing oxygen (aerobic) or other electron acceptors (anaerobic) into the subsurface to stimulate microbial biodegradation of contaminants (e.g., injecting a soil amendment or bioventing).

- **Soil Excavation and Off-Site Disposal.** Removal of impacted soil, followed by off-site disposal.

These technologies are summarized and screened based on their potential effectiveness, implementability, and relative cost in Table 3. Technologies with low effectiveness or implementability were not retained for development of remedial alternatives. The technologies retained for further development as remedial alternatives are:

- Institutional Controls
- Engineering Controls
- Soil Excavation and Off-Site Disposal

7.3 Development of Remedial Alternatives

Two remedial alternatives were developed for comparison with MTCA criteria for cleanup actions using the technology retained in the initial screening:

1. Capping (engineering control) with an Environmental Covenant (institutional control)

2. Excavation and Off-Site Disposal of Soil Impacts in the right-of-way

Remedial alternatives are described in the following sections. Feasibility-level costs estimates were developed for each alterative in accordance with U.S. Environmental Protection Agency (EPA) cost estimating guidance (EPA, 2000) and professional experience with similar projects. Feasibility-level cost estimates have an inherent accuracy of +50/-30 percent by definition and should be reviewed with that in mind. Long term costs have been adjusted for net present value (NPV) using an assumed discount rate of 2 percent. Cost estimate details and assumptions are provided in Appendix D for each alternative and do not include costs already incurred for previous interim or remedial actions.

7.3.1 Alternative 1 – Excavation and Off-Site Disposal

This alternative builds on the protectiveness of Alternative 1 through the removal of soil impacts in the public right-of-way exceeding cleanup standards. Excavation and off-site disposal of soil impacts includes the following elements:

- Traffic controls for right-of-way and road closures during construction activities.
- Removal of the asphalt road and concrete sidewalk in the right-of-way to facilitate excavation activities.
- Temporary removal and replacement of public utilities in the right-of-way to facilitate shoring installation and excavations.
- Installation of shoring around the planned excavation area shown on Figure 4 to facilitate excavation activities.
- Excavation and off-site disposal of approximately 360 cubic yards (600 tons) of petroleum-contaminated soil from the area shown on Figure 4.
- Confirmation soil sampling during the excavation.

- Restoration of the roadway and sidewalk following the cleanup.
- Extensive permitting and coordination with the City of Lynnwood and utility companies is anticipated.

For cost estimating purposes, the duration of this alternative is estimated to be approximately 4 weeks of construction activities. Design and permitting are anticipated to take up to a year. The estimated cost for implementation of this alternative is $860,000 (Table D.1; Appendix D).

7.3.2 Alternative 2 – Capping with Environmental Covenant

This alternative achieves RAOs for the Site through engineering and institutional controls and includes the following elements:

- Maintaining the existing impervious surfaces over the public right-of-way as an engineering control to effectively cap shallow soil impacts and prevent direct contact and/or leaching to groundwater.
- Placing an environmental covenant on the public right-of-way and the Property to control activities that could result in risk of exposures related to soil impacts leaching to groundwater, direct contact, or vapor intrusion (e.g., permanent removal of the impervious cap or redevelopment including structures within 30 feet of residual soil impacts).
- Periodic protectiveness monitoring to inspect the impervious surfaces acting as the cap and confirm the effectiveness of the remedy.

For cost estimating purposes, the duration of this alternative is estimated to be 30 years. The estimated cost of this alternative over this time period is $160,000 (Table D.2; Appendix D).

7.4 Evaluation of Remedial Alternatives

This section considers the general requirements for cleanup actions under MTCA and provides a disproportionate cost analysis (DCA) to determine whether the remedial alternatives use permanent solutions to the maximum extent practicable.

7.4.1 General Cleanup Requirements

Cleanup actions selected under MTCA must meet the following 10 requirements identified in WAC 173-340-360(3)(a):

- Protect human health and the environment, including likely vulnerable populations and overburdened communities
- Comply with cleanup standards
- Comply with applicable state and federal laws
- Prevent or minimize present and future releases and migration of hazardous substances in the environment

- Provide resilience to climate change impacts that have a high likelihood of occurring and severely compromising its long-term effectiveness
- Provide for compliance monitoring
- Not relying primarily on institutional controls and monitoring at a site, or a portion thereof, if it is technically possible to implement a more permanent action
- Not relying primarily on dilution and dispersion unless the incremental costs of any active remedial measures over the costs of dilution and dispersion grossly exceed the incremental degree of benefits of active remedial measures over the benefits of dilution and dispersion
- Provide for a reasonable time frame
- Use permanent solutions to the maximum extent practicable

A summary of alternatives compared to these general cleanup requirements is provided in Table 4. Both remedial alternatives meet these requirements, pending evaluation of the DCA below.

7.4.2 Disproportionate Cost Analysis

In addition to meeting the general requirements for a cleanup action, MTCA also allows for consideration of cost in selecting a final remedy. A DCA is conducted to determine whether a cleanup action uses permanent solutions to the maximum extent practicable by comparing the relative benefits and costs of cleanup alternatives. Six criteria are considered in the evaluation, as specified in WAC 173-340-360(5)(d):

- **Protectiveness:** Overall protectiveness of human health and the environment, including the degree to which existing Site risks are reduced, time required to reduce the risks and attain cleanup standards, on-Site and off-Site risks during implementation, and improvement in overall environmental quality.
- **Permanence:** Degree to which the alternative reduces the toxicity, mobility, or volume of hazardous substances, including the adequacy of destroying hazardous substances, the reduction or elimination of hazardous substance releases and sources of releases, the degree of irreversibility of treatment, and the characteristics and quantity of the treatment residuals.
- **Long-term effectiveness:** Degree of certainty that the alternative will successfully and reliably address contamination that exceeds applicable CULs until CULs are attained, the resilience of the alternative to climate change impacts, the magnitude of the residual risk with the alternative in place, and the effectiveness of controls to manage treatment residue and remaining wastes.
- **Management of Implementation Risks:** The risks to human health and the environment during construction and implementation of the alternative, and the effectiveness of measures that will be taken to manage such risks.
- **Implementability:** The technical difficulty of designing and constructing the remedy; the availability of necessary off-Site facilities, services, and materials; administrative and regulatory requirements; scheduling, size, and complexity of the alternative; monitoring requirements; access for construction, operations, and

monitoring; and integration with existing facility operations and other current or potential remedial actions.

- **Cost:** Remedy design, construction, and long-term operation and maintenance costs to implement the alternative.

The DCA is based on a comparative evaluation of an alternative's cost against the environmental benefits represented by the other five criteria. As per WAC 173-340-360(5)(c)(iv), cost is disproportionate to benefits if the incremental cost of an alternative over that of a lower-cost alternative exceeds the incremental degree of benefits achieved by the alternative over that of the lower-cost alternative.

The DCA is summarized in Table 4 and illustrated on Figure 5. The environmental benefit is quantified by first rating the alternatives with respect to five of the six criteria discussed above (cost is not included when quantifying environmental benefit). Rating values are assigned on a scale of 1 to 10, where 1 indicates the criterion is satisfied to a very low degree, and 10 indicates the criterion is satisfied to a very high degree. Each criterion is assigned an equal "weighting factor" of 20 percent (Ecology, 2025).

- Overall protectiveness
- Permanence
- Long-term effectiveness
- Management of Implementation Risks
- Implementability

A MTCA benefits ranking is then obtained for each alternative by multiplying the five rating values by their corresponding weighting factors and summing the weighted values. Finally, the benefits ranking of each alternative is divided by the alternative's estimated cost to obtain a benefit/cost ratio, which is a relative measure of the cost-effectiveness of the alternative.

7.5 Recommended Remedial Alternative

Both remedial alternatives evaluated in this FS meet the general MTCA requirements. The results of the DCA are summarized in Table 4 and illustrated on Figure 5. Alternative 2, Capping with an Environmental Covenant, has a much higher benefit-to-cost ratio than Alternative 1, Excavation with Off-Site Disposal. The overall benefits of both alternatives are comparable, while the cost of excavation of the public right-of-way is exponentially higher. Therefore, the DCA process selected Alternative 2 (Capping with an Environmental Covenant) as the apparent permanent to the maximum extent practicable (PMEP) alternative.

8 Conclusion

Based on the results of the Interim Action and the nature and extent of residual soil impacts, active cleanup is considered complete to the extent practicable at this Site. Further excavation does not provide any appreciable benefits to human health or the environment over engineering and institutional controls to ensure ongoing protection of human health and the environment. Therefore, Alternative 2 (Capping with an Environmental Covenant) is recommended as the final remedy for the Site and is expected to satisfy the requirements of the AO and WAC 173-340-360. A Cleanup Action Plan will be prepared under separate cover detailing the final remedy for the Site.

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10 Limitations

Work for this project was performed for the Strickland Real Estate Holdings, LLC (Client), and this report was prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. This report does not represent a legal opinion. No other warranty, expressed or implied, is made.

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TABLES

Table 1. Confirmation Groundwater Monitoring Results

Project No. 180357, Texaco Strickland, Lynnwood, Washington

			Location	MW-16				MW-17[3]				MW-18R			
			Date	08/31/2023	11/30/2023	02/29/2024	05/30/2024	11/02/2023	11/30/2023	02/29/2024	05/30/2024	08/30/2023	11/28/2023	02/28/2024	05/29/2024
			Groundwater Elevation	441.91	441.94	445.15	443.49	--	440.83	444.33	442.78	438.91	439.94	442.7	441.58
Analyte	Unit	MTCA Method A Cleanup Level[1]													
Total Petroleum Hydrocarbons															
Gasoline Range Organics	ug/L	800 | 1000[2]		**380**	**490**	**380**	**320**	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U
Diesel Range Organics	ug/L	500		**100 X**	**220 X**	**250 X**	**160 X**	**98 X**	< 50 U	**64 X**	**53 X**	< 50 U	< 50 U	< 50 U	< 50 U
Motor Oil Range Organics	ug/L	500		< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U
Diesel and Oil Extended Range Organics	ug/L	500		**100 X**	**220 X**	**250 X**	**160 X**	**98 X**	< 250 U	**64 X**	**53 X**	< 250 U	< 250 U	< 250 U	< 250 U
Benzene, Toluene, Ethylbenzene, and Xylenes															
Benzene	ug/L	5		< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U
Toluene	ug/L	1000		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Ethylbenzene	ug/L	700		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Total Xylenes	ug/L	1000		< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
Polycyclic Aromatic Hydrocarbons															
Naphthalene	ug/L	160		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U

Notes:
Results in **bold** indicate the analyte was detected above the laboratory reporting limit
U = Analyte not detected at or above Reporting Limit (RL) shown
X = Chromatographic pattern does not match fuel standard used for quantitation
ug/L = microgram per liter
T - Total Fraction (unfiltered) sample result
[1]Model Toxics Control At (MTCA) cleanup regulation Method A Cleanup Levels for Groundwater.
[2]Gasoline Range Hydrocarbons are screened against a tighter value when benzene is present in the sample.
[3]Monitoring well MW-17 was not sampled in August 2023 because the monument was obstructed, the well was redeveloped and sampled twice in November 2023.
[4]Monitoring well MW-27 was not sampled in August 2023 because the well was dry.

Table 1. Confirmation Groundwater Monitoring Results

Project No. 180357, Texaco Strickland, Lynnwood, Washington

		Location	MW-19				MW-25R				MW-26			
		Date	08/30/2023	11/28/2023	02/28/2024	05/29/2024	08/30/2023	11/28/2023	02/28/2024	05/29/2024	08/30/2023	11/28/2023	02/28/2024	05/29/2024
		Groundwater Elevation	435.58	438.18	441.66	439.42	439.34	439.69	443.74	441.95	433.76	434.61	438.7	437.02
Analyte	Unit	MTCA Method A Cleanup Level[1]												
Total Petroleum Hydrocarbons														
Gasoline Range Organics	ug/L	800 | 1000[2]	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U
Diesel Range Organics	ug/L	500	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Motor Oil Range Organics	ug/L	500	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U
Diesel and Oil Extended Range Organics	ug/L	500	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U
Benzene, Toluene, Ethylbenzene, and Xylenes														
Benzene	ug/L	5	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U
Toluene	ug/L	1000	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Ethylbenzene	ug/L	700	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Total Xylenes	ug/L	1000	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
Polycyclic Aromatic Hydrocarbons														
Naphthalene	ug/L	160	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U

Notes:
Results in **bold** indicate the analyte was detected above the laboratory reporting limit
U = Analyte not detected at or above Reporting Limit (RL) shown
X = Chromatographic pattern does not match fuel standard used for quantitation
ug/L = microgram per liter
T - Total Fraction (unfiltered) sample result

[1]Model Toxics Control At (MTCA) cleanup regulation Method A Cleanup Levels for Groundwater.
[2]Gasoline Range Hydrocarbons are screened against a tighter value when benzene is present in the sample.
[3]Monitoring well MW-17 was not sampled in August 2023 because the monument was obstructed, the well was redeveloped and sampled twice in November 2023.
[4]Monitoring well MW-27 was not sampled in August 2023 because the well was dry.

Table 1. Confirmation Groundwater Monitoring Results

Project No. 180357, Texaco Strickland, Lynnwood, Washington

			Location	MW-27[4]			MW-29				MW-30			
			Date	11/28/2023	02/28/2024	05/30/2024	08/30/2023	11/30/2023	02/28/2024	05/29/2024	08/30/2023	11/28/2023	02/28/2024	05/29/2024
			Groundwater Elevation	433.19	437.44	433.58	440.29	441.08	443.93	442.16	439.96	440.84	443.73	441.96
Analyte	Unit	MTCA Method A Cleanup Level[1]												
Total Petroleum Hydrocarbons														
Gasoline Range Organics	ug/L	800 | 1000[2]		< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U
Diesel Range Organics	ug/L	500		< 50 U	< 50 U	< 50 U	**77 X**	**110 X**	**160 X**	**140 X**	**83 X**	**69 X**	**190 X**	**78 X**
Motor Oil Range Organics	ug/L	500		< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U
Diesel and Oil Extended Range Organics	ug/L	500		< 250 U	< 250 U	< 250 U	**77 X**	**110 X**	**160 X**	**140 X**	**83 X**	**69 X**	**190 X**	**78 X**
Benzene, Toluene, Ethylbenzene, and Xylenes														
Benzene	ug/L	5		< 0.35 U	< 0.35 U	< 0.35 U	**0.52**	< 0.35 U	< 0.35 U	**1.6**	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U
Toluene	ug/L	1000		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Ethylbenzene	ug/L	700		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Total Xylenes	ug/L	1000		< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
Polycyclic Aromatic Hydrocarbons														
Naphthalene	ug/L	160		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U

Notes:
Results in **bold** indicate the analyte was detected above the laboratory reporting limit
U = Analyte not detected at or above Reporting Limit (RL) shown
X = Chromatographic pattern does not match fuel standard used for quantitation
ug/L = microgram per liter
T - Total Fraction (unfiltered) sample result

[1]Model Toxics Control At (MTCA) cleanup regulation Method A Cleanup Levels for Groundwater.
[2]Gasoline Range Hydrocarbons are screened against a tighter value when benzene is present in the sample.
[3]Monitoring well MW-17 was not sampled in August 2023 because the monument was obstructed, the well was redeveloped and sampled twice in November 2023.
[4]Monitoring well MW-27 was not sampled in August 2023 because the well was dry.

Table 1. Confirmation Groundwater Monitoring Results

Project No. 180357, Texaco Strickland, Lynnwood, Washington

		Location	MW-31				MW-32			
		Date	08/30/2023	11/28/2023	02/28/2024	05/29/2024	08/31/2023	11/28/2023	02/28/2024	05/29/2024
		Groundwater Elevation	439.33	440.55	443.62	441.72	439.17	440.3	442.87	441.99
Analyte	Unit	MTCA Method A Cleanup Level[1]								
Total Petroleum Hydrocarbons										
Gasoline Range Organics	ug/L	800 | 1000[2]	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U
Diesel Range Organics	ug/L	500	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	**83 X**	< 50 U
Motor Oil Range Organics	ug/L	500	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U
Diesel and Oil Extended Range Organics	ug/L	500	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	**83 X**	< 250 U
Benzene, Toluene, Ethylbenzene, and Xylenes										
Benzene	ug/L	5	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U
Toluene	ug/L	1000	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Ethylbenzene	ug/L	700	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Total Xylenes	ug/L	1000	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
Polycyclic Aromatic Hydrocarbons										
Naphthalene	ug/L	160	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U

Notes:
Results in **bold** indicate the analyte was detected above the laboratory reporting limit
U = Analyte not detected at or above Reporting Limit (RL) shown
X = Chromatographic pattern does not match fuel standard used for quantitation
ug/L = microgram per liter
T - Total Fraction (unfiltered) sample result

[1]Model Toxics Control At (MTCA) cleanup regulation Method A Cleanup Levels for Groundwater.
[2]Gasoline Range Hydrocarbons are screened against a tighter value when benzene is present in the sample.
[3]Monitoring well MW-17 was not sampled in August 2023 because the monument was obstructed, the well was redeveloped and sampled twice in November 2023.
[4]Monitoring well MW-27 was not sampled in August 2023 because the well was dry.

Table 2. Confirmation Ventilation Sampling Results (Passive Condition)

Project No. 180357, Texaco Strickland Site, Lynnwood, Washington

			Date	09/26/2024			12/31/2024		
			Sample Name	AMB-1	AMB-2	VS-EFF	AMB-1	AMB-2	VS-EFF
			Location	Outdoor Background Air	Outdoor Background Air	Passive Vent	Outdoor Background Air	Outdoor Background Air	Passive Vent
Analyte	Unit	MTCA Method B Cleanup Level for Air [1]	MTCA Method B Screening Level for Soil Gas [3]						
Air-Phase Petroleum Hydrocarbons (APHs)									
C5 - C8 Aliphatic Hydrocarbons	ug/m3	--	--	**100**	< 100 U	**200**	**81**	**86**	< 75 U
C9 - C12 Aliphatic Hydrocarbons	ug/m3	--	--	**43**	< 25 U	**67**	< 25 U	**34**	**31**
C9 - C10 Aromatic Hydrocarbons	ug/m3	--	--	< 25 U	< 25 U	< 50 U	< 25 U	< 25 U	< 25 U
Petroleum-Related Volatile Organic Compounds (VOCs)									
Benzene	ug/m3	0.32	11	**0.38**	< 0.32 U	< 0.32 J	**0.42**	**0.60**	< 0.32 J
Toluene	ug/m3	2300	76000	< 7.5 U	< 7.5 U	< 15 U	< 7.5 U	< 7.5 U	< 15 U
Ethylbenzene	ug/m3	460	15000	< 0.43 U	< 0.43 U	< 0.87 U	< 0.43 U	< 0.43 U	< 0.87 U
Total Xylenes	ug/m3	46	1500	< 0.87 U	< 0.87 U	**4.59**	< 0.87 U	< 0.87 U	< 0.43 U
Naphthalene	ug/m3	0.074	2.5	**0.15**	**0.084 J**	< 0.15 J	**0.073 J**	**0.11**	< 0.15 J
Total Petroleum Hydrocarbons (TPH) [4]									
Total Petroleum Hydrocarbons	ug/m3	636[2]	1500	**160**	**80**	**305**	**111**	**94**	**89**

Definitions:

Bold results indicate analyte was detected above laboratory reporting limit

Blue shaded results indicate the detected result exceeded the MTCA Method B Indoor Air Cleanup Level for Unrestricted Land Use

U - Analyte not detected at or above laboratory reporting limit

J - Result reported by the laboratory is an estimate

ug/m3 - micrograms per cubic meter

Notes:

(1) Model Toxics Control Act (MTCA) Method B Indoor Air Cleanup Level for Unrestricted Land Use

(2) Site-Specific TPH cleanup level calculated per Ecology Guidance for Evaluating Vapor Intrusion in Washington State (Ecology, 2022), as previously proposed and documented in Progress Report No. 23 (Aspect, 2024)

(3) MTCA Method B Soil Gas Screening Level for Unrestricted Land Use

(4) Total Petroleum Hydrocarbon results calculated as the sum total of APHs and VOCs, one-half of the laboratory reporting limit was used for non-detects

Table 3. Remedial Technology Screening

Project No. 180357, Texaco Strickland, Lynnwood, Washington

Remedial Technologies	Preliminary Technology Screening				
	Description	Effectiveness	Implementability	Relative Cost	Screening Result
Institutional Controls (ICs)	Measures undertaken to limit or prohibit activities that may interfere with the integrity of the cleanup action or that may result in exposure to hazardous substances at a site. Most commonly, ICs are recorded as Environmental Covenants with the property deed.	**High** Effective at preventing unacceptable exposures to contamination, does not reduce contaminant mass.	**High** Readily implementable.	**Low**	**Retained**
Engineering Controls (ECs)	Containment and/or mitigation systems designed to prevent or limit the movement of, or the exposure to, hazardous substances (e.g., paving/capping, vapor barriers).	**High** Capping would be effective at preventing unacceptable exposures to contamination, does not reduce contaminant mass.	**High** Readily implementable. The public right-of-way is already capped with an impervious surface (road and sidewalk).	**Low**	**Retained**
Monitored Natural Attenuation (MNA)	Monitoring the reduction of contaminants through natural processes over time (e.g., biodegradation, dispersion, and dilution).	**Low** Extended restoration time frame, more effective for groundwater impacts than vadose zone soil.	**Moderate** Would require periodic drilling in the public right-of-way and around subsurface utilities to monitor soil quality over time	**Moderate**	**Not Retained**
Soil Vapor Extraction (SVE)	Extracting contaminants in the form of soil vapor and introducing oxygen into the unsaturated zone to enhance microbial activity. Extracted vapors are typically treated using activated carbon via adsorption or destruction via thermal oxidation.	**Moderate** Provides treatment of vadose zone soil impacts. Full treatment limited by heterogeneous soils and preferential pathways or short-circuiting of air flow through fill materials and gravel surface on Property.	**Low** Not considered realistic to install permanent SVE wells and piping within public right-of-way. Requires an above ground equipment footprint.	**Moderate to High**	**Not Retained**
In Situ Chemical Oxidation (ISCO)	Injecting or mixing an oxidant, such as potassium permanganate or sodium persulfate, into the subsurface to react with and destroy contaminants.	**Low to Moderate** Provides treatment of soil impacts, distribution of amendments typically more effective below the water table. Full treatment would be limited by preferential pathways or short-circuiting of injected amendments through fill material and utility corridors.	**Low** Shallow treatment area would be prone to short-circuiting and surfacing of injected amendments. Dense native soil outside of fill materials on the Property are not suitable for injections and soil mixing is not feasible around utilities. Oxidants may not be compatible with utilities present in public right-of-way.	**Moderate to High**	**Not Retained**
In Situ Bioremediation (ISB)	Introducing oxygen (aerobic) or other electron acceptors (anaerobic) into the subsurface to stimulate microbial biodegradation of contaminants (e.g., injecting a soil amendment or bioventing).	**Low to Moderate** Same effectiveness limitations as SVE and ISCO	**Low** Same implementability concerns as SVE and ISCO	**Moderate to High**	**Not Retained**
Soil Excavation and Off-Site Disposal	Impacted soil is excavated and transported off-site for disposal.	**High** Provides fastest and most reliable treatment through removal of impacted soils from the Property.	**Moderate** Implementability challenges include subsurface utilities, adjacent road, and right-of-way access. Highly invasive technique would creates significant disturbance of the affected area below road.	**High**	**Retained**

Notes:

Green shading - technology retained for further consideration

Red shading - technology not retained for further consideration

Table 4. Disproportionate Cost Analysis

Project No. AS180357, Texaco Strickland, Lynnwood, Washington

Remedial Alternatives		Alternative 1 - Soil Excavation and Off-Site Disposal	Alternative 2 - Engineering and Institutional Controls
Description of Alternatives			
Common Elements		Completed Remedial Actions: Excavation of 14,437 tons of contaminated soil and disposal off-site during interim action.	
Additional Remedial Actions		Excavation of petroleum-contaminated soil to 12 feet below ground surface in the area proximal to the 196th St SW right-of-way.	Installation of engineering and institutional controls including environmental covenant and a permanent soil cap, assumed to be placed during planned property redevelopment.
Contingency Actions		Implementation of engineering and institutional controls including environmental covenant and a permanent soil cap, assumed to be placed during planned property redevelopment.	No planned contingency actions.
Evaluation of Alternatives			
General Criteria	Protection of Human Health and the Environment	Yes – Alternative will protect human health and the environment, including protection of vulnerable populations and overburdened communities.	Yes – Alternative will protect human health and the environment, including protection of vulnerable populations and overburdened communities.
	Compliance with Cleanup Standards	Yes – Cleanup standards will be achieved for all alternatives.	Yes – Cleanup standards will be achieved for all alternatives.
	Compliance with Applicable State and Federal Laws	Yes – Compliance with applicable laws will be ensured through obtaining required permits and meeting the substantive requirements of exempt Federal, State, and local permits	Yes – Compliance with applicable laws will be ensured through obtaining required permits and meeting the substantive requirements of exempt Federal, State, and local permits
	Prevent or Minimize Present and Future Releases and Migration of Hazardous Substances in the Environment	Yes - contaminant migration controlled by prior and proposed remedial actions.	Yes - contaminant migration controlled by prior remedial actions.
	Provide Resilience to Climate Change	Yes - climate change is not anticipated to impact performance of this alternative.	Yes - Climate change is not anticipated to impact performance of this alternative.
	Provision for Compliance Monitoring	Yes – Alternative includes provisions for compliance groundwater monitoring.	Yes - Alternative includes provisions for compliance monitoring through period inspections of the soil cap.
	Not Rely Primarily on Institutional Controls and Monitoring	Yes - Alternative includes significant prior active remediation and additional planned treatment to achieve objectives.	Yes - Alternative includes significant prior active remediation to the practicable limits as a result of the interim action.
	Not Rely Primarily on Dilution or Dispersion	Yes - Alternative does not rely on dilution or dispersion.	Yes - Alternative does not rely on dilution or dispersion.
	Provide for a Reasonable Restoration Time Frame	Yes - Includes significant prior active treatment and additional planned treatment to reduce restoration timeframe.	Yes - Includes significant prior active remediation to the extent practicable to reduce restoration timeframe.
Criteria to Evaluate Use of Permanent Solutions to the Maximum Extent Practicable	Protectiveness (20% weighting factor)	Similar to Alternative 1, exposure pathways can be reliably controlled during the restoration timeframe. This alternative will provide additional protectiveness in the short-term through removal of shallow contaminated soil. 9	This alternative includes an environmental covenant which will impose restrictions on the property to manage environmental risks. The environmental covenant will serve as an institutional control to protect human health and the environmental in the event of future construction or redevelopment on the Site. 7
	Permanence (20% weighting factor)	This alternative permanently removes soil contamination exceeding cleanup standards from the Site through excavation and disposal to a landfill. 9	This alternative includes significant prior active remediation to the extent practicable as part of the interim action. The existing impervious cap will serve as a permanent engineering control prevent soil impacts leaching to groundwater. 7
	Long-Term Effectiveness (20% weighting factor)	Shallow excavation will increase long-term effectiveness at achieving cleanup standards; however, landfill disposal is considered less effective than destruction/treatment. 9	The addition of a cap will serve as a long-term engineering control to protect human health and the environment. The environmental covenant will serve as a long-term protective administrative measure to establish clear rules for any future transfer of ownership or redevelopment. 7
	Management of Implementation Risks (20% weighting factor)	There is a moderate short-term health and safety risk associated with excavations deeper than 4 feet and working in the right-of-way. The implementation of shoring will be required in order to be protective of worker's safety due to the depth contaminated soil. Traffic controls and closure of portions of the road and sidewalk will also be required for protection of the public and workers. 7	There is no short-term risk to human health or the environment due to significant prior active remediation as part of the interim action. 10
	Implementability (20% weighting factor)	Implementability challenges include subsurface utilities, adjacent road, and right-of-way access. Highly invasive technique would creates significant disturbance of the affected area below road. 7	Highly implementable 10
MTCA Benefits Ranking[2]		8.2	8.2
Estimated Cost[3]		$860,000	$160,000
Benefit/Cost Ratio[4]		**0.95**	**5.13**

Notes:

MTCA = Model Toxics Control Act

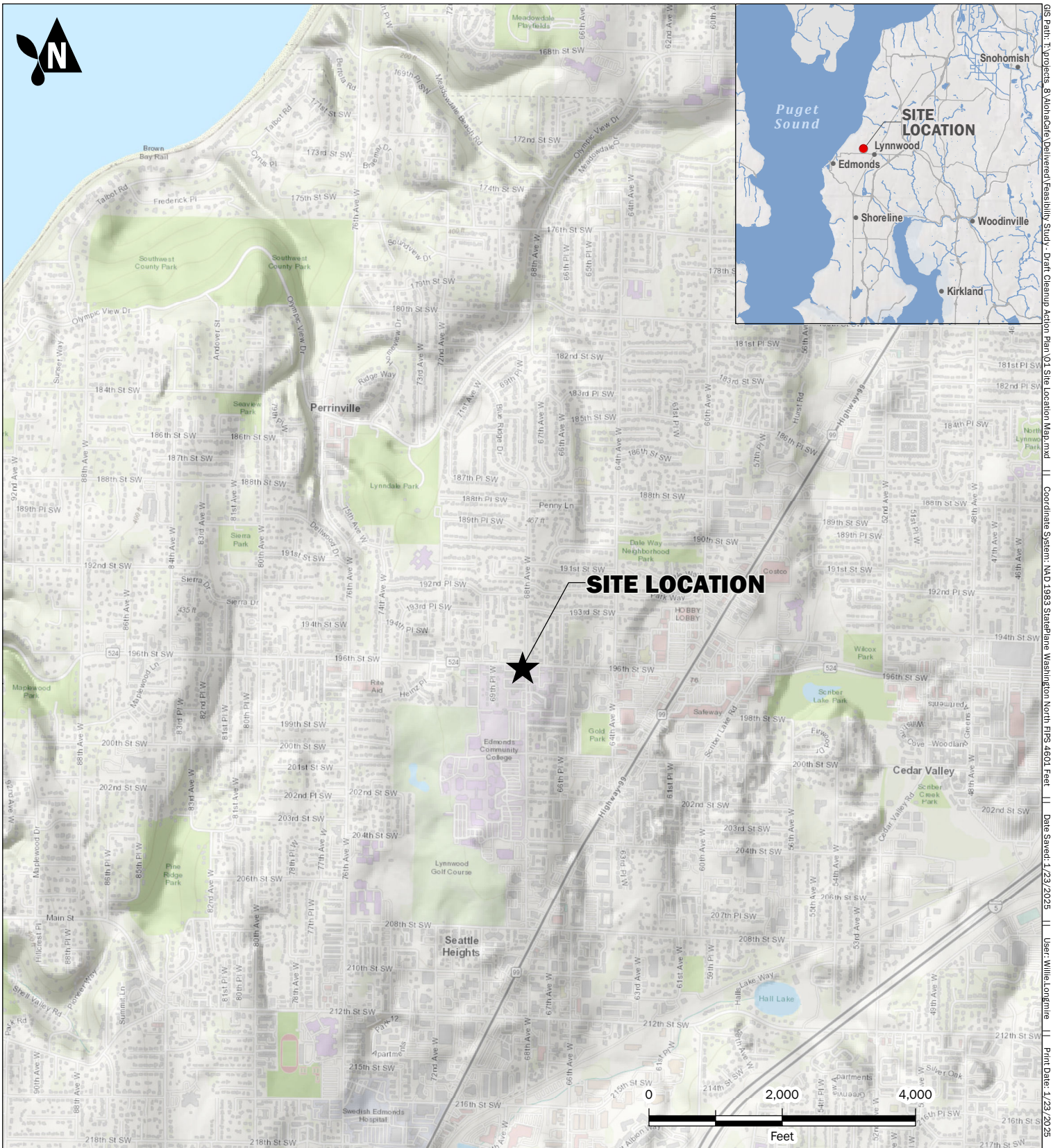
1) A numeric scale of 1 to 10 is used to rate the alternatives with respect to the criteria to evaluate use of permanent solutions to the maximum extent practicable, where 1 is low and 10 is high.

2) The MTCA benefits ranking is obtained by multiplying the rating for each criterion by its weighting factor, and summing the results for the six criteria.

3) Costs are Net Present Value in 2025 dollars based on a 2% discount rate. The costs shown are rounded to three significant figures.

4) The benefit/cost ratio is obtained by dividing the alternative's MTCA benefits ranking by its estimated cost (in $NPV million).

FIGURES





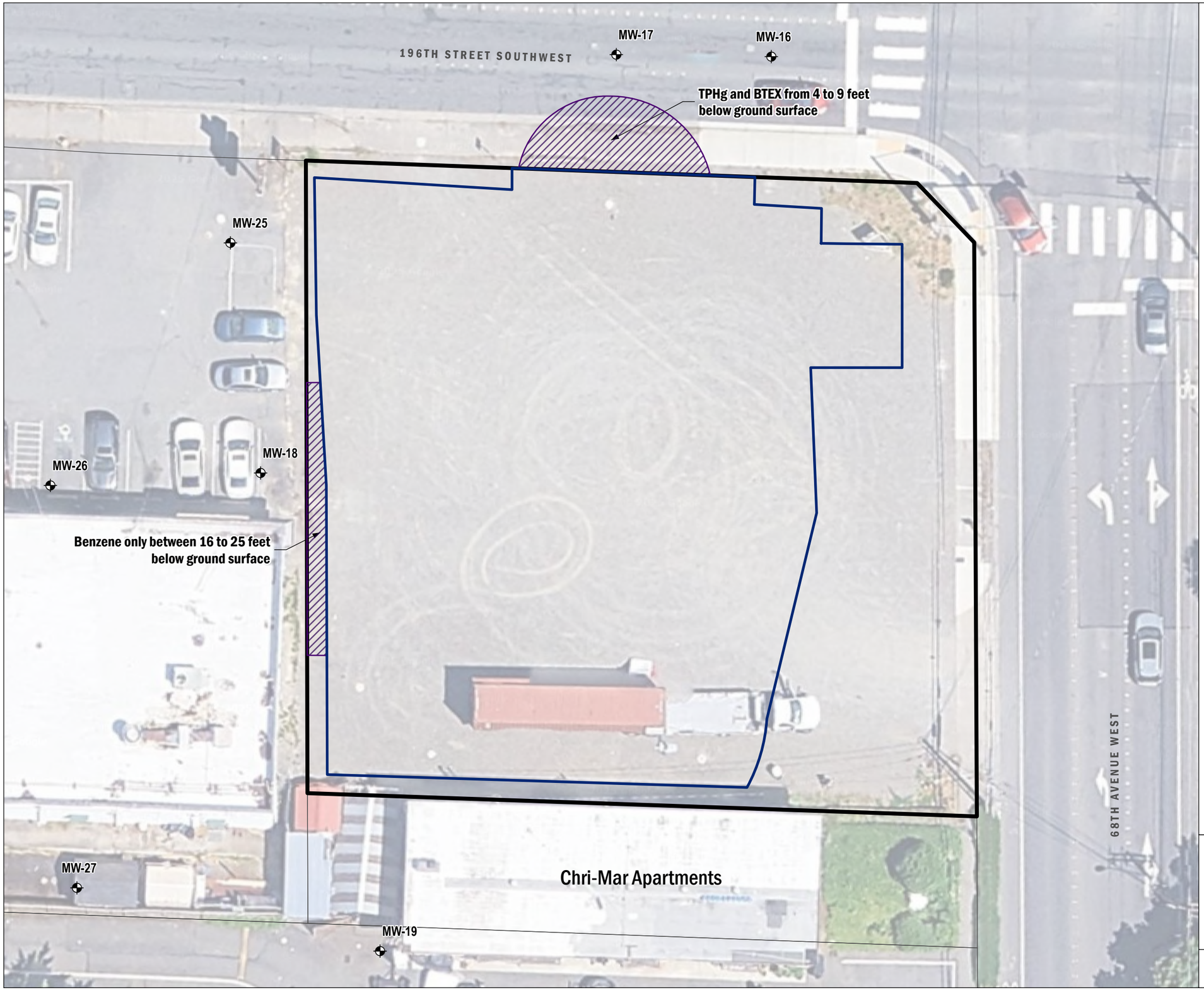
Site Location Map

Feasibility Study
Texaco Strickland Site
6808 196th Street SW
Lynnwood, Washington

Aspect CONSULTING	JAN-2025	BY: WVG / TDR	FIGURE NO. 1
	PROJECT NO. 180357	REVISED BY: ---	

GIS Path: T:\projects_8\MohaCafe\Delivered\Feasibility Study - Draft Cleanup Action Plan\01 Site Location Map.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 1/23/2025 || User: Willie.Longmire || Print Date: 1/23/2025

Basemap Layer Credits | | Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community



Existing Monitoring Well

Extents of Soil Exceeding Cleanup Levels

Previous Interim Action Excavation Area

Property Boundary

Snohomish County Tax Parcel

N

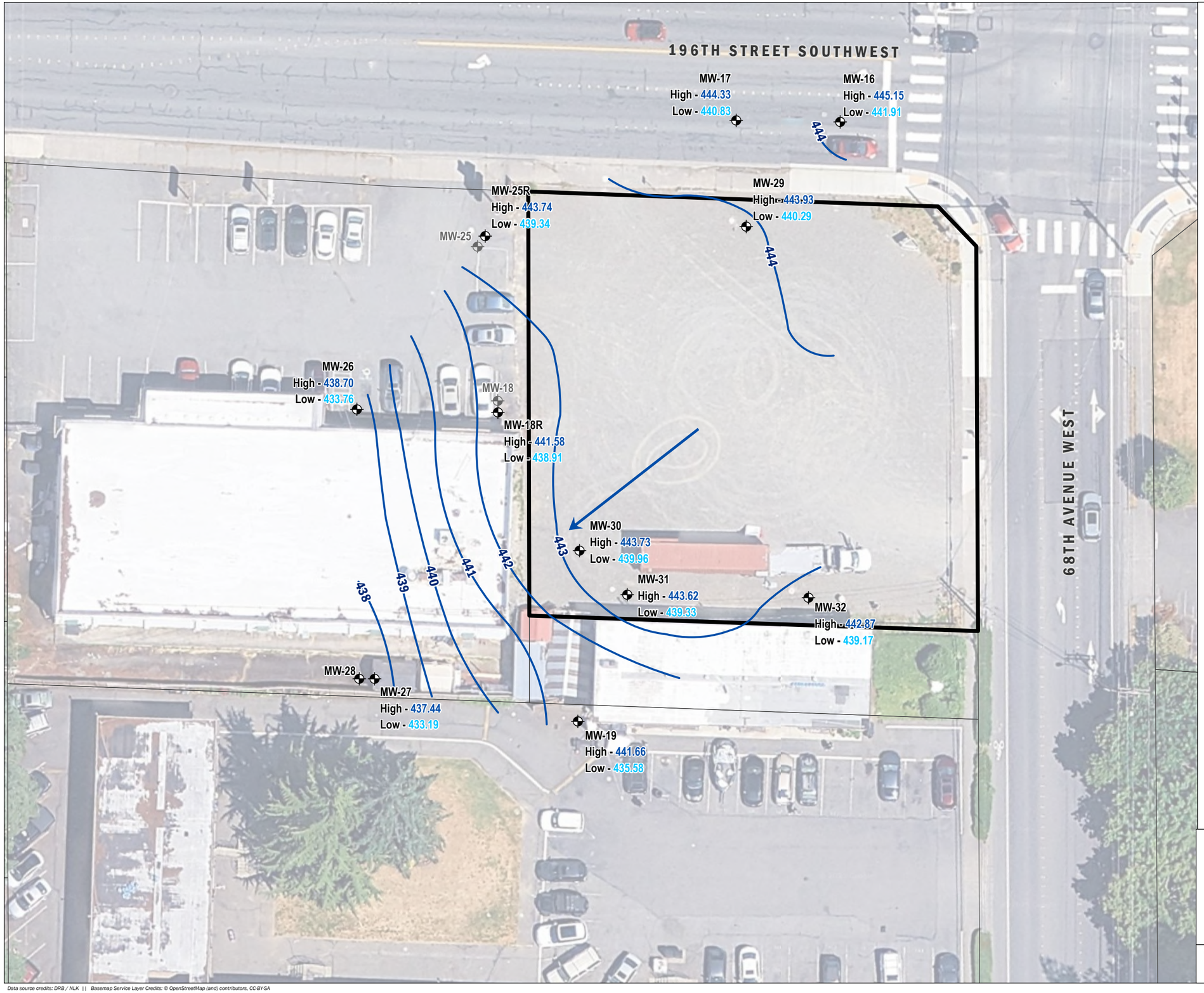
0 20 40 Feet

Extent of Post-Interim Action Soil Impacts

Feasibility Study
Texaco Strickland Site
6808 196th Street SW
Lynnwood, Washington

Aspect CONSULTING	APR-2025	BY: DRB / HMD	FIGURE NO. 2
	PROJECT NO. 180357	REVISED BY: ---/---	

GIS Path: T:\projects_8\Mohai\Cafe Texaco_180357.aprx || Coordinate System: NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet || Date Saved: 4/15/2025 || User: haley.duran || Print Date: 4/15/2025



Monitoring Well (Existing)

Monitoring Well (Decomissioned)

Groundwater Contour

Flow Direction

Subject Property

Snohomish County Tax Parcel

Note:
- Groundwater contours based on February 2024 monitoring event

N

0 30 60

Feet

Sample Name → MW-32

Seasonal High Groundwater Elevation

High - 442.87

Low - 439.17

Seasonal Low Groundwater Elevation

Confirmation Groundwater Monitoring Locations and Flow Direction

Feasibility Study
Texaco Strickland Site
6808 196th Street SW
Lynnwood, Washington

Aspect Consulting	APR-2025	BY: DRB / NLK	FIGURE NO. 3
	PROJECT NO. AS180357A	REVISED BY: HMD	

Data source credits: DRB / NLK || Basemap Service Layer Credits: © OpenStreetMap (and) contributors, CC-BY-SA

GIS Path: T:\projects_8\Work\Cafe\Texaco_180357\gis\mxd\ 03 - Confirmation Groundwater Monitoring Locations.mxd || User: haley.duran || Print Date: 4/7/2025



- Existing Monitoring Well
- Proposed Excavation Area
  Area - 800 sq. ft. to 12 ft bgs
- Previous Interim Action Excavation Area
- Property Boundary

N

0 20 40 Feet

Alternative 1
Conceptual Excavation Extents

Feasibility Study
Texaco Strickland Site
6808 196th Street SW
Lynnwood, Washington

Aspect Consulting	APR-2025	BY: DRB / HMD	FIGURE NO. 4
	PROJECT NO. 180357	REVISED BY: ---/---	

GIS Path: T:\projects_8\Michaelis Texaco_180357.aprx || Coordinate System: NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet || Date Saved: 4/15/2025 || User: haley.duran || Print Date: 4/15/2025

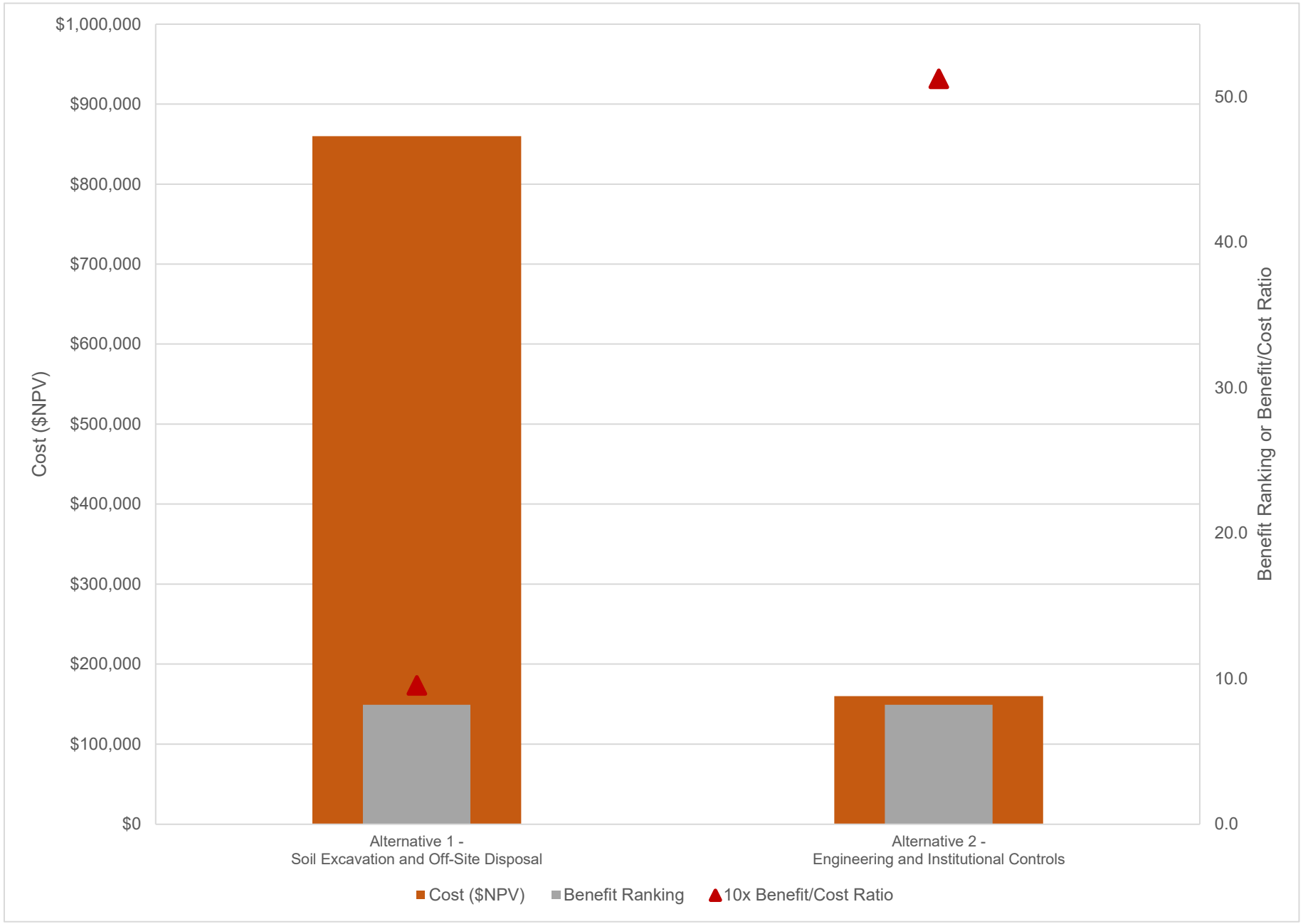


Figure 5. Disproportionate Cost Analysis Summary

Project AS180357, Texaco Strickland, Lynnwood, Washington

APPENDIX A

Boring Logs and Well Completion Diagrams

Aspect CONSULTING	Aloha Cafe - 180357		Monitoring Well Log	
	Project Address & Site Specific Location 6808 196th Street Southwest, Lynwood, Washington, 98036, SE corner of 6820 parking lot		*Coordinates (SPN NAD83 ft)* E:1273797.02 N:303043.18	*Exploration Number* **MW-18R**
Contractor Holt Services	*Equipment* Mobile B57	*Sampling Method* Autohammer; 140 lb hammer; 30" drop	*Ground Surface Elev. (NAVD88)* 449.51'	Ecology Well Tag No. BNL 888
Operator Abe Causland	*Exploration Method(s)* 8.5" OD X 4.25" ID Hollow-Stem Auger	*Work Start/Completion Dates* 8/15/2023	*Top of Casing Elev. (NAVD88)* 449.26'	*Depth to Water (Below GS)* 9.96' (Static)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0		8" Flush mount, traffic-rated monument in concrete					ASPHALT; with base course	
							FILL SILTY SAND (SM); dense, moist, gray; fine to coarse sand; trace fine to coarse sub-rounded to subangular gravel; no petroleum-like odor.	
		2" Schedule 40 PVC in 3/8" hyrdated bentonite chips						
5	445				SPT=10,19,20			5
		0.010" (10-slot) 2" schedule 40 PVC screen in 12-20 silica sand						
	440	8/16/2023						
10					SPT=13,34,50/4"		**VASHON TILL** SILTY SAND WITH GRAVEL (SM); very dense, moist, gray; fine to medium sand; fine to coarse sub-rounded to sub-angular gravel; no petroleum-like odor.	10
	435							
15					SPT=50/5"		SILT WITH SAND (ML); very dense, moist, gray; non-plastic silt; fine sand; trace fine to coarse sub-rounded to sub-angular gravel; no petroleum-like odor.	15
	430							
20					SPT=50/2"		SILTY SAND (SM); very dense, moist, gray; fine to coarse sand; trace coarse sub-rounded gravel; no petroleum-like odor. Bottom of exploration at 20.2 ft. bgs.	20
	425							
25								25
	420							

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◩ Split Barrel 2" X 1.375" (SPT)

Water Level
- ▼ Static Water Level

See Exploration Log Key for explanation of symbols

Logged by: CMT
Approved by: DRB

Exploration Log MW-18R
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\180357 ALOHA CAFE1.GPJ April 11, 2025

Aspect CONSULTING	Aloha Cafe - 180357		Monitoring Well Log	
	Project Address & Site Specific Location 6808 196th Street Southwest, Lynwood, Washington, 98036, NE corner of 6820 parking lot		*Coordinates (SPN NAD83 ft)* E:1273793.08 N:303098.26	*Exploration Number* **MW-25R**
Contractor Holt Services	*Equipment* Mobile B57	*Sampling Method* Autohammer; 140 lb hammer; 30" drop	*Ground Surface Elev. (NAVD88)* 450.52'	Ecology Well Tag No. BNL 883
Operator Abe Causland	*Exploration Method(s)* 8.5" OD X 4.25" ID Hollow-Stem Auger	*Work Start/Completion Dates* 8/15/2023	*Top of Casing Elev. (NAVD88)* 450.19'	*Depth to Water (Below GS)* 10.42' (Static)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0	450	8" Flush mount, traffic-rated monument in concrete					ASPHALT; with base course	0
							VASHON TILL SILTY SAND WITH GRAVEL (SM); very dense, slightly moist, gray-gray brown; fine to coarse sand; fine to coarse sub-rounded to sub-angular gravel; no petroleum-like odor.	
		2" Schedule 40 PVC in 3/8" hyrdated bentonite chips						
5	445				SPT=24,50/6"			5
		0.010" (10-slot) 2" schedule 40 PVC screen in 12-20 silica sand						
10	440	▼ 8/16/2023			SPT=14,24,38			10
15	435				SPT=23,29,50/5"		SILT WITH SAND (ML); very dense, wet, gray; non-plastic silt; fine to coarse sand; fine sub-rounded to sub-angular gravel; no petroleum-like odor.	15
20	430				SPT=50/3"		SILTY SAND (SM); very dense, moist, gray; fine to coarse sand; trace fine to coarse sub-angular gravel; no petroleum-like odor.	20
							Bottom of exploration at 20.3 ft. bgs.	
25	425							25

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◩ Split Barrel 2" X 1.375" (SPT)

Water Level
- ▼ Static Water Level

See Exploration Log Key for explanation of symbols

Logged by: CMT
Approved by: DRB

Exploration Log MW-25R
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\180357 ALOHA CAFE1.GPJ April 11, 2025

Aspect CONSULTING	Aloha Cafe - 180357		Monitoring Well Log	
	Project Address & Site Specific Location 6808 196th Street Southwest, Lynwood, Washington, 98036, North side of 6808 excavated area, along 196th St		*Coordinates (SPN NAD83 ft)* E:1273874.53 N:303101.17	*Exploration Number* **MW-29**
Contractor Holt Services	*Equipment* Mobile B57	*Sampling Method* Autohammer; 140 lb hammer; 30" drop	*Ground Surface Elev. (NAVD88)* 450.57'	Ecology Well Tag No. BNL 884
Operator Abe Causland	*Exploration Method(s)* 8.5" OD X 4.25" ID Hollow-Stem Auger	*Work Start/Completion Dates* 8/14/2023	*Top of Casing Elev. (NAVD88)* 450.24'	*Depth to Water (Below GS)* 9.42' (ATD) 9.48' (Static)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0	450	8" Flush mount, traffic-rated monument in concrete					**FILL** GRAVEL WITH SILT AND SAND (GP-GM); medium dense, very moist, gray; fine sand; fine to coarse sub-rounded gravel; no petroleum-like odor.	0
		2" Schedule 40 PVC in 3/8" hyrdated bentonite chips						
5	445	0.010" (10-slot) 2" schedule 40 PVC screen in 12-20 silica sand			SPT=15,32,32			5
		8/14/2023 8/15/2023						
10	440				SPT=8,10,12			10
15	435				SPT=8,13,14		GRAVEL WITH SAND (GP); medium dense, wet, gray; fine to medium sand; fine to coarse gravel; no petroleum-like odor. GRAVEL WITH SILT AND SAND (GP-GM); medium dense, wet, gray; fine to coarse sub-rounded gravel; no petroleum-like odor.	15
20	430				SPT=1,2,3		GRAVEL WITH SILT (GP-GM); very loose, wet, gray; fine to coarse sub-rounded gravel; no petroleum-like odor.	20
25	425				SPT=50/2"		**VASHON TILL** GRAVEL WITH SILT (GP-GM); very dense, very moist, gray; fine sub-rounded gravel; no petroleum-like odor. Bottom of exploration at 20.5 ft. bgs.	25

Legend

Sample Type
- No Soil Sample Recovery
- Split Barrel 2" X 1.375" (SPT)

Water Level
- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: CMT
Approved by: DRB

Exploration Log MW-29

Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\180357 ALOHA CAFE1.GPJ April 11, 2025

Aspect CONSULTING	Aloha Cafe - 180357		Monitoring Well Log	
	Project Address & Site Specific Location 6808 196th Street Southwest, Lynwood, Washington, 98036, SW corner of 6808 excavated area next to China Cafe		*Coordinates (SPN NAD83 ft)* E:1273822.52 N:303000.15	*Exploration Number* **MW-30** Ecology Well Tag No. BNL 887
Contractor Holt Services	*Equipment* Mobile B57	*Sampling Method* Autohammer; 140 lb hammer; 30" drop	*Ground Surface Elev. (NAVD88)* 449.4'	
Operator Abe Causland	*Exploration Method(s)* 8.5" OD X 4.25" ID Hollow-Stem Auger	*Work Start/Completion Dates* 8/15/2023	*Top of Casing Elev. (NAVD88)* 449.02'	*Depth to Water (Below GS)* 8.65' (Static) 12.1' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0	449	8" Flush mount, traffic-rated monument in concrete					**FILL** SILTY SAND WITH GRAVEL (SM); dense, moist, gray brown; fine to coarse sand; fine to coarse sub-rounded to sub-angular gravel; no petroleum-like odor.	0
		2" Schedule 40 PVC in 3/8" hyrdated bentonite chips						
5	445				SPT=8,20,22			5
		0.010" (10-slot) 2" schedule 40 PVC screen in 12-20 silica sand ▼ 8/15/2023						
10	440	▽ 8/15/2023			SPT=6,11,10			10
15	435				SPT=14,18,21		SAND WITH SILT AND GRAVEL (SP-SM); dense, very moist, gray; fine to coarse sand; fine to coarse sub-rounded to sub-angular gravel; no petroleum-like odor.	15
20	430				SPT=50/5"		**VASHON TILL** SILT WITH SAND (ML); very dense, very moist, gray; fine sand; trace sub-rounded gravel; no petroleum-like odor. Bottom of exploration at 20.5 ft. bgs.	20
25	425							25
	420							

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◩ Split Barrel 2" X 1.375" (SPT)

Water Level
- ▼ Static Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: CMT
Approved by: DRB

Exploration Log MW-30
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\180357 ALOHA CAFE1.GPJ April 11, 2025

Aspect CONSULTING	Aloha Cafe - 180357		Monitoring Well Log	
	Project Address & Site Specific Location 6808 196th Street Southwest, Lynwood, Washington, 98036, SW corner of 6808 excaveted area north of apartment complex		*Coordinates (SPN NAD83 ft)* E:1273837.40 N:302986.36	*Exploration Number* **MW-31**
Contractor Holt Services	*Equipment* Mobile B57	*Sampling Method* Autohammer; 140 lb hammer; 30" drop	*Ground Surface Elev. (NAVD88)* 448.77'	Ecology Well Tag No. BNL 886
Operator Abe Causland	*Exploration Method(s)* 8.5" OD X 4.25" ID Hollow-Stem Auger	*Work Start/Completion Dates* 8/14/2023	*Top of Casing Elev. (NAVD88)* 448.36'	*Depth to Water (Below GS)* 8.57' (Static) 19.51' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0	445	8" Flush mount, traffic-rated monument in concrete 2" Schedule 40 PVC in 3/8" hyrdated bentonite chips					**FILL** SILTY SAND WITH GRAVEL (SM); medium dense, slightly moist, gray; fine to coarse sand; fine to coarse sub-rounded gravel; no petroleum-like odor.	0
5					SPT=7,7,19			5
10	440	0.010" (10-slot) 2" schedule 40 PVC screen in 12-20 silica sand ▼ 8/15/2023			SPT=5,9,22		SILTY SAND (SM); dense, moist, gray; fine to coarse sand; trace fine to coarse sub-rounded gravel; no petroleum-like odor.	10
15	435				SPT=25, 50/6"		**VASHON TILL** SILTY SAND (SM); very dense, moist, gray; fine to coarse sand; trace fine to coarse sub-rounded gravel; no petroleum-like odor.	15
20	430	▽ 8/14/2023			SPT=50/5"		Bottom of exploration at 20.5 ft. bgs.	20
25	425							25
	420							

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◩ Split Barrel 2" X 1.375" (SPT)

Water Level
- ▼ Static Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: CMT
Approved by: DRB

Exploration Log MW-31
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\180357 ALOHA CAFE1.GPJ April 11, 2025

Aspect CONSULTING	Aloha Cafe - 180357		Monitoring Well Log	
	Project Address & Site Specific Location 6808 196th Street Southwest, Lynwood, Washington, 98036, SE corner of 6808 excaveted area north of apartment complex		*Coordinates (SPN NAD83 ft)* E:1273893.93 N:302985.42	*Exploration Number* **MW-32**
Contractor Holt Services	*Equipment* Mobile B57	*Sampling Method* Autohammer; 140 lb hammer; 30" drop	*Ground Surface Elev. (NAVD88)* 448.16'	Ecology Well Tag No. BNL 885
Operator Abe Causland	*Exploration Method(s)* 8.5" OD X 4.25" ID Hollow-Stem Auger	*Work Start/Completion Dates* 8/14/2023	*Top of Casing Elev. (NAVD88)* 447.88'	*Depth to Water (Below GS)* 8.3' (Static) 8.43' (Static)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0	448	8" Flush mount, traffic-rated monument in concrete					**FILL** SILTY SAND (SM); loose, moist, dark gray to gray; fine sand; trace fine to coarse sub-rounded gravel; no petroleum-like odor.	0
	445	2" Schedule 40 PVC in 3/8" hyrdated bentonite chips						
5					SPT=3,1,5			5
	440	0.010" (10-slot) 2" schedule 40 PVC screen in 12-20 silica sand 8/15/2023 8/14/2023						
10					SPT=13,18,22		SILTY SAND (SM); dense, moist, gray; fine sand; trace fine to coarse sub-rounded gravel; no petroleum-like odor.	10
	435							
15					SPT=50/4"		**VASHON TILL** SILTY SAND (SM); very dense, wet, gray; fine to medium sand; trace fine-coarse sub-rounded gravel; no petroleum-like odor.	15
	430							
20					SPT=50/3"		Bottom of exploration at 20.5 ft. bgs.	20
	425							
25								25
	420							

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◪ Split Barrel 2" X 1.375" (SPT)

Water Level
- ▼ Static Water Level

See Exploration Log Key for explanation of symbols

Logged by: CMT
Approved by: DRB

Exploration Log MW-32
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\180357 ALOHA CAFE1.GPJ April 11, 2025

APPENDIX B

Laboratory Analytical Reports - Groundwater

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
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November 9, 2023

Daniel Babcock, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

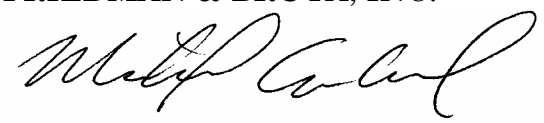
Dear Mr Babcock:

Included are the results from the testing of material submitted on November 2, 2023 from the Aloha-Strickland 180357, F&BI 311054 project. There are 9 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: Aspect Data
ASP1109R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on November 2, 2023 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Aloha-Strickland 180357, F&BI 311054 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
311054 -01	MW-17-110223

All quality control requirements were acceptable.

Date of Report: 11/09/23
Date Received: 11/02/23
Project: Aloha-Strickland 180357, F&BI 311054
Date Extracted: 11/02/23
Date Analyzed: 11/03/23

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
MW-17-110223 311054-01	<100	96
Method Blank 03-2489 MB	<100	106

Date of Report: 11/09/23
Date Received: 11/02/23
Project: Aloha-Strickland 180357, F&BI 311054
Date Extracted: 11/03/23
Date Analyzed: 11/03/23

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
MW-17-110223 311054-01	98 x	<250	131
Method Blank 03-2610 MB2	<50	<250	129

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-17-110223	Client:	Aspect Consulting, LLC
Date Received:	11/02/23	Project:	Aloha-Strickland 180357
Date Extracted:	11/07/23	Lab ID:	311054-01
Date Analyzed:	11/07/23	Data File:	110713.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	71	132
Toluene-d8	98	68	139
4-Bromofluorobenzene	104	62	136

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Aloha-Strickland 180357
Date Extracted:	11/07/23	Lab ID:	03-2623 mb
Date Analyzed:	11/07/23	Data File:	110707.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	71	132
Toluene-d8	100	68	139
4-Bromofluorobenzene	99	62	136

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Date of Report: 11/09/23
Date Received: 11/02/23
Project: Aloha-Strickland 180357, F&BI 311054

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 310561-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	91,000	89,000	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	110	69-134

Date of Report: 11/09/23
Date Received: 11/02/23
Project: Aloha-Strickland 180357, F&BI 311054

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

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	96	100	72-139	4

Date of Report: 11/09/23
Date Received: 11/02/23
Project: Aloha-Strickland 180357, F&BI 311054

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)
Benzene	ug/L (ppb)	10	108	109	70-130	1
Toluene	ug/L (ppb)	10	105	108	70-130	3
Ethylbenzene	ug/L (ppb)	10	108	110	70-130	2
m,p-Xylene	ug/L (ppb)	20	109	111	70-130	2
o-Xylene	ug/L (ppb)	10	107	109	70-130	2
Naphthalene	ug/L (ppb)	10	101	101	61-133	0

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, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. 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 standard reporting limit. 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.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

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.

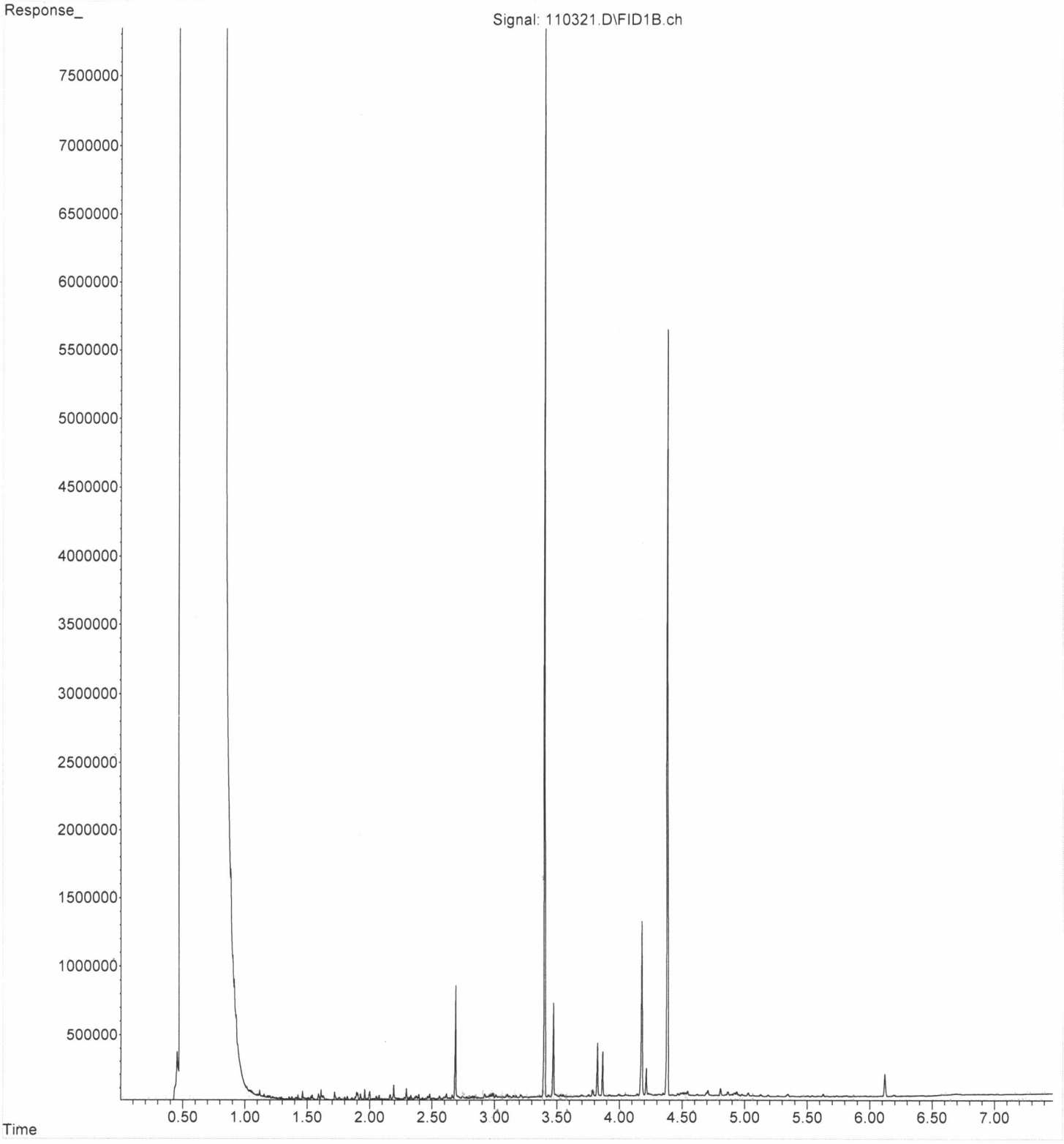
pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

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

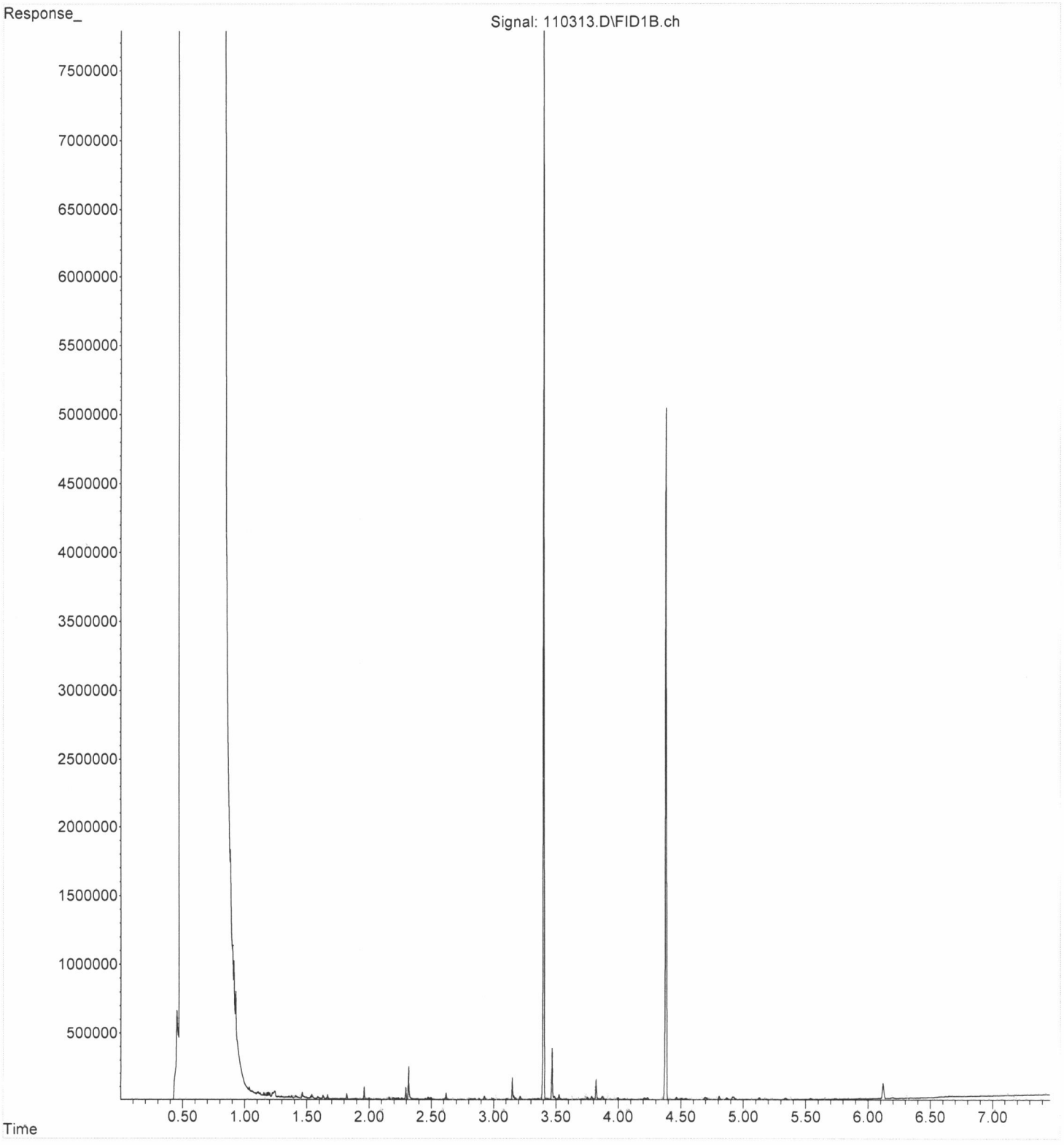
vo - The value reported fell outside the control limits established for this analyte.

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

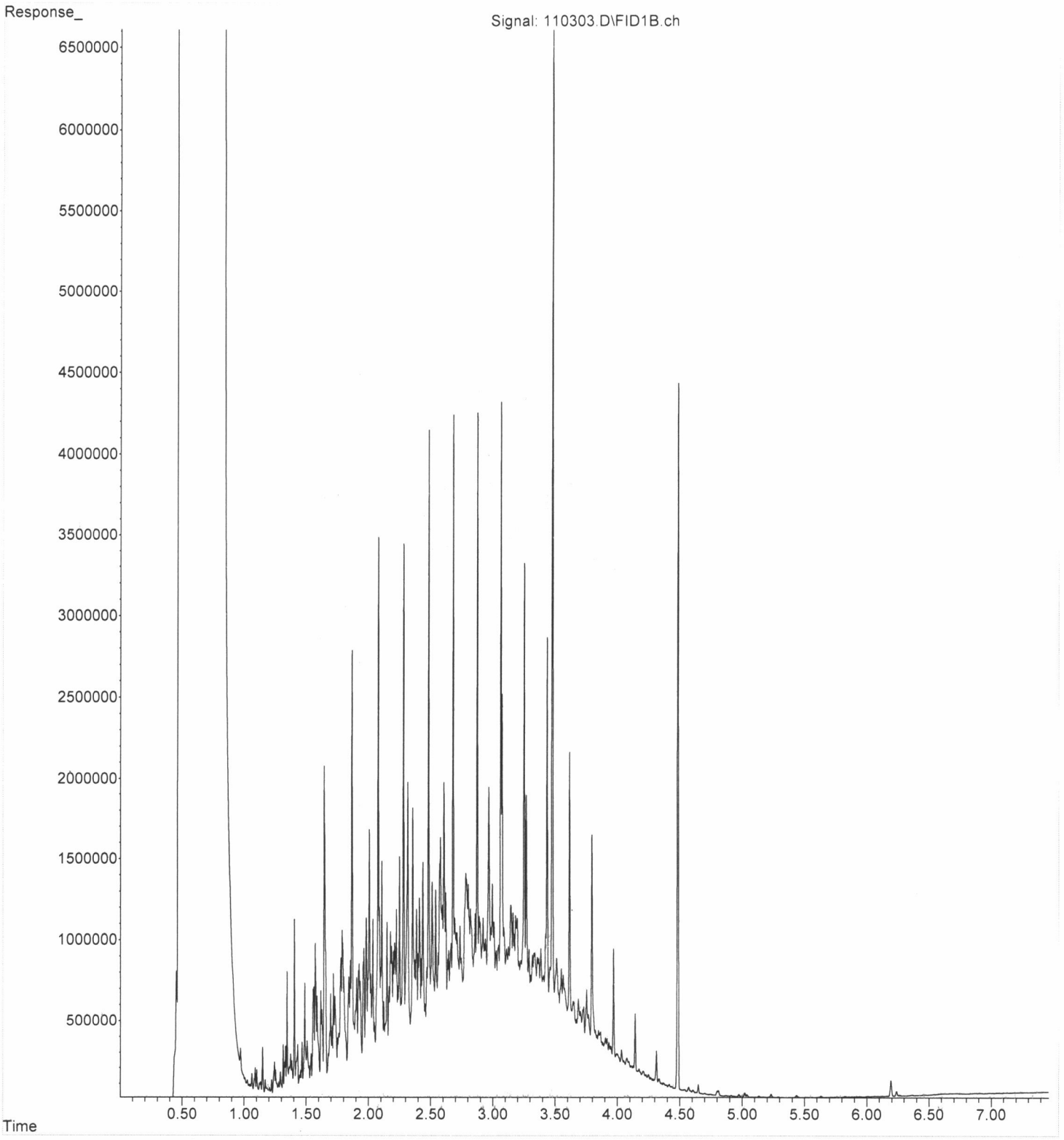
File :P:\Proc_GC14\11-03-23\110321.D
Operator : TL
Acquired : 03 Nov 2023 02:40 pm using AcqMethod DX.M
Instrument : GC14
Sample Name: 311054-01
Misc Info : ERR
Vial Number: 20



File :P:\Proc_GC14\11-03-23\110313.D
Operator : TL
Acquired : 03 Nov 2023 01:05 pm using AcqMethod DX.M
Instrument : GC14
Sample Name: 03-2610 mb2
Misc Info : ERR
Vial Number: 14



File :P:\Proc_GC14\11-03-23\110303.D
Operator : TL
Acquired : 03 Nov 2023 09:09 am using AcqMethod DX.M
Instrument : GC14
Sample Name: 500 Dx 69-104J
Misc Info : ERR
Vial Number: 3



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
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Eric Young, B.S.

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Seattle, WA 98108
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

December 7, 2023

Breeyn Greer, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Greer:

Included are the results from the testing of material submitted on November 30, 2023 from the Texaco Strickland 180357, F&BI 311408 project. There are 20 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: Aspect Data
ASP1207R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on November 30, 2023 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Texaco Strickland 180357 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
311408 -01	MW-16-113023
311408 -02	MW-17-113023
311408 -03	MW-29-113023
311408 -04	MW-18R-112823
311408 -05	MW-25R-112823
311408 -06	MW-27-112823
311408 -07	MW-19-112823
311408 -08	MW-30-112823
311408 -09	MW-31-112823
311408 -10	MW-32-112823
311408 -11	MW-26-112823
311408 -12	Trip Blank

All quality control requirements were acceptable.

Date of Report: 12/07/23
Date Received: 11/30/23
Project: Texaco Strickland 180357, F&BI 311408
Date Extracted: 12/04/23
Date Analyzed: 12/04/23

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
MW-16-113023 311408-01	490	113
MW-17-113023 311408-02	<100	107
MW-29-113023 311408-03	<100	119
MW-18R-112823 311408-04	<100	108
MW-25R-112823 311408-05	<100	107
MW-27-112823 311408-06	<100	102
MW-19-112823 311408-07	<100	102
MW-30-112823 311408-08	<100	101
MW-31-112823 311408-09	<100	103
MW-32-112823 311408-10	<100	97

Date of Report: 12/07/23
Date Received: 11/30/23
Project: Texaco Strickland 180357, F&BI 311408
Date Extracted: 12/04/23
Date Analyzed: 12/04/23

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
MW-26-112823 311408-11	<100	96
Method Blank 03-2522 MB	<100	106

Date of Report: 12/07/23
Date Received: 11/30/23
Project: Texaco Strickland 180357, F&BI 311408
Date Extracted: 12/04/23
Date Analyzed: 12/05/23

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
MW-16-113023 311408-01	220 x	<250	103
MW-17-113023 311408-02	<50	<250	98
MW-29-113023 311408-03	110 x	<250	96
MW-18R-112823 311408-04	<50	<250	98
MW-25R-112823 311408-05	<50	<250	97
MW-27-112823 311408-06	<50	<250	104
MW-19-112823 311408-07	<50	<250	97
MW-30-112823 311408-08	69 x	<250	84
MW-31-112823 311408-09	<50	<250	90
MW-32-112823 311408-10	<50	<250	98
MW-26-112823 311408-11	<50	<250	88
Method Blank 03-2776 MB	<50	<250	85

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-16-113023	Client:	Aspect Consulting, LLC
Date Received:	11/30/23	Project:	Texaco Strickland 180357
Date Extracted:	12/01/23	Lab ID:	311408-01
Date Analyzed:	12/01/23	Data File:	120110.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	109	71	132
Toluene-d8	104	68	139
4-Bromofluorobenzene	99	62	136

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-17-113023	Client:	Aspect Consulting, LLC
Date Received:	11/30/23	Project:	Texaco Strickland 180357
Date Extracted:	12/01/23	Lab ID:	311408-02
Date Analyzed:	12/01/23	Data File:	120109.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	78	126
Toluene-d8	102	84	115
4-Bromofluorobenzene	103	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-29-113023	Client:	Aspect Consulting, LLC
Date Received:	11/30/23	Project:	Texaco Strickland 180357
Date Extracted:	12/01/23	Lab ID:	311408-03
Date Analyzed:	12/01/23	Data File:	120111.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	71	132
Toluene-d8	103	68	139
4-Bromofluorobenzene	96	62	136

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-18R-112823	Client:	Aspect Consulting, LLC
Date Received:	11/30/23	Project:	Texaco Strickland 180357
Date Extracted:	12/01/23	Lab ID:	311408-04
Date Analyzed:	12/01/23	Data File:	120112.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	107	71	132
Toluene-d8	99	68	139
4-Bromofluorobenzene	94	62	136

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-25R-112823	Client:	Aspect Consulting, LLC
Date Received:	11/30/23	Project:	Texaco Strickland 180357
Date Extracted:	12/01/23	Lab ID:	311408-05
Date Analyzed:	12/01/23	Data File:	120113.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	71	132
Toluene-d8	97	68	139
4-Bromofluorobenzene	95	62	136

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-27-112823	Client:	Aspect Consulting, LLC
Date Received:	11/30/23	Project:	Texaco Strickland 180357
Date Extracted:	12/01/23	Lab ID:	311408-06
Date Analyzed:	12/01/23	Data File:	120114.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	71	132
Toluene-d8	90	68	139
4-Bromofluorobenzene	94	62	136

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-19-112823	Client:	Aspect Consulting, LLC
Date Received:	11/30/23	Project:	Texaco Strickland 180357
Date Extracted:	12/01/23	Lab ID:	311408-07
Date Analyzed:	12/01/23	Data File:	120115.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	71	132
Toluene-d8	98	68	139
4-Bromofluorobenzene	96	62	136

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-30-112823	Client:	Aspect Consulting, LLC
Date Received:	11/30/23	Project:	Texaco Strickland 180357
Date Extracted:	12/01/23	Lab ID:	311408-08
Date Analyzed:	12/01/23	Data File:	120116.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	71	132
Toluene-d8	101	68	139
4-Bromofluorobenzene	93	62	136

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-31-112823	Client:	Aspect Consulting, LLC
Date Received:	11/30/23	Project:	Texaco Strickland 180357
Date Extracted:	12/01/23	Lab ID:	311408-09
Date Analyzed:	12/01/23	Data File:	120117.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	71	132
Toluene-d8	99	68	139
4-Bromofluorobenzene	95	62	136

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-32-112823	Client:	Aspect Consulting, LLC
Date Received:	11/30/23	Project:	Texaco Strickland 180357
Date Extracted:	12/01/23	Lab ID:	311408-10
Date Analyzed:	12/01/23	Data File:	120118.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	71	132
Toluene-d8	101	68	139
4-Bromofluorobenzene	97	62	136

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-26-112823	Client:	Aspect Consulting, LLC
Date Received:	11/30/23	Project:	Texaco Strickland 180357
Date Extracted:	12/01/23	Lab ID:	311408-11
Date Analyzed:	12/01/23	Data File:	120119.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	71	132
Toluene-d8	100	68	139
4-Bromofluorobenzene	99	62	136

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Texaco Strickland 180357
Date Extracted:	12/01/23	Lab ID:	03-2753 mb
Date Analyzed:	12/01/23	Data File:	120108.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	78	126
Toluene-d8	102	84	115
4-Bromofluorobenzene	100	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Date of Report: 12/07/23
Date Received: 11/30/23
Project: Texaco Strickland 180357, F&BI 311408

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 312021-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	89	70-130

Date of Report: 12/07/23
Date Received: 11/30/23
Project: Texaco Strickland 180357, F&BI 311408

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

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	112	100	72-139	11

Date of Report: 12/07/23
Date Received: 11/30/23
Project: Texaco Strickland 180357, F&BI 311408

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

Laboratory Code: 311408-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Benzene	ug/L (ppb)	10	<0.35	105	50-150
Toluene	ug/L (ppb)	10	<1	99	50-150
Ethylbenzene	ug/L (ppb)	10	<1	102	50-150
m,p-Xylene	ug/L (ppb)	20	<2	102	50-150
o-Xylene	ug/L (ppb)	10	<1	103	50-150
Naphthalene	ug/L (ppb)	10	<1	105	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benzene	ug/L (ppb)	10	97	103	70-130	6
Toluene	ug/L (ppb)	10	95	98	70-130	3
Ethylbenzene	ug/L (ppb)	10	94	99	70-130	5
m,p-Xylene	ug/L (ppb)	20	94	100	70-130	6
o-Xylene	ug/L (ppb)	10	93	101	70-130	8
Naphthalene	ug/L (ppb)	10	96	105	70-130	9

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, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. 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 standard reporting limit. 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.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

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.

311408

SAMPLE CHAIN OF CUSTODY

11/30/23 VW4/F4

Page # 1 of 2

Report To Breeyn Greer

Company Aspect Consulting

Address 710 2nd Ave

City, State, ZIP Seattle, WA, 98104

Phone 404-210-6437 Email Breeyn.Greer@aspectconsulting.com

SAMPLERS (signature) Carmen Tappero

PROJECT NAME: Texaco Strickland

PO #: 180357

REMARKS: Project specific RLs? - Yes / No

INVOICE TO

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	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	BTEX + Naphthalene by EPA 8260				Notes
MW-16-113023	01 A-G	11/30/23	1140	W	7	X	X						X				
MW-17-113023	02		1050														
MW-29-113023	03		0950														
MW-18R-112823	04	11/28/23	0815	W	7												
MW-25R-112823	05		0935														
MW-27-112823	06		1040														
MW-19-112823	07		1245														
MW-30-112823	08		1525														Label MW-31-112823 AP 11/30
MW-31-112823	09		1450														Samples received at 4 °C
MW-32-112823	10		1350														

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Carmen Tappero	Carmen Tappero	Aspect Consulting	11/30/23	13:07
Received by:	Eric Young	F-B	11/30/23	13:07
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
Ph. (206) 285-8282

311408

SAMPLE CHAIN OF CUSTODY

11/30/23 VW4/F4

Page # 2 of 2

Report To Breeyn Greer

Company

Address

City, State, ZIP See pg 1

Phone Email

SAMPLERS (*signature*) Carmen Tapp

PROJECT NAME: Texaco Strickland

PO #: 180357

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☑ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

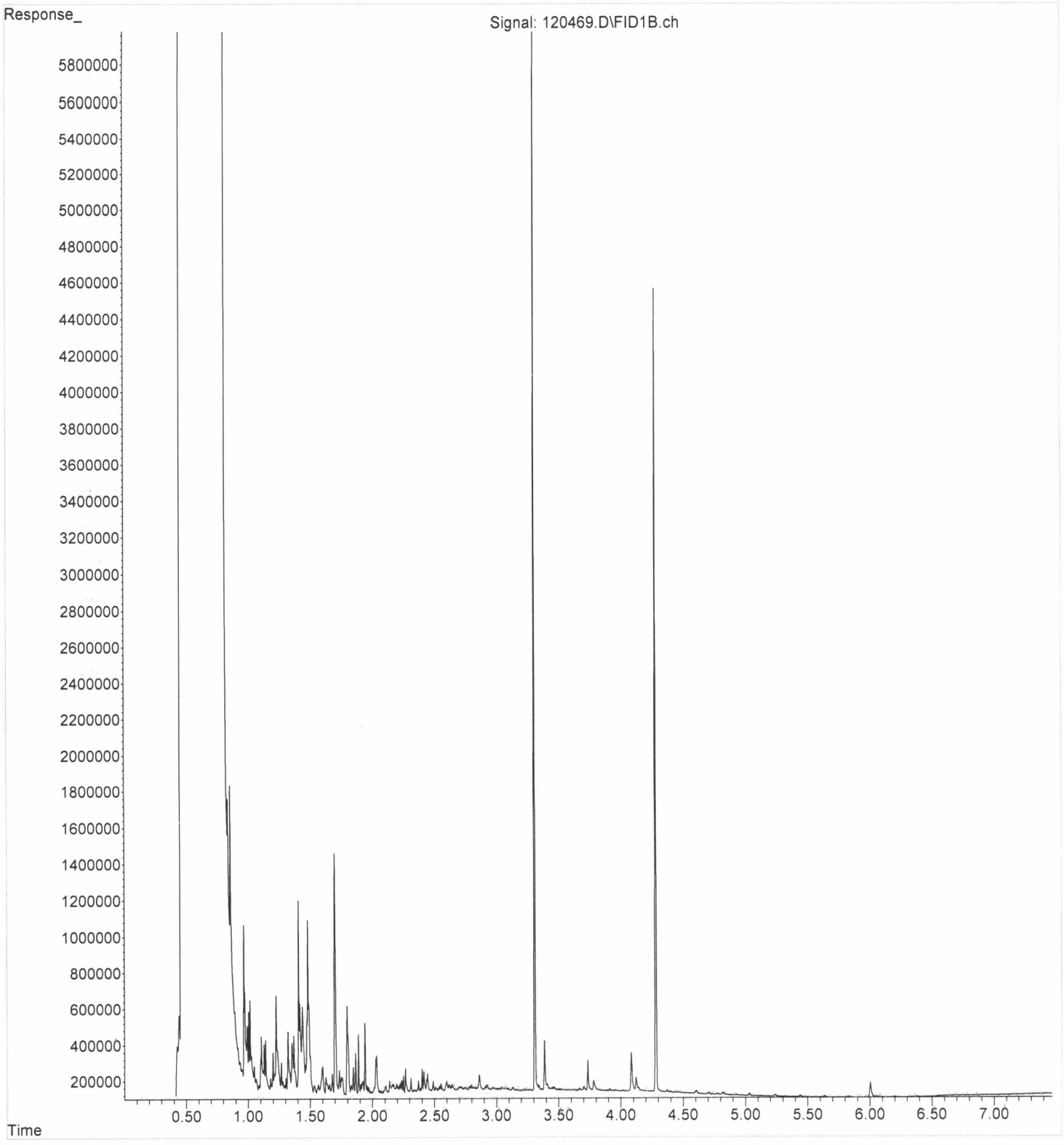
SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	BTEX + Naphthalene by EPA 8260				Notes
						ANALYSES REQUESTED											
MW-26-112830	11 A-G	11/28/30	1150	W	7 (VW)	X	X						X				
Trip Blank	12 A-B	—	—	water	2												Added at lab AP 11/30

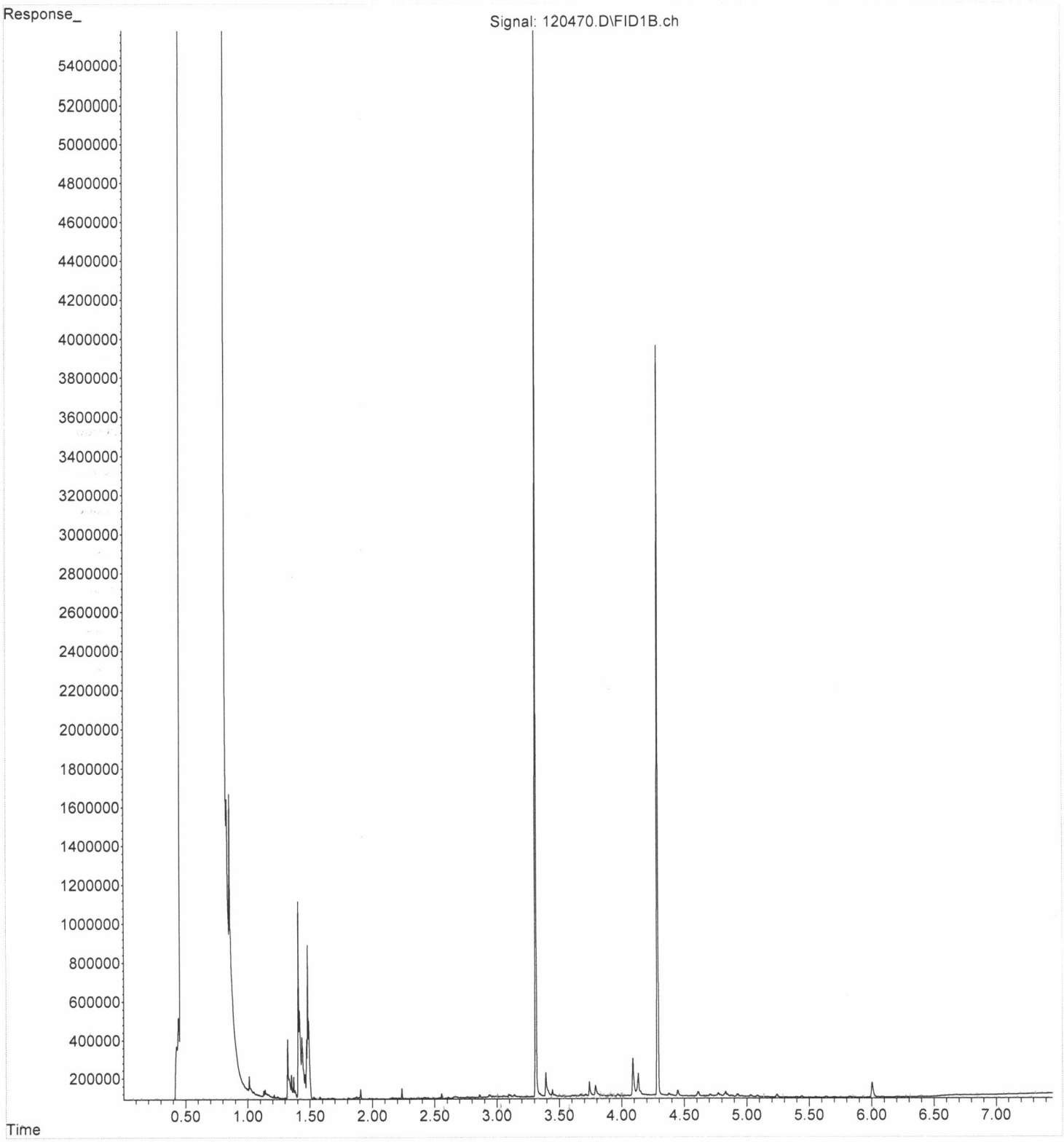
SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Carmen Tapp	Carmen Tappero	Aspect Consulting	11/30/23	13:07
Received by:	Eric Glover	F&B	11/30/23	1307
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
Ph. (206) 285-8282

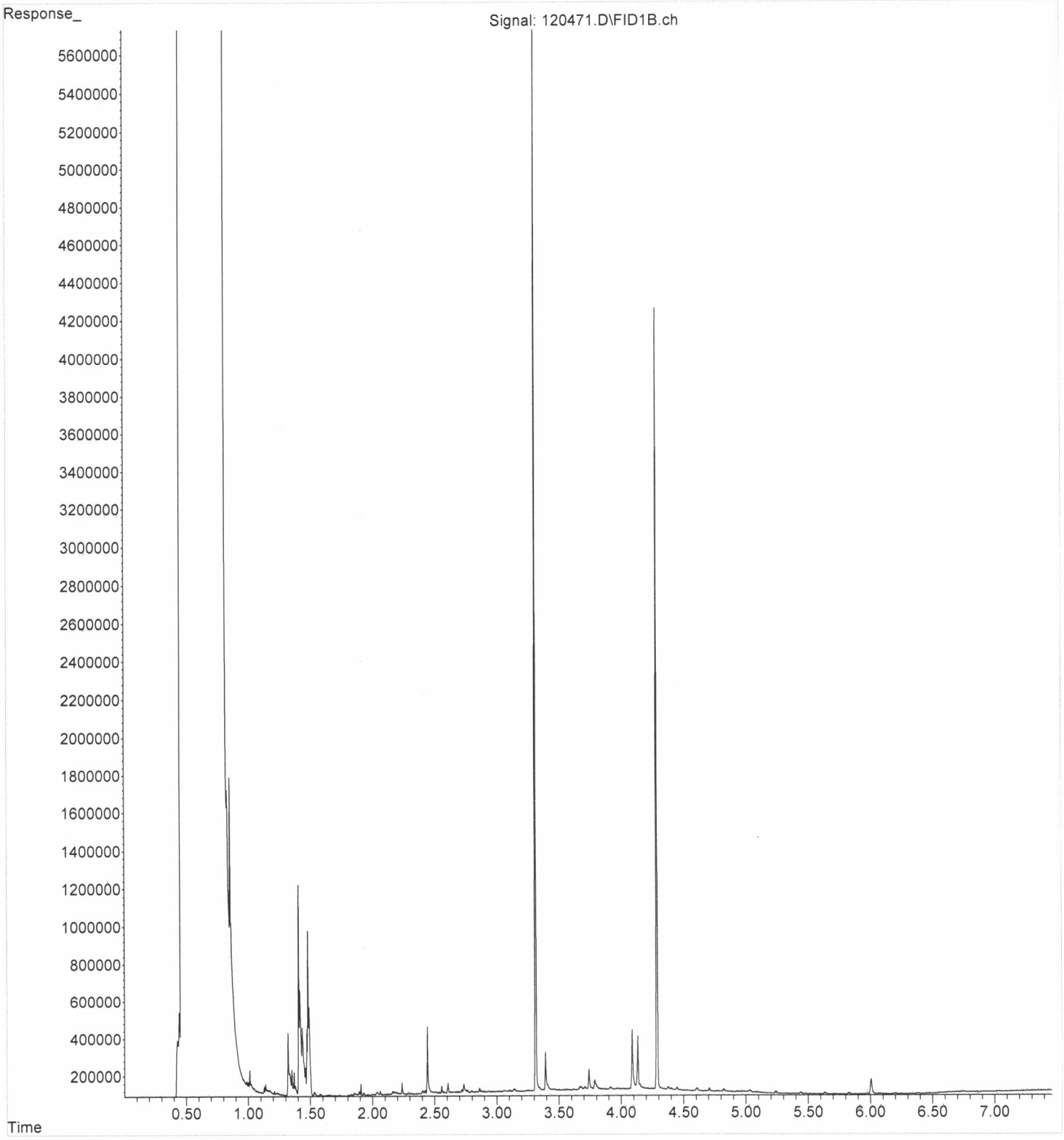
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Operator : IJL
Acquired : 05 Dec 2023 01:32 am using AcqMethod DX.M
Instrument : GC10
Sample Name: 311408-01
Misc Info :
Vial Number: 56



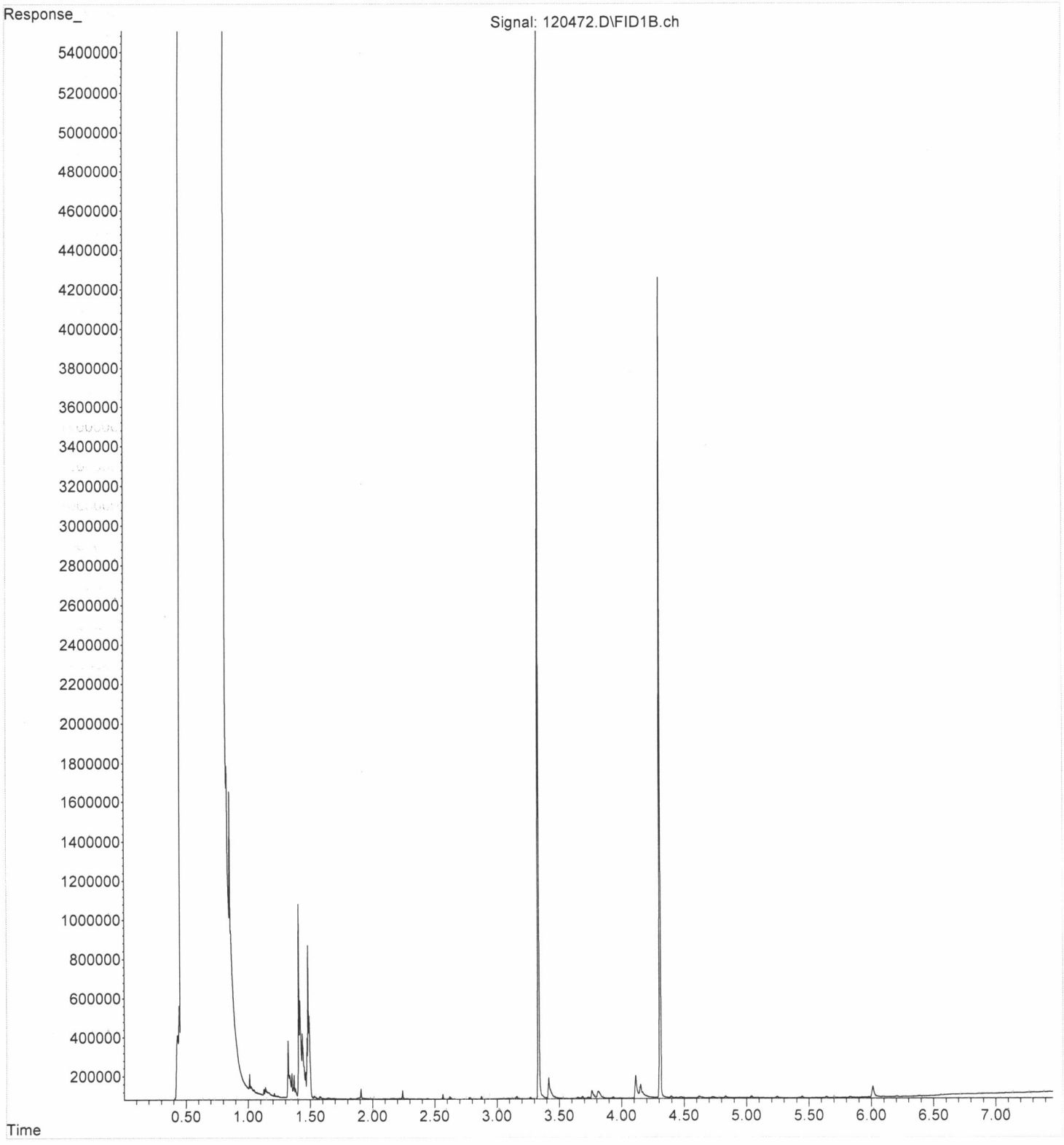
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Instrument : GC10
Sample Name: 311408-02
Misc Info :
Vial Number: 57



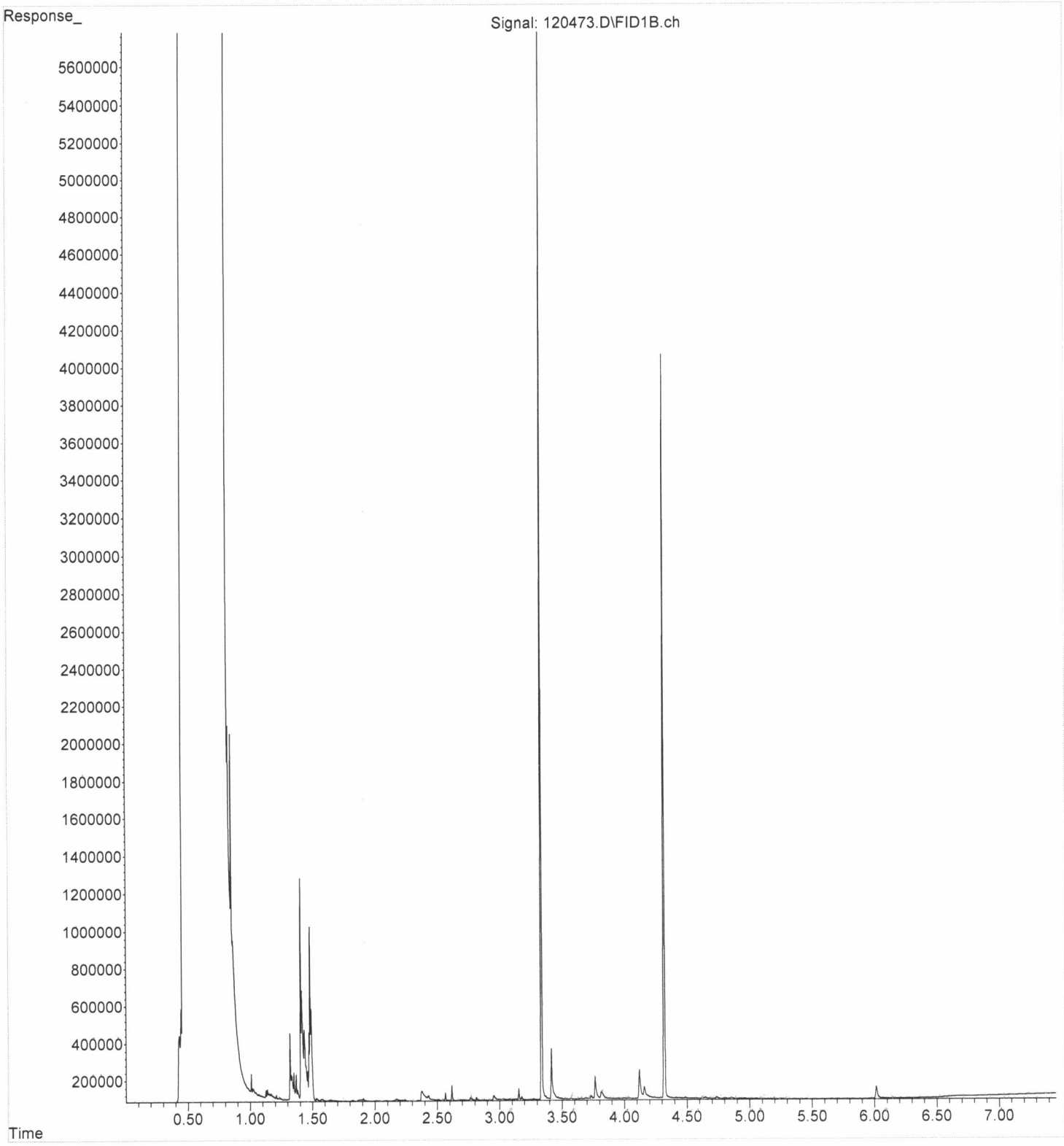
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Acquired : 05 Dec 2023 01:55 am using AcqMethod DX.M
Instrument : GC10
Sample Name: 311408-03
Misc Info :
Vial Number: 58



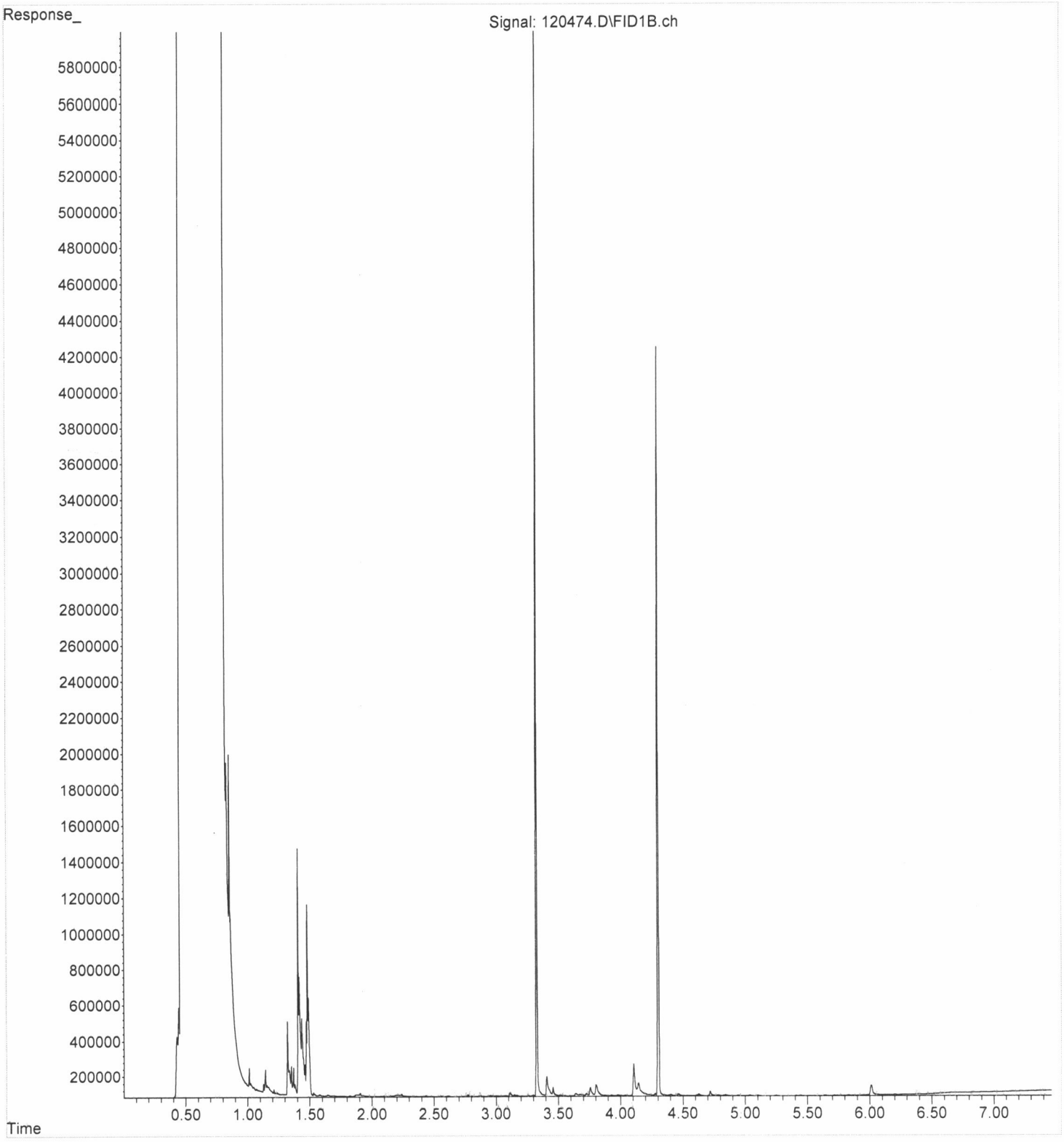
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Instrument : GC10
Sample Name: 311408-04
Misc Info :
Vial Number: 59



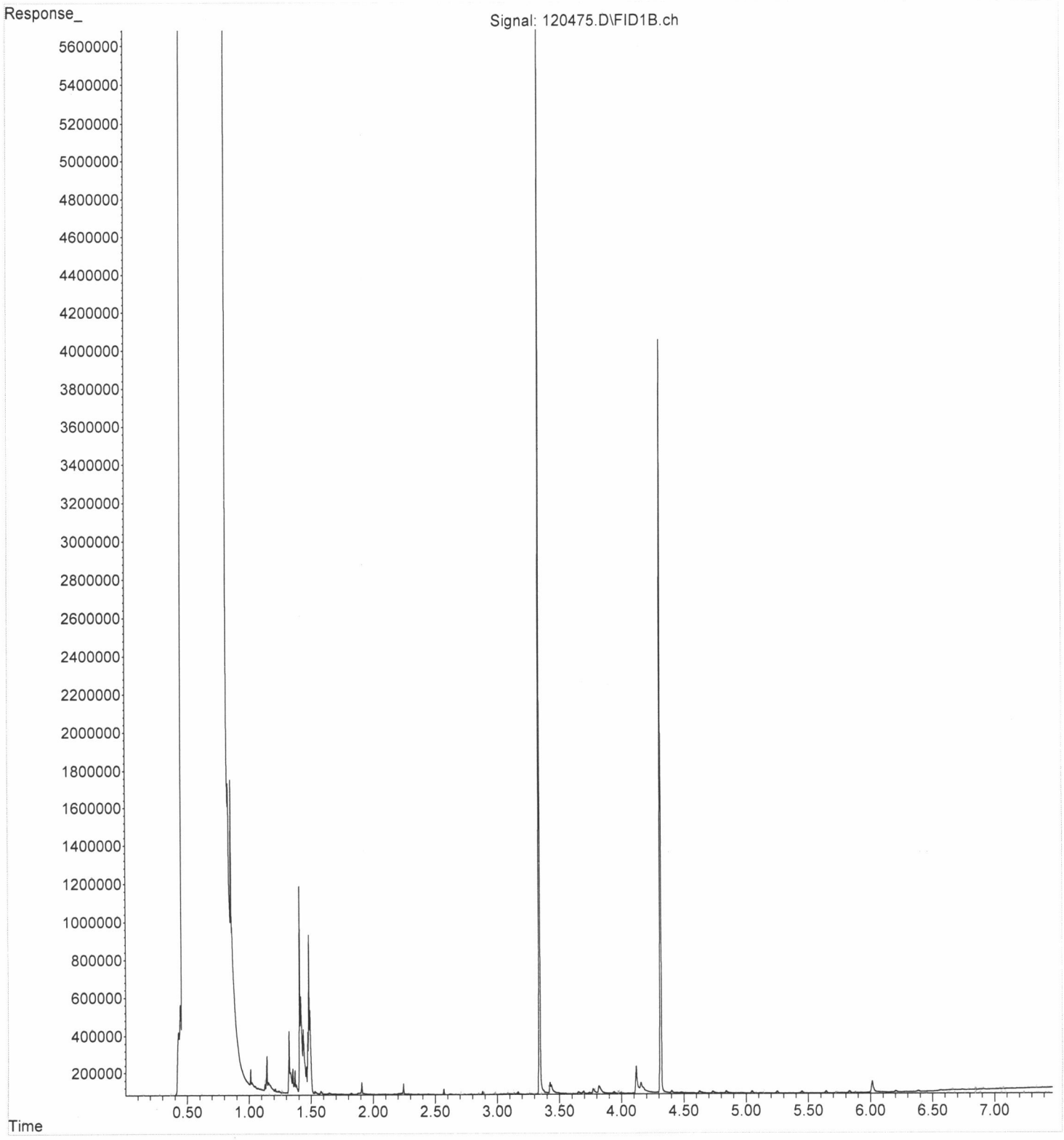
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Instrument : GC10
Sample Name: 311408-05
Misc Info :
Vial Number: 60



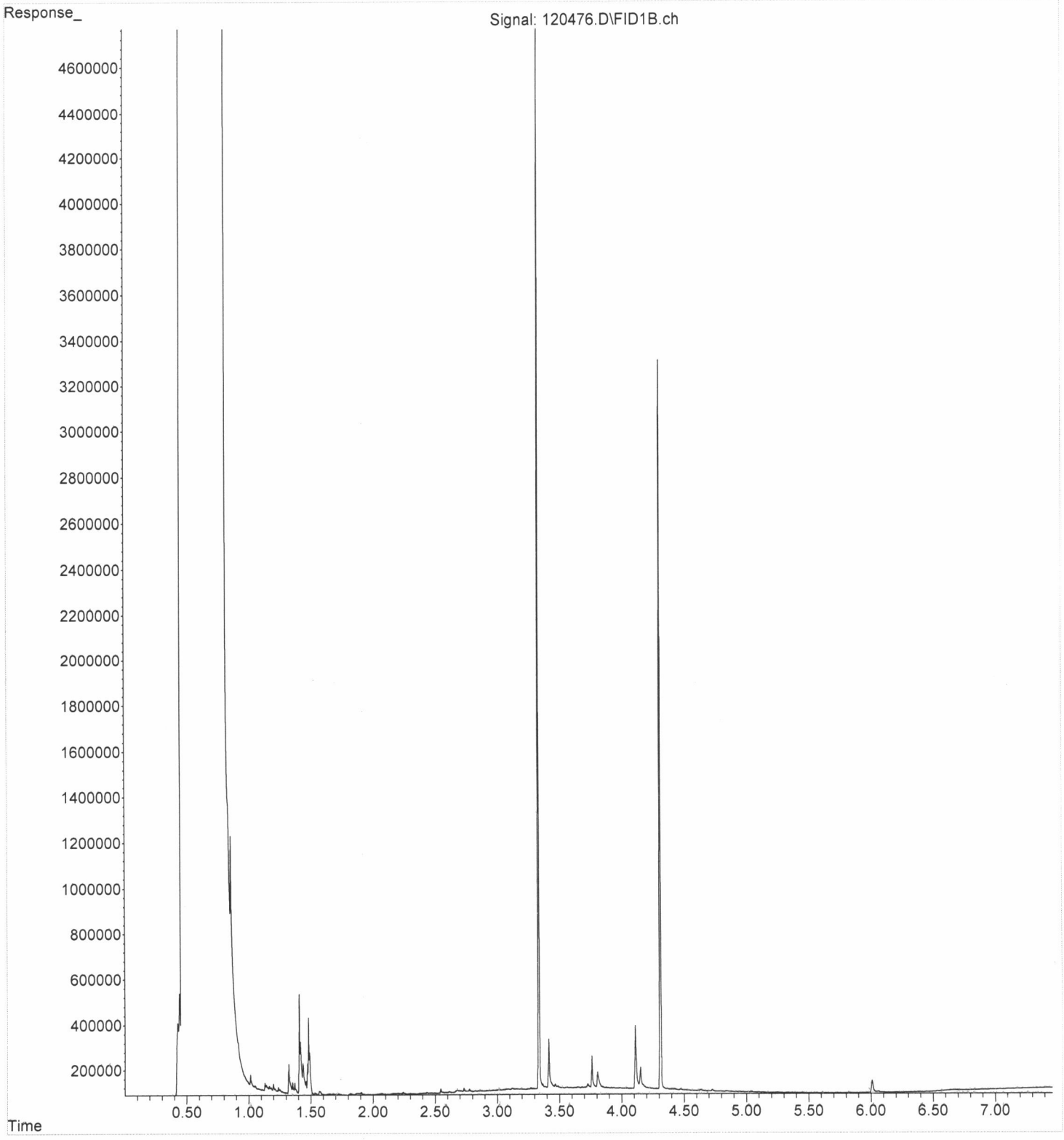
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Operator : IJL
Acquired : 05 Dec 2023 02:30 am using AcqMethod DX.M
Instrument : GC10
Sample Name: 311408-06
Misc Info :
Vial Number: 61



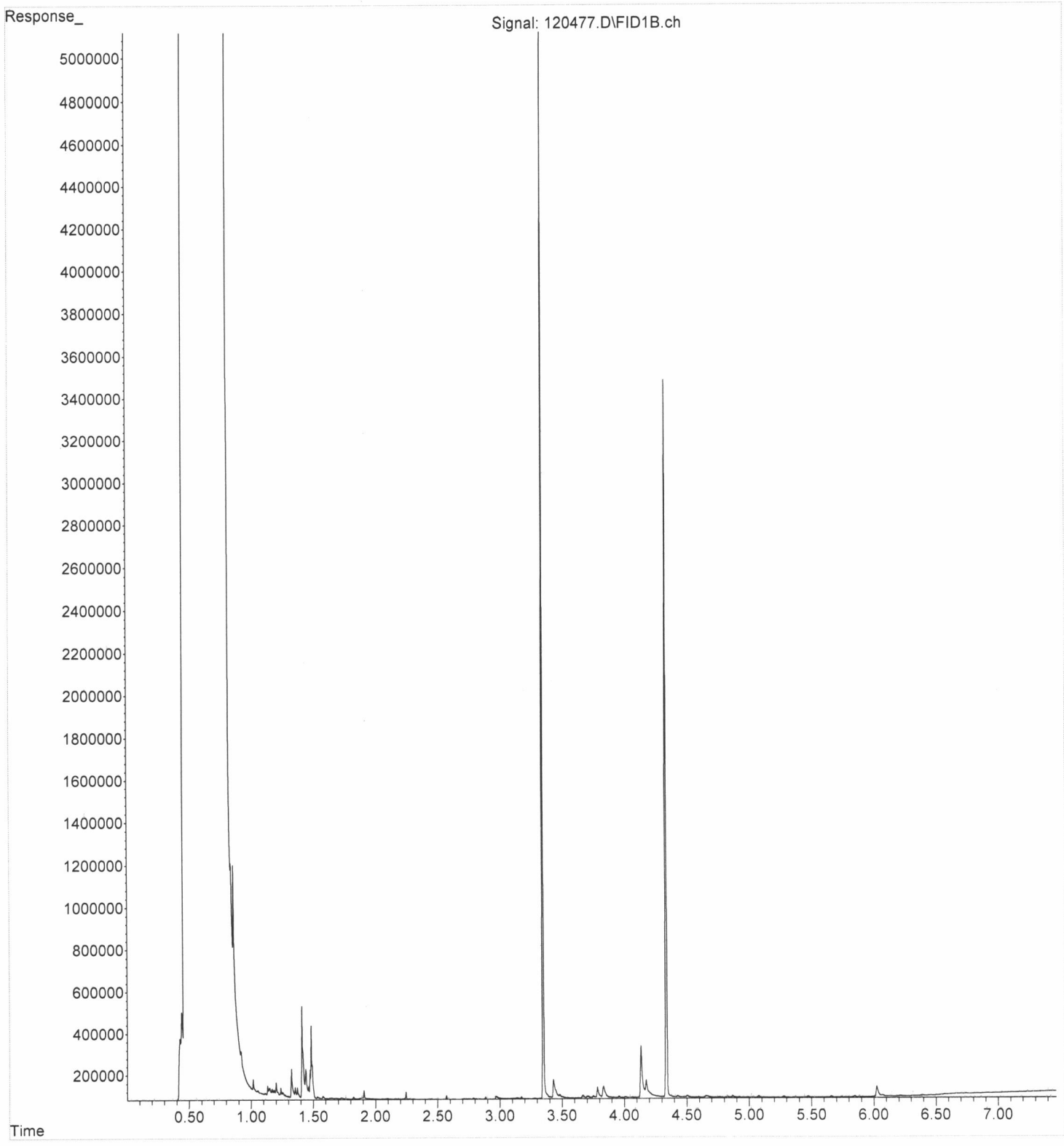
File :P:\Proc_GC10\12-04-23\120475.D
Operator : IJL
Acquired : 05 Dec 2023 02:42 am using AcqMethod DX.M
Instrument : GC10
Sample Name: 311408-07
Misc Info :
Vial Number: 62



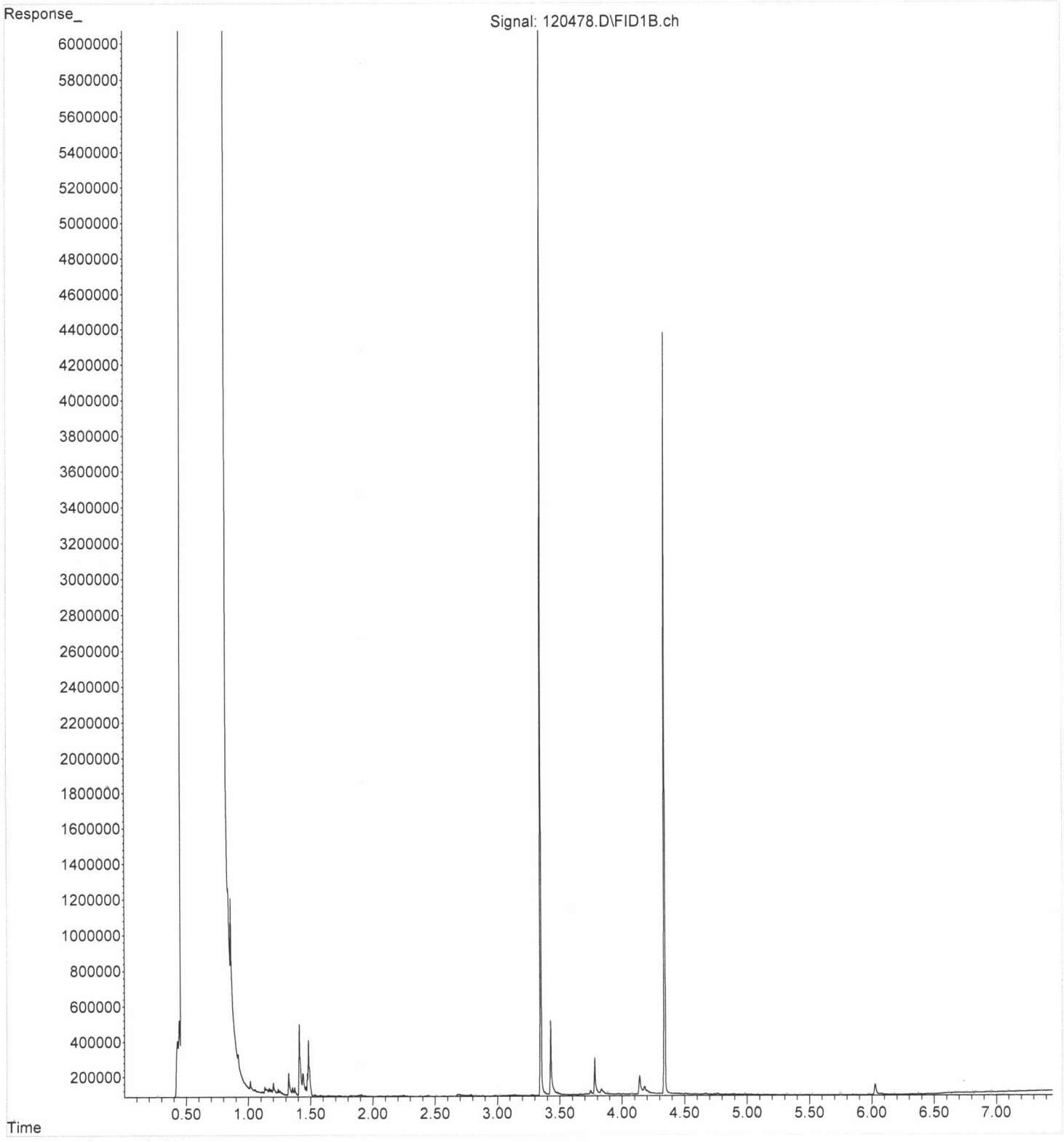
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Operator : IJL
Acquired : 05 Dec 2023 02:53 am using AcqMethod DX.M
Instrument : GC10
Sample Name: 311408-08
Misc Info :
Vial Number: 63



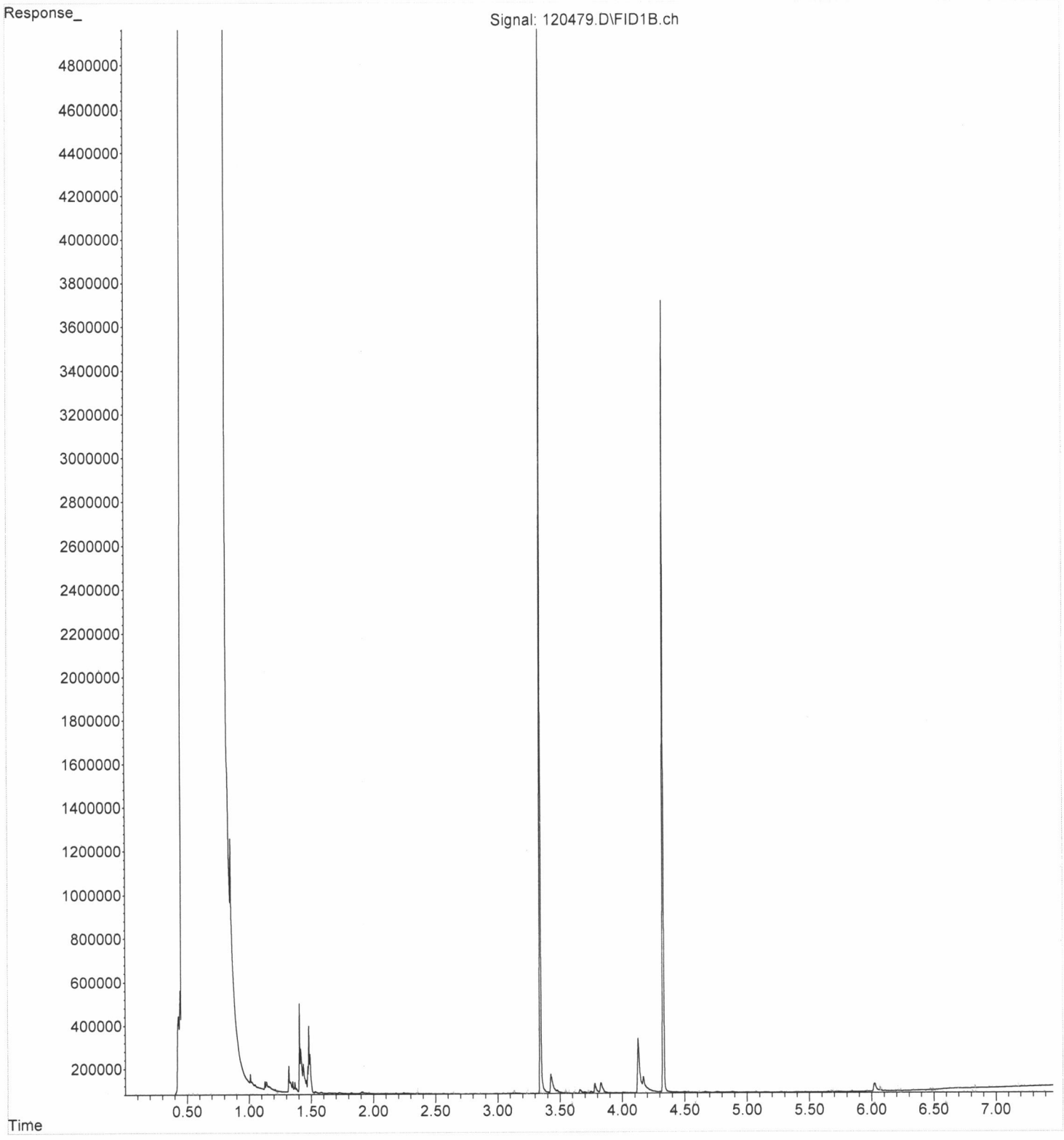
File :P:\Proc_GC10\12-04-23\120477.D
Operator : IJL
Acquired : 05 Dec 2023 03:05 am using AcqMethod DX.M
Instrument : GC10
Sample Name: 311408-09
Misc Info :
Vial Number: 64



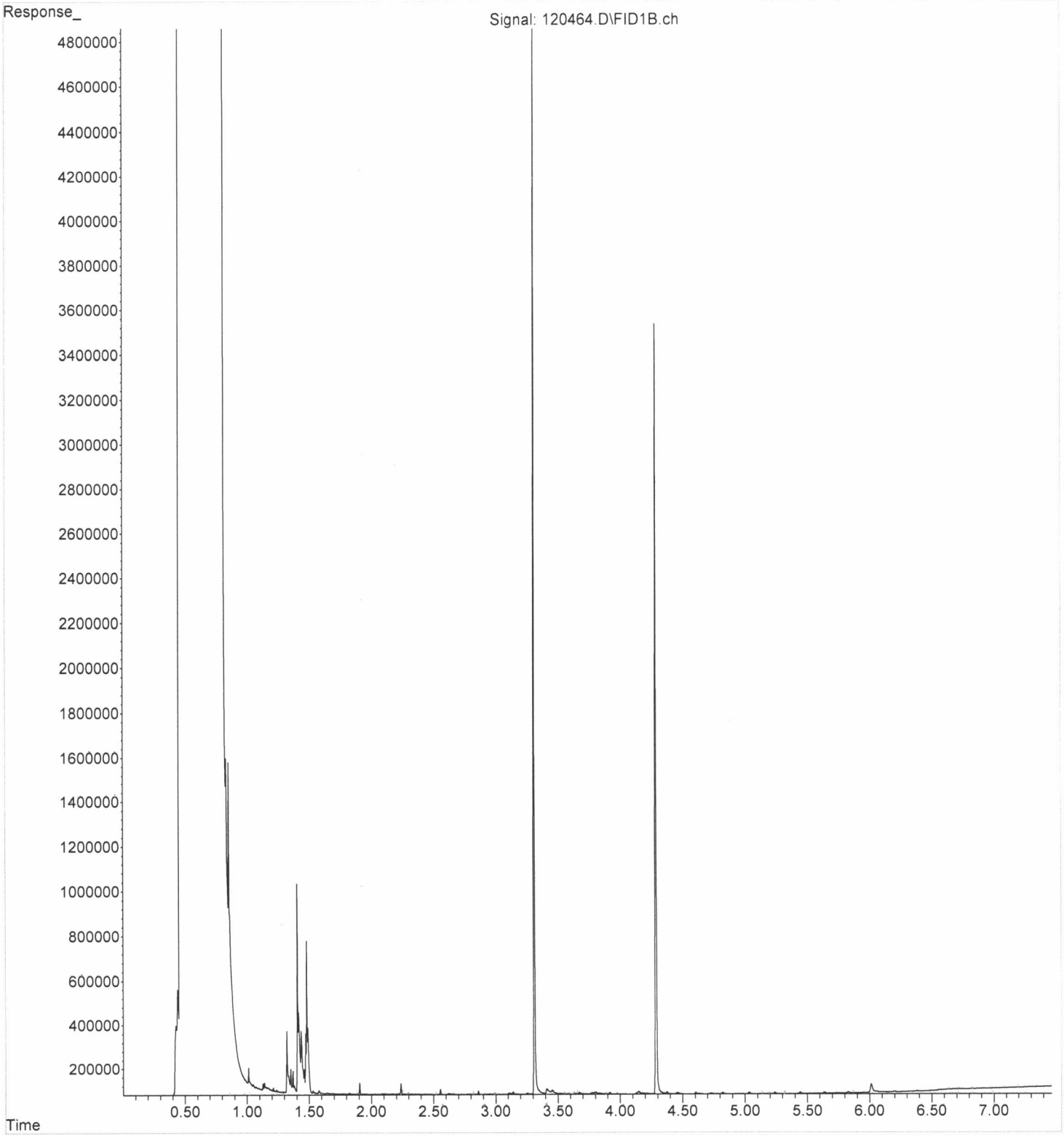
File :P:\Proc_GC10\12-04-23\120478.D
Operator : IJL
Acquired : 05 Dec 2023 03:17 am using AcqMethod DX.M
Instrument : GC10
Sample Name: 311408-10
Misc Info :
Vial Number: 65



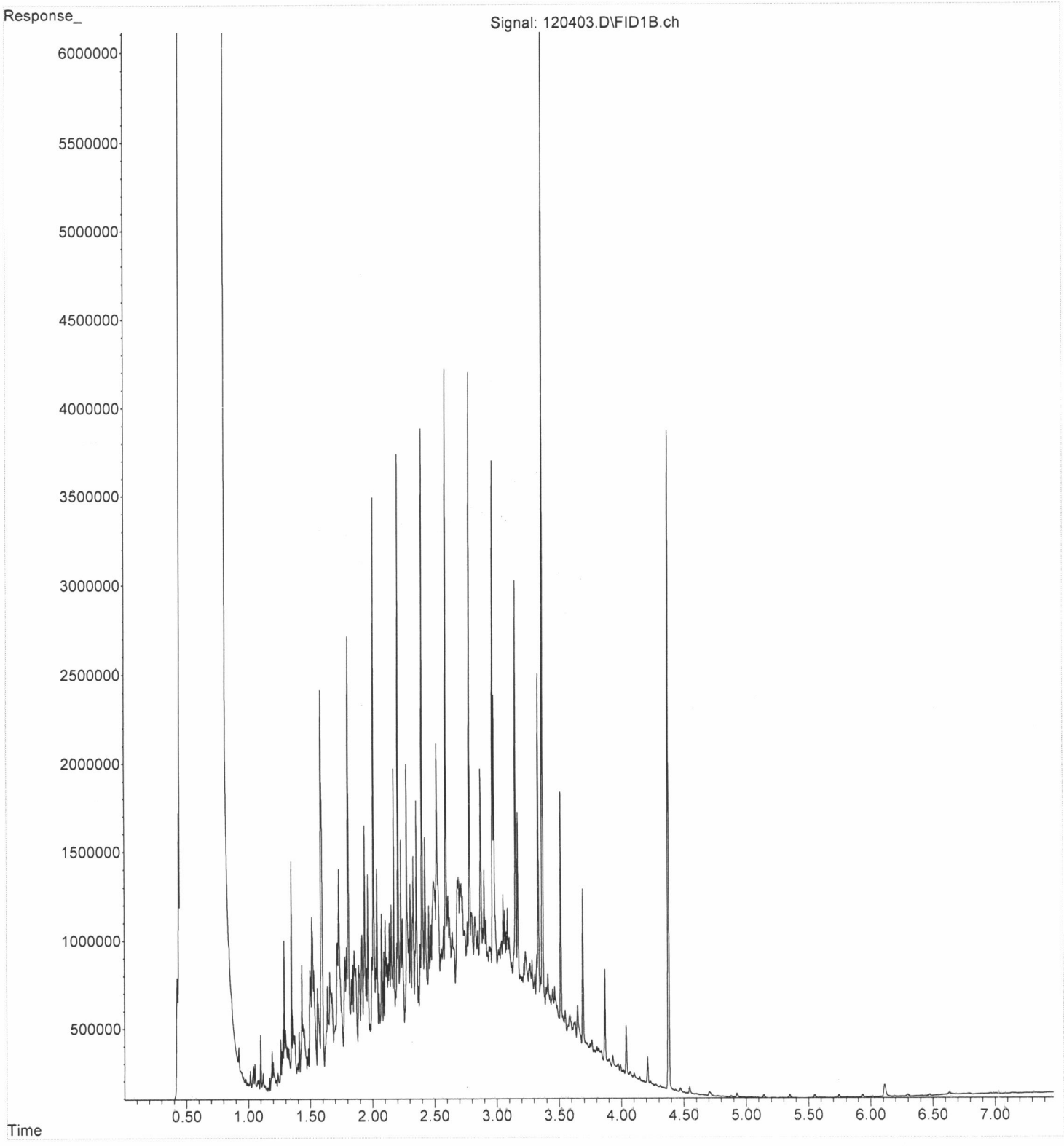
File :P:\Proc_GC10\12-04-23\120479.D
Operator : IJL
Acquired : 05 Dec 2023 03:28 am using AcqMethod DX.M
Instrument : GC10
Sample Name: 311408-11
Misc Info :
Vial Number: 66



File :P:\Proc_GC10\12-04-23\120464.D
Operator : IJL
Acquired : 05 Dec 2023 12:34 am using AcqMethod DX.M
Instrument : GC10
Sample Name: 03-2776 mb
Misc Info :
Vial Number: 53



File :P:\Proc_GC10\12-04-23\120403.D
Operator : IJL
Acquired : 04 Dec 2023 08:31 am using AcqMethod DX.M
Instrument : GC10
Sample Name: 500 DX 70-26F
Misc Info :
Vial Number: 3



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

5500 4th Ave South
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www.friedmanandbruya.com

March 6, 2024

Daniel Babcock, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

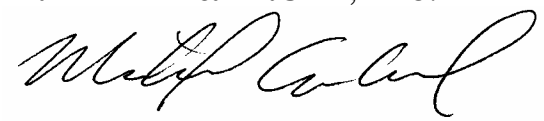
Dear Mr Babcock:

Included are the results from the testing of material submitted on February 29, 2024 from the Texaco Strickland 180357, F&BI 402437 project. There are 20 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: Aspect Data
ASP0306R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 29, 2024 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Texaco Strickland 180357, F&BI 402437 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
402437 -01	MW-18R-022824
402437 -02	MW-25R-022824
402437 -03	MW-26-022824
402437 -04	MW-19-022824
402437 -05	MW-32-022824
402437 -06	MW-31-022824
402437 -07	MW-30-022824
402437 -08	MW-29-022824
402437 -09	MW-27-022824
402437 -10	MW-17-022924
402437 -11	MW-16-022924
402437 -12	Trip Blank

All quality control requirements were acceptable.

Date of Report: 03/06/24
Date Received: 02/29/24
Project: Texaco Strickland 180357, F&BI 402437
Date Extracted: 03/01/24
Date Analyzed: 03/01/24

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
MW-18R-022824 402437-01	<100	96
MW-25R-022824 402437-02	<100	98
MW-26-022824 402437-03	<100	97
MW-19-022824 402437-04	<100	99
MW-32-022824 402437-05	<100	98
MW-31-022824 402437-06	<100	101
MW-30-022824 402437-07	<100	101
MW-29-022824 402437-08	<100	102
MW-27-022824 402437-09	<100	99
MW-17-022924 402437-10	<100	98

Date of Report: 03/06/24
Date Received: 02/29/24
Project: Texaco Strickland 180357, F&BI 402437
Date Extracted: 03/01/24
Date Analyzed: 03/01/24

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
MW-16-022924 402437-11	380	101
Method Blank 04-429 MB	<100	95

Date of Report: 03/06/24
Date Received: 02/29/24
Project: Texaco Strickland 180357, F&BI 402437
Date Extracted: 03/01/24
Date Analyzed: 03/01/24

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
MW-18R-022824 402437-01	<50	<250	116
MW-25R-022824 402437-02	<50	<250	120
MW-26-022824 402437-03	<50	<250	111
MW-19-022824 402437-04	<50	<250	90
MW-32-022824 402437-05	83 x	<250	100
MW-31-022824 402437-06	<50	<250	107
MW-30-022824 402437-07	190 x	<250	124
MW-29-022824 402437-08	160 x	<250	121
MW-27-022824 402437-09	<50	<250	107
MW-17-022924 402437-10	64 x	<250	114
MW-16-022924 402437-11	250 x	<250	112
Method Blank 04-490 MB	<50	<250	112

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-18R-022824	Client:	Aspect Consulting, LLC
Date Received:	02/29/24	Project:	Texaco Strickland 180357
Date Extracted:	03/04/24 11:00	Lab ID:	402437-01
Date Analyzed:	03/04/24	Data File:	030411.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	78	126
Toluene-d8	101	84	115
4-Bromofluorobenzene	97	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-25R-022824	Client:	Aspect Consulting, LLC
Date Received:	02/29/24	Project:	Texaco Strickland 180357
Date Extracted:	03/04/24 11:00	Lab ID:	402437-02
Date Analyzed:	03/04/24	Data File:	030412.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	78	126
Toluene-d8	98	84	115
4-Bromofluorobenzene	92	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-26-022824	Client:	Aspect Consulting, LLC
Date Received:	02/29/24	Project:	Texaco Strickland 180357
Date Extracted:	03/04/24 11:00	Lab ID:	402437-03
Date Analyzed:	03/04/24	Data File:	030413.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	78	126
Toluene-d8	99	84	115
4-Bromofluorobenzene	98	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-19-022824	Client:	Aspect Consulting, LLC
Date Received:	02/29/24	Project:	Texaco Strickland 180357
Date Extracted:	03/04/24 11:00	Lab ID:	402437-04
Date Analyzed:	03/04/24	Data File:	030414.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	78	126
Toluene-d8	99	84	115
4-Bromofluorobenzene	95	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-32-022824	Client:	Aspect Consulting, LLC
Date Received:	02/29/24	Project:	Texaco Strickland 180357
Date Extracted:	03/04/24 11:00	Lab ID:	402437-05
Date Analyzed:	03/04/24	Data File:	030415.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	78	126
Toluene-d8	105	84	115
4-Bromofluorobenzene	102	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-31-022824	Client:	Aspect Consulting, LLC
Date Received:	02/29/24	Project:	Texaco Strickland 180357
Date Extracted:	03/04/24 11:00	Lab ID:	402437-06
Date Analyzed:	03/04/24	Data File:	030416.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	78	126
Toluene-d8	104	84	115
4-Bromofluorobenzene	105	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-30-022824	Client:	Aspect Consulting, LLC
Date Received:	02/29/24	Project:	Texaco Strickland 180357
Date Extracted:	03/04/24 11:00	Lab ID:	402437-07
Date Analyzed:	03/04/24	Data File:	030417.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	78	126
Toluene-d8	103	84	115
4-Bromofluorobenzene	100	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-29-022824	Client:	Aspect Consulting, LLC
Date Received:	02/29/24	Project:	Texaco Strickland 180357
Date Extracted:	03/04/24 11:00	Lab ID:	402437-08
Date Analyzed:	03/04/24	Data File:	030418.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	78	126
Toluene-d8	103	84	115
4-Bromofluorobenzene	103	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-27-022824	Client:	Aspect Consulting, LLC
Date Received:	02/29/24	Project:	Texaco Strickland 180357
Date Extracted:	03/04/24 11:00	Lab ID:	402437-09
Date Analyzed:	03/04/24	Data File:	030419.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	93	78	126
Toluene-d8	100	84	115
4-Bromofluorobenzene	103	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-17-022924	Client:	Aspect Consulting, LLC
Date Received:	02/29/24	Project:	Texaco Strickland 180357
Date Extracted:	03/04/24 11:00	Lab ID:	402437-10
Date Analyzed:	03/04/24	Data File:	030420.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	78	126
Toluene-d8	100	84	115
4-Bromofluorobenzene	103	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-16-022924	Client:	Aspect Consulting, LLC
Date Received:	02/29/24	Project:	Texaco Strickland 180357
Date Extracted:	03/04/24 11:00	Lab ID:	402437-11
Date Analyzed:	03/04/24	Data File:	030421.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	78	126
Toluene-d8	103	84	115
4-Bromofluorobenzene	106	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Texaco Strickland 180357
Date Extracted:	03/04/24	Lab ID:	04-0494 mb
Date Analyzed:	03/04/24	Data File:	030409.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	78	126
Toluene-d8	100	84	115
4-Bromofluorobenzene	100	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Date of Report: 03/06/24
Date Received: 02/29/24
Project: Texaco Strickland 180357, F&BI 402437

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 402437-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	<10	<10	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	90	70-130

Date of Report: 03/06/24
Date Received: 02/29/24
Project: Texaco Strickland 180357, F&BI 402437

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

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	96	100	72-139	4

Date of Report: 03/06/24
Date Received: 02/29/24
Project: Texaco Strickland 180357, F&BI 402437

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

Laboratory Code: 402437-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Benzene	ug/L (ppb)	10	<0.35	101	50-150
Toluene	ug/L (ppb)	10	<1	96	50-150
Ethylbenzene	ug/L (ppb)	10	<1	100	50-150
m,p-Xylene	ug/L (ppb)	20	<2	99	50-150
o-Xylene	ug/L (ppb)	10	<1	97	50-150
Naphthalene	ug/L (ppb)	10	<1	95	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benzene	ug/L (ppb)	10	105	105	70-130	0
Toluene	ug/L (ppb)	10	100	102	70-130	2
Ethylbenzene	ug/L (ppb)	10	103	104	70-130	1
m,p-Xylene	ug/L (ppb)	20	101	102	70-130	1
o-Xylene	ug/L (ppb)	10	99	99	70-130	0
Naphthalene	ug/L (ppb)	10	100	96	70-130	4

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, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. 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 standard reporting limit. 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.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

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.

402437

SAMPLE CHAIN OF CUSTODY

02/29/24

VW4/F3

Page # 1 of 2

Report To Daniel Babcock

Company Aspect Consulting

Address 710 2nd Ave #550

City, State, ZIP Seattle, WA, 98110

Phone 404-210-1e437 Email Daniel.Babcock@aspectconsulting.com

SAMPLERS (signature) Carmen Tappero

PROJECT NAME: Texaco - Strickland

PO #: 180357

REMARKS: Project specific RLs? - Yes / No

INVOICE TO

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	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	BTEX + Naphthalene EPA 8260				Notes
						ANALYSES REQUESTED											
MW-18R-022824	01 A-G	2/28/24	0810	W	7	X	X						X				
MW-25R-022824	02		0850														
MW-26-022824	03		0940														
MW-19-022824	04		1020														
MW-32-022824	05		1120														
MW-31-022824	06		1200														
MW-30-022824	07		1250														
MW-29-022824	08		1330														
MW-27-022824	09	"	1420	"	"												
MW-17-022924	10	2/29/24	0930	W	7												

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Carmen Tappero	Carmen Tappero	Aspect	2/29/24	12:28
Received by:	Michael Erdahl	Fed Ex	2/29/24	1228
Relinquished by:		Samples received at 2 °C		
Received by:				

Friedman & Bruya, Inc.
Ph. (206) 285-8282

402437

SAMPLE CHAIN OF CUSTODY

02/29/24

VW 4/F3

Page # 2 of 2

Report To See pg 1.

Company

Address

City, State, ZIP

Phone Email

SAMPLERS (signature)

PROJECT NAME: Texaco - Strickland

PO #: 180357

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

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	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	BTEX & Naphthalene by 8260				Notes
MW-116-022924	11 A-G	2/29/24	1020	W	7	X	X						X				
Trip Blank	12 A-B	-	-	water	2												Added at lab AP 02/29

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Carmen Tappero	Aspect	2/29/24	12:28
Received by:	Michael Erkl	FGBm	2/29/24	1228
Relinquished by:		Samples received at 2 oC		
Received by:				

Friedman & Bruya, Inc.
Ph. (206) 285-8282

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

5500 4th Ave South
Seattle, WA 98108-2419
(206) 285-8282
office@friedmanandbruya.com
www.friedmanandbruya.com

June 6, 2024

Daniel Babcock, Project Manager
Aspect Consulting
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Mr Babcock:

Included are the results from the testing of material submitted on May 30, 2024 from the Texaco Strickland AS180357, F&BI 405479 project. There are 20 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: Aspect Data
ASP0606R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on May 30, 2024 by Friedman & Bruya, Inc. from the Aspect Consulting Texaco Strickland AS180357, F&BI 405479 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting
405479 -01	MW-18R-240529
405479 -02	MW-25R-240529
405479 -03	MW-26-240529
405479 -04	MW-19-240529
405479 -05	MW-32-240529
405479 -06	MW-31-240529
405479 -07	MW-30-240529
405479 -08	MW-29-240529
405479 -09	MW-27-240530
405479 -10	MW-16-240530
405479 -11	MW-17-240530
405479 -12	Trip Blank

All quality control requirements were acceptable.

Date of Report: 06/06/24
Date Received: 05/30/24
Project: Texaco Strickland AS180357, F&BI 405479
Date Extracted: 05/30/24
Date Analyzed: 05/31/24

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
MW-18R-240529 405479-01	<100	92
MW-25R-240529 405479-02	<100	96
MW-26-240529 405479-03	<100	97
MW-19-240529 405479-04	<100	101
MW-32-240529 405479-05	<100	97
MW-31-240529 405479-06	<100	98
MW-30-240529 405479-07	<100	98
MW-29-240529 405479-08	<100	99
MW-27-240530 405479-09	<100	106
MW-16-240530 405479-10	320	104

Date of Report: 06/06/24
Date Received: 05/30/24
Project: Texaco Strickland AS180357, F&BI 405479
Date Extracted: 05/30/24
Date Analyzed: 05/31/24

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
MW-17-240530 405479-11	<100	103
Method Blank 04-914 MB	<100	95

Date of Report: 06/06/24
Date Received: 05/30/24
Project: Texaco Strickland AS180357, F&BI 405479
Date Extracted: 05/31/24
Date Analyzed: 05/31/24

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
MW-18R-240529 405479-01	<50	<250	76
MW-25R-240529 405479-02	<50	<250	75
MW-26-240529 405479-03	<50	<250	82
MW-19-240529 405479-04	<50	<250	71
MW-32-240529 405479-05	<50	<250	79
MW-31-240529 405479-06	<50	<250	87
MW-30-240529 405479-07	78 x	<250	71
MW-29-240529 405479-08	140 x	<250	78
MW-27-240530 405479-09	<50	<250	68
MW-16-240530 405479-10	160 x	<250	78
MW-17-240530 405479-11	53 x	<250	86
Method Blank 04-1270 MB2	<50	<250	75

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-18R-240529	Client:	Aspect Consulting
Date Received:	05/30/24	Project:	Texaco Strickland AS180357
Date Extracted:	06/03/24	Lab ID:	405479-01
Date Analyzed:	06/03/24	Data File:	060332.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	110	79	128
Toluene-d8	99	84	121
4-Bromofluorobenzene	100	84	116

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-25R-240529	Client:	Aspect Consulting
Date Received:	05/30/24	Project:	Texaco Strickland AS180357
Date Extracted:	06/03/24	Lab ID:	405479-02
Date Analyzed:	06/03/24	Data File:	060333.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	107	79	128
Toluene-d8	98	84	121
4-Bromofluorobenzene	99	84	116

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-26-240529	Client:	Aspect Consulting
Date Received:	05/30/24	Project:	Texaco Strickland AS180357
Date Extracted:	06/03/24	Lab ID:	405479-03
Date Analyzed:	06/03/24	Data File:	060334.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	94	79	128
Toluene-d8	97	84	121
4-Bromofluorobenzene	101	84	116

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-19-240529	Client:	Aspect Consulting
Date Received:	05/30/24	Project:	Texaco Strickland AS180357
Date Extracted:	06/03/24	Lab ID:	405479-04
Date Analyzed:	06/03/24	Data File:	060335.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	79	128
Toluene-d8	103	84	121
4-Bromofluorobenzene	99	84	116

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-32-240529	Client:	Aspect Consulting
Date Received:	05/30/24	Project:	Texaco Strickland AS180357
Date Extracted:	06/03/24	Lab ID:	405479-05
Date Analyzed:	06/03/24	Data File:	060336.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	79	128
Toluene-d8	99	84	121
4-Bromofluorobenzene	107	84	116

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-31-240529	Client:	Aspect Consulting
Date Received:	05/30/24	Project:	Texaco Strickland AS180357
Date Extracted:	06/03/24	Lab ID:	405479-06
Date Analyzed:	06/03/24	Data File:	060337.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	79	128
Toluene-d8	99	84	121
4-Bromofluorobenzene	100	84	116

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-30-240529	Client:	Aspect Consulting
Date Received:	05/30/24	Project:	Texaco Strickland AS180357
Date Extracted:	06/03/24	Lab ID:	405479-07
Date Analyzed:	06/03/24	Data File:	060338.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	110	79	128
Toluene-d8	99	84	121
4-Bromofluorobenzene	97	84	116

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-29-240529	Client:	Aspect Consulting
Date Received:	05/30/24	Project:	Texaco Strickland AS180357
Date Extracted:	06/03/24	Lab ID:	405479-08
Date Analyzed:	06/03/24	Data File:	060339.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	110	79	128
Toluene-d8	104	84	121
4-Bromofluorobenzene	102	84	116

Compounds:	Concentration ug/L (ppb)
Benzene	1.6
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-27-240530	Client:	Aspect Consulting
Date Received:	05/30/24	Project:	Texaco Strickland AS180357
Date Extracted:	06/03/24	Lab ID:	405479-09
Date Analyzed:	06/03/24	Data File:	060340.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	86	79	128
Toluene-d8	98	84	121
4-Bromofluorobenzene	105	84	116

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-16-240530	Client:	Aspect Consulting
Date Received:	05/30/24	Project:	Texaco Strickland AS180357
Date Extracted:	06/03/24	Lab ID:	405479-10
Date Analyzed:	06/03/24	Data File:	060341.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	79	128
Toluene-d8	96	84	121
4-Bromofluorobenzene	97	84	116

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-17-240530	Client:	Aspect Consulting
Date Received:	05/30/24	Project:	Texaco Strickland AS180357
Date Extracted:	06/03/24	Lab ID:	405479-11
Date Analyzed:	06/03/24	Data File:	060342.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	90	79	128
Toluene-d8	95	84	121
4-Bromofluorobenzene	96	84	116

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	Aspect Consulting
Date Received:	Not Applicable	Project:	Texaco Strickland AS180357
Date Extracted:	06/03/24	Lab ID:	04-1231 mb
Date Analyzed:	06/03/24	Data File:	060329.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	78	126
Toluene-d8	100	84	115
4-Bromofluorobenzene	97	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Date of Report: 06/06/24
Date Received: 05/30/24
Project: Texaco Strickland AS180357, F&BI 405479

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 405440-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	97	70-130

Date of Report: 06/06/24
Date Received: 05/30/24
Project: Texaco Strickland AS180357, F&BI 405479

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

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	89	81	65-151	9

Date of Report: 06/06/24
Date Received: 05/30/24
Project: Texaco Strickland AS180357, F&BI 405479

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

Laboratory Code: 405479-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Benzene	ug/L (ppb)	10	<0.35	103	50-150
Toluene	ug/L (ppb)	10	<1	101	50-150
Ethylbenzene	ug/L (ppb)	10	<1	103	50-150
m,p-Xylene	ug/L (ppb)	20	<2	102	50-150
o-Xylene	ug/L (ppb)	10	<1	103	50-150
Naphthalene	ug/L (ppb)	10	<1	109	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benzene	ug/L (ppb)	10	101	103	70-130	2
Toluene	ug/L (ppb)	10	101	101	70-130	0
Ethylbenzene	ug/L (ppb)	10	103	102	70-130	1
m,p-Xylene	ug/L (ppb)	20	101	101	70-130	0
o-Xylene	ug/L (ppb)	10	99	99	70-130	0
Naphthalene	ug/L (ppb)	10	103	102	70-130	1

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, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. 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 standard reporting limit. 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.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

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.

405479

SAMPLE CHAIN OF CUSTODY

05/30/24 F3/VW4

Page # 1 of 2

Report To Daniel Babcock

Company Aspect

Address

City, State, ZIP

Phone 404-210-6437 Email Daniel.Babcock@aspectconsulting.com

SAMPLERS (*signature*)

PROJECT NAME: Texaco - Strickland

PO #: AS180357

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

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	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	BTEX + Naphthalene EPA 8260				Notes
						ANALYSES REQUESTED											
MW-18R-240529	01 A-G	5/29/24	0805	W	7	X	X						X				
MW-25R-240529	02		0900														
MW-26-240529	03		1020														
MW-19-240529	04		1200														
MW-32-240529	05		1305														
MW-31-240529	06		1345														
MW-30-240529	07		1445														
MW-29-240529	08	"	1550														
MW-27-240530	09	5/30/24	0805														
MW-16-240530	10	"	1050	"	"	"	"						"				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Carmen Tappero	Aspect	5/30/24	12:58
Received by:	ANH PHAN	F&B	05/30/24	12:58
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
Ph. (206) 285-8282

405479

SAMPLE CHAIN OF CUSTODY

05/30/24 F3/VW4

Page # 2 of 2

Report To Daniel Babcock

Company

Address See pg. 1

City, State, ZIP

Phone Email

SAMPLERS (*signature*)

PROJECT NAME: Texaco - Strickland

PO #: A5180357

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

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	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	BTEX + Naphthalene EPA 8260				Notes
MW-17-240530	11A-G	5/30/24	1020	W	7	X	X						X				
Trip Blank	12A-B	–	–	Water	2												Added at lab 05/30/24 AP
							Samples received at 0 °C										

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Carmen Tappero	Aspect	5/30/24	12:58
Received by:	ANH PHAN	F&B	05/30/24	12:58
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
Ph. (206) 285-8282

SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 405479 CLIENT ASP INITIALS/ DATE: AP 05/30/24

If custody seals are present on cooler, are they intact? ☑ NA ☐ YES ☐ NO

Cooler/Sample temperature 0 °C
Thermometer ID: Fluke 96312917

Were samples received on ice/cold packs? ☑ YES ☐ NO

How did samples arrive?
☑ Over the Counter ☐ Picked up by F&BI ☐ FedEx/UPS/GSO

Is there a Chain-of-Custody* (COC)? ☑ YES ☐ NO Initials/ Date: AP 05/30/24
*or other representative documents, letters, and/or shipping memos

Number of days samples have been sitting prior to receipt at laboratory 0-1 days

Are the samples clearly identified? (explain "no" answer below) ☑ YES ☐ NO

Were all sample containers received intact (i.e. not broken, leaking etc.)? (explain "no" answer below) ☑ YES ☐ NO

Were appropriate sample containers used? ☑ YES ☐ NO ☐ Unknown

If custody seals are present on samples, are they intact? ☑ NA ☐ YES ☐ NO

Are samples requiring no headspace, headspace free? ☐ NA ☑ YES ☐ NO

Is the following information provided on the COC, and does it match the sample label?
(explain "no" answer below)

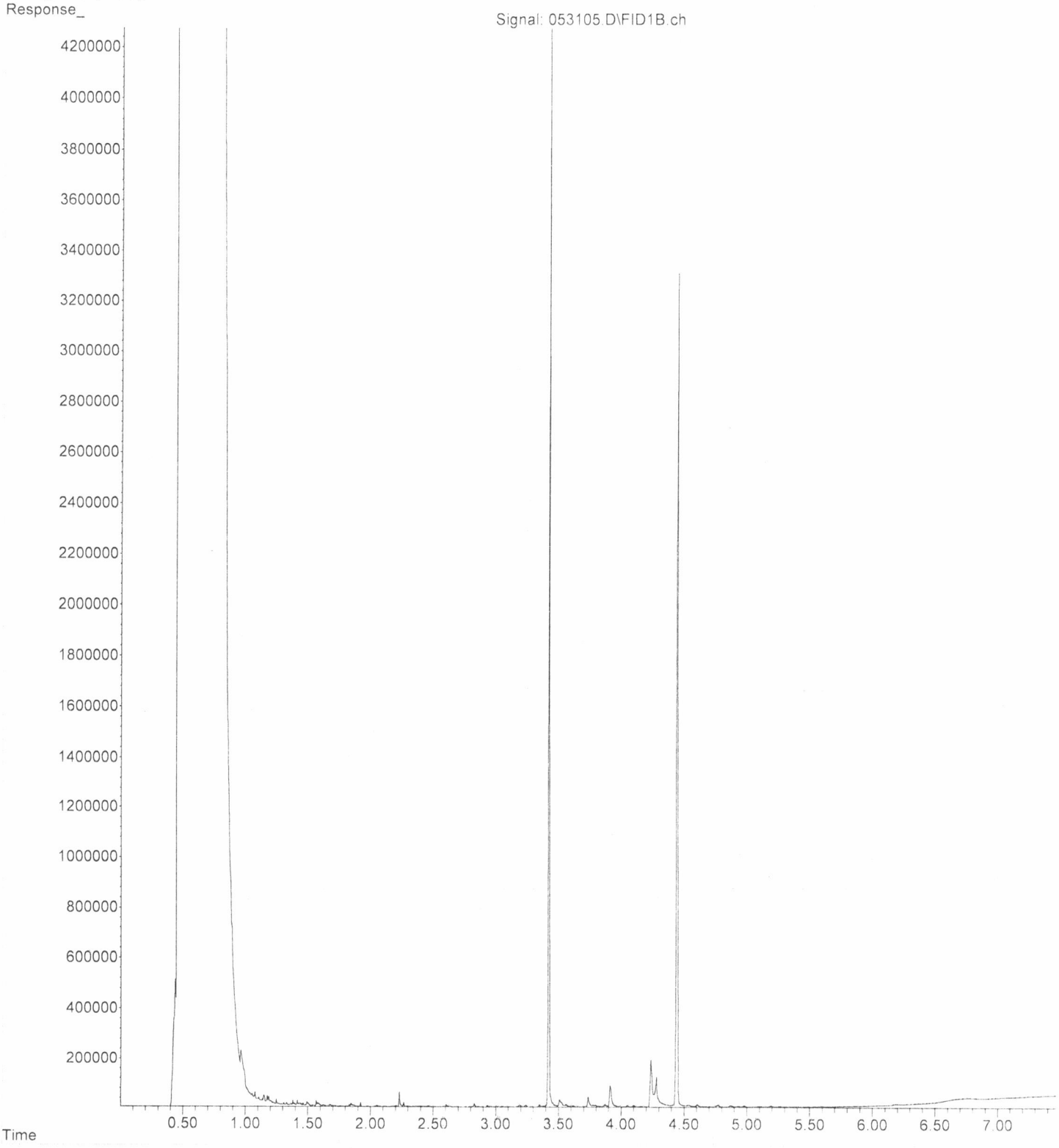
Sample ID's	☑ Yes ☐ No	☐ Not on COC/label
Date Sampled	☑ Yes ☐ No	☐ Not on COC/label
Time Sampled	☑ Yes ☐ No	☐ Not on COC/label
# of Containers	☐ Yes ☑ No	Added Trip Blank at lab
Relinquished	☑ Yes ☐ No	
Requested analysis	☑ Yes ☐ On Hold	

Other comments (use a separate page if needed)

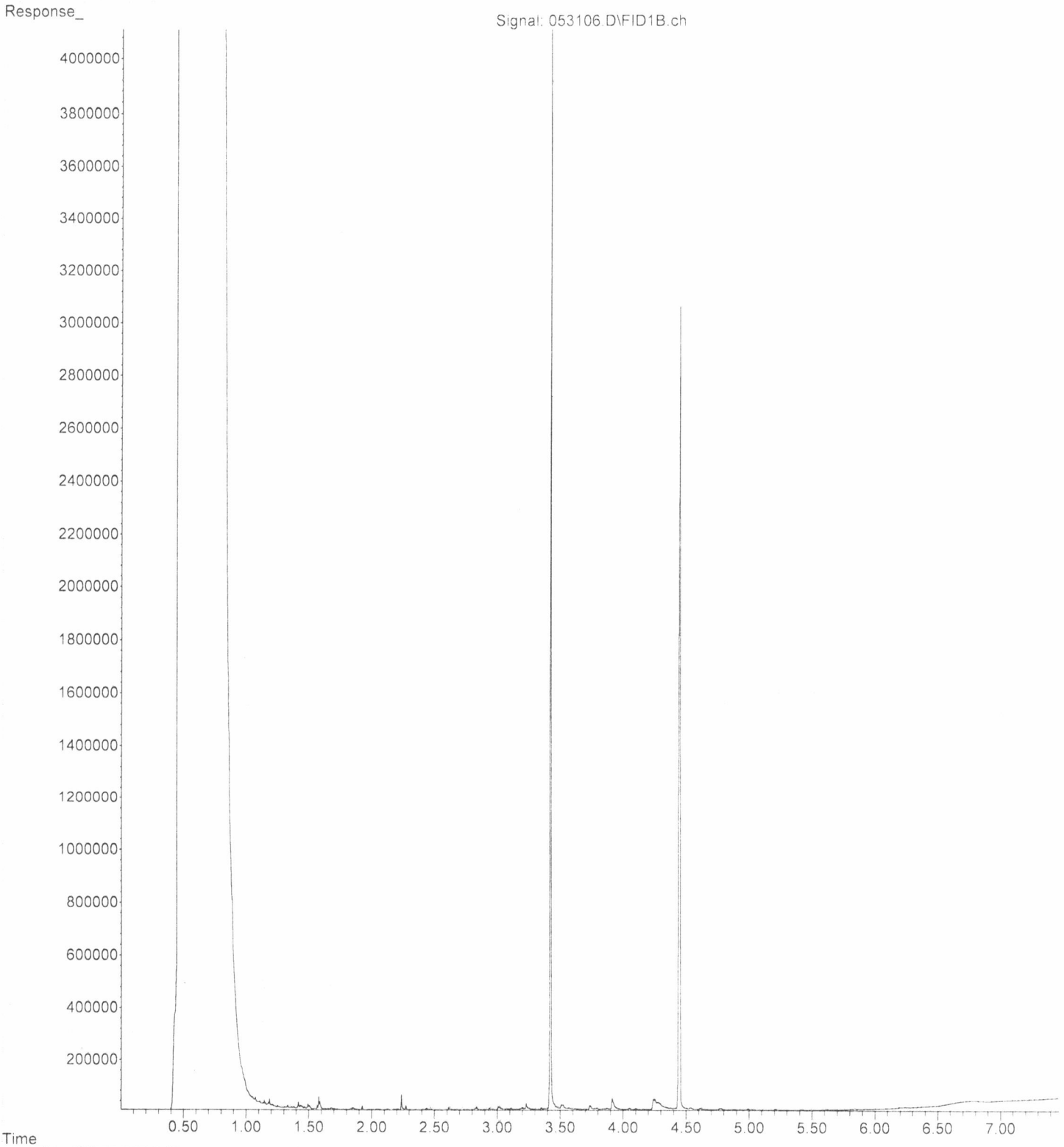
Air Samples: Were any additional canisters/tubes received? ☑ NA ☐ YES ☐ NO

Number of unused TO15 canisters _____ **Number of unused TO17 tubes** _____

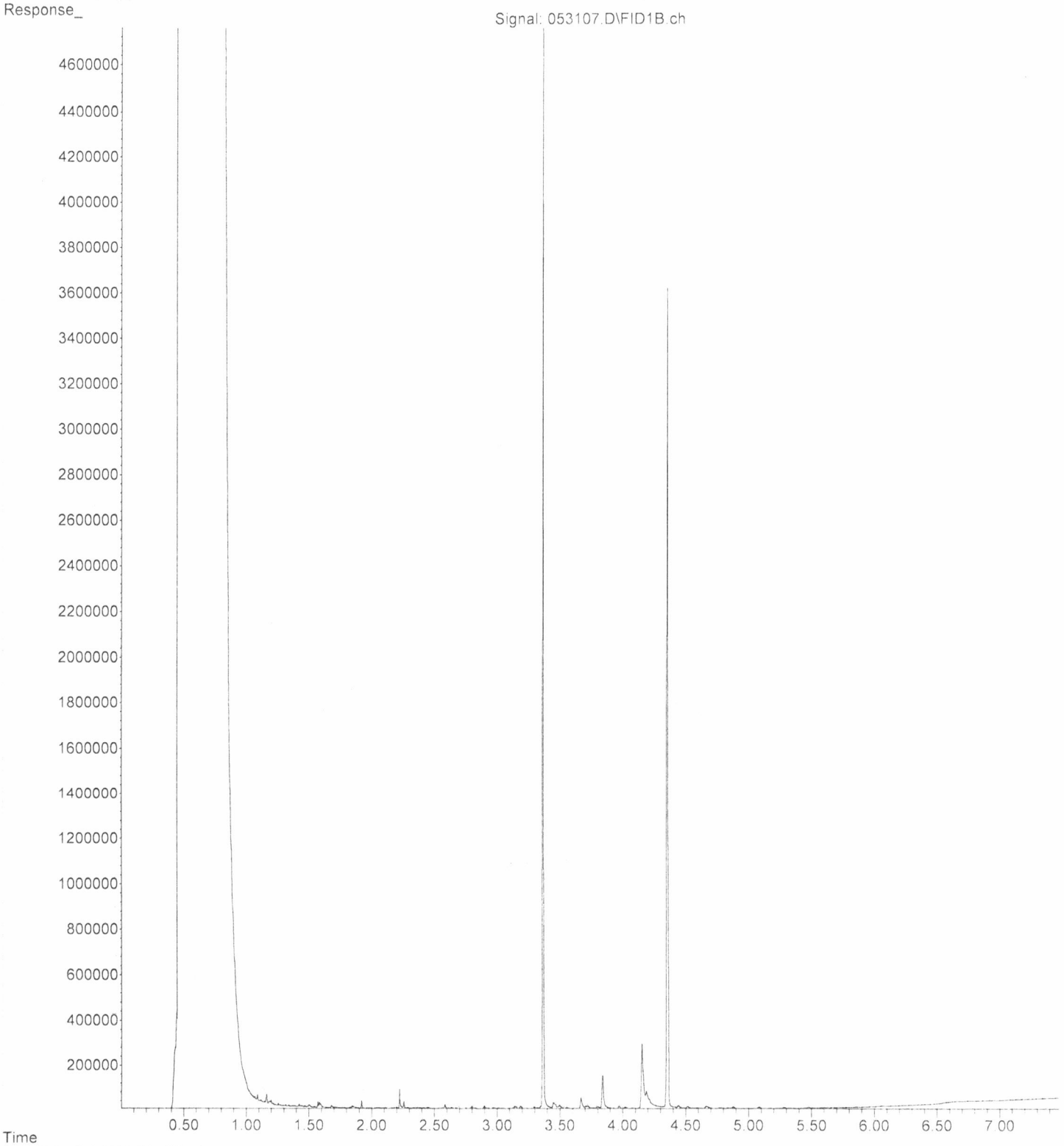
File :P:\Proc_GC14\05-31-24\053105.D
Operator : TL
Acquired : 31 May 2024 09:13 am using AcqMethod DX.M
Instrument : GC14
Sample Name: 405479-01
Misc Info : ERR
Vial Number: 7



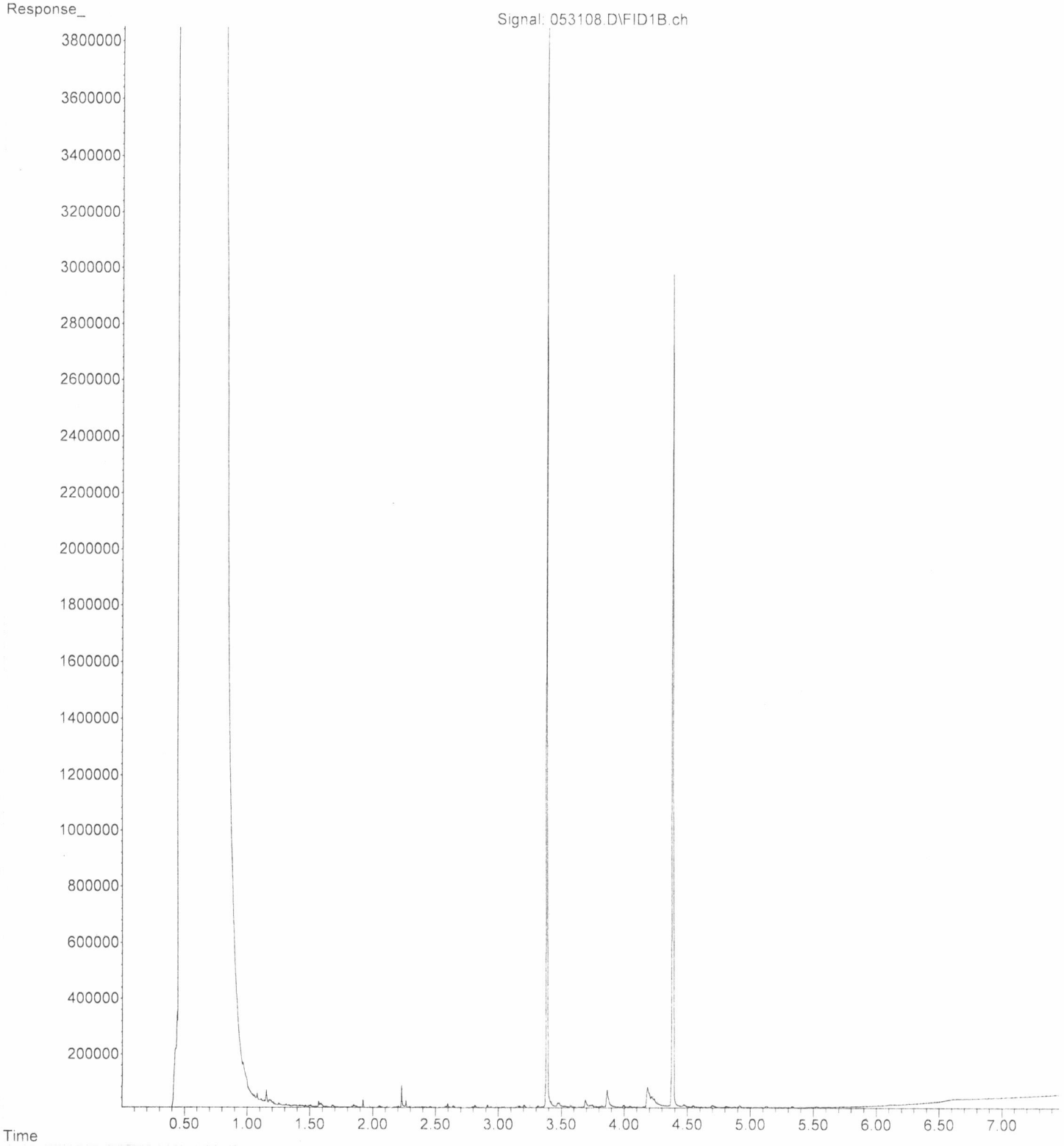
File :P:\Proc_GC14\05-31-24\053106.D
Operator : TL
Acquired : 31 May 2024 09:25 am using AcqMethod DX.M
Instrument : GC14
Sample Name: 405479-02
Misc Info : ERR
Vial Number: 8



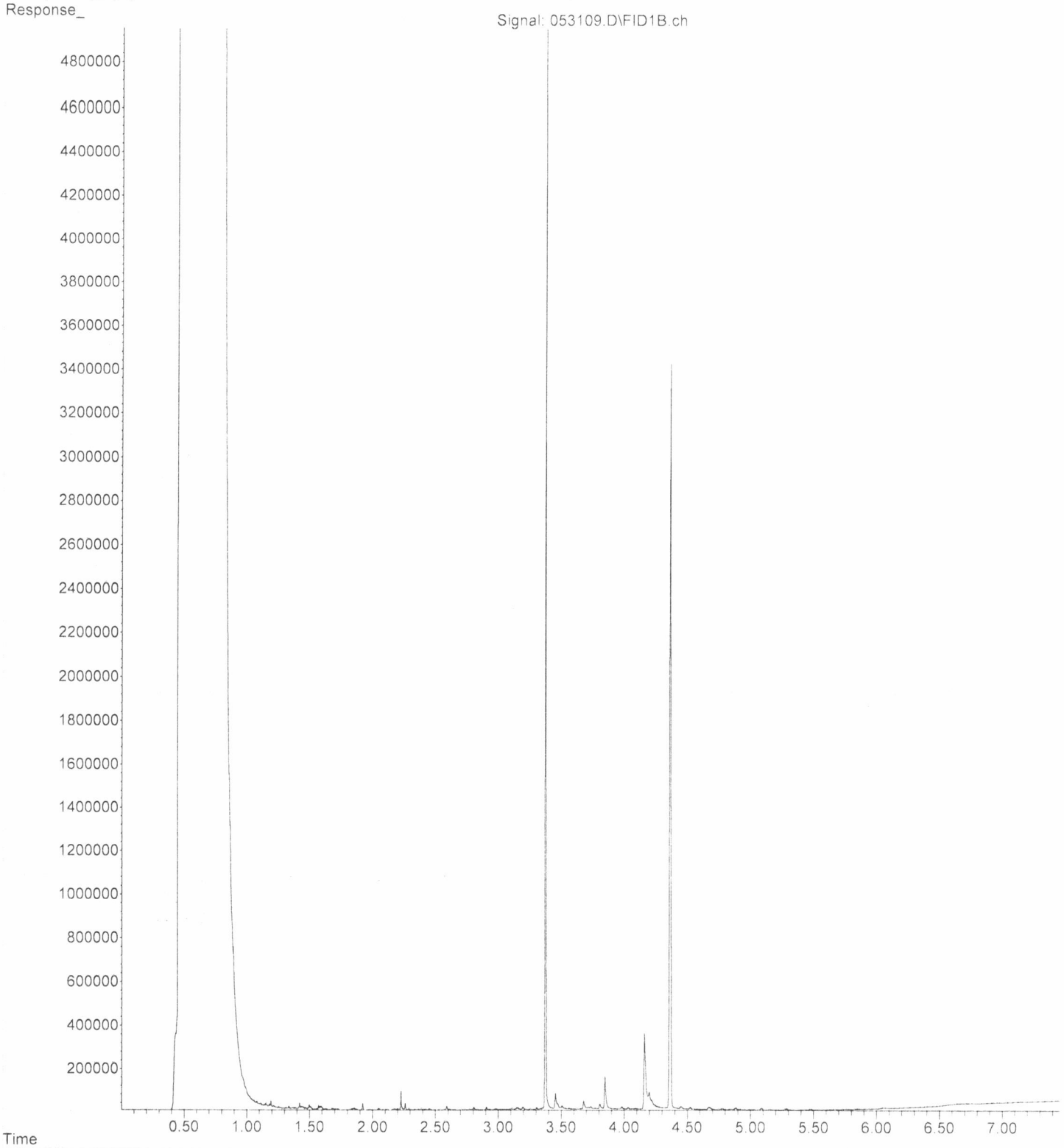
File :P:\Proc_GC14\05-31-24\053107.D
Operator : TL
Acquired : 31 May 2024 09:37 am using AcqMethod DX.M
Instrument : GC14
Sample Name: 405479-03
Misc Info : ERR
Vial Number: 9



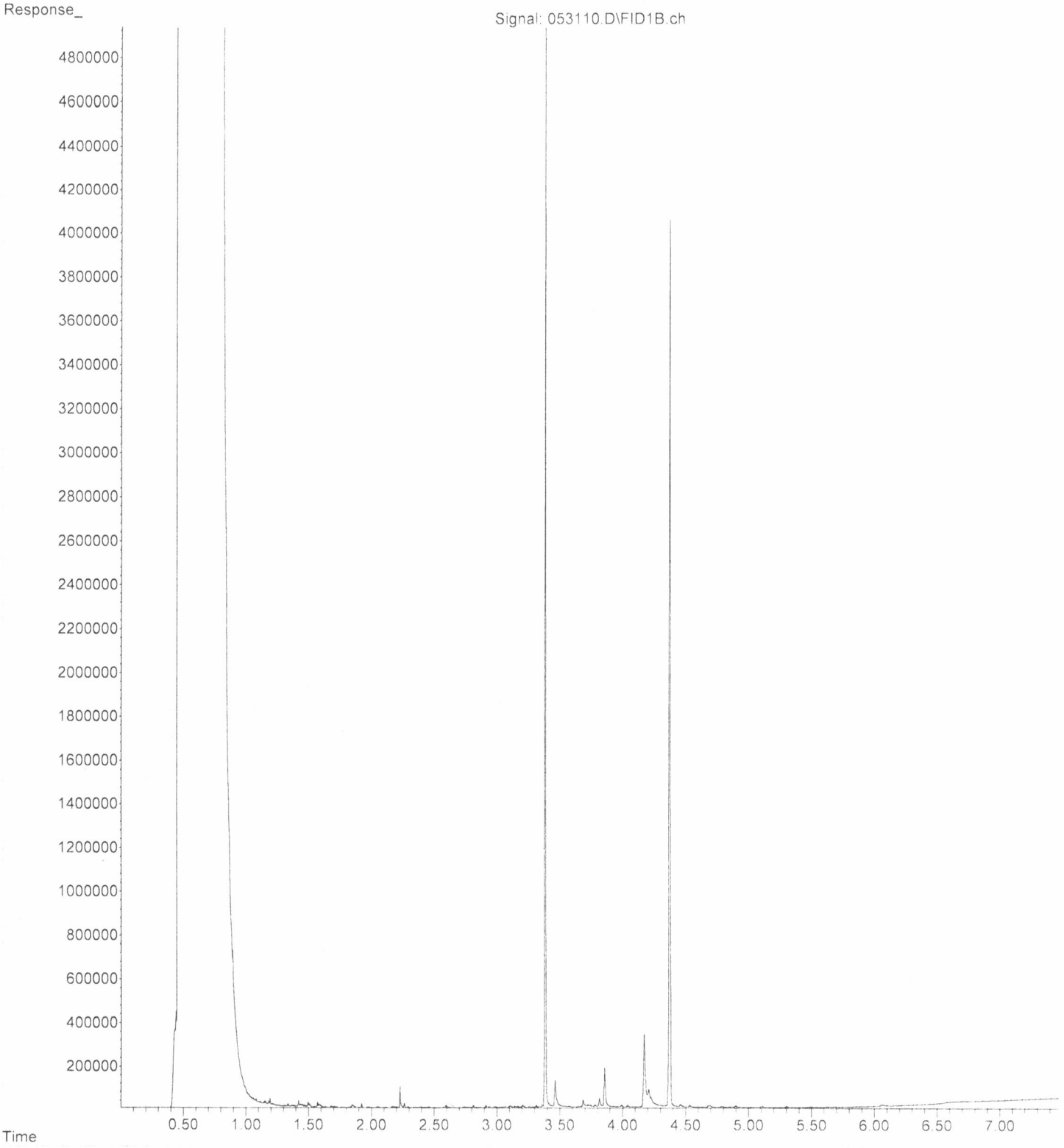
File :P:\Proc_GC14\05-31-24\053108.D
Operator : TL
Acquired : 31 May 2024 09:48 am using AcqMethod DX.M
Instrument : GC14
Sample Name: 405479-04
Misc Info : ERR
Vial Number: 10



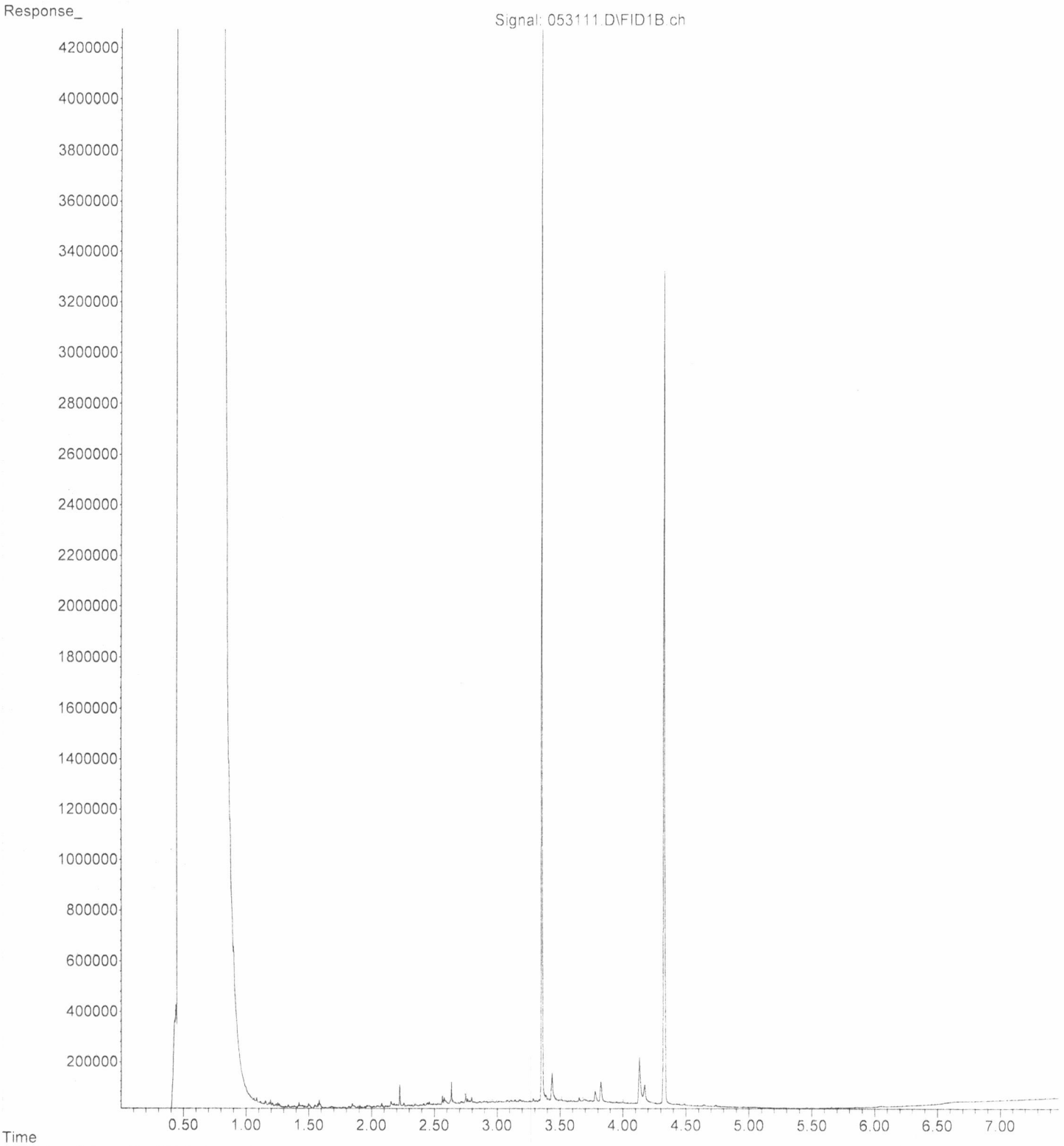
File :P:\Proc_GC14\05-31-24\053109.D
Operator : TL
Acquired : 31 May 2024 10:00 am using AcqMethod DX.M
Instrument : GC14
Sample Name: 405479-05
Misc Info : ERR
Vial Number: 11



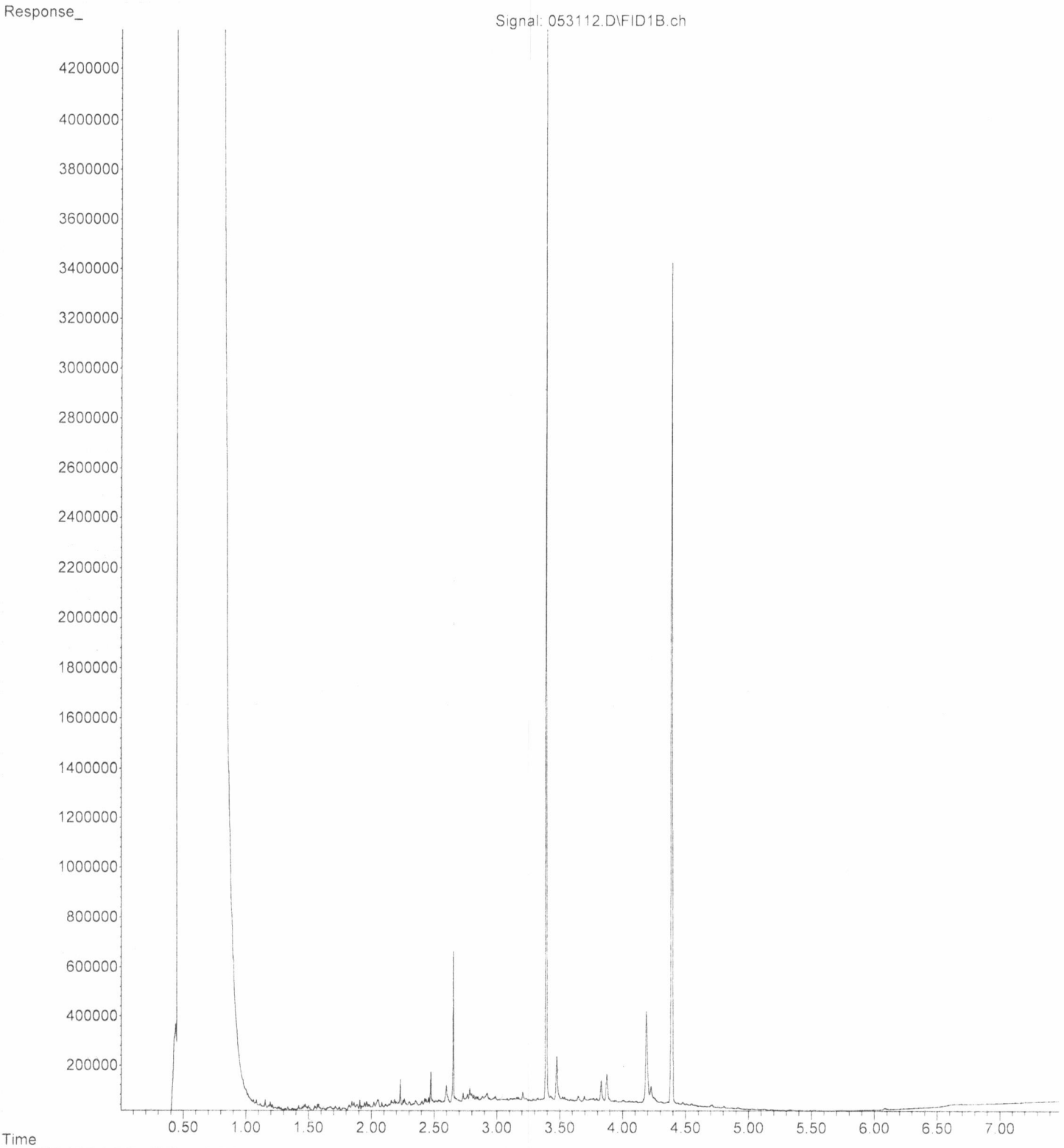
File :P:\Proc_GC14\05-31-24\053110.D
Operator : TL
Acquired : 31 May 2024 10:12 am using AcqMethod DX.M
Instrument : GC14
Sample Name: 405479-06
Misc Info : ERR
Vial Number: 12



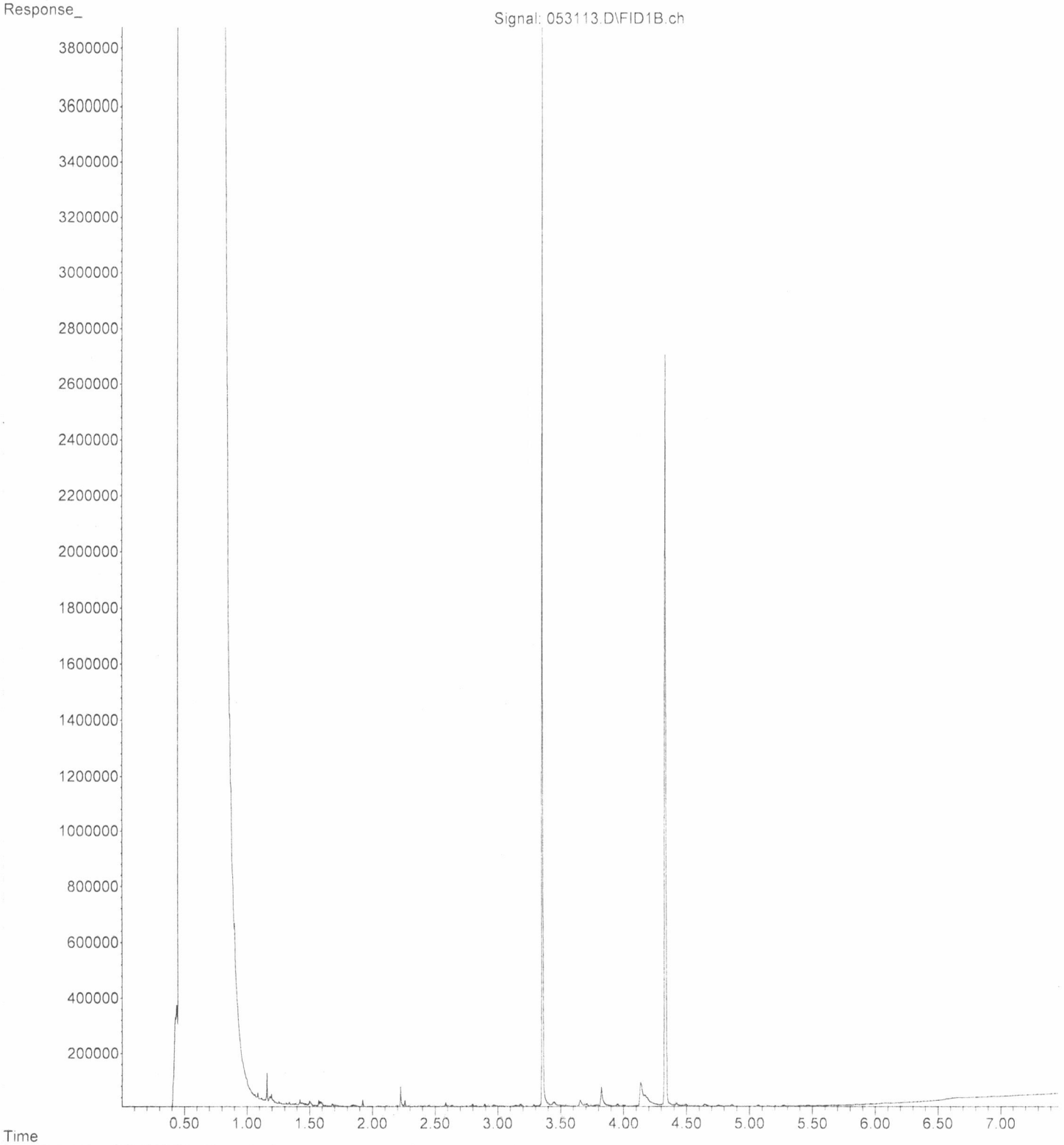
File :P:\Proc_GC14\05-31-24\053111.D
Operator : TL
Acquired : 31 May 2024 10:24 am using AcqMethod DX.M
Instrument : GC14
Sample Name: 405479-07
Misc Info : ERR
Vial Number: 13



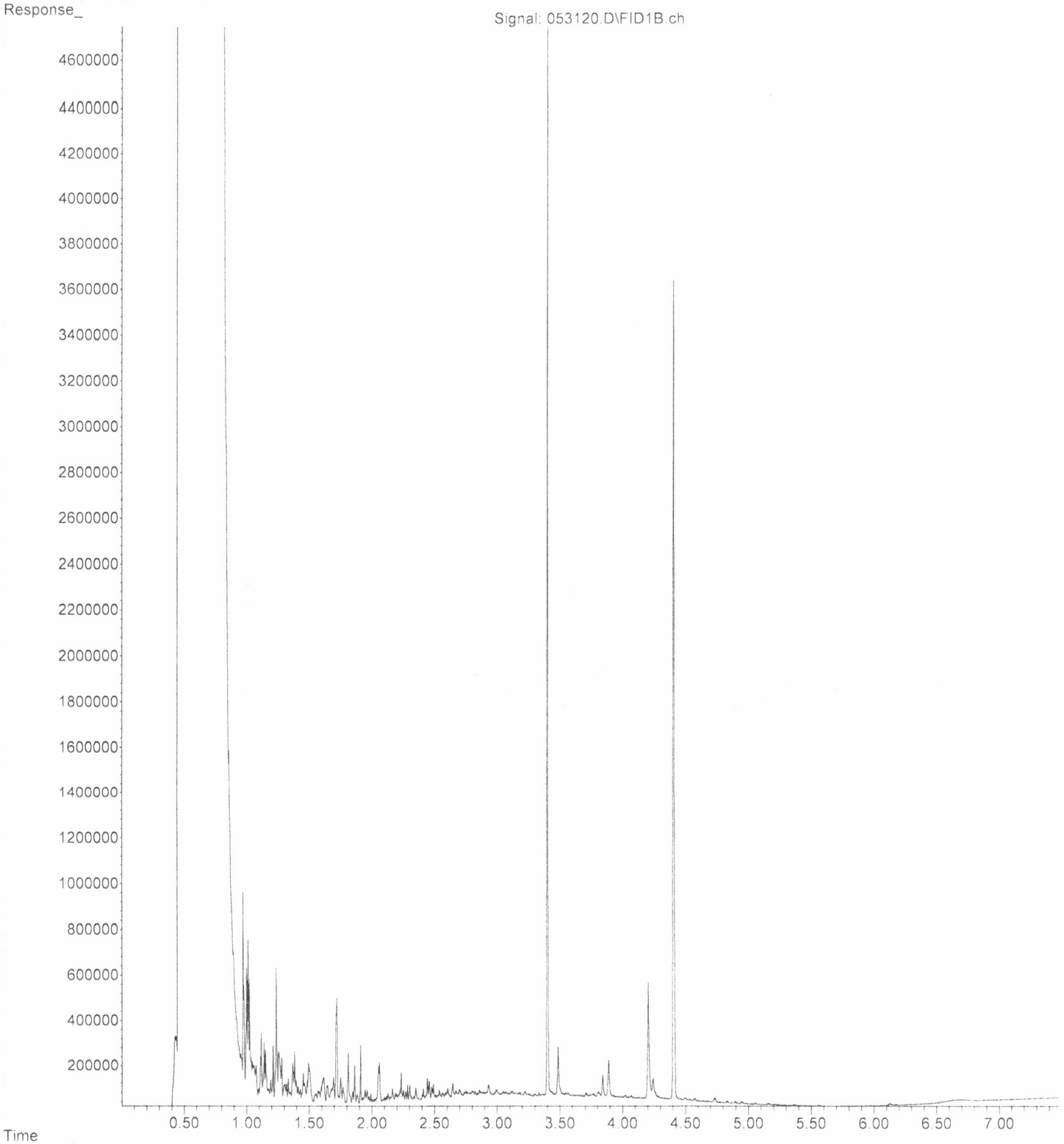
File :P:\Proc_GC14\05-31-24\053112.D
Operator : TL
Acquired : 31 May 2024 10:36 am using AcqMethod DX.M
Instrument : GC14
Sample Name: 405479-08
Misc Info : ERR
Vial Number: 14



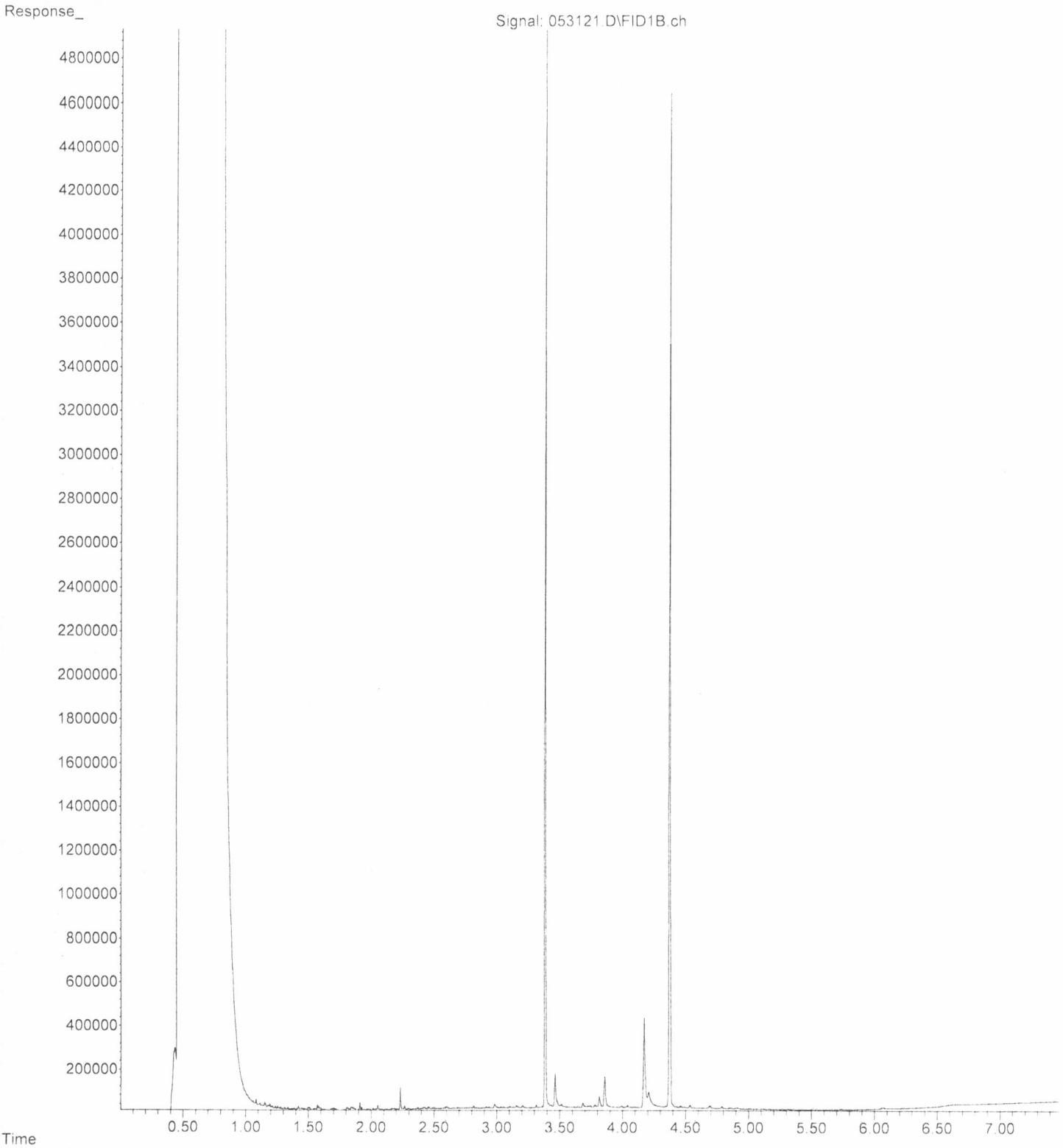
File :P:\Proc_GC14\05-31-24\053113.D
Operator : TL
Acquired : 31 May 2024 10:48 am using AcqMethod DX.M
Instrument : GC14
Sample Name: 405479-09
Misc Info : ERR
Vial Number: 15



File :P:\Proc_GC14\05-31-24\053120.D
Operator : TL
Acquired : 31 May 2024 12:14 pm using AcqMethod DX.M
Instrument : GC14
Sample Name: 405479-10
Misc Info : ERR
Vial Number: 16

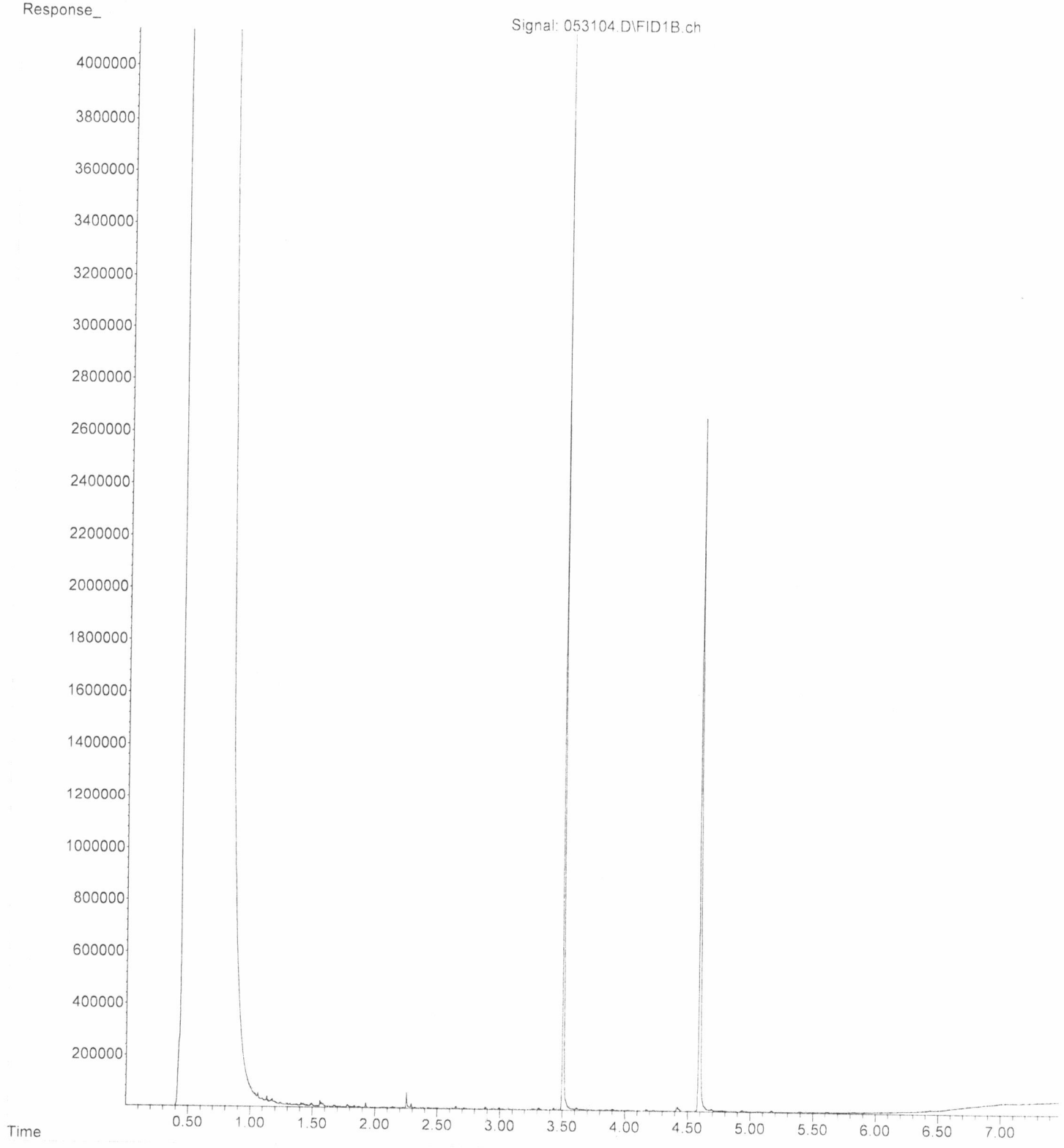


File :P:\Proc_GC14\05-31-24\053121.D
Operator : TL
Acquired : 31 May 2024 12:26 pm using AcqMethod DX.M
Instrument : GC14
Sample Name: 405479-11
Misc Info : ERR
Vial Number: 17

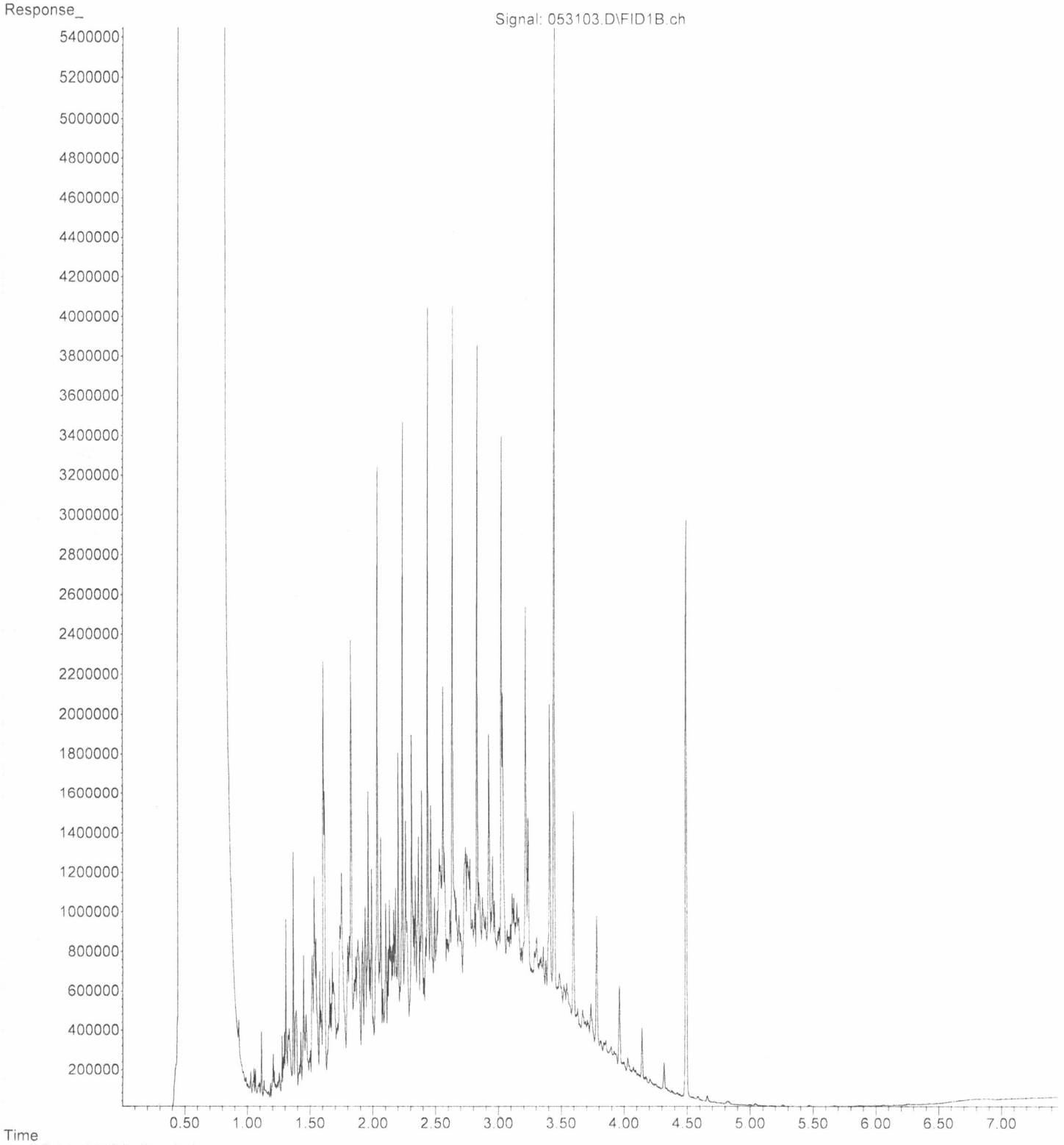


File :P:\Proc_GC14\05-31-24\053104.D
Operator : TL
Acquired : 31 May 2024 09:02 am using AcqMethod DX.M
Instrument : GC14
Sample Name: 04-1270 mb2
Misc Info :
Vial Number: 6

ERR



File :P:\Proc_GC14\05-31-24\053103.D
Operator : TL
Acquired : 31 May 2024 08:26 am using AcqMethod DX.M
Instrument : GC14
Sample Name: 500 Dx 71-400
Misc Info : ERR
Vial Number: 3



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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Seattle, WA 98108
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

September 11, 2023

Daniel Babcock, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Mr Babcock:

Included are the results from the testing of material submitted on August 31, 2023 from the Texaco-Strickland 180357, F&BI 308491 project. There are 17 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: Aspect Data
ASP0911R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 31, 2023 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Texaco-Strickland 180357, F&BI 308491 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
308491 -01	MW-18R-083023
308491 -02	MW-25R-083023
308491 -03	MW-26-083023
308491 -04	MW-29-083023
308491 -05	MW-19-083023
308491 -06	MW-30-083023
308491 -07	MW-31-083023
308491 -08	MW-16-083023
308491 -09	MW-32-083023
308491 -10	Trip Blank

All quality control requirements were acceptable.

Date of Report: 09/09/23
Date Received: 08/31/23
Project: Texaco-Strickland 180357, F&BI 308491
Date Extracted: 09/05/23
Date Analyzed: 09/05/23

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
MW-18R-083023 308491-01	<100	97
MW-25R-083023 308491-02	<100	95
MW-26-083023 308491-03	<100	99
MW-29-083023 308491-04	<100	101
MW-19-083023 308491-05	<100	100
MW-30-083023 308491-06	<100	102
MW-31-083023 308491-07	<100	98
MW-16-083023 308491-08	380	103
MW-32-083023 308491-09	<100	100
Method Blank 03-2071 MB	<100	100

Date of Report: 09/09/23
Date Received: 08/31/23
Project: Texaco-Strickland 180357, F&BI 308491
Date Extracted: 09/01/23
Date Analyzed: 09/01/23

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
MW-18R-083023 308491-01	<50	<250	90
MW-25R-083023 308491-02	<50	<250	90
MW-26-083023 308491-03	<50	<250	87
MW-29-083023 308491-04	77 x	<250	91
MW-19-083023 308491-05	<50	<250	82
MW-30-083023 308491-06	83 x	<250	90
MW-31-083023 308491-07	<50	<250	103
MW-16-083023 308491-08	100 x	<250	91
MW-32-083023 308491-09	<50	<250	87
Method Blank 03-2065 mb2	<50	<250	90

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-18R-083023	Client:	Aspect Consulting, LLC
Date Received:	08/31/23	Project:	Texaco-Strickland 180357
Date Extracted:	09/06/23	Lab ID:	308491-01
Date Analyzed:	09/06/23	Data File:	090634.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	78	126
Toluene-d8	98	84	115
4-Bromofluorobenzene	102	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-25R-083023	Client:	Aspect Consulting, LLC
Date Received:	08/31/23	Project:	Texaco-Strickland 180357
Date Extracted:	09/06/23	Lab ID:	308491-02
Date Analyzed:	09/06/23	Data File:	090635.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	78	126
Toluene-d8	99	84	115
4-Bromofluorobenzene	101	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-26-083023	Client:	Aspect Consulting, LLC
Date Received:	08/31/23	Project:	Texaco-Strickland 180357
Date Extracted:	09/06/23	Lab ID:	308491-03
Date Analyzed:	09/06/23	Data File:	090636.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	78	126
Toluene-d8	98	84	115
4-Bromofluorobenzene	100	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-29-083023	Client:	Aspect Consulting, LLC
Date Received:	08/31/23	Project:	Texaco-Strickland 180357
Date Extracted:	09/06/23	Lab ID:	308491-04
Date Analyzed:	09/06/23	Data File:	090637.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	78	126
Toluene-d8	101	84	115
4-Bromofluorobenzene	102	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	0.52
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-19-083023	Client:	Aspect Consulting, LLC
Date Received:	08/31/23	Project:	Texaco-Strickland 180357
Date Extracted:	09/06/23	Lab ID:	308491-05
Date Analyzed:	09/06/23	Data File:	090638.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	78	126
Toluene-d8	96	84	115
4-Bromofluorobenzene	99	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-30-083023	Client:	Aspect Consulting, LLC
Date Received:	08/31/23	Project:	Texaco-Strickland 180357
Date Extracted:	09/06/23	Lab ID:	308491-06
Date Analyzed:	09/06/23	Data File:	090639.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	78	126
Toluene-d8	99	84	115
4-Bromofluorobenzene	101	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-31-083023	Client:	Aspect Consulting, LLC
Date Received:	08/31/23	Project:	Texaco-Strickland 180357
Date Extracted:	09/06/23	Lab ID:	308491-07
Date Analyzed:	09/06/23	Data File:	090640.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	78	126
Toluene-d8	95	84	115
4-Bromofluorobenzene	101	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-16-083023	Client:	Aspect Consulting, LLC
Date Received:	08/31/23	Project:	Texaco-Strickland 180357
Date Extracted:	09/06/23	Lab ID:	308491-08
Date Analyzed:	09/06/23	Data File:	090641.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	78	126
Toluene-d8	101	84	115
4-Bromofluorobenzene	103	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW-32-083023	Client:	Aspect Consulting, LLC
Date Received:	08/31/23	Project:	Texaco-Strickland 180357
Date Extracted:	09/06/23	Lab ID:	308491-09
Date Analyzed:	09/06/23	Data File:	090642.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	78	126
Toluene-d8	101	84	115
4-Bromofluorobenzene	102	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Texaco-Strickland 180357
Date Extracted:	09/06/23	Lab ID:	03-1982 mb
Date Analyzed:	09/06/23	Data File:	090607.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	78	126
Toluene-d8	98	84	115
4-Bromofluorobenzene	100	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Date of Report: 09/09/23
Date Received: 08/31/23
Project: Texaco-Strickland 180357, F&BI 308491

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 308491-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	100	70-130

Date of Report: 09/09/23
Date Received: 08/31/23
Project: Texaco-Strickland 180357, F&BI 308491

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

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	84	95	65-151	12

Date of Report: 09/09/23
Date Received: 08/31/23
Project: Texaco-Strickland 180357, F&BI 308491

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

Laboratory Code: 308491-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Benzene	ug/L (ppb)	10	<0.35	108	50-150
Toluene	ug/L (ppb)	10	<1	105	50-150
Ethylbenzene	ug/L (ppb)	10	<1	107	50-150
m,p-Xylene	ug/L (ppb)	20	<2	104	50-150
o-Xylene	ug/L (ppb)	10	<1	103	50-150
Naphthalene	ug/L (ppb)	10	<1	94	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benzene	ug/L (ppb)	10	105	106	70-130	1
Toluene	ug/L (ppb)	10	106	105	70-130	1
Ethylbenzene	ug/L (ppb)	10	108	107	70-130	1
m,p-Xylene	ug/L (ppb)	20	105	105	70-130	0
o-Xylene	ug/L (ppb)	10	104	104	70-130	0
Naphthalene	ug/L (ppb)	10	95	94	70-130	1

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, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. 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 standard reporting limit. 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.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

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.

308491

SAMPLE CHAIN OF CUSTODY 08/31/23 VWS/F3

Report To Daniel Babcock
Company Aspect Consulting
Address 710 2nd Ave #550
City, State, ZIP Seattle, WA, 98104
Phone 404-210-6437 Email dbabcock@aspectconsulting.com

SAMPLERS (signature) Carmen Tappen
PROJECT NAME Texaco - Strickland
PO # 180357
REMARKS
Project specific RLs? - Yes / No
INVOICE TO

Page # _____ of _____

TURNAROUND TIME
☑ Standard turnaround
☐ RUSH _____
Rush charges authorized by: _____

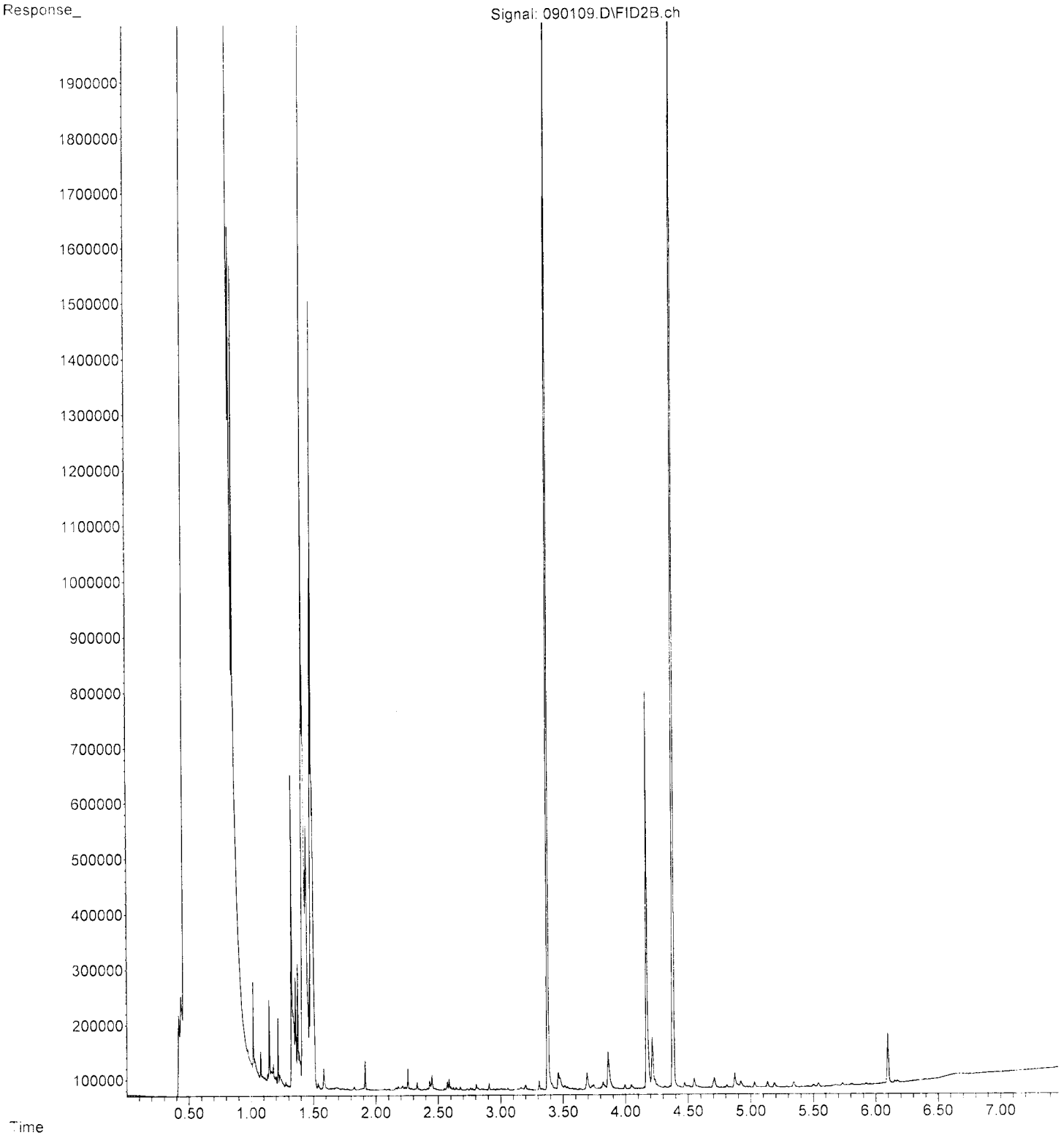
SAMPLE DISPOSAL
☐ Archive samples
☐ Other _____
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	BTEX + Naphthalene by EPA 8260			Notes
						ANALYSES REQUESTED										
MW-18R-083023	01 A-G	8/30/23	0935	W	7	X	X	~~X~~					X			
MW-25R-083023	02		1040													
MW-26-083023	03		1150													
MW-29-083023	04		1425													
MW-19-083023	05		1320													
MW-30-083023	06		1545													
MW-31-083023	07	↓	1650													
MW-16-083123	08	8/31/23	0955													
MW-32-083123	09	↓		↓	↓	↓	↓						↓			Samples received at 0 °C
Trip Blank	10 A-B	–	–	water	2											Added at lab (AP)

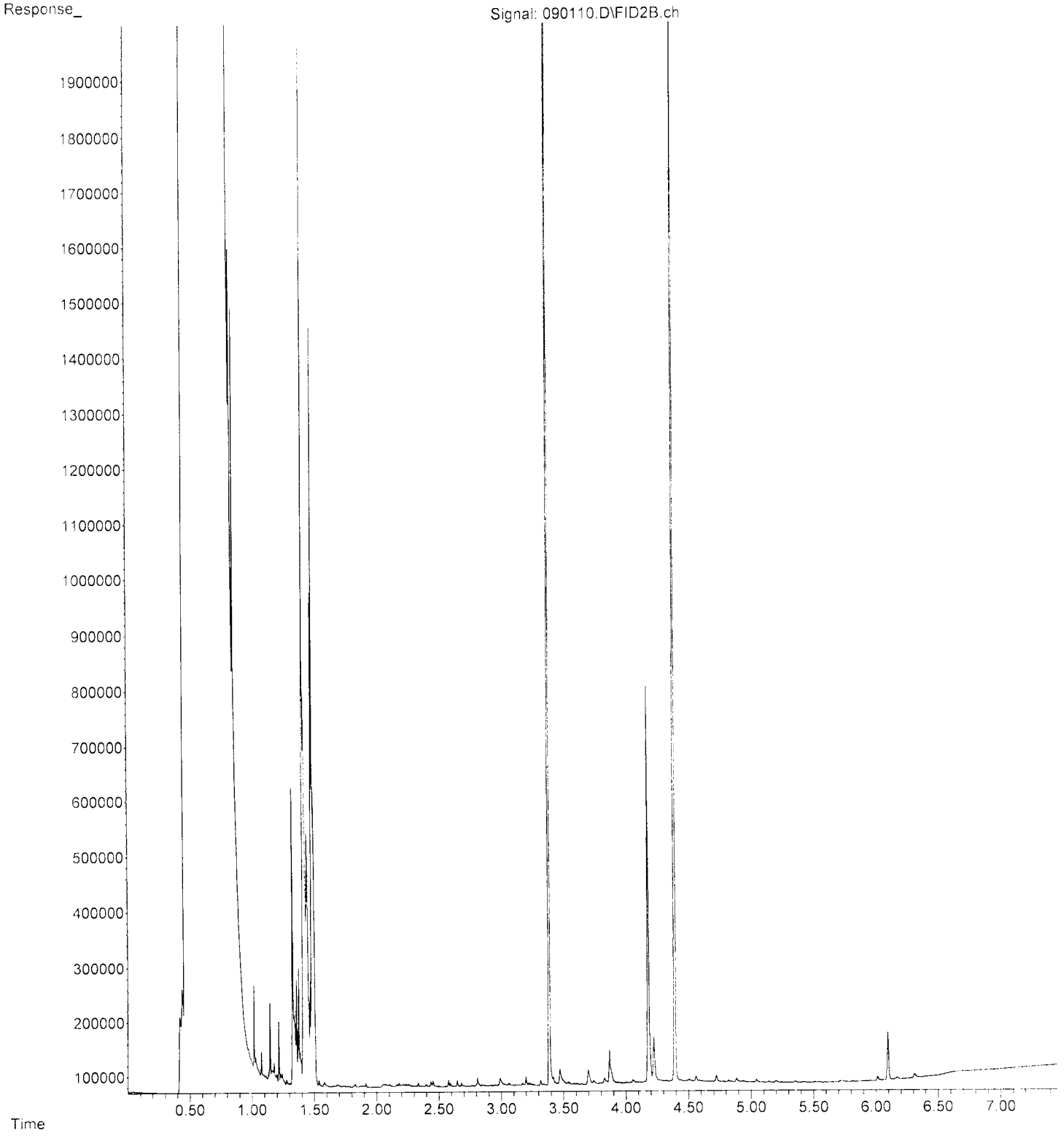
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Relinquished by: Carmen Tappen	Carmen Tappen	Aspect Consulting	8/31/23	1340
Received by:	ANH PHAN	FSB	08/31/23	13:40
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
Ph. (206) 285-8282

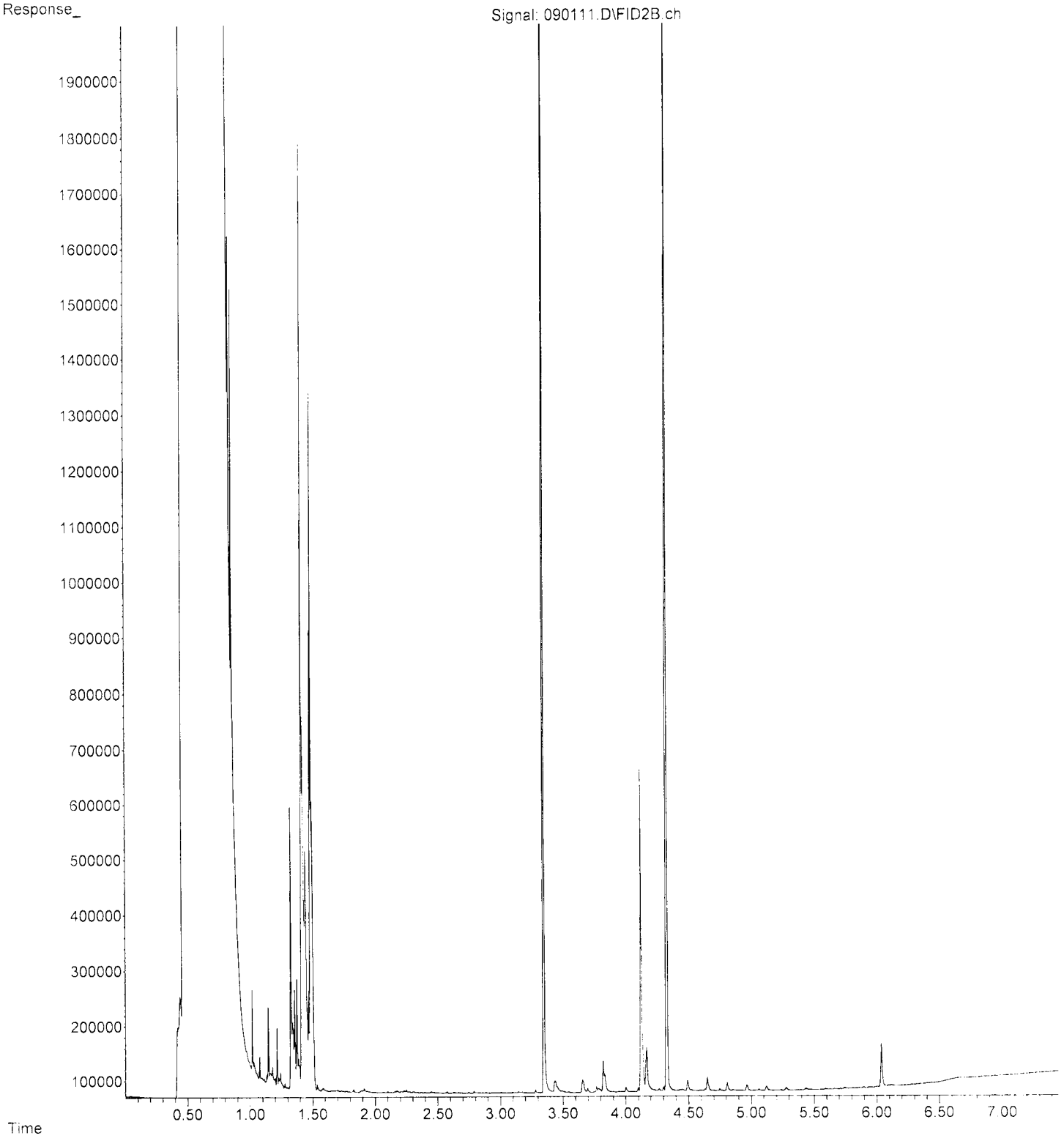
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Instrument : GC10
Sample Name: 308491-01
Misc Info :
Vial Number: 11



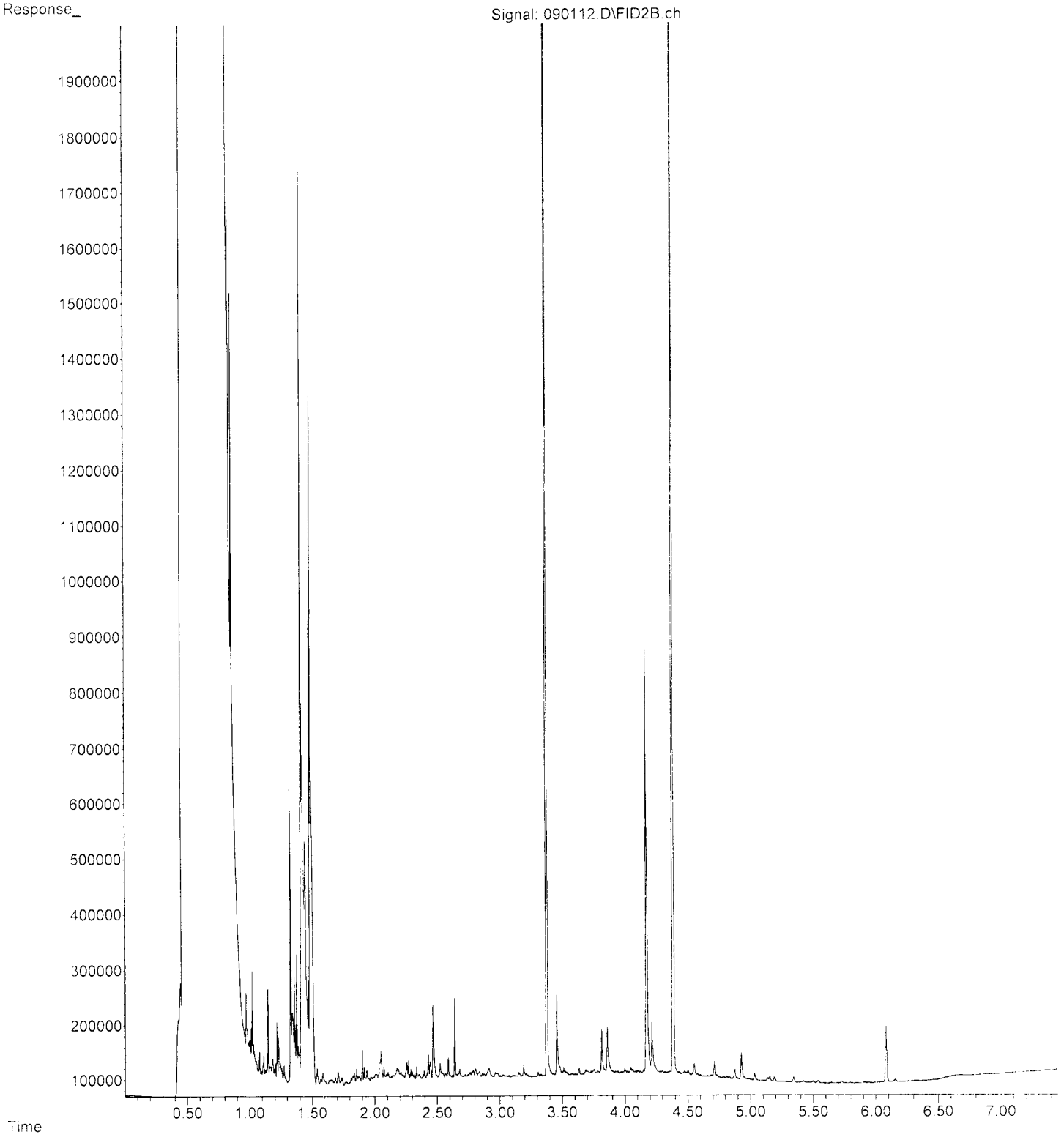
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Instrument : GC10
Sample Name: 308491-02
Misc Info :
Vial Number: 12



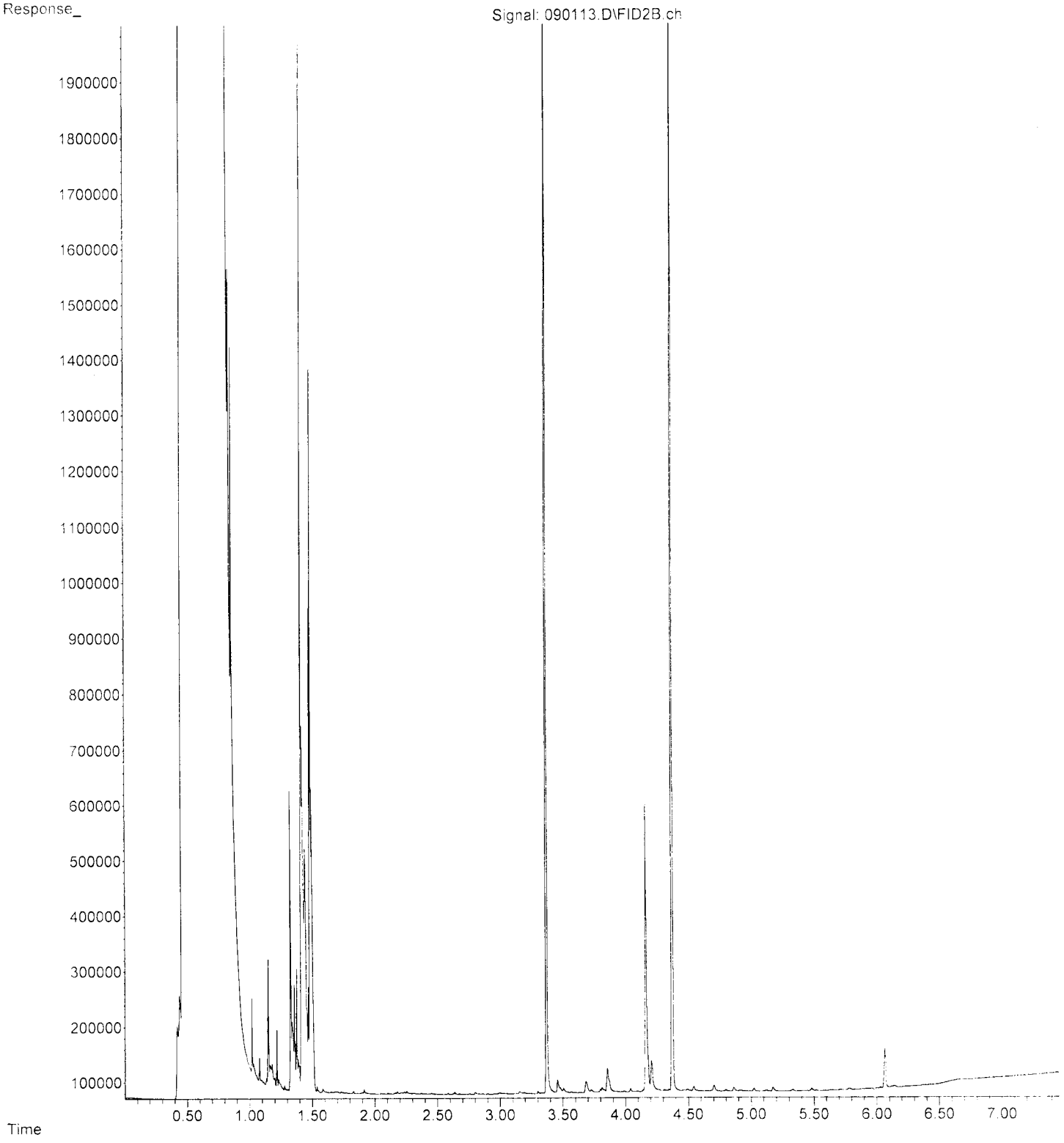
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Instrument : GC10
Sample Name: 308491-03
Misc Info :
Vial Number: 13



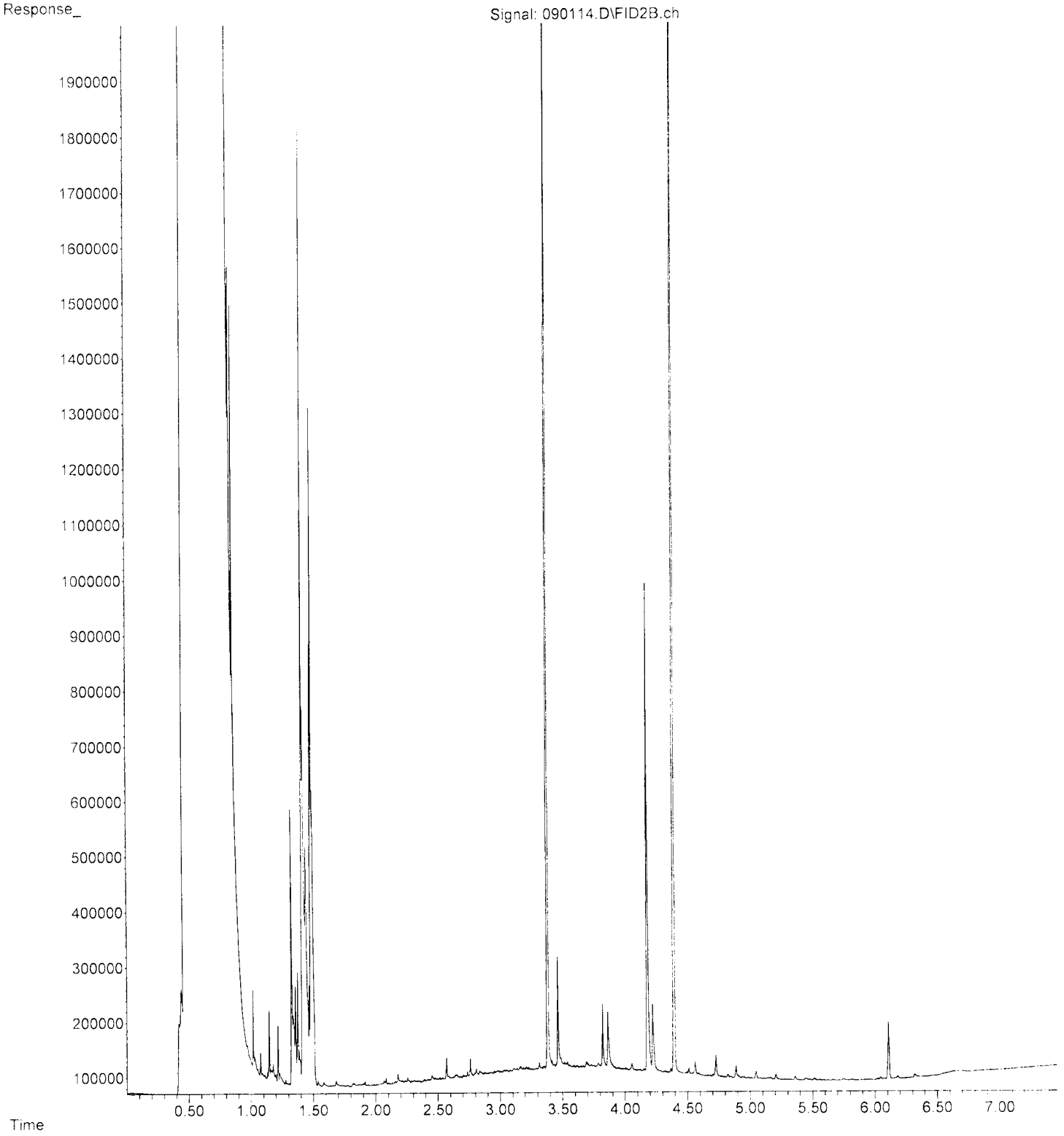
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Instrument : GC10
Sample Name: 308491-04
Misc Info :
Vial Number: 14



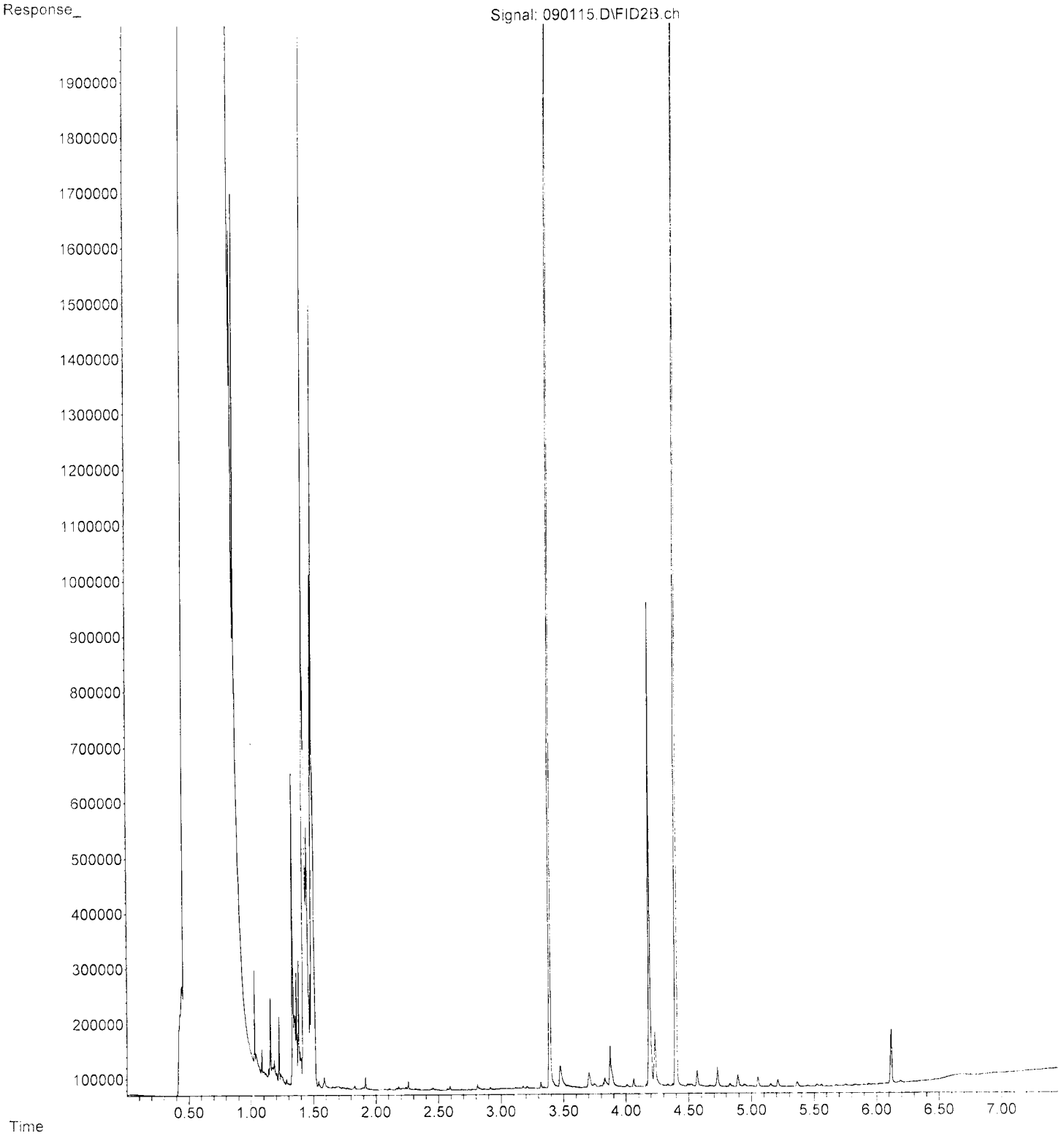
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Instrument : GC10
Sample Name: 308491-05
Misc Info :
Vial Number: 15



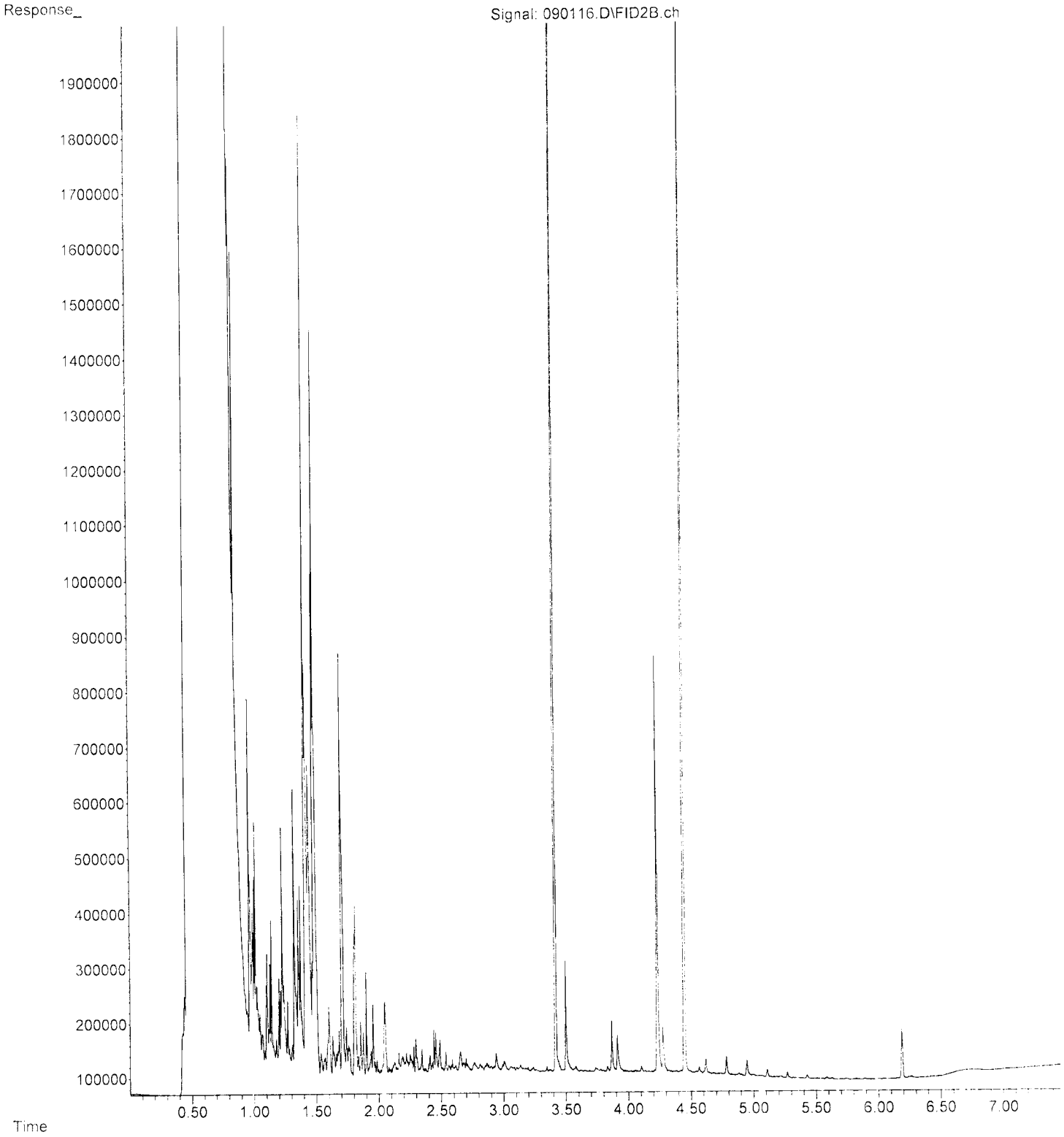
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Instrument : GC10
Sample Name: 308491-06
Misc Info :
Vial Number: 16



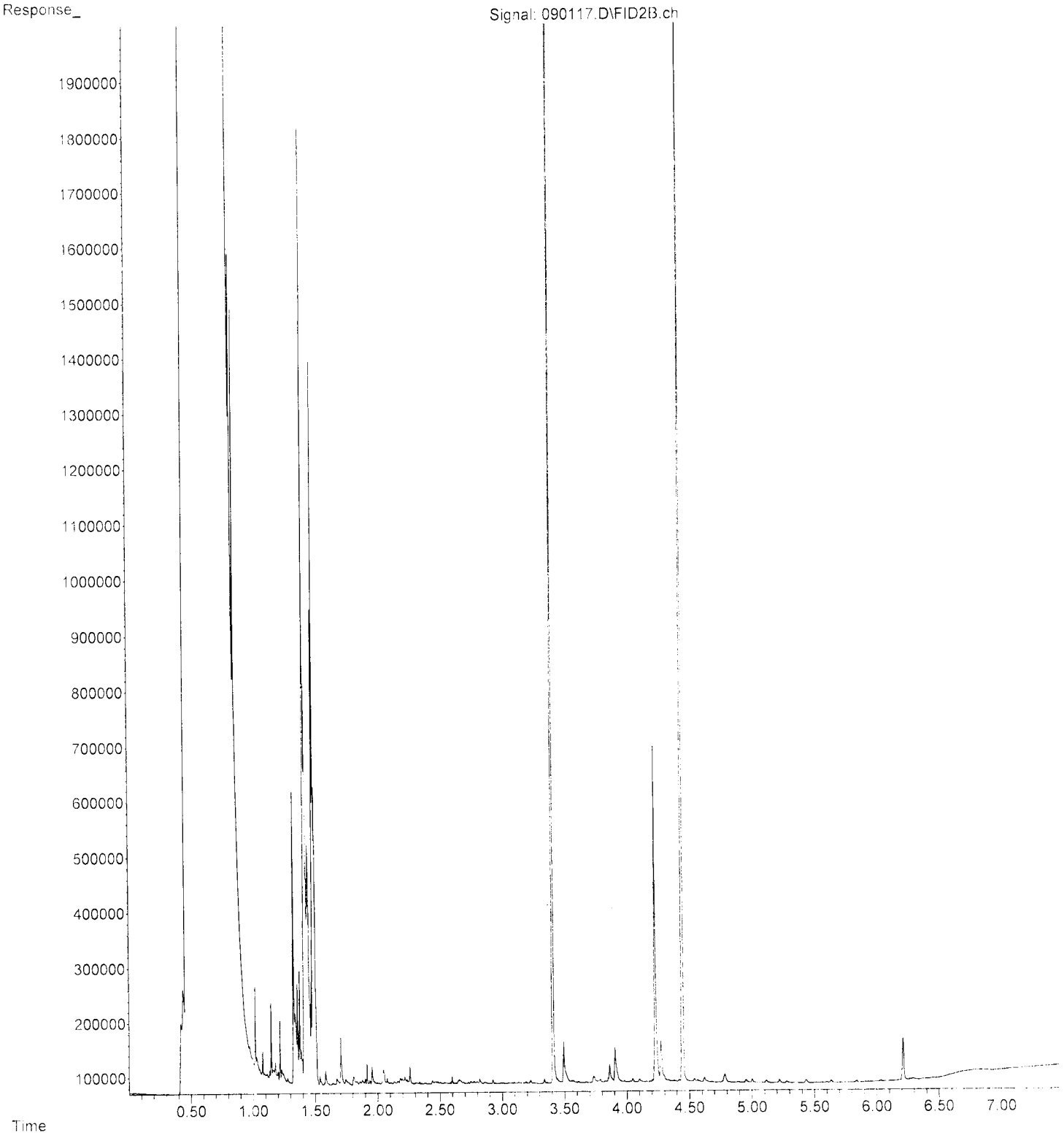
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Instrument : GC10
Sample Name: 308491-07
Misc Info :
Vial Number: 17



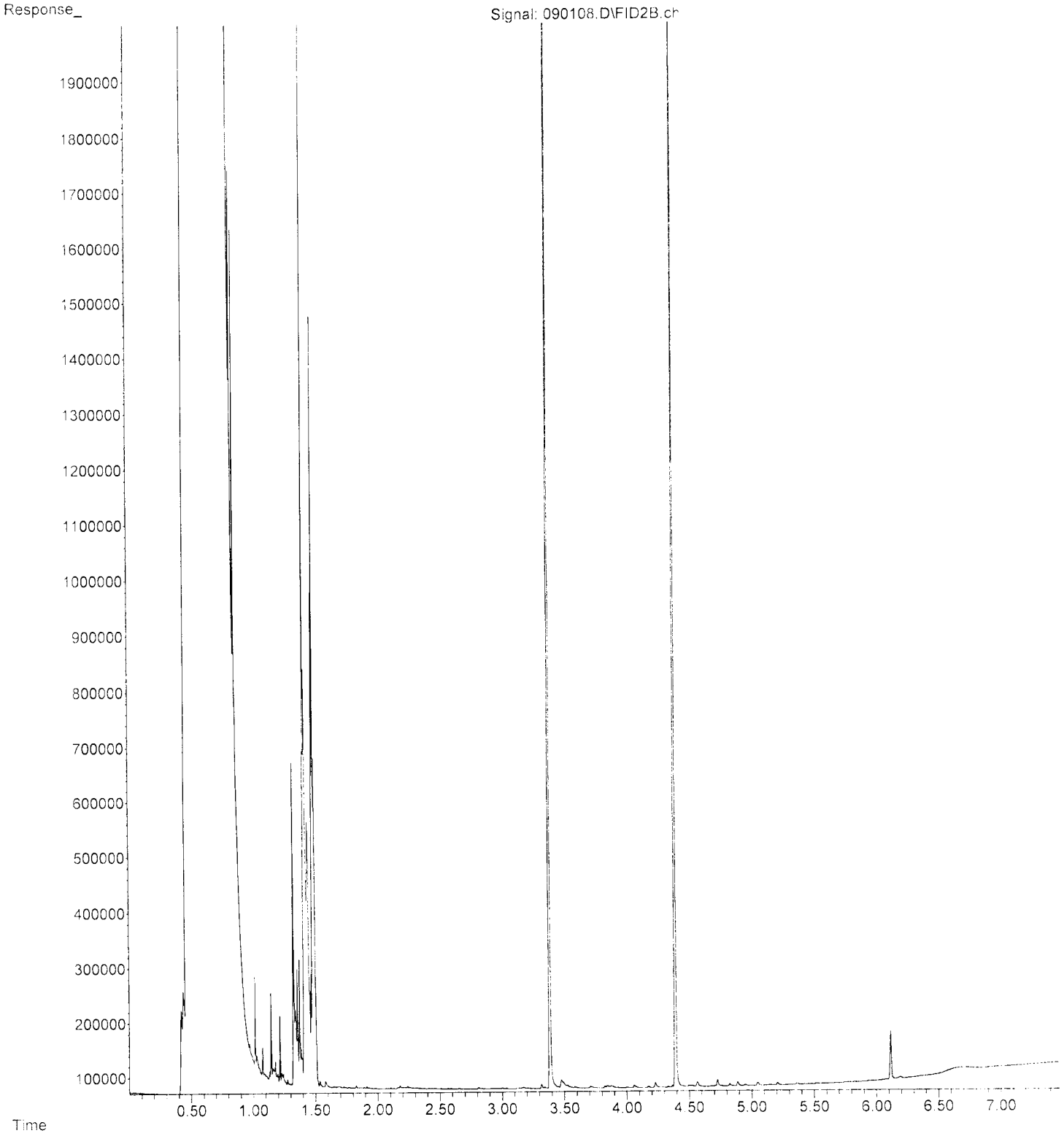
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Instrument : GC10
Sample Name: 308491-08
Misc Info :
Vial Number: 18



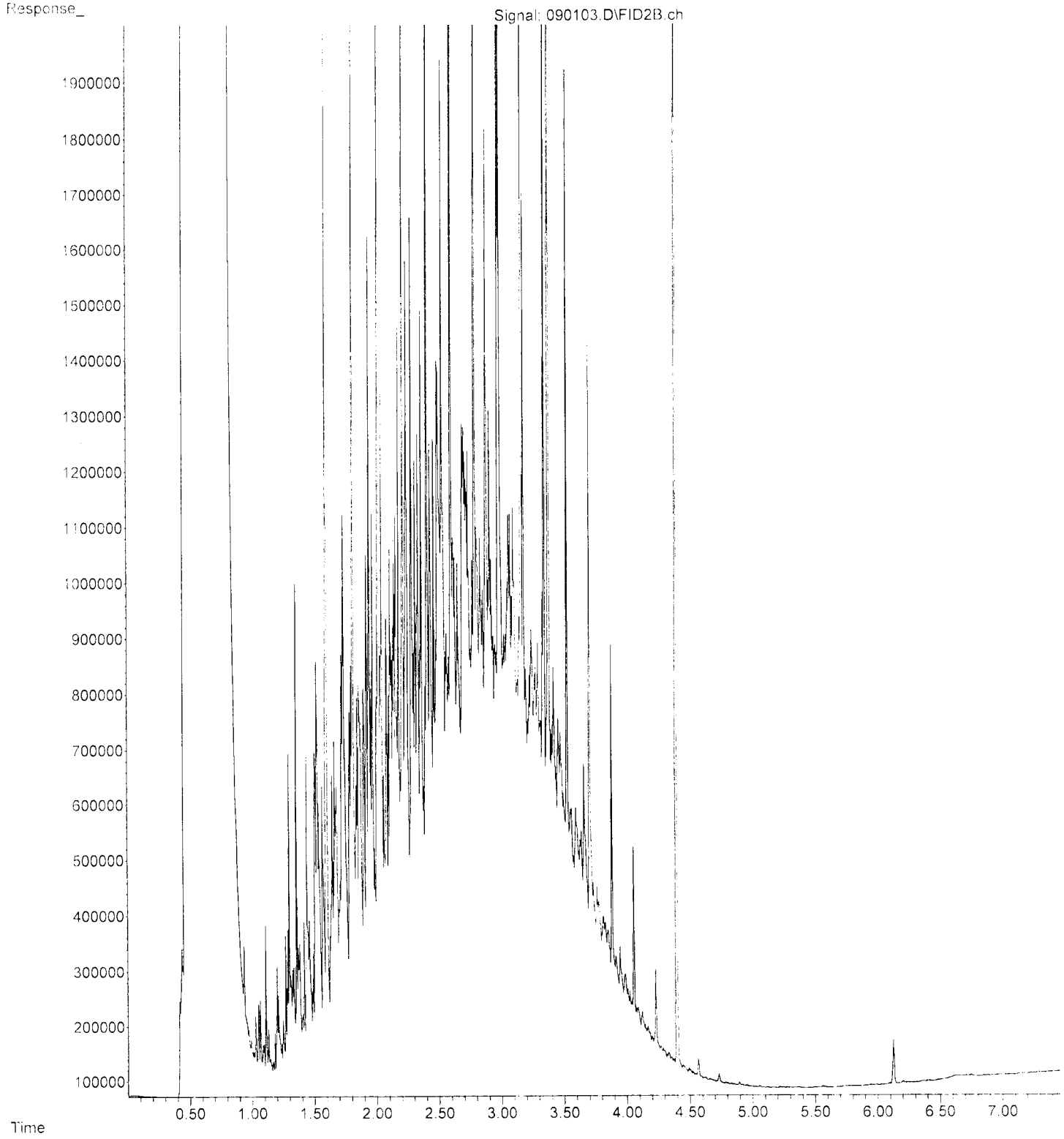
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Operator : TL
Acquired : 01 Sep 2023 11:11 am using AcqMethod DX.M
Instrument : GC10
Sample Name: 308491-09
Misc Info :
Vial Number: 19



File :P:\Proc_GC10\09-01-23\090108.D
Operator : TL
Acquired : 01 Sep 2023 09:24 am using AcqMethod DX.M
Instrument : GC10
Sample Name: 03-2065 mb2
Misc Info :
Vial Number: 10



File :P:\Proc_GC10\09-01-23\090103.D
Operator : TL
Acquired : 01 Sep 2023 07:37 am using AcqMethod DX.M
Instrument : GC10
Sample Name: 500 DX 69-104B
Misc Info :
Vial Number: 3



APPENDIX C

Laboratory Analytical Reports - Vapor

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Aspect Consulting LLC
701 Second Ave., Suite 550
Seattle, WA 98104
ATTN: Daniel Babcock
Daniel.Babcock@aspectconsulting.com

June 3, 2025

SUBJECT: Texaco Strickland/Aloha Café - Data Validation

Dear Mr. Babcock,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on April 29, 2025. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #60968:

SDG #	Fraction
402437 405479 409456 412508	Volatiles, Gasoline Range Organics, Diesel Range Organics

The data validation was performed under Stage 2A guidelines. The analysis was validated using the following documents, as applicable to each method:

- Appendix E, CEMC Review Draft, Sampling and Analysis/Quality Assurance Project Plan (February 2019)
- USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020)
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Stella Cuenco
scuenco@lab-data.com
Project Manager/Senior Chemist

LDC #60968 (Aspect Consulting - Seattle, WA / Texaco Strickland/Aloha Cafe)

LDC	SDG#	Received Date	(21) Due Date	Validation Level	(6) VOCs (TO-15)	(6) VOCs (8260D)	VOCs (MA-APH)	TPH-G (NWTPH-Gx)	TPH-E (NWTPH-Dx)
Matrix Type:					Air	Water	Air	Water	Water
A	402437	4/29/25	5/20/25	Stage 2A		12		12	11
B	405479	4/29/25	5/20/25	Stage 2A		12		11	11
C	409456	4/29/25	5/20/25	Stage 2A	4		4		
D	412508	4/29/25	5/20/25	Stage 2A	3		3		
Total			PM: SC		**7**	**24**	**7**	**23**	**22**

EDD: EDD
Stage 2A

Project AS180357A

WO AS180357A-137000278

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Texaco Strickland/Aloha Café

LDC Report Date: May 27, 2025

Parameters: Volatile Organic Compounds

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 402437

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
MW-18R-022824	402437-01	Water	02/28/24
MW-25R-022824	402437-02	Water	02/28/24
MW-26-022824	402437-03	Water	02/28/24
MW-19-022824	402437-04	Water	02/28/24
MW-32-022824	402437-05	Water	02/28/24
MW-31-022824	402437-06	Water	02/28/24
MW-30-022824	402437-07	Water	02/28/24
MW-29-022824	402437-08	Water	02/28/24
MW-17-022924	402437-10	Water	02/29/24
MW-16-022924	402437-11	Water	02/29/24
MW-18R-022824MS	402437-01MS	Water	02/28/24

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Sampling and Analysis Plan for Groundwater Monitoring, Texaco Strickland Site (August 2023) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) SW 846 Method 8260D

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary reports.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

III. Field Blank

No field blanks were identified in this SDG.

IV. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

V. Matrix Spike/Matrix Spike Duplicate

Matrix spike (MS) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits.

VI. Laboratory Control Sample

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VII. Field Duplicate

No field duplicates were identified in this SDG.

VIII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

IX. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Data Qualification Summary - SDG 402437

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Laboratory Blank Data Qualification Summary - SDG 402437

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Field Blank Data Qualification Summary - SDG 402437

No Sample Data Qualified in this SDG

VALIDATION COMPLETENESS WORKSHEET

LDC #: 60968A
SDG #: 402437
Laboratory: Friedman & Bruya Inc., Seattle, WA

Date: 5/1/2025
Page: 1
Reviewer: MN
2nd Reviewer: A

Method: Volatiles (EPA 8260D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I	Sample Receipt/Technical Holding Time	A/A	
II	Laboratory Blanks	A	
III	Field Blank	N	
IV	Surrogate Spikes	A	
V	Matrix Spike/Matrix Spike Duplicate	A	
VI	Laboratory Control Sample	A	LCS/D
VII	Field Duplicate	N	
VIII	Target Analyte Quantitation	N	
IX	Overall Assessment of Data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = Not detected; NQ = Not qualified; FD = Field duplicate; FT = Field triplicate; TB = Trip blank; FB = Field blank; AB= Ambient blank; SB = Source blank; EB = Equipment blank; R = Rinsate

	Client ID	Lab ID	QC Type	Matrix	Date	Stage
1	MW-18R-022824	402437-01		Water	02/28/2024	Stage 2A
2	MW-25R-022824	402437-02		Water	02/28/2024	Stage 2A
3	MW-26-022824	402437-03		Water	02/28/2024	Stage 2A
4	MW-19-022824	402437-04		Water	02/28/2024	Stage 2A
5	MW-32-022824	402437-05		Water	02/28/2024	Stage 2A
6	MW-31-022824	402437-06		Water	02/28/2024	Stage 2A
7	MW-30-022824	402437-07		Water	02/28/2024	Stage 2A
8	MW-29-022824	402437-08		Water	02/28/2024	Stage 2A
9	MW-17-022924	402437-10		Water	02/29/2024	Stage 2A
10	MW-16-022924	402437-11		Water	02/29/2024	Stage 2A
11	MW-18R-022824MS	402437-01MS	MS	Water	02/28/2024	Stage 2A
~~12~~	~~MW-18R-022824DUP~~	~~402437-01DUP~~	~~DUP~~	~~Water~~	~~02/28/2024~~	~~Stage 2A~~

Notes:

- 04-0494 mb		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Texaco Strickland/Aloha Café

LDC Report Date: May 27, 2025

Parameters: Gasoline Range Organics

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 402437

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
MW-18R-022824	402437-01	Water	02/28/24
MW-25R-022824	402437-02	Water	02/28/24
MW-26-022824	402437-03	Water	02/28/24
MW-19-022824	402437-04	Water	02/28/24
MW-32-022824	402437-05	Water	02/28/24
MW-31-022824	402437-06	Water	02/28/24
MW-30-022824	402437-07	Water	02/28/24
MW-29-022824	402437-08	Water	02/28/24
MW-27-022824	402437-09	Water	02/28/24
MW-17-022924	402437-10	Water	02/29/24
MW-16-022924	402437-11	Water	02/29/24
MW-18R-022824DUP	402437-01DUP	Water	02/28/24

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Sampling and Analysis Plan for Groundwater Monitoring, Texaco Strickland Site (August 2023) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Gasoline Range Organics by NWTPH-Gx

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary reports.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

III. Field Blank

No field blanks were identified in this SDG.

IV. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

V. Matrix Spike/Matrix Spike Duplicate/Laboratory Duplicate

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

Laboratory duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits.

VI. Laboratory Control Sample

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

VII. Field Duplicate

No field duplicates were identified in this SDG.

VIII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

IX. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Texaco Strickland/Aloha Café
Gasoline Range Organics - Data Qualification Summary - SDG 402437

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Gasoline Range Organics - Laboratory Blank Data Qualification Summary - SDG 402437

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Gasoline Range Organics - Field Blank Data Qualification Summary - SDG 402437

No Sample Data Qualified in this SDG

VALIDATION COMPLETENESS WORKSHEET

LDC #: 60968A
SDG #: 402437
Laboratory: Friedman & Bruya Inc., Seattle, WA

Date: 5/1/2025
Page: 1
Reviewer: MN
2nd Reviewer: A

Method: Gasoline Range Organics (NWTPH-Gx)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I	Sample Receipt/Technical Holding Time	A/A	
II	Laboratory Blanks	A	
III	Field Blank	N	
IV	Surrogate Spikes	A	
V	Matrix Spike/Matrix Spike Duplicate /Lab Dup	N/A	
VI	Laboratory Control Sample	A	LCS
VII	Field Duplicate	N	
VIII	Target Analyte Quantitation	N	
IX	Overall Assessment of Data	A	

Note: A = Acceptable; ND = Not detected; FT = Field triplicate; AB= Ambient blank; R = Rinsate
N = Not provided/applicable; NQ = Not qualified; TB = Trip blank; SB = Source blank
SW = See worksheet; FD = Field duplicate; FB = Field blank; EB = Equipment blank

	Client ID	Lab ID	QC Type	Matrix	Date	Stage
1	MW-18R-022824	402437-01		Water	02/28/2024	Stage 2A
2	MW-25R-022824	402437-02		Water	02/28/2024	Stage 2A
3	MW-26-022824	402437-03		Water	02/28/2024	Stage 2A
4	MW-19-022824	402437-04		Water	02/28/2024	Stage 2A
5	MW-32-022824	402437-05		Water	02/28/2024	Stage 2A
6	MW-31-022824	402437-06		Water	02/28/2024	Stage 2A
7	MW-30-022824	402437-07		Water	02/28/2024	Stage 2A
8	MW-29-022824	402437-08		Water	02/28/2024	Stage 2A
9	MW-27-022824	402437-09		Water	02/28/2024	Stage 2A
10	MW-17-022924	402437-10		Water	02/29/2024	Stage 2A
11	MW-16-022924	402437-11		Water	02/29/2024	Stage 2A
12	MW-18R-022824DUP	402437-01DUP	DUP	Water	02/28/2024	Stage 2A

Notes:

1 04-0429 MB		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Texaco Strickland/Aloha Café

LDC Report Date: May 27, 2025

Parameters: Diesel Range Organics

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 402437

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
MW-18R-022824	402437-01	Water	02/28/24
MW-25R-022824	402437-02	Water	02/28/24
MW-26-022824	402437-03	Water	02/28/24
MW-19-022824	402437-04	Water	02/28/24
MW-32-022824	402437-05	Water	02/28/24
MW-31-022824	402437-06	Water	02/28/24
MW-30-022824	402437-07	Water	02/28/24
MW-29-022824	402437-08	Water	02/28/24
MW-27-022824	402437-09	Water	02/28/24
MW-17-022924	402437-10	Water	02/29/24
MW-16-022924	402437-11	Water	02/29/24

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Sampling and Analysis Plan for Groundwater Monitoring, Texaco Strickland Site (August 2023) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Diesel Range Organics by NWTPH-Dx

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary reports.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

III. Field Blank

No field blanks were identified in this SDG.

IV. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

V. Matrix Spike/Matrix Spike Duplicate

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VI. Laboratory Control Sample

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VII. Field Duplicate

No field duplicates were identified in this SDG.

VIII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

IX. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Texaco Strickland/Aloha Café
Diesel Range Organics - Data Qualification Summary - SDG 402437

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Diesel Range Organics - Laboratory Blank Data Qualification Summary - SDG 402437

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Diesel Range Organics - Field Blank Data Qualification Summary - SDG 402437

No Sample Data Qualified in this SDG

VALIDATION COMPLETENESS WORKSHEET

LDC #: 60968A
SDG #: 402437
Laboratory: Friedman & Bruya Inc., Seattle, WA

Date: 5/1/2025
Page: 1
Reviewer: MN
2nd Reviewer: A

Method: Diesel Range Organics (NWTPH-Dx)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I	Sample Receipt/Technical Holding Time	A/A	
II	Laboratory Blanks	A	
III	Field Blank	N	
IV	Surrogate Spikes	A	
V	Matrix Spike/Matrix Spike Duplicate	N	
VI	Laboratory Control Sample	A	LCSID
VII	Field Duplicate	N	
VIII	Target Analyte Quantitation	N	
IX	Overall Assessment of Data	A	

Note: A = Acceptable; ND = Not detected; FT = Field triplicate; AB= Ambient blank; R = Rinsate
N = Not provided/applicable; NQ = Not qualified; TB = Trip blank; SB = Source blank
SW = See worksheet; FD = Field duplicate; FB = Field blank; EB = Equipment blank

	Client ID	Lab ID	QC Type	Matrix	Date	Stage
1	MW-18R-022824	402437-01		Water	02/28/2024	Stage 2A
2	MW-25R-022824	402437-02		Water	02/28/2024	Stage 2A
3	MW-26-022824	402437-03		Water	02/28/2024	Stage 2A
4	MW-19-022824	402437-04		Water	02/28/2024	Stage 2A
5	MW-32-022824	402437-05		Water	02/28/2024	Stage 2A
6	MW-31-022824	402437-06		Water	02/28/2024	Stage 2A
7	MW-30-022824	402437-07		Water	02/28/2024	Stage 2A
8	MW-29-022824	402437-08		Water	02/28/2024	Stage 2A
9	MW-27-022824	402437-09		Water	02/28/2024	Stage 2A
10	MW-17-022924	402437-10		Water	02/29/2024	Stage 2A
11	MW-16-022924	402437-11		Water	02/29/2024	Stage 2A

Notes:

1 04-490MB		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Texaco Strickland/Aloha Café

LDC Report Date: May 27, 2025

Parameters: Volatile Organic Compounds

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 405479

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
MW-18R-240529	405479-01	Water	05/29/24
MW-25R-240529	405479-02	Water	05/29/24
MW-26-240529	405479-03	Water	05/29/24
MW-19-240529	405479-04	Water	05/29/24
MW-32-240529	405479-05	Water	05/29/24
MW-31-240529	405479-06	Water	05/29/24
MW-30-240529	405479-07	Water	05/29/24
MW-29-240529	405479-08	Water	05/29/24
MW-27-240530	405479-09	Water	05/30/24
MW-16-240530	405479-10	Water	05/30/24
MW-17-240530	405479-11	Water	05/30/24
MW-32-240529MS	405479-05MS	Water	05/29/24

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Sampling and Analysis Plan for Groundwater Monitoring, Texaco Strickland Site (August 2023) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) SW 846 Method 8260D

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary reports.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

III. Field Blank

No field blanks were identified in this SDG.

IV. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

V. Matrix Spike/Matrix Spike Duplicate

Matrix spike (MS) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits.

VI. Laboratory Control Sample

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VII. Field Duplicate

No field duplicates were identified in this SDG.

VIII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

IX. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Data Qualification Summary - SDG 405479

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Laboratory Blank Data Qualification Summary - SDG 405479

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Field Blank Data Qualification Summary - SDG 405479

No Sample Data Qualified in this SDG

VALIDATION COMPLETENESS WORKSHEET

LDC #: 60968B
SDG #: 405479
Laboratory: Friedman & Bruya Inc., Seattle, WA

Date: 5/1/2025
Page: 1
Reviewer: MN
2nd Reviewer: AC

Method: Volatiles (EPA 8260D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I	Sample Receipt/Technical Holding Time	A/A	
II	Laboratory Blanks	A	
III	Field Blank	N	
IV	Surrogate Spikes	A	
V	Matrix Spike/Matrix Spike Duplicate	A	
VI	Laboratory Control Sample	A	LCSD
VII	Field Duplicate	N	
VIII	Target Analyte Quantitation	N	
IX	Overall Assessment of Data	A	

Note: A = Acceptable; ND = Not detected; FT = Field triplicate; AB= Ambient blank; R = Rinsate
N = Not provided/applicable; NQ = Not qualified; TB = Trip blank; SB = Source blank
SW = See worksheet; FD = Field duplicate; FB = Field blank; EB = Equipment blank

	Client ID	Lab ID	QC Type	Matrix	Date	Stage
1	MW-18R-240529	405479-01		Water	05/29/2024	Stage 2A
2	MW-25R-240529	405479-02		Water	05/29/2024	Stage 2A
3	MW-26-240529	405479-03		Water	05/29/2024	Stage 2A
4	MW-19-240529	405479-04		Water	05/29/2024	Stage 2A
5	MW-32-240529	405479-05		Water	05/29/2024	Stage 2A
6	MW-31-240529	405479-06		Water	05/29/2024	Stage 2A
7	MW-30-240529	405479-07		Water	05/29/2024	Stage 2A
8	MW-29-240529	405479-08		Water	05/29/2024	Stage 2A
9	MW-27-240530	405479-09		Water	05/30/2024	Stage 2A
10	MW-16-240530	405479-10		Water	05/30/2025	Stage 2A
11	MW-17-240530	405479-11		Water	05/30/2026	Stage 2A
12	MW-32-240529MS	405479-05MS	MS	Water	05/29/2024	Stage 2A

Notes:

04-1231 mb		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Texaco Strickland/Aloha Café

LDC Report Date: May 27, 2025

Parameters: Gasoline Range Organics

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 405479

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
MW-18R-240529	405479-01	Water	05/29/24
MW-25R-240529	405479-02	Water	05/29/24
MW-26-240529	405479-03	Water	05/29/24
MW-19-240529	405479-04	Water	05/29/24
MW-32-240529	405479-05	Water	05/29/24
MW-31-240529	405479-06	Water	05/29/24
MW-30-240529	405479-07	Water	05/29/24
MW-29-240529	405479-08	Water	05/29/24
MW-27-240530	405479-09	Water	05/30/25
MW-16-240530	405479-10	Water	05/30/25
MW-17-240530	405479-11	Water	05/30/25

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Sampling and Analysis Plan for Groundwater Monitoring, Texaco Strickland Site (August 2023) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Gasoline Range Organics by NWTPH-Gx

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary reports.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

III. Field Blank

No field blanks were identified in this SDG.

IV. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

V. Matrix Spike/Matrix Spike Duplicate

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VI. Laboratory Control Sample

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VII. Field Duplicate

No field duplicates were identified in this SDG.

VIII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

IX. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Texaco Strickland/Aloha Café
Gasoline Range Organics - Data Qualification Summary - SDG 405479

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Gasoline Range Organics - Laboratory Blank Data Qualification Summary - SDG 405479

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Gasoline Range Organics - Field Blank Data Qualification Summary - SDG 405479

No Sample Data Qualified in this SDG

VALIDATION COMPLETENESS WORKSHEET

LDC #: 60968B
SDG #: 405479
Laboratory: Friedman & Bruya Inc., Seattle, WA

Date: 5/1/2025
Page: 1
Reviewer: MN
2nd Reviewer: [illegible]

Method: Gasoline Range Organics (NWTPH-Gx)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I	Sample Receipt/Technical Holding Time	I / A	
II	Laboratory Blanks	A	
III	Field Blank	N	
IV	Surrogate Spikes	A	
V	Matrix Spike/Matrix Spike Duplicate	N	
VI	Laboratory Control Sample	A	LCS/D
VII	Field Duplicate	N	
VIII	Target Analyte Quantitation	A	
IX	Overall Assessment of Data	A	

Note: A = Acceptable; ND = Not detected; FT = Field triplicate; AB= Ambient blank; R = Rinsate
N = Not provided/applicable; NQ = Not qualified; TB = Trip blank; SB = Source blank
SW = See worksheet; FD = Field duplicate; FB = Field blank; EB = Equipment blank

	Client ID	Lab ID	QC Type	Matrix	Date	Stage
1	MW-18R-240529	405479-01		Water	05/29/2024	Stage 2A
2	MW-25R-240529	405479-02		Water	05/29/2024	Stage 2A
3	MW-26-240529	405479-03		Water	05/29/2024	Stage 2A
4	MW-19-240529	405479-04		Water	05/29/2024	Stage 2A
5	MW-32-240529	405479-05		Water	05/29/2024	Stage 2A
6	MW-31-240529	405479-06		Water	05/29/2024	Stage 2A
7	MW-30-240529	405479-07		Water	05/29/2024	Stage 2A
8	MW-29-240529	405479-08		Water	05/29/2024	Stage 2A
9	MW-27-240530	405479-09		Water	05/30/2025	Stage 2A
10	MW-16-240530	405479-10		Water	05/30/2025	Stage 2A
11	MW-17-240530	405479-11		Water	05/30/2025	Stage 2A

Notes:

04-914MB		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Texaco Strickland/Aloha Café

LDC Report Date: May 27, 2025

Parameters: Diesel Range Organics

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 405479

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
MW-18R-240529	405479-01	Water	05/29/24
MW-25R-240529	405479-02	Water	05/29/24
MW-26-240529	405479-03	Water	05/29/24
MW-19-240529	405479-04	Water	05/29/24
MW-32-240529	405479-05	Water	05/29/24
MW-31-240529	405479-06	Water	05/29/24
MW-30-240529	405479-07	Water	05/29/24
MW-29-240529	405479-08	Water	05/29/24
MW-27-240530	405479-09	Water	05/30/25
MW-16-240530	405479-10	Water	05/30/25
MW-17-240530	405479-11	Water	05/30/25

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Sampling and Analysis Plan for Groundwater Monitoring, Texaco Strickland Site (August 2023) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Diesel Range Organics by NWTPH-Dx

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary reports.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

III. Field Blank

No field blanks were identified in this SDG.

IV. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

V. Matrix Spike/Matrix Spike Duplicate

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VI. Laboratory Control Sample

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VII. Field Duplicate

No field duplicates were identified in this SDG.

VIII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

IX. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Texaco Strickland/Aloha Café
Diesel Range Organics - Data Qualification Summary - SDG 405479

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Diesel Range Organics - Laboratory Blank Data Qualification Summary - SDG 405479

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Diesel Range Organics - Field Blank Data Qualification Summary - SDG 405479

No Sample Data Qualified in this SDG

VALIDATION COMPLETENESS WORKSHEET

LDC #: 60968B
SDG #: 405479
Laboratory: Friedman & Bruya Inc., Seattle, WA

Date: 5/1/2025
Page: 1
Reviewer: MW
2nd Reviewer: AC

Method: Diesel Range Organics (NWTPH-Dx)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I	Sample Receipt/Technical Holding Time	A/A	
II	Laboratory Blanks	A	
III	Field Blank	N	
IV	Surrogate Spikes	A	
V	Matrix Spike/Matrix Spike Duplicate	N	
VI	Laboratory Control Sample	A	LCSID
VII	Field Duplicate	N	
VIII	Target Analyte Quantitation	N	
IX	Overall Assessment of Data	A	

Note: A = Acceptable; ND = Not detected; FT = Field triplicate; AB= Ambient blank; R = Rinsate
N = Not provided/applicable; NQ = Not qualified; TB = Trip blank; SB = Source blank
SW = See worksheet; FD = Field duplicate; FB = Field blank; EB = Equipment blank

	Client ID	Lab ID	QC Type	Matrix	Date	Stage
1	MW-18R-240529	405479-01		Water	05/29/2024	Stage 2A
2	MW-25R-240529	405479-02		Water	05/29/2024	Stage 2A
3	MW-26-240529	405479-03		Water	05/29/2024	Stage 2A
4	MW-19-240529	405479-04		Water	05/29/2024	Stage 2A
5	MW-32-240529	405479-05		Water	05/29/2024	Stage 2A
6	MW-31-240529	405479-06		Water	05/29/2024	Stage 2A
7	MW-30-240529	405479-07		Water	05/29/2024	Stage 2A
8	MW-29-240529	405479-08		Water	05/29/2024	Stage 2A
9	MW-27-240530	405479-09		Water	05/30/2025	Stage 2A
10	MW-16-240530	405479-10		Water	05/30/2025	Stage 2A
11	MW-17-240530	405479-11		Water	05/30/2025	Stage 2A

Notes:

04-1270MB2		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Texaco Strickland/Aloha Café

LDC Report Date: May 28, 2025

Parameters: Volatile Organic Compounds

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 409456

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
AMB-1-240926	409456-01	Air	09/26/24
AMB-2-240926	409456-02	Air	09/26/24
US-EFF-240927	409456-03	Air	09/27/24
US-EFF-240927DUP	409456-03DUP	Air	09/27/24

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Appendix E, CEMC Review Draft, Sampling and Analysis/Quality Assurance Project Plan (February 2019) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Method TO-15

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary reports.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

The canisters were properly pressurized and handled.

All technical holding time requirements were met.

II. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

Canister blank analyses were performed for every sample canister. No contaminants were found in the canister blanks.

III. Field Blank

Samples AMB-1-240926 and AMB-2-240926 were identified as ambient blanks. No contaminants were found with the following exceptions:

Blank ID	Analyte	Concentration
AMB-1-240926	Benzene Naphthalene	0.38 ug/m^3 0.15 ug/m^3
AMB-2-240926	Naphthalene	0.084 ug/m^3

IV. Surrogates

Although surrogates were not required by the method, surrogate analysis was performed by the laboratory. Surrogate recoveries (%R) were within QC limits.

V. Laboratory Duplicate

Laboratory duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits.

VI. Laboratory Control Sample

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

VII. Field Duplicate

No field duplicates were identified in this SDG.

VIII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

IX. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Data Qualification Summary - SDG 409456

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Laboratory Blank Data Qualification Summary - SDG 409456

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Field Blank Data Qualification Summary - SDG 409456

No Sample Data Qualified in this SDG

VALIDATION COMPLETENESS WORKSHEET

LDC #: 60968C
SDG #: 409456
Laboratory: Friedman & Bruya Inc., Seattle, WA

Date: 5/9/2025
Page: 1
Reviewer: MN
2nd Reviewer: AF

Method: Volatiles (EPA TO-15)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I	Sample Receipt/Technical Holding Time	A/A	
II	Laboratory Blanks /canister	A/	
III	Field Blank	SW	AB=1,2
IV	Surrogate Spikes	A	
V	Laboratory Duplicate	A	
VI	Laboratory Control Sample	A	LCS
VII	Field Duplicate	N	
VIII	Target Analyte Quantitation	N	
IX	Overall Assessment of Data	A	

Note: A = Acceptable; ND = Not detected; FT = Field triplicate; AB= Ambient blank; R = Rinsate
N = Not provided/applicable; NQ = Not qualified; TB = Trip blank; SB = Source blank
SW = See worksheet; FD = Field duplicate; FB = Field blank; EB = Equipment blank

	Client ID	Lab ID	QC Type	Matrix	Date	Stage
1	AMB-1-240926	409456-01		Air	09/26/2024	Stage 2A
2	AMB-2-240926	409456-02		Air	09/26/2024	Stage 2A
3	US-EFF-240927	409456-03		Air	09/27/2024	Stage 2A
4	US-EFF-240927DUP	409456-03DUP	DUP	Air	09/27/2024	Stage 2A

Notes:

1 04-2348 MB		

VALIDATION FINDINGS WORKSHEET
Field Blanks

METHOD: GC/MS Volatiles (EPA Method TO-15)
Field blanks were identified in this SDG.
No contaminants were found in the field blanks with the exceptions identified below.
Sampling date: 9/26/24 **Blank units:** ug/m3 **Associated sample units:** ug/m3
Field blank type: AB **Associated Samples:** none
(TB = Trip Blank; FB = Field Blank; EB = Equipment Blank; SB = Source Blank)

Compound	Blank ID	Blank ID	Sample Identification						
	1	2							
Benzene	0.38								
Naphthalene	0.15	0.084							

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Texaco Strickland/Aloha Café

LDC Report Date: May 28, 2025

Parameters: Volatile Organic Compounds

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 409456

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
AMB-1-240926	409456-01	Air	09/26/24
AMB-2-240926	409456-02	Air	09/26/24
US-EFF-240927	409456-03	Air	09/27/24
US-EFF-240927DUP	409456-03DUP	Air	09/27/24

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Appendix E, CEMC Review Draft, Sampling and Analysis/Quality Assurance Project Plan (February 2019) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Method MA-APH

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary reports.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

The canisters were properly pressurized and handled.

All technical holding time requirements were met.

II. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

III. Field Blank

Samples AMB-1-240926 and AMB-2-240926 were identified as ambient blanks. No contaminants were found with the following exceptions:

Blank ID	Analyte	Concentration
AMB-1-240926	APH EC5-8 aliphatics APH EC9-12 aliphatics	100 ug/m^3 43 ug/m^3

IV. Surrogates

Although surrogates were not required by the method, surrogate analysis was performed by the laboratory. Surrogate recoveries (%R) were within QC limits.

V. Matrix Spike/Matrix Spike Duplicate/Laboratory Duplicate

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

Laboratory duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits.

VI. Laboratory Control Sample

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

VII. Field Duplicate

No field duplicates were identified in this SDG.

VIII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

IX. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Data Qualification Summary - SDG 409456

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Laboratory Blank Data Qualification Summary - SDG 409456

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Field Blank Data Qualification Summary - SDG 409456

No Sample Data Qualified in this SDG

VALIDATION COMPLETENESS WORKSHEET

LDC #: 60968C
SDG #: 409456
Laboratory: Friedman & Bruya Inc., Seattle, WA

Date: 5/1/2025
Page: 1
Reviewer: MM
2nd Reviewer: A

Method: VOCs (APH) (MA-APH)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I	Sample Receipt/Technical Holding Time	A/A	
II	Laboratory Blanks	A	
III	Field Blank	SW	AB=1,2
IV	Surrogate Spikes	A	
V	Matrix Spike/Matrix Spike Duplicate / Lab Dup	N/A	
VI	Laboratory Control Sample	A	LCS
VII	Field Duplicate	N	
VIII	Target Analyte Quantitation	N	
IX	Overall Assessment of Data	A	

Note: A = Acceptable; ND = Not detected; FT = Field triplicate; AB= Ambient blank; R = Rinsate
N = Not provided/applicable; NQ = Not qualified; TB = Trip blank; SB = Source blank
SW = See worksheet; FD = Field duplicate; FB = Field blank; EB = Equipment blank

	Client ID	Lab ID	QC Type	Matrix	Date	Stage
1	AMB-1-240926	409456-01		Air	09/26/2024	Stage 2A
2	AMB-2-240926	409456-02		Air	09/26/2024	Stage 2A
3	US-EFF-240927	409456-03		Air	09/27/2024	Stage 2A
4	US-EFF-240927DUP	409456-03DUP	DUP	Air	09/27/2024	Stage 2A

Notes:

1 04-2348MB		

VALIDATION FINDINGS WORKSHEET
Field Blanks

METHOD: GC/MS Volatiles (EPA Method MA-APH)
Field blanks were identified in this SDG.
No contaminants were found in the field blanks with the exceptions identified below.
Sampling date: 9/26/24 **Blank units:** ug/m3 **Associated sample units:** ug/m3
Field blank type: AB **Associated Samples:** none
(TB = Trip Blank; FB = Field Blank; EB = Equipment Blank; SB = Source Blank)

Compound	Blank ID	Sample Identification							
	1								
APH EC5-8 aliphatics	100								
APH EC9-12 aliphatics	43								

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Texaco Strickland/Aloha Café

LDC Report Date: May 28, 2025

Parameters: Volatile Organic Compounds

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 412508

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
AMB-1-241230	412508-01	Air	12/30/24
AMB-2-241230	412508-02	Air	12/30/24
VS-EFF-241231	412508-03	Air	12/31/24

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Appendix E, CEMC Review Draft, Sampling and Analysis/Quality Assurance Project Plan (February 2019) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Method TO-15

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary reports.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

The canisters were properly pressurized and handled.

All technical holding time requirements were met.

II. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks with the following exceptions:

Blank ID	Analysis Date	Analyte	Concentration (ug/m^3)	Associated Samples
50-003 MB	01/02/25	Naphthalene	0.073	All samples in SDG 412508

Canister blank analyses were performed for every sample canister. No contaminants were found in the canister blanks.

Sample concentrations were compared to concentrations detected in the laboratory blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated laboratory blanks with the following exceptions:

Sample	Analyte	Reported Concentration (ug/m^3)	Modified Final Concentration (ug/m^3)
AMB-1-241230	Naphthalene	0.073	0.073U
AMB-2-241230	Naphthalene	0.11	0.11U
VS-EFF-241231	Naphthalene	0.079	0.079U

III. Field Blank

Samples AMB-1-241230 and AMB-2-241230 were identified as ambient blanks. No contaminants were found with the following exceptions:

Blank ID	Analyte	Concentration
AMB-1-241230	Benzene Naphthalene	0.42 ug/m^3 0.073 ug/m^3
AMB-2-241230	Benzene Naphthalene	0.60 ug/m^3 0.11 ug/m^3

IV. Surrogates

Although surrogates were not required by the method, surrogate analysis was performed by the laboratory. Surrogate recoveries (%R) were within QC limits.

V. Laboratory Duplicate

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VI. Laboratory Control Sample

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

VII. Field Duplicate

No field duplicates were identified in this SDG.

VIII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

IX. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Data qualified due to laboratory blank contamination are summarized and presented in the Data Qualification Summary.

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Data Qualification Summary - SDG 412508

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Laboratory Blank Data Qualification Summary - SDG 412508

Sample	Analyte	Modified Final Concentration (ug/m^3)
AMB-1-241230	Naphthalene	0.073U
AMB-2-241230	Naphthalene	0.11U
VS-EFF-241231	Naphthalene	0.079U

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Field Blank Data Qualification Summary - SDG 412508

No Sample Data Qualified in this SDG

VALIDATION COMPLETENESS WORKSHEET

LDC #: 60968D
SDG #: 412508
Laboratory: Friedman & Bruya Inc., Seattle, WA

Date: 5/9/2025
Page: 1
Reviewer: MM
2nd Reviewer:

Method: Volatiles (EPA TO-15)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I	Sample Receipt/Technical Holding Time	A/A	
II	Laboratory Blanks / canister	SW/	
III	Field Blank	SW	
IV	Surrogate Spikes	A	
V	Laboratory Duplicate	N	
VI	Laboratory Control Sample	A	LCS/D
VII	Field Duplicate	N	
VIII	Target Analyte Quantitation	N	
IX	Overall Assessment of Data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = Not detected; NQ = Not qualified; FD = Field duplicate; FT = Field triplicate; TB = Trip blank; FB = Field blank; AB= Ambient blank; SB = Source blank; EB = Equipment blank; R = Rinsate

	Client ID	Lab ID	QC Type	Matrix	Date	Stage
1	AMB-1-241230	412508-01		Air	12/30/2024	Stage 2A
2	AMB-2-241230	412508-02		Air	12/30/2024	Stage 2A
3	VS-EFF-241231	412508-03		Air	12/31/2024	Stage 2A

Notes:

1 05-003 MB		

LDC #: _60968D

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: _____MN___

METHOD: GC/MS Volatiles (EPA Method TO-15)
Method blanks were performed at the required frequency and sequence.
No contaminants were found in the method blanks with the exceptions identified below.
Blank analysis date: _____~~05-003 MB~~ 1/2/25 **Associated samples:** _all_____
Conc. units: ___ug/m3_____

Compound	Blank ID	Sample Identification							
	50-003 MB	1	2	3					
Naphthalene	0.073	0.073U	0.11U	0.079U					

LDC# 60968D

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: ____MN_____

METHOD: GC/MS Volatiles (EPA Method TO-15)
Field blanks were identified in this SDG.
No contaminants were found in the field blanks with the exceptions identified below.

Sampling date: 12/30/24 **Blank units:** ug/m3 **Associated sample units:** ug/m3
Field blank type: AB **Associated Samples:** none

(TB = Trip Blank; FB = Field Blank; EB = Equipment Blank; SB = Source Blank)

Compound	Blank ID	Blank ID	Sample Identification						
	1	2							
Benzene	0.42	0.60							
Naphthalene	0.073	0.11							

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Texaco Strickland/Aloha Café

LDC Report Date: May 28, 2025

Parameters: Volatile Organic Compounds

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 412508

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
AMB-1-241230	412508-01	Air	12/30/24
AMB-2-241230	412508-02	Air	12/30/24
VS-EFF-241231	412508-03	Air	12/31/24

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Appendix E, CEMC Review Draft, Sampling and Analysis/Quality Assurance Project Plan (February 2019) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Method MA-APH

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary reports.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

The canisters were properly pressurized and handled.

All technical holding time requirements were met.

II. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

III. Field Blank

Samples AMB-1-241230 and AMB-2-241230 were identified as ambient blanks. No contaminants were found with the following exceptions:

Blank ID	Analyte	Concentration
AMB-1-241230	APH EC5-8 aliphatics	86 ug/m^3
AMB-2-241230	APH EC5-8 aliphatics APH EC9-12 aliphatics	86 ug/m^3 34 ug/m^3

IV. Surrogates

Although surrogates were not required by the method, surrogate analysis was performed by the laboratory. Surrogate recoveries (%R) were within QC limits.

V. Matrix Spike/Matrix Spike Duplicate

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VI. Laboratory Control Sample

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

VII. Field Duplicate

No field duplicates were identified in this SDG.

VIII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

VALIDATION COMPLETENESS WORKSHEET

LDC #: 60968D
SDG #: 412508
Laboratory: Friedman & Bruya Inc., Seattle, WA

Date: 5/1/2025
Page: 1
Reviewer: MN
2nd Reviewer: [illegible]

Method: VOCs (APH) (MA-APH)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I	Sample Receipt/Technical Holding Time	A/A	
II	Laboratory Blanks	A	
III	Field Blank	SW	AB=1,2
IV	Surrogate Spikes	A	
V	Matrix Spike/Matrix Spike Duplicate	N	
VI	Laboratory Control Sample	A	LCS
VII	Field Duplicate	N	
VIII	Target Analyte Quantitation	N	
IX	Overall Assessment of Data	A	

Note: A = Acceptable; ND = Not detected; FT = Field triplicate; AB= Ambient blank; R = Rinsate
N = Not provided/applicable; NQ = Not qualified; TB = Trip blank; SB = Source blank
SW = See worksheet; FD = Field duplicate; FB = Field blank; EB = Equipment blank

	Client ID	Lab ID	QC Type	Matrix	Date	Stage
1	AMB-1-241230	412508-01		Air	12/30/2024	Stage 2A
2	AMB-2-241230	412508-02		Air	12/30/2024	Stage 2A
3	VS-EFF-241231	412508-03		Air	12/31/2024	Stage 2A

Notes:

1 05-003 MB		

LDC# 60968D

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: ____MN_____

METHOD: GC/MS Volatiles (EPA Method MA-APH)
Field blanks were identified in this SDG.
No contaminants were found in the field blanks with the exceptions identified below.

Sampling date: 12/30/24 **Blank units:** ug/m3 **Associated sample units:** ug/m3
Field blank type: AB **Associated Samples:** none

(TB = Trip Blank; FB = Field Blank; EB = Equipment Blank; SB = Source Blank)

Compound	Blank ID	Blank ID	Sample Identification						
	1	2							
APH EC5-8 aliphatics	86	86							
APH EC9-12 aliphatics		34							

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

5500 4th Ave South
Seattle, WA 98108-2419
(206) 285-8282
office@friedmanandbruya.com
www.friedmanandbruya.com

October 29, 2024

Daniel Babcock, Project Manager
Aspect Consulting
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Mr Babcock:

Included are the amended results from the testing of material submitted on September 27, 2024 from the Texaco-Strickland 180354, F&BI 409456 project. Sample US-EFF-240927 was re-analyzed at a lesser dilution.

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: Aspect Data
ASP1015R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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October 15, 2024

Daniel Babcock, Project Manager
Aspect Consulting
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Mr Babcock:

Included are the results from the testing of material submitted on September 27, 2024 from the Texaco-Strickland 180354, F&BI 409456 project. There are 12 pages included in this report.

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: Aspect Data
ASP1015R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 27, 2024 by Friedman & Bruya, Inc. from the Aspect Consulting Texaco-Strickland 180354, F&BI 409456 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting
409456 -01	AMB-1-240926
409456 -02	AMB-2-240926
409456 -03	US-EFF-240927

Non-petroleum compounds identified in the air phase hydrocarbon (APH) ranges were subtracted per the MA-APH method.

All quality control requirements were acceptable.

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	AMB-1-240926	Client:	Aspect Consulting
Date Received:	09/27/24	Project:	Texaco-Strickland 180354
Date Collected:	09/26/24	Lab ID:	409456-01
Date Analyzed:	10/04/24	Data File:	100415.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	84	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	100
APH EC9-12 aliphatics	43
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	AMB-2-240926	Client:	Aspect Consulting
Date Received:	09/27/24	Project:	Texaco-Strickland 180354
Date Collected:	09/26/24	Lab ID:	409456-02
Date Analyzed:	10/04/24	Data File:	100416.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	84	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<100
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	US-EFF-240927	Client:	Aspect Consulting
Date Received:	09/27/24	Project:	Texaco-Strickland 180354
Date Collected:	09/26/24	Lab ID:	409456-03 1/2.0
Date Analyzed:	10/18/24 15:23	Data File:	101812.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	93	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	200
APH EC9-12 aliphatics	67
APH EC9-10 aromatics	<50

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	Method Blank	Client:	Aspect Consulting
Date Received:	Not Applicable	Project:	Texaco-Strickland 180354
Date Collected:	Not Applicable	Lab ID:	04-2348 MB
Date Analyzed:	10/04/24	Data File:	100411.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	87	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<100
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	AMB-1-240926	Client:	Aspect Consulting
Date Received:	09/27/24	Project:	Texaco-Strickland 180354
Date Collected:	09/26/24	Lab ID:	409456-01
Date Analyzed:	10/04/24	Data File:	100415.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	87	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.38	0.12
Toluene	<7.5	<2
Ethylbenzene	<0.43	<0.1
m,p-Xylene	<0.87	<0.2
o-Xylene	<0.43	<0.1
Naphthalene	0.15	0.028

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	AMB-2-240926	Client:	Aspect Consulting
Date Received:	09/27/24	Project:	Texaco-Strickland 180354
Date Collected:	09/26/24	Lab ID:	409456-02
Date Analyzed:	10/04/24	Data File:	100416.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	87	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<0.32	<0.1
Toluene	<7.5	<2
Ethylbenzene	<0.43	<0.1
m,p-Xylene	<0.87	<0.2
o-Xylene	<0.43	<0.1
Naphthalene	0.084 j	0.016 j

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	US-EFF-240927	Client:	Aspect Consulting
Date Received:	09/27/24	Project:	Texaco-Strickland 180354
Date Collected:	09/26/24	Lab ID:	409456-03 1/2.0
Date Analyzed:	10/18/24	Data File:	101812.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	94	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<0.32 j	<0.1 j
Toluene	<15	<4
Ethylbenzene	<0.87	<0.2
m,p-Xylene	3.7	0.86
o-Xylene	0.89	0.20
Naphthalene	<0.15 j	<0.028 j

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	Aspect Consulting
Date Received:	Not Applicable	Project:	Texaco-Strickland 180354
Date Collected:	Not Applicable	Lab ID:	04-2348 MB
Date Analyzed:	10/04/24	Data File:	100411.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	90	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<0.32	<0.1
Toluene	<7.5	<2
Ethylbenzene	<0.43	<0.1
m,p-Xylene	<0.87	<0.2
o-Xylene	<0.43	<0.1
Naphthalene	<0.073 j	<0.014 j

Date of Report: 10/15/24
Date Received: 09/27/24
Project: Texaco-Strickland 180354, F&BI 409456

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD MA-APH

Laboratory Code: 409456-03 1/5.8 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
APH EC5-8 aliphatics	ug/m3	<580	<580	nm
APH EC9-12 aliphatics	ug/m3	<140	<140	nm
APH EC9-10 aromatics	ug/m3	<140	<140	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
APH EC5-8 aliphatics	ug/m3	67	89	70-130
APH EC9-12 aliphatics	ug/m3	67	109	70-130
APH EC9-10 aromatics	ug/m3	67	100	70-130

Date of Report: 10/15/24
Date Received: 09/27/24
Project: Texaco-Strickland 180354, F&BI 409456

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 409456-03 1/5.8 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Benzene	ug/m3	<1.9	<1.9	nm
Toluene	ug/m3	<44	<44	nm
Ethylbenzene	ug/m3	<2.5	<2.5	nm
m,p-Xylene	ug/m3	<5	<5	nm
o-Xylene	ug/m3	<2.5	<2.5	nm
Naphthalene	ug/m3	<1.5	<1.5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/m3	43	95	70-130
Toluene	ug/m3	51	104	70-130
Ethylbenzene	ug/m3	59	105	70-130
m,p-Xylene	ug/m3	120	107	70-130
o-Xylene	ug/m3	59	112	70-130
Naphthalene	ug/m3	71	111	70-130

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, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. 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 standard reporting limit. 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.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

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.

409456

SAMPLE CHAIN OF CUSTODY

09/27/24

Page # 1 of 1

Report To Daniel Babcock
Company Aspect Consulting
Address 710 2nd Ave #550
City, State, ZIP Seattle, WA
Phone _____ Email daniel.babcock@aspectconsulting.com

SAMPLERS (*signature*)

PROJECT NAME & ADDRESS: Texaco - Strickland

PO # 180354

NOTES:

INVOICE TO: AP

TURNAROUND TIME
~~Standard~~
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
Default: Clean following final report delivery
Hold (Fee may apply): _____

SAMPLE INFORMATION										ANALYSIS REQUESTED						
Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	APH	Chlorinated VOCs	Helium		Notes
AMB-1-240926	01	20546	20946	IA / SG	09/26/24	29	1120	2.5	1055		X	X				
AMB-2-240926	02	18569	07845	IA / SG	↓	29	1120	5.5	1056		↓	↓				
VS-EFF-240927	03	3311	~~H569~~ 02	IA / SG	09/27/24	29	0928	5	2938		↓	↓				
				IA / SG												
				IA / SG												
				IA / SG							Samples received at 17					
				IA / SG												
				IA / SG												

Friedman & Bruya, Inc.
5500 4th Avenue South
Seattle, WA 98108
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COCTO-15.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Nikolai Carlson	Aspect	09/27/24	1204
Received by:		Anh Phan	FBI	09/27/24	12:04
Relinquished by:					
Received by:					

SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 409456 CLIENT Aspect INITIALS/ DATE: AP 09/27/24

If custody seals are present on cooler, are they intact? ☑ NA ☐ YES ☐ NO

Cooler/Sample temperature 17 °C
Thermometer ID: Fluke 96312917

Were samples received on ice/cold packs? ☐ YES ☑ NO

How did samples arrive?
☑ Over the Counter ☐ Picked up by F&BI ☐ FedEx/UPS/GSO

Is there a Chain-of-Custody* (COC)? ☑ YES ☐ NO **Initials/ Date:** ND 9/27
*or other representative documents, letters, and/or shipping memos

Number of days samples have been sitting prior to receipt at laboratory 0 ≥ 1 days

Are the samples clearly identified? (explain "no" answer below) ☑ YES ☐ NO

Were all sample containers received intact (i.e. not broken, leaking etc.)? (explain "no" answer below) ☑ YES ☐ NO

Were appropriate sample containers used? ☑ YES ☐ NO ☐ Unknown

If custody seals are present on samples, are they intact? ☑ NA ☐ YES ☐ NO

Are samples requiring no headspace, headspace free? ☑ NA ☐ YES ☐ NO

Is the following information provided on the COC, and does it match the sample label?
(explain "no" answer below)

Sample ID's	☑ Yes	☐ No	☐ Not on COC/label
Date Sampled	☑ Yes	☐ No	☐ Not on COC/label
Time Sampled	☑ Yes	☐ No	☐ Not on COC/label
# of Containers	☑ Yes	☐ No	
Relinquished	☑ Yes	☐ No	
Requested analysis	☑ Yes	☐ On Hold	

Other comments (use a separate page if needed)

Air Samples: Were any additional canisters/tubes received? ☑ NA ☐ YES ☐ NO

Number of unused TO15 canisters** _____ **Number of unused TO17 tubes** _____
**Fill out Green manifolds billing sheet

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

5500 4th Ave South
Seattle, WA 98108-2419
(206) 285-8282
office@friedmanandbruya.com
www.friedmanandbruya.com

January 15, 2025

Daniel Babcock, Project Manager
Aspect Consulting
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Mr Babcock:

Included are the results from the testing of material submitted on December 31, 2024 from the Texaco - Strickland 180357, F&BI 412508 project. There are 12 pages included in this report.

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: Aspect Data
ASP0115R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on December 31, 2024 by Friedman & Bruya, Inc. from the Aspect Consulting Texaco - Strickland 180357, F&BI 412508 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting
412508 -01	AMB-1-241230
412508 -02	AMB-2-241230
412508 -03	VS-EFF-241231

Non-petroleum compounds identified in the air phase hydrocarbon (APH) ranges were subtracted per the MA-APH method.

Naphthalene was present in the TO15 method blank. The data were qualified accordingly.

All quality control requirements were acceptable.

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	AMB-1-241230	Client:	Aspect Consulting
Date Received:	12/31/24	Project:	Texaco - Strickland 180357
Date Collected:	12/30/24	Lab ID:	412508-01
Date Analyzed:	01/02/25	Data File:	010213.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	92	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	81
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	AMB-2-241230	Client:	Aspect Consulting
Date Received:	12/31/24	Project:	Texaco - Strickland 180357
Date Collected:	12/30/24	Lab ID:	412508-02
Date Analyzed:	01/02/25	Data File:	010214.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	95	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	86
APH EC9-12 aliphatics	34
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	VS-EFF-241231	Client:	Aspect Consulting
Date Received:	12/31/24	Project:	Texaco - Strickland 180357
Date Collected:	12/30/24	Lab ID:	412508-03
Date Analyzed:	01/02/25	Data File:	010215.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	91	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<75
APH EC9-12 aliphatics	31
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	Method Blank	Client:	Aspect Consulting
Date Received:	Not Applicable	Project:	Texaco - Strickland 180357
Date Collected:	01/02/25	Lab ID:	05-003 MB
Date Analyzed:	01/02/25	Data File:	010212.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	94	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<75
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	AMB-1-241230	Client:	Aspect Consulting
Date Received:	12/31/24	Project:	Texaco - Strickland 180357
Date Collected:	12/30/24	Lab ID:	412508-01
Date Analyzed:	01/02/25	Data File:	010213.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	92	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.42	0.13
Toluene	<7.5	<2
Ethylbenzene	<0.43	<0.1
m,p-Xylene	<0.87	<0.2
o-Xylene	<0.43	<0.1
Naphthalene	0.073 j fb	0.014 j fb

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	AMB-2-241230	Client:	Aspect Consulting
Date Received:	12/31/24	Project:	Texaco - Strickland 180357
Date Collected:	12/30/24	Lab ID:	412508-02
Date Analyzed:	01/02/25	Data File:	010214.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	95	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.60	0.19
Toluene	<7.5	<2
Ethylbenzene	<0.43	<0.1
m,p-Xylene	0.97	0.22
o-Xylene	<0.43	<0.1
Naphthalene	0.11 fb	0.020 fb

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VS-EFF-241231	Client:	Aspect Consulting
Date Received:	12/31/24	Project:	Texaco - Strickland 180357
Date Collected:	12/30/24	Lab ID:	412508-03
Date Analyzed:	01/02/25	Data File:	010215.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	90	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<0.32	<0.1
Toluene	<7.5	<2
Ethylbenzene	<0.43	<0.1
m,p-Xylene	<0.87	<0.2
o-Xylene	<0.43	<0.1
Naphthalene	0.079 j fb	0.015 j fb

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	Aspect Consulting
Date Received:	Not Applicable	Project:	Texaco - Strickland 180357
Date Collected:	Not Applicable	Lab ID:	05-003 MB
Date Analyzed:	01/02/25	Data File:	010212.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	94	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<0.32	<0.1
Toluene	<7.5	<2
Ethylbenzene	<0.43	<0.1
m,p-Xylene	<0.87	<0.2
o-Xylene	<0.43	<0.1
Naphthalene	0.073 j lc	0.014 j lc

Date of Report: 01/15/25
Date Received: 12/31/24
Project: Texaco - Strickland 180357, F&BI 412508

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD MA-APH

Laboratory Code: 412493-01 1/10 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
APH EC5-8 aliphatics	ug/m3	2,500	2,900	15
APH EC9-12 aliphatics	ug/m3	320	340	6
APH EC9-10 aromatics	ug/m3	<250	<250	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
APH EC5-8 aliphatics	ug/m3	67	82	70-130
APH EC9-12 aliphatics	ug/m3	67	98	70-130
APH EC9-10 aromatics	ug/m3	67	94	70-130

Date of Report: 01/15/25
Date Received: 12/31/24
Project: Texaco - Strickland 180357, F&BI 412508

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 412493-01 1/10 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 25)
Benzene	ug/m3	5.5	5.6	2
Toluene	ug/m3	<75	<75	nm
Ethylbenzene	ug/m3	<4.3	<4.3	nm
m,p-Xylene	ug/m3	<8.7	<8.7	nm
o-Xylene	ug/m3	<4.3	<4.3	nm
Naphthalene	ug/m3	<2.6	<2.6	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/m3	43	110	70-130
Toluene	ug/m3	51	115	70-130
Ethylbenzene	ug/m3	59	107	70-130
m,p-Xylene	ug/m3	120	108	70-130
o-Xylene	ug/m3	59	106	70-130
Naphthalene	ug/m3	71	108	70-130

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, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. 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 between the method detection limit and the lowest calibration point. 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.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

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.

412508

SAMPLE CHAIN OF CUSTODY 12/31/24

Report To Daniel Babcock
Company Aspect Consulting
Address 710 2nd Ave #550
City, State, ZIP Seattle, WA
Phone _____ Email _____

SAMPLERS (*signature*)

PROJECT NAME & ADDRESS: Texaco - Strickland
PO # 180357

NOTES:

INVOICE TO: AP

Page # 1 of 1

TURNAROUND TIME
☑ Standard
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
Default: Clean following final report delivery
Hold (Fee may apply): _____

SAMPLE INFORMATION										ANALYSIS REQUESTED						
Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	APH	Chlorinated VOCs	Helium		~~HOLD AMB-1-241230 per DC 12/31/24 ME~~ Analyze AMB-1-241230 per DB 01/03/25 ME Notes
AMB-1-241230	01	23233	06606	IA / SG	12/30/24	29.5	1024	∅	0940		X	X				can went to ∅.1 "Hg in ~23 hours
AMB-2-241230	02	21437	20490	IA / SG	12/30/24	730	1025	2	1034		↓	↓				
VS-EFF-241231	03	20542	01	IA / SG	12/31/24	29.5	0956	5	1039		↓	↓				
				IA / SG												
				IA / SG												
				IA / SG							Samples received at 13 °C					
				IA / SG												
				IA / SG												

Friedman & Bruya, Inc.
5500 4th Avenue South
Seattle, WA 98108
Ph. (206) 285-8282
Fax (206) 283-5044
FORMS\COC\COCTO-15.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Nikolai Carroll	Aspect	12/31/24	1121
Received by:		Anh Phan	FBI	12/31/24	11:21
Relinquished by:					
Received by:					

SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 412508 CLIENT Aspect INITIALS/ DATE: AP 12/31/24

If custody seals are present on cooler, are they intact? ☑ NA ☐ YES ☐ NO

Cooler/Sample temperature 13 °C
Thermometer ID: Fluke 96312917

Were samples received on ice/cold packs? ☐ YES ☑ NO

How did samples arrive?
☑ Over the Counter ☐ Picked up by F&BI ☐ FedEx/UPS/GSO

Is there a Chain-of-Custody* (COC)? ☑ YES ☐ NO Initials/ AP Date: 12/31/24
*or other representative documents, letters, and/or shipping memos

Number of days samples have been sitting prior to receipt at laboratory 0-1 days

Are the samples clearly identified? (explain "no" answer below) ☑ YES ☐ NO

Were all sample containers received intact (i.e. not broken, leaking etc.)? (explain "no" answer below) ☑ YES ☐ NO

Were appropriate sample containers used? ☑ YES ☐ NO ☐ Unknown

If custody seals are present on samples, are they intact? ☑ NA ☐ YES ☐ NO

Are samples requiring no headspace, headspace free? ☑ NA ☐ YES ☐ NO

Is the following information provided on the COC, and does it match the sample label?
(explain "no" answer below)

Sample ID's	☑ Yes ☐ No	☐ Not on COC/label
Date Sampled	☑ Yes ☐ No	☐ Not on COC/label
Time Sampled	☑ Yes ☐ No	☐ Not on COC/label
# of Containers	☑ Yes ☐ No	
Relinquished	☑ Yes ☐ No	
Requested analysis	☑ Yes ☐ On Hold	

Other comments (use a separate page if needed)

Air Samples: Were any additional canisters/tubes received? ☐ NA ☐ YES ☑ NO

Number of unused TO15 canisters** _____ **Number of unused TO17 tubes** _____
**Fill out Green manifolds billing sheet

APPENDIX D

Remedial Alternative Cost Estimates

Table D.1 - Cost Estimate - Excavation and Off-Site Disposal

Project No. AS180357, Texaco Strickland, Lynnwood, Washington

Site:	Texaco Strickland
Remedial Action Description:	Excavation and Off-Site Disposal
Cost Estimate Accuracy:	Feasibility Study Level (+50/-30 percent)

Key Assumptions and Quantities:

Quantities		
800	ft^2	total excavation area
12	ft	base depth
356	cy	PCS Excavation volume
1.7	ton/cy	soil density

CONSTRUCTION COSTS

Item	Quantity	Unit	Unit Cost	Total Cost	Notes
Excavation					
Mobilization/demobilization	1	LS	$ 50,000	$ 50,000	includes submittals and TESC
Traffic controls for right-of-way closure	1	LS	$ 20,000	$ 20,000	Mobilization of traffic controls for 3 week-long implmentation
Hardscape demolition, hauling, and disposal	29	ton	$ 50	$ 1,450	assumes approx 800 sq ft asphalt and concrete removal, 145lb per cu. ft.
Utility Locating/Protection/Temporary Disconnection	1	LS	$ 100,000	$ 100,000	public water, gas, telecom, power
Shoring	1,584	sf	$ 110	$ 174,240	soldier pile 4 sides to 12 feet
Excavate, direct load, haul and disposal of soil	604	ton	$ 150	$ 90,667	
Analytical fees for soil confirmation sampling	21	ea	$ 200	$ 4,240	sample every 10' of sidewall and every 100ft2 of bottom, 24hr TAT, GRO/BTEX
Import, place, and compact gravel borrow backfill	554	ton	$ 45	$ 24,933	
Import, place, and crushed base course surfacing	50	ton	$ 75	$ 3,778	
Replace asphalt roadway, hot mix	400	sf	$ 25	$ 10,000	
Replace concrete sidewalk and curb	400	sf	$ 35	$ 14,000	
Subtotal Excavation				*$ 493,308*	
Professional Services					
Engineering Design	1	LS	$ 50,000	$ 50,000	Includes contruction plan set and specifications for competative bidding
Cleanup Action Permitting	1	LS	$ 30,000	$ 30,000	City, SEPA, grading permit, utility company coordination
Bidding and Contractor Selection	1	LS	$ 15,000	$ 15,000	bid package preparation, site walk
Project management, construction oversight and monitoring	1	LS	$ 50,000	$ 50,000	4 weeks of constuction monitoring and oversight
Cleanup Action Report	1	LS	$ 30,000	$ 30,000	
Subtotal Professional Services				*$ 175,000*	
Tax	10.1%		$ 493,308	$ 49,824	
Contingency	20%		$ 718,132	$ 143,626	10% scope + 10% bid contigency
ESTIMATED CONSTRUCTION COST				$ 862,000	
TOTAL ESTIMATED COST:				**$ 860,000**	**rounded to the nearest $10,000**

Table D.2. Cost Estimate - Engineering and Institutional Controls

Project No. AS180357, Texaco Strickland, Lynnwood, Washington

Site:	Texaco Strickland
Remedial Action Description:	Engineering and Institutional Controls
Cost Estimate Accuracy:	Feasibility Study Level (+50/-30 percent)
Key Assumptions and Quantities:	30 year duration
	Future costs for compliance monitoring adjusted to net present value (NPV) using a discount rate of 2%

MONITORING COSTS

Item	Quantity	Unit	Unit Cost	Total Cost	Notes
Professional Services					
Environmental Covenants	1	ls	$ 25,000	$ 25,000	For Property, and Public Right-of-Way
Subtotal				*$ 25,000*	
Compliance Monitoring					
Annual Cap Inspections	30	yr	$ 4,000	$ 120,000	
5-Year Review	6	ea	$ 8,000	$ 48,000	Based on current equipment rates
Subtotal				*$ 168,000*	
Subtotal (NPV)				*$ 120,000*	
Contingency	10%		$ 145,000	$ 14,500	10% scope contingency
ESTIMATED MONITORING COST (NPV)				$ 159,500	
TOTAL ESTIMATED COST (NPV)				**$ 160,000**	**rounded to nearest $10,000**

APPENDIX E

Data Validation Reports

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Aspect Consulting LLC
701 Second Ave., Suite 550
Seattle, WA 98104
ATTN: Jason Yabandeh
jyabandeh@aspectconsulting.com

November 29, 2023

SUBJECT: Aloha Café - Data Validation

Dear Mr. Yabandeh,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on October 23, 2023. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #57781:

SDG #	Fraction
308491 309537	Volatiles, Total Petroleum Hydrocarbons as Gasoline, Total Petroleum Hydrocarbons as Extractables,

The data validation was performed under Stage 2A guidelines. The analysis was validated using the following documents, as applicable to each method:

- Appendix E, CEMC Review Draft, Sampling and Analysis/Quality Assurance Project Plan (February 2019)
- USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020)
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Stella Cuenco
scuenco@lab-data.com
Project Manager/Senior Chemist

Stage 2A EDD

LDC# 57781 (Aspect Consulting, LLC - Seattle, WA / Aloha Cafe)

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (TO-15)		VOA (8260C)		Aliphatics (MA-APH)		TPH-G (NWTPH-Gx)		TPH-E (NWTPH-Dx)																							
Matrix:	Air/Water/Soil			A	S	W	S	A	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	308491	10/23/23	11/13/23	-	-	9	0	-	-	9	0	9	0																						
B	309537	10/23/23	11/13/23	14	0	-	-	14	0	-	-	-	-																						
Total	TR/SC			14	0	9	0	14	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55

Shaded cells indicate Stage 4 validation (all other cells are Stage 2A validation). These sample counts do not include MS, MSD, or DUP's.

V:\LOGIN\Aspect Consulting\Aloha Cafe\57781ST.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Aloha Café

LDC Report Date: November 15, 2023

Parameters: Volatiles

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 308491

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
MW-18R-083023	308491-01	Water	08/30/23
MW-25R-083023	308491-02	Water	08/30/23
MW-26-083023	308491-03	Water	08/30/23
MW-29-083023	308491-04	Water	08/30/23
MW-19-083023	308491-05	Water	08/30/23
MW-30-083023	308491-06	Water	08/30/23
MW-31-083023	308491-07	Water	08/30/23
MW-16-083123	308491-08	Water	08/31/23
MW-32-083123	308491-09	Water	08/31/23
4W-18R-083023MS	308491-01MS	Water	08/30/23

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Appendix E, CEMC Review Draft, Sampling and Analysis/Quality Assurance Project Plan (February 2019) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) SW 846 Method 8260D

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

Instrument performance check data were not reviewed for Stage 2A validation.

III. Initial Calibration and Initial Calibration Verification

Initial calibration data were not reviewed for Stage 2A validation.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Stage 2A validation.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike

Matrix spike (MS) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits.

IX. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

Internal standard data were not reviewed for Stage 2A validation.

XII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

XIII. Target Analyte Identification

Raw data were not reviewed for Stage 2A validation.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Aloha Café
Volatiles - Data Qualification Summary - SDG 308491

No Sample Data Qualified in this SDG

Aloha Café
Volatiles - Laboratory Blank Data Qualification Summary - SDG 308491

No Sample Data Qualified in this SDG

Aloha Café
Volatiles - Field Blank Data Qualification Summary - SDG 308491

No Sample Data Qualified in this SDG

LDC #: 57781A1a **VALIDATION COMPLETENESS WORKSHEET** Date: 11/14/23
SDG #: 308491 Stage 2A Page: 1 of 1
Laboratory: Friedman & Bruya, Inc., Seattle, WA Reviewer: JVG
2nd Reviewer: A

METHOD: GC/MS Volatiles (EPA SW-846 Method 8260D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	N	
III.	Initial calibration/ICV	N/N	
IV.	Continuing calibration	N	
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	A	
VIII.	Matrix spike~~/Matrix spike duplicates~~	A	
IX.	Laboratory control samples	A	LCS/D
X.	Field duplicates	N	
XI.	Internal standards	N	
XII.	Target analyte quantitation	N	
XIII.	Target analyte identification	N	
XIV	Overall assessment of data	A	

Note: A = Acceptable ND = No compounds detected D = Duplicate SB=Source blank
N = Not provided/applicable R = Rinsate TB = Trip blank OTHER:
SW = See worksheet FB = Field blank EB = Equipment blank

	Client ID	Lab ID	Matrix	Date
1	MW-18R-083023	308491-01	Water	08/30/23
2	MW-25R-083023	308491-02	Water	08/30/23
3	MW-26-083023	308491-03	Water	08/30/23
4	MW-29-083023	308491-04	Water	08/30/23
5	MW-19-083023	308491-05	Water	08/30/23
6	MW-30-083023	308491-06	Water	08/30/23
7	MW-31-083023	308491-07	Water	08/30/23
8	MW-16-083123	308491-08	Water	08/31/23
9	MW-32-083123	308491-09	Water	08/31/23
10	4W-18R-083023MS	308491-01MS	Water	08/30/23
11				

Notes:

1	03-1982 MPJ						

BTEX + Naphthalene

LDC Report# 57781A7

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Aloha Café

LDC Report Date: November 15, 2023

Parameters: Total Petroleum Hydrocarbons as Gasoline

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 308491

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
MW-18R-083023	308491-01	Water	08/30/23
MW-25R-083023	308491-02	Water	08/30/23
MW-26-083023	308491-03	Water	08/30/23
MW-29-083023	308491-04	Water	08/30/23
MW-19-083023	308491-05	Water	08/30/23
MW-30-083023	308491-06	Water	08/30/23
MW-31-083023	308491-07	Water	08/30/23
MW-16-083123	308491-08	Water	08/31/23
MW-32-083123	308491-09	Water	08/31/23
MW-18R-083023DUP	308491-01DUP	Water	08/30/23

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Appendix E, CEMC Review Draft, Sampling and Analysis/Quality Assurance Project Plan (February 2019) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Total Petroleum Hydrocarbons (TPH) as Gasoline by NWTPH-Gx

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

Initial calibration data were not reviewed for Stage 2A validation.

III. Continuing Calibration

Continuing calibration data were not reviewed for Stage 2A validation.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

No field blanks were identified in this SDG.

VI. Surrogates

Surrogates were added to all samples as required by the method.

VII. Matrix Spike/Matrix Spike Duplicates/Duplicate Sample Analysis

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

XI. Target Analyte Identification

Raw data were not reviewed for Stage 2A validation.

XII. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Aloha Café
Total Petroleum Hydrocarbons as Gasoline - Data Qualification Summary - SDG 308491

No Sample Data Qualified in this SDG

Aloha Café
Total Petroleum Hydrocarbons as Gasoline - Laboratory Blank Data Qualification Summary - SDG 308491

No Sample Data Qualified in this SDG

Aloha Café
Total Petroleum Hydrocarbons as Gasoline - Field Blank Data Qualification Summary - SDG 308491

No Sample Data Qualified in this SDG

LDC #: 57781A7 **VALIDATION COMPLETENESS WORKSHEET** Date: 11/14/23
SDG #: 308491 Stage 2A Page: 1 of 1
Laboratory: Friedman & Bruya, Inc., Seattle, WA Reviewer: SW
2nd Reviewer: A

METHOD: GC TPH as Gasoline (NWTPH-Gx)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II.	Initial calibration/ICV	N/N	
III.	Continuing calibration	N	
IV.	Laboratory Blanks	A	
V.	Field blanks	N	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates /LD	N/A	
VIII.	Laboratory control samples	A	LCS
IX.	Field duplicates	N	
X.	Target analyte quantitation	N	
XI.	Target analyte identification	N	
XII.	Overall assessment of data	A	

Note: A = Acceptable ND = No compounds detected D = Duplicate SB=Source blank
N = Not provided/applicable R = Rinsate TB = Trip blank OTHER:
SW = See worksheet FB = Field blank EB = Equipment blank

	Client ID	Lab ID	Matrix	Date
1	MW-18R-083023	308491-01	Water	08/30/23
2	MW-25R-083023	308491-02	Water	08/30/23
3	MW-26-083023	308491-03	Water	08/30/23
4	MW-29-083023	308491-04	Water	08/30/23
5	MW-19-083023	308491-05	Water	08/30/23
6	MW-30-083023	308491-06	Water	08/30/23
7	MW-31-083023	308491-07	Water	08/30/23
8	MW-16-083123	308491-08	Water	08/31/23
9	MW-32-083123	308491-09	Water	08/31/23
10	MW-18R-083023DUP	308491-01DUP	Water	08/30/23
11				
12				
13				

Notes:

-	03-2071 MB						

LDC Report# 57781A8

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Aloha Café

LDC Report Date: November 15, 2023

Parameters: Total Petroleum Hydrocarbons as Extractables

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 308491

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
MW-18R-083023	308491-01	Water	08/30/23
MW-25R-083023	308491-02	Water	08/30/23
MW-26-083023	308491-03	Water	08/30/23
MW-29-083023	308491-04	Water	08/30/23
MW-19-083023	308491-05	Water	08/30/23
MW-30-083023	308491-06	Water	08/30/23
MW-31-083023	308491-07	Water	08/30/23
MW-16-083123	308491-08	Water	08/31/23
MW-32-083123	308491-09	Water	08/31/23

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Appendix E, CEMC Review Draft, Sampling and Analysis/Quality Assurance Project Plan (February 2019) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Total Petroleum Hydrocarbons (TPH) as Extractables by NWTPH-Dx

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

Initial calibration data were not reviewed for Stage 2A validation.

III. Continuing Calibration

Continuing calibration data were not reviewed for Stage 2A validation.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

No field blanks were identified in this SDG.

VI. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

XI. Target Analyte Identification

Raw data were not reviewed for Stage 2A validation.

XII. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

LDC #: 57781A8 **VALIDATION COMPLETENESS WORKSHEET** Date: 11/14/23
SDG #: 308491 Stage 2A Page: 1 of 1
Laboratory: Friedman & Bruya, Inc., Seattle, WA Reviewer: SV
2nd Reviewer: [illegible]

METHOD: GC TPH as Extractables (NWTPH-Dx)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II.	Initial calibration/ICV	N/N	
III.	Continuing calibration	N	
IV.	Laboratory Blanks	A	
V.	Field blanks	N	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	A	LCS/D
IX.	Field duplicates	N	
X.	Target analyte quantitation	N	
XI.	Target analyte identification	N	
XII	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	MW-18R-083023	308491-01	Water	08/30/23
2	MW-25R-083023	308491-02	Water	08/30/23
3	MW-26-083023	308491-03	Water	08/30/23
4	MW-29-083023	308491-04	Water	08/30/23
5	MW-19-083023	308491-05	Water	08/30/23
6	MW-30-083023	308491-06	Water	08/30/23
7	MW-31-083023	308491-07	Water	08/30/23
8	MW-16-083123	308491-08	Water	08/31/23
9	MW-32-083123	308491-09	Water	08/31/23
10				
11				
12				
13				

Notes:

	03-2065 MB2						

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Aloha Café

LDC Report Date: November 15, 2023

Parameters: Volatiles

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 309537

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
IA-125-1-230928	309537-01	Air	09/28/23
IA-125-2-230928	309537-02	Air	09/28/23
IA-127-1-230928	309537-03	Air	09/28/23
IA-127-2-230928	309537-04	Air	09/28/23
IA-129-1-230928	309537-05	Air	09/28/23
IA-129-2-230928	309537-06	Air	09/28/23
IA-131-1-230928	309537-07	Air	09/28/23
IA-FD-230928	309537-08	Air	09/28/23
AMB-2-230928	309537-10	Air	09/28/23
VS-EFF-230928	309537-11	Air	09/28/23
CS-125-230928	309537-12	Air	09/28/23
CS-127-230928	309537-13	Air	09/28/23
CS-129-230928	309537-14	Air	09/28/23
CS-131-230928	309537-15	Air	09/28/23
VS-EFF-230928DUP	309537-11DUP	Air	09/28/23

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Appendix E, CEMC Review Draft, Sampling and Analysis/Quality Assurance Project Plan (February 2019) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Method TO-15

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

The canisters were properly pressurized and handled.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

Instrument performance check data were not reviewed for Stage 2A validation.

III. Initial Calibration and Initial Calibration Verification

Initial calibration data were not reviewed for Stage 2A validation.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Stage 2A validation.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Duplicate Sample Analysis

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits.

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

Samples IA-131-1-230928 and IA-FD-230928 were identified as field duplicates. No results were detected in any of the samples with the following exceptions:

Analyte	Concentration (ug/m³)		RPD (≤35)	Difference (Limits)
	IA-131-1-230928	IA-FD-230928		
Benzene	0.59	0.66	-	0.07 (≤0.64)
Naphthalene	0.19	0.22	-	0.03 (≤0.104)

XI. Internal Standards

Internal standards data were not reviewed for Stage 2A validation.

XII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

XIII. Target Analyte Identification

Raw data were not reviewed for Stage 2A validation.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Aloha Café
Volatiles - Data Qualification Summary - SDG 309537

No Sample Data Qualified in this SDG

Aloha Café
Volatiles - Laboratory Blank Data Qualification Summary - SDG 309537

No Sample Data Qualified in this SDG

Aloha Café
Volatiles - Field Blank Data Qualification Summary - SDG 309537

No Sample Data Qualified in this SDG

LDC #: 57781B48a **VALIDATION COMPLETENESS WORKSHEET** Date: 11/14/23
SDG #: 309537 Stage 2A Page: 1 of 1
Laboratory: Friedman & Bruya, Inc., Seattle, WA Reviewer: JVG
2nd Reviewer: A

METHOD: GC/MS Volatiles (EPA Method TO-15)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II.	GC/MS Instrument performance check	N	
III.	Initial calibration/ICV	N/N	
IV.	Continuing calibration	N	
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	A	
VIII.	Duplicate sample analysis	A	
IX.	Laboratory control samples	A	LCS
X.	Field duplicates	SW	b = 7/8
XI.	Internal standards	N	
XII.	Target analyte quantitation	N	
XIII.	Target analyte identification	N	
XIV.	~~Leak Check Compounds~~	-	
XV.	Overall assessment of data	A	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank
SB=Source blank
OTHER:

	Client ID	Lab ID	Matrix	Date
1	IA-125-1-230928	309537-01	Air	09/28/23
2	IA-125-2-230928	309537-02	Air	09/28/23
3	IA-127-1-230928	309537-03	Air	09/28/23
4	IA-127-2-230928	309537-04	Air	09/28/23
5	IA-129-1-230928	309537-05	Air	09/28/23
6	IA-129-2-230928	309537-06	Air	09/28/23
7	IA-131-1-230928 b	309537-07	Air	09/28/23
8	IA-FD-230928 b	309537-08	Air	09/28/23
9	AMB-2-230928	309537-10	Air	09/28/23
10	VS-EFF-230928	309537-11	Air	09/28/23
11	CS-125-230928	309537-12	Air	09/28/23
12	CS-127-230928	309537-13	Air	09/28/23
13	CS-129-230928	309537-14	Air	09/28/23
14	CS-131-230928	309537-15	Air	09/28/23

LDC #: 57781B48a **VALIDATION COMPLETENESS WORKSHEET** Date:_____
SDG #: 309537 Stage 2A Page:___of___
Laboratory: Friedman & Bruya, Inc., Seattle, WA Reviewer:_____
2nd Reviewer:_____

METHOD: GC/MS Volatiles (EPA Method TO-15)

	Client ID	Lab ID	Matrix	Date
15	VS-EFF-230928DUP	309537-11DUP	Air	09/28/23
16				
17				
18				

Notes:

	03-2298 MB						

BTEX + Naphthalene

AMB-1-230928 - not analyzed, vacuum -30" Hg

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	AA. Tetrachloroethene	AAA. 1,3,5-Trimethylbenzene	AAAA. Ethyl tert-butyl ether	A1. 1,3-Butadiene	A2. 1,2,4,5-Tetramethylbenzene
B. Bromomethane	BB. 1,1,2,2-Tetrachloroethane	BBB. 4-Chlorotoluene	BBBB. tert-Amyl methyl ether	B1. Hexane	B2. n-Octane
C. Vinyl choride	CC. Toluene	CCC. tert-Butylbenzene	CCCC. 1-Chlorohexane	C1. Heptane	C2. n-Propyl alcohol
D. Chloroethane	DD. Chlorobenzene	DDD. 1,2,4-Trimethylbenzene	DDDD. Isopropyl alcohol	D1. Propylene	D2. n-Pentane
E. Methylene chloride	EE. Ethylbenzene	EEE. sec-Butylbenzene	EEEE. Acetonitrile	E1. Freon 11	E2. n-Decane
F. Acetone	FF. Styrene	FFF. 1,3-Dichlorobenzene	FFFF. Acrolein	F1. Freon 12	F2. Chlorodifluoromethane
G. Carbon disulfide	GG. Xylenes, total	GGG. p-Isopropyltoluene	GGGG. Acrylonitrile	G1. Freon 113	G2. cis-decahydronaphthalene
H. 1,1-Dichloroethene	HH. Vinyl acetate	HHH. 1,4-Dichlorobenzene	HHHH. 1,4-Dioxane	H1. Freon 114	H2. trans-decahydronaphthalene
I. 1,1-Dichloroethane	II. 2-Chloroethylvinyl ether	III. n-Butylbenzene	IIII. Isobutyl alcohol	I1. 2-Nitropropane	I2. n–Nonane
J. 1,2-Dichloroethene, total	JJ. Dichlorodifluoromethane	JJJ. 1,2-Dichlorobenzene	JJJJ. Methacrylonitrile	J1. Dimethyl disulfide	J2. n-Undecane
K. Chloroform	KK. Trichlorofluoromethane	KKK. 1,2,4-Trichlorobenzene	KKKK. Propionitrile	K1. 2,3-Dimethyl pentane	K2. Chloroprene
L. 1,2-Dichloroethane	LL. Methyl-tert-butyl ether	LLL. Hexachlorobutadiene	LLLL. Ethyl ether	L1. 2,4-Dimethyl pentane	L2. n-Butanol
M. 2-Butanone	MM. 1,2-Dibromo-3-chloropropane	MMM. Naphthalene	MMMM. Benzyl chloride	M1. 3,3-Dimethyl pentane	M2. n-Butyl acetate
N. 1,1,1-Trichloroethane	NN. Methyl ethyl ketone	NNN. 1,2,3-Trichlorobenzene	NNNN. Iodomethane	N1. 2-Methylpentane	N2. Nitrobenzene
O. Carbon tetrachloride	OO. 2,2-Dichloropropane	OOO. 1,3,5-Trichlorobenzene	OOOO. 1,1-Difluoroethane	O1. 3-Methylpentane	O2.
P. Bromodichloromethane	PP. Bromochloromethane	PPP. trans-1,2-Dichloroethene	PPPP. Tetrahydrofuran	P1. 3-Ethylpentane	P2.
Q. 1,2-Dichloropropane	QQ. 1,1-Dichloropropene	QQQ. cis-1,2-Dichloroethene	QQQQ. Methyl acetate	Q1. 2,2-Dimethylpentane	Q2.
R. cis-1,3-Dichloropropene	RR. Dibromomethane	RRR. m,p-Xylenes	RRRR. Ethyl acetate	R1. 2,2,3- Trimethylbutane	R2.
S. Trichloroethene	SS. 1,3-Dichloropropane	SSS. o-Xylene	SSSS. Cyclohexane	S1. 2,2,4-Trimethylpentane	S2.
T. Dibromochloromethane	TT. 1,2-Dibromoethane	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	TTTT. Methylcyclohexane	T1. 2-Methylhexane	T2.
U. 1,1,2-Trichloroethane	UU. 1,1,1,2-Tetrachloroethane	UUU. 1,2-Dichlorotetrafluoroethane	UUUU. Allyl chloride	U1. Nonanal	U2.
V. Benzene	VV. Isopropylbenzene	VVV. 4-Ethyltoluene	VVVV. Methyl methacrylate	V1. 2-Methylnaphthalene	V2.
W. trans-1,3-Dichloropropene	WW. Bromobenzene	WWW. Ethanol	WWWW. Ethyl methacrylate	W1. Methanol	W2.
X. Bromoform	XX. 1,2,3-Trichloropropane	XXX. Di-isopropyl ether	XXXX. cis-1,4-Dichloro-2-butene	X1. 1,2,3-Trimethylbenzene	X2.
Y. 4-Methyl-2-pentanone	YY. n-Propylbenzene	YYY. tert-Butanol	YYYY. trans-1,4-Dichloro-2-butene	Y1. 2-Propanol	Y2.
Z. 2-Hexanone	ZZ. 2-Chlorotoluene	ZZZ. tert-Butyl alcohol	ZZZZ. Pentachloroethane	Z1. p-Diethylbenzene	Z2.

LDC#: 57781B48a

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: JVG

METHOD: GCMS VOA (EPA Method TO15)

Compound	Concentration (ug/m3)		RPD (≤35%)	Difference (ug/m3)	Limits (≤2xLOQ)	Qualifications (Parent Only)
	7	8				
V	0.59	0.66		0.07	≤0.64	
MMM	0.19	0.22		0.03	≤0.104	

V:\Josephine\FIELD DUPLICATES\57781B48a aspect consulting aloha cafe diff.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Aloha Café

LDC Report Date: November 15, 2023

Parameters: Volatiles

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 309537

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
IA-125-1-230928	309537-01	Air	09/28/23
IA-125-2-230928	309537-02	Air	09/28/23
IA-127-1-230928	309537-03	Air	09/28/23
IA-127-2-230928	309537-04	Air	09/28/23
IA-129-1-230928	309537-05	Air	09/28/23
IA-129-2-230928	309537-06	Air	09/28/23
IA-131-1-230928	309537-07	Air	09/28/23
IA-FD-230928	309537-08	Air	09/28/23
AMB-2-230928	309537-10	Air	09/28/23
VS-EFF-230928	309537-11	Air	09/28/23
CS-125-230928	309537-12	Air	09/28/23
CS-127-230928	309537-13	Air	09/28/23
CS-129-230928	309537-14	Air	09/28/23
CS-131-230928	309537-15	Air	09/28/23
VS-EFF-230928DUP	309537-11DUP	Air	09/28/23

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Appendix E, CEMC Review Draft, Sampling and Analysis/Quality Assurance Project Plan (February 2019) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by MA-APH

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

The canisters were properly pressurized and handled.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

Instrument performance check data were not reviewed for Stage 2A validation.

III. Initial Calibration and Initial Calibration Verification

Initial calibration data were not reviewed for Stage 2A validation.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Stage 2A validation.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Duplicate Sample Analysis

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits.

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

Samples IA-131-1-230928 and IA-FD-230928 were identified as field duplicates. No results were detected in any of the samples with the following exceptions:

Analyte	Concentration (ug/m³)		RPD (≤35)	Difference (Limits)
	IA-131-1-230928	IA-FD-230928		
APH EC5-8 aliphatics	86	91	-	5 (≤150)
APH EC9-12 aliphatics	29	34	-	5 (≤50)

XI. Internal Standards

Internal standards data were not reviewed for Stage 2A validation.

XII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

XIII. Target Analyte Identification

Raw data were not reviewed for Stage 2A validation.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Aloha Café
Volatiles - Data Qualification Summary - SDG 309537

No Sample Data Qualified in this SDG

Aloha Café
Volatiles - Laboratory Blank Data Qualification Summary - SDG 309537

No Sample Data Qualified in this SDG

Aloha Café
Volatiles - Field Blank Data Qualification Summary - SDG 309537

No Sample Data Qualified in this SDG

LDC #: 57781B48b **VALIDATION COMPLETENESS WORKSHEET** Date: 11/14/23
SDG #: 309537 Stage 2A Page: 1 of 2
Laboratory: Friedman & Bruya, Inc., Seattle, WA Reviewer: VV
2nd Reviewer:

METHOD: GC/MS Volatiles (MA-APH)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II.	GC/MS Instrument performance check	N	
III.	Initial calibration/ICV	N/N	
IV.	Continuing calibration	N	
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	A	
VIII.	Duplicate sample analysis	A	
IX.	Laboratory control samples	A	LCS
X.	Field duplicates	SW	D = 7/8
XI.	Internal standards	N	
XII.	Target analyte quantitation	N	
XIII.	Target analyte identification	N	
XIV.	~~Leak Check Compounds~~	-	
XV.	Overall assessment of data	A	

Note: A = Acceptable ND = No compounds detected D = Duplicate SB=Source blank
N = Not provided/applicable R = Rinsate TB = Trip blank OTHER:
SW = See worksheet FB = Field blank EB = Equipment blank

	Client ID	Lab ID	Matrix	Date
1	IA-125-1-230928	309537-01	Air	09/28/23
2	IA-125-2-230928	309537-02	Air	09/28/23
3	IA-127-1-230928	309537-03	Air	09/28/23
4	IA-127-2-230928	309537-04	Air	09/28/23
5	IA-129-1-230928	309537-05	Air	09/28/23
6	IA-129-2-230928	309537-06	Air	09/28/23
7	IA-131-1-230928	309537-07	Air	09/28/23
8	IA-FD-230928	309537-08	Air	09/28/23
9	AMB-2-230928	309537-10	Air	09/28/23
10	VS-EFF-230928	309537-11	Air	09/28/23
11	CS-125-230928	309537-12	Air	09/28/23
12	CS-127-230928	309537-13	Air	09/28/23
13	CS-129-230928	309537-14	Air	09/28/23
14	CS-131-230928	309537-15	Air	09/28/23

LDC #: 57781B48b **VALIDATION COMPLETENESS WORKSHEET** Date: 1/4/23
SDG #: 309537 Stage 2A Page: 2 of 2
Laboratory: Friedman & Bruya, Inc., Seattle, WA Reviewer: JVG
2nd Reviewer: A

METHOD: GC/MS Volatiles (MA-APH)

	Client ID	Lab ID	Matrix	Date
15	VS-EFF-230928DUP	309537-11DUP	Air	09/28/23
16				
17				
18				

Notes:

	03-2298 MB						

AMB-1-230928 - not analyzed, vacuum -30"Hg

LDC#: 57781B48b

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: JVG

METHOD: GCMS Volatiles (MA-APH)

Compound	Concentration (ug/m3)		RPD (≤35%)	Difference (ug/m3)	Limits (≤2xLOQ)	Qualifications (Parent Only)
	7	8				
APH EC5-8 aliphatics	86	91		5	≤150	
APH EC9-12 aliphatics	29	34		5	≤50	

V:\Josephine\FIELD DUPLICATES\57781B48b aspect consulting aloha cafe diff.wpd

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Aspect Consulting LLC
701 Second Ave., Suite 550
Seattle, WA 98104
ATTN: Jason Yabandeh
jyabandeh@aspectconsulting.com

December 22, 2023

SUBJECT: Aloha Café - Data Validation

Dear Mr. Yabandeh,

Enclosed are the final validation reports for the fractions listed below. This SDG was received on November 14, 2023. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #57892:

SDG #	Fraction
311054	Volatiles, Total Petroleum Hydrocarbons as Gasoline, Total Petroleum Hydrocarbons as Extractables

The data validation was performed under Stage 2A guidelines. The analysis was validated using the following documents, as applicable to each method:

- Appendix E, CEMC Review Draft, Sampling and Analysis/Quality Assurance Project Plan (February 2019)
- USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020)
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Stella Cuenco
scuenco@lab-data.com
Project Manager/Senior Chemist

Stage 2A EDD

LDC# 57892 (Aspect Consulting, LLC - Seattle, WA / Aloha Cafe)

LDC	SDG#	DATE REC'D	(3) DATE DUE	(6) VOA (8260D)		TPH-G (NWTPH -Gx)		TPH-E (NWTP H-Dx)																													
Matrix:	Water/Soil			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	311054	11/14/23	12/07/23	1	0	1	0	1	0																												
Total	TR/SC			1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3

Shaded cells indicate Stage 4 validation (all other cells are Stage 2A validation). These sample counts do not include MS, MSD, or DUP's.

LDC Report# 57892A1a

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Aloha Café

LDC Report Date: December 13, 2023

Parameters: Volatiles

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 311054

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
MW-17-110223	311054-01	Water	11/02/23

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Appendix E, CEMC Review Draft, Sampling and Analysis/Quality Assurance Project Plan (February 2019) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) SW 846 Method 8260D

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

Instrument performance check data were not reviewed for Stage 2A validation.

III. Initial Calibration and Initial Calibration Verification

Initial calibration data were not reviewed for Stage 2A validation.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Stage 2A validation.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

IX. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

Internal standard data were not reviewed for Stage 2A validation.

XII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

XIII. Target Analyte Identification

Raw data were not reviewed for Stage 2A validation.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Aloha Café
Volatiles - Data Qualification Summary - SDG 311054

No Sample Data Qualified in this SDG

Aloha Café
Volatiles - Laboratory Blank Data Qualification Summary - SDG 311054

No Sample Data Qualified in this SDG

Aloha Café
Volatiles - Field Blank Data Qualification Summary - SDG 311054

No Sample Data Qualified in this SDG

LDC #: 57892A1a **VALIDATION COMPLETENESS WORKSHEET** Date: 12/12/23
SDG #: 311054 Stage 2A Page: 1 of 1
Laboratory: Friedman & Bruya, Inc., Seattle, WA Reviewer: DG
2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW-846 Method 8260D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A, A	
II.	GC/MS Instrument performance check	N	
III.	Initial calibration/ICV	N/N	
IV.	Continuing calibration	N	
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	N	
IX.	Laboratory control samples	A	LCS/D
X.	Field duplicates	N	
XI.	Internal standards	N	
XII.	Target analyte quantitation	N	
XIII.	Target analyte identification	N	
XIV.	Overall assessment of data	A	

Note: A = Acceptable ND = No compounds detected D = Duplicate SB=Source blank
N = Not provided/applicable R = Rinsate TB = Trip blank OTHER:
SW = See worksheet FB = Field blank EB = Equipment blank

	Client ID	Lab ID	Matrix	Date
1	MW-17-110223	311054-01	Water	11/02/23
2				
3				
4				
5				
6				
7				
8				
9				
10				

Notes:

	03-2623 MB						

BTEX + Naphthalene

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Aloha Café

LDC Report Date: December 13, 2023

Parameters: Total Petroleum Hydrocarbons as Gasoline

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 311054

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
MW-17-110223	311054-01	Water	11/02/23

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Appendix E, CEMC Review Draft, Sampling and Analysis/Quality Assurance Project Plan (February 2019) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Total Petroleum Hydrocarbons (TPH) as Gasoline by NWTPH-Gx

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

Initial calibration data were not reviewed for Stage 2A validation.

III. Continuing Calibration

Continuing calibration data were not reviewed for Stage 2A validation.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

No field blanks were identified in this SDG.

VI. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

XI. Target Analyte Identification

Raw data were not reviewed for Stage 2A validation.

XII. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Aloha Café
Total Petroleum Hydrocarbons as Gasoline - Data Qualification Summary - SDG 311054

No Sample Data Qualified in this SDG

Aloha Café
Total Petroleum Hydrocarbons as Gasoline - Laboratory Blank Data Qualification Summary - SDG 311054

No Sample Data Qualified in this SDG

Aloha Café
Total Petroleum Hydrocarbons as Gasoline - Field Blank Data Qualification Summary - SDG 311054

No Sample Data Qualified in this SDG

LDC #: 57892A7 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/12/23
SDG #: 311054 Stage 2A Page: 1 of 1
Laboratory: Friedman & Bruya, Inc., Seattle, WA Reviewer: JVG
2nd Reviewer: SE

METHOD: GC TPH as Gasoline (NWTPH-Gx)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	Initial calibration/ICV	N/N	
III.	Continuing calibration	N	
IV.	Laboratory Blanks	A	
V.	Field blanks	N	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	A	LCS
IX.	Field duplicates	N	
X.	Target analyte quantitation	N	
XI.	Target analyte identification	N	
XII	Overall assessment of data	A	

Note: A = Acceptable ND = No compounds detected D = Duplicate SB=Source blank
N = Not provided/applicable R = Rinsate TB = Trip blank OTHER:
SW = See worksheet FB = Field blank EB = Equipment blank

	Client ID	Lab ID	Matrix	Date
1	MW-17-110223	311054-01	Water	11/02/23
2				
3				
4				
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6				
7				
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11				
12				
13				

Notes:

	03-2489 MB						

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Aloha Café

LDC Report Date: December 13, 2023

Parameters: Total Petroleum Hydrocarbons as Extractables

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 311054

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
MW-17-110223	311054-01	Water	11/02/23

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Appendix E, CEMC Review Draft, Sampling and Analysis/Quality Assurance Project Plan (February 2019) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Total Petroleum Hydrocarbons (TPH) as Extractables by NWTPH-Dx

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Initial Calibration and Initial Calibration Verification

Initial calibration data were not reviewed for Stage 2A validation.

III. Continuing Calibration

Continuing calibration data were not reviewed for Stage 2A validation.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

V. Field Blanks

No field blanks were identified in this SDG.

VI. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

XI. Target Analyte Identification

Raw data were not reviewed for Stage 2A validation.

XII. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Aloha Café
Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG 311054

No Sample Data Qualified in this SDG

Aloha Café
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG 311054

No Sample Data Qualified in this SDG

Aloha Café
Total Petroleum Hydrocarbons as Extractables - Field Blank Data Qualification Summary - SDG 311054

No Sample Data Qualified in this SDG

LDC #: 57892A8 **VALIDATION COMPLETENESS WORKSHEET** Date: 12/12/23
SDG #: 311054 Stage 2A Page: 1 of 1
Laboratory: Friedman & Bruya, Inc., Seattle, WA Reviewer: MV
2nd Reviewer: AC

METHOD: GC TPH as Extractables (NWTPH-Dx)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II.	Initial calibration/ICV	N/N	
III.	Continuing calibration	N	
IV.	Laboratory Blanks	A	
V.	Field blanks	N	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	A	LCS/D
IX.	Field duplicates	N	
X.	Target analyte quantitation	N	
XI.	Target analyte identification	N	
XII.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	MW-17-110223	311054-01	Water	11/02/23
2				
3				
4				
5				
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7				
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9				
10				
11				
12				
13				

Notes:

-	03-2610 MB2						

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Aspect Consulting LLC
701 Second Ave., Suite 550
Seattle, WA 98104
ATTN: Daniel Babcock
Daniel.Babcock@aspectconsulting.com

June 3, 2025

SUBJECT: Texaco Strickland/Aloha Café - Data Validation

Dear Mr. Babcock,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on April 29, 2025. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #60968:

SDG #	Fraction
402437 405479 409456 412508	Volatiles, Gasoline Range Organics, Diesel Range Organics

The data validation was performed under Stage 2A guidelines. The analysis was validated using the following documents, as applicable to each method:

- Appendix E, CEMC Review Draft, Sampling and Analysis/Quality Assurance Project Plan (February 2019)
- USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020)
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Stella Cuenco
scuenco@lab-data.com
Project Manager/Senior Chemist

LDC #60968 (Aspect Consulting - Seattle, WA / Texaco Strickland/Aloha Cafe)

LDC	SDG#	Received Date	(21) Due Date	Validation Level	(6) VOCs (TO-15)	(6) VOCs (8260D)	VOCs (MA-APH)	TPH-G (NWTPH-Gx)	TPH-E (NWTPH-Dx)
Matrix Type:					Air	Water	Air	Water	Water
A	402437	4/29/25	5/20/25	Stage 2A		12		12	11
B	405479	4/29/25	5/20/25	Stage 2A		12		11	11
C	409456	4/29/25	5/20/25	Stage 2A	4		4		
D	412508	4/29/25	5/20/25	Stage 2A	3		3		
Total			PM: SC		**7**	**24**	**7**	**23**	**22**

EDD: EDD
Stage 2A

Project AS180357A

WO AS180357A-137000278

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Texaco Strickland/Aloha Café

LDC Report Date: May 27, 2025

Parameters: Volatile Organic Compounds

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 402437

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
MW-18R-022824	402437-01	Water	02/28/24
MW-25R-022824	402437-02	Water	02/28/24
MW-26-022824	402437-03	Water	02/28/24
MW-19-022824	402437-04	Water	02/28/24
MW-32-022824	402437-05	Water	02/28/24
MW-31-022824	402437-06	Water	02/28/24
MW-30-022824	402437-07	Water	02/28/24
MW-29-022824	402437-08	Water	02/28/24
MW-17-022924	402437-10	Water	02/29/24
MW-16-022924	402437-11	Water	02/29/24
MW-18R-022824MS	402437-01MS	Water	02/28/24

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Sampling and Analysis Plan for Groundwater Monitoring, Texaco Strickland Site (August 2023) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) SW 846 Method 8260D

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary reports.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

III. Field Blank

No field blanks were identified in this SDG.

IV. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

V. Matrix Spike/Matrix Spike Duplicate

Matrix spike (MS) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits.

VI. Laboratory Control Sample

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VII. Field Duplicate

No field duplicates were identified in this SDG.

VIII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

IX. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Data Qualification Summary - SDG 402437

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Laboratory Blank Data Qualification Summary - SDG 402437

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Field Blank Data Qualification Summary - SDG 402437

No Sample Data Qualified in this SDG

VALIDATION COMPLETENESS WORKSHEET

LDC #: 60968A
SDG #: 402437
Laboratory: Friedman & Bruya Inc., Seattle, WA

Date: 5/1/2025
Page: 1
Reviewer: MN
2nd Reviewer: A

Method: Volatiles (EPA 8260D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I	Sample Receipt/Technical Holding Time	A/A	
II	Laboratory Blanks	A	
III	Field Blank	N	
IV	Surrogate Spikes	A	
V	Matrix Spike/Matrix Spike Duplicate	A	
VI	Laboratory Control Sample	A	LCS/D
VII	Field Duplicate	N	
VIII	Target Analyte Quantitation	N	
IX	Overall Assessment of Data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = Not detected; NQ = Not qualified; FD = Field duplicate; FT = Field triplicate; TB = Trip blank; FB = Field blank; AB= Ambient blank; SB = Source blank; EB = Equipment blank; R = Rinsate

	Client ID	Lab ID	QC Type	Matrix	Date	Stage
1	MW-18R-022824	402437-01		Water	02/28/2024	Stage 2A
2	MW-25R-022824	402437-02		Water	02/28/2024	Stage 2A
3	MW-26-022824	402437-03		Water	02/28/2024	Stage 2A
4	MW-19-022824	402437-04		Water	02/28/2024	Stage 2A
5	MW-32-022824	402437-05		Water	02/28/2024	Stage 2A
6	MW-31-022824	402437-06		Water	02/28/2024	Stage 2A
7	MW-30-022824	402437-07		Water	02/28/2024	Stage 2A
8	MW-29-022824	402437-08		Water	02/28/2024	Stage 2A
9	MW-17-022924	402437-10		Water	02/29/2024	Stage 2A
10	MW-16-022924	402437-11		Water	02/29/2024	Stage 2A
11	MW-18R-022824MS	402437-01MS	MS	Water	02/28/2024	Stage 2A
~~12~~	~~MW-18R-022824DUP~~	~~402437-01DUP~~	~~DUP~~	~~Water~~	~~02/28/2024~~	~~Stage 2A~~

Notes:

- 04-0494 mb		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Texaco Strickland/Aloha Café

LDC Report Date: May 27, 2025

Parameters: Gasoline Range Organics

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 402437

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
MW-18R-022824	402437-01	Water	02/28/24
MW-25R-022824	402437-02	Water	02/28/24
MW-26-022824	402437-03	Water	02/28/24
MW-19-022824	402437-04	Water	02/28/24
MW-32-022824	402437-05	Water	02/28/24
MW-31-022824	402437-06	Water	02/28/24
MW-30-022824	402437-07	Water	02/28/24
MW-29-022824	402437-08	Water	02/28/24
MW-27-022824	402437-09	Water	02/28/24
MW-17-022924	402437-10	Water	02/29/24
MW-16-022924	402437-11	Water	02/29/24
MW-18R-022824DUP	402437-01DUP	Water	02/28/24

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Sampling and Analysis Plan for Groundwater Monitoring, Texaco Strickland Site (August 2023) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Gasoline Range Organics by NWTPH-Gx

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary reports.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

III. Field Blank

No field blanks were identified in this SDG.

IV. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

V. Matrix Spike/Matrix Spike Duplicate/Laboratory Duplicate

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

Laboratory duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits.

VI. Laboratory Control Sample

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

VII. Field Duplicate

No field duplicates were identified in this SDG.

VIII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

IX. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Texaco Strickland/Aloha Café
Gasoline Range Organics - Data Qualification Summary - SDG 402437

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Gasoline Range Organics - Laboratory Blank Data Qualification Summary - SDG 402437

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Gasoline Range Organics - Field Blank Data Qualification Summary - SDG 402437

No Sample Data Qualified in this SDG

VALIDATION COMPLETENESS WORKSHEET

LDC #: 60968A
SDG #: 402437
Laboratory: Friedman & Bruya Inc., Seattle, WA

Date: 5/1/2025
Page: 1
Reviewer: MN
2nd Reviewer: A

Method: Gasoline Range Organics (NWTPH-Gx)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I	Sample Receipt/Technical Holding Time	A/A	
II	Laboratory Blanks	A	
III	Field Blank	N	
IV	Surrogate Spikes	A	
V	Matrix Spike/Matrix Spike Duplicate /Lab Dup	N/A	
VI	Laboratory Control Sample	A	LCS
VII	Field Duplicate	N	
VIII	Target Analyte Quantitation	N	
IX	Overall Assessment of Data	A	

Note: A = Acceptable; ND = Not detected; FT = Field triplicate; AB= Ambient blank; R = Rinsate
N = Not provided/applicable; NQ = Not qualified; TB = Trip blank; SB = Source blank
SW = See worksheet; FD = Field duplicate; FB = Field blank; EB = Equipment blank

	Client ID	Lab ID	QC Type	Matrix	Date	Stage
1	MW-18R-022824	402437-01		Water	02/28/2024	Stage 2A
2	MW-25R-022824	402437-02		Water	02/28/2024	Stage 2A
3	MW-26-022824	402437-03		Water	02/28/2024	Stage 2A
4	MW-19-022824	402437-04		Water	02/28/2024	Stage 2A
5	MW-32-022824	402437-05		Water	02/28/2024	Stage 2A
6	MW-31-022824	402437-06		Water	02/28/2024	Stage 2A
7	MW-30-022824	402437-07		Water	02/28/2024	Stage 2A
8	MW-29-022824	402437-08		Water	02/28/2024	Stage 2A
9	MW-27-022824	402437-09		Water	02/28/2024	Stage 2A
10	MW-17-022924	402437-10		Water	02/29/2024	Stage 2A
11	MW-16-022924	402437-11		Water	02/29/2024	Stage 2A
12	MW-18R-022824DUP	402437-01DUP	DUP	Water	02/28/2024	Stage 2A

Notes:

1 04-0429 MB		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Texaco Strickland/Aloha Café

LDC Report Date: May 27, 2025

Parameters: Diesel Range Organics

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 402437

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
MW-18R-022824	402437-01	Water	02/28/24
MW-25R-022824	402437-02	Water	02/28/24
MW-26-022824	402437-03	Water	02/28/24
MW-19-022824	402437-04	Water	02/28/24
MW-32-022824	402437-05	Water	02/28/24
MW-31-022824	402437-06	Water	02/28/24
MW-30-022824	402437-07	Water	02/28/24
MW-29-022824	402437-08	Water	02/28/24
MW-27-022824	402437-09	Water	02/28/24
MW-17-022924	402437-10	Water	02/29/24
MW-16-022924	402437-11	Water	02/29/24

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Sampling and Analysis Plan for Groundwater Monitoring, Texaco Strickland Site (August 2023) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Diesel Range Organics by NWTPH-Dx

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary reports.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

III. Field Blank

No field blanks were identified in this SDG.

IV. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

V. Matrix Spike/Matrix Spike Duplicate

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VI. Laboratory Control Sample

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VII. Field Duplicate

No field duplicates were identified in this SDG.

VIII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

IX. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Texaco Strickland/Aloha Café
Diesel Range Organics - Data Qualification Summary - SDG 402437

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Diesel Range Organics - Laboratory Blank Data Qualification Summary - SDG 402437

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Diesel Range Organics - Field Blank Data Qualification Summary - SDG 402437

No Sample Data Qualified in this SDG

VALIDATION COMPLETENESS WORKSHEET

LDC #: 60968A
SDG #: 402437
Laboratory: Friedman & Bruya Inc., Seattle, WA

Date: 5/1/2025
Page: 1
Reviewer: MN
2nd Reviewer: A

Method: Diesel Range Organics (NWTPH-Dx)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I	Sample Receipt/Technical Holding Time	A/A	
II	Laboratory Blanks	A	
III	Field Blank	N	
IV	Surrogate Spikes	A	
V	Matrix Spike/Matrix Spike Duplicate	N	
VI	Laboratory Control Sample	A	LCSID
VII	Field Duplicate	N	
VIII	Target Analyte Quantitation	N	
IX	Overall Assessment of Data	A	

Note: A = Acceptable; ND = Not detected; FT = Field triplicate; AB= Ambient blank; R = Rinsate
N = Not provided/applicable; NQ = Not qualified; TB = Trip blank; SB = Source blank
SW = See worksheet; FD = Field duplicate; FB = Field blank; EB = Equipment blank

	Client ID	Lab ID	QC Type	Matrix	Date	Stage
1	MW-18R-022824	402437-01		Water	02/28/2024	Stage 2A
2	MW-25R-022824	402437-02		Water	02/28/2024	Stage 2A
3	MW-26-022824	402437-03		Water	02/28/2024	Stage 2A
4	MW-19-022824	402437-04		Water	02/28/2024	Stage 2A
5	MW-32-022824	402437-05		Water	02/28/2024	Stage 2A
6	MW-31-022824	402437-06		Water	02/28/2024	Stage 2A
7	MW-30-022824	402437-07		Water	02/28/2024	Stage 2A
8	MW-29-022824	402437-08		Water	02/28/2024	Stage 2A
9	MW-27-022824	402437-09		Water	02/28/2024	Stage 2A
10	MW-17-022924	402437-10		Water	02/29/2024	Stage 2A
11	MW-16-022924	402437-11		Water	02/29/2024	Stage 2A

Notes:

1 04-490MB		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Texaco Strickland/Aloha Café

LDC Report Date: May 27, 2025

Parameters: Volatile Organic Compounds

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 405479

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
MW-18R-240529	405479-01	Water	05/29/24
MW-25R-240529	405479-02	Water	05/29/24
MW-26-240529	405479-03	Water	05/29/24
MW-19-240529	405479-04	Water	05/29/24
MW-32-240529	405479-05	Water	05/29/24
MW-31-240529	405479-06	Water	05/29/24
MW-30-240529	405479-07	Water	05/29/24
MW-29-240529	405479-08	Water	05/29/24
MW-27-240530	405479-09	Water	05/30/24
MW-16-240530	405479-10	Water	05/30/24
MW-17-240530	405479-11	Water	05/30/24
MW-32-240529MS	405479-05MS	Water	05/29/24

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Sampling and Analysis Plan for Groundwater Monitoring, Texaco Strickland Site (August 2023) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) SW 846 Method 8260D

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary reports.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

III. Field Blank

No field blanks were identified in this SDG.

IV. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

V. Matrix Spike/Matrix Spike Duplicate

Matrix spike (MS) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits.

VI. Laboratory Control Sample

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VII. Field Duplicate

No field duplicates were identified in this SDG.

VIII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

IX. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Data Qualification Summary - SDG 405479

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Laboratory Blank Data Qualification Summary - SDG 405479

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Field Blank Data Qualification Summary - SDG 405479

No Sample Data Qualified in this SDG

VALIDATION COMPLETENESS WORKSHEET

LDC #: 60968B
SDG #: 405479
Laboratory: Friedman & Bruya Inc., Seattle, WA

Date: 5/1/2025
Page: 1
Reviewer: MN
2nd Reviewer: AC

Method: Volatiles (EPA 8260D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I	Sample Receipt/Technical Holding Time	A/A	
II	Laboratory Blanks	A	
III	Field Blank	N	
IV	Surrogate Spikes	A	
V	Matrix Spike/Matrix Spike Duplicate	A	
VI	Laboratory Control Sample	A	LCSD
VII	Field Duplicate	N	
VIII	Target Analyte Quantitation	N	
IX	Overall Assessment of Data	A	

Note: A = Acceptable; ND = Not detected; FT = Field triplicate; AB= Ambient blank; R = Rinsate
N = Not provided/applicable; NQ = Not qualified; TB = Trip blank; SB = Source blank
SW = See worksheet; FD = Field duplicate; FB = Field blank; EB = Equipment blank

	Client ID	Lab ID	QC Type	Matrix	Date	Stage
1	MW-18R-240529	405479-01		Water	05/29/2024	Stage 2A
2	MW-25R-240529	405479-02		Water	05/29/2024	Stage 2A
3	MW-26-240529	405479-03		Water	05/29/2024	Stage 2A
4	MW-19-240529	405479-04		Water	05/29/2024	Stage 2A
5	MW-32-240529	405479-05		Water	05/29/2024	Stage 2A
6	MW-31-240529	405479-06		Water	05/29/2024	Stage 2A
7	MW-30-240529	405479-07		Water	05/29/2024	Stage 2A
8	MW-29-240529	405479-08		Water	05/29/2024	Stage 2A
9	MW-27-240530	405479-09		Water	05/30/2024	Stage 2A
10	MW-16-240530	405479-10		Water	05/30/2025	Stage 2A
11	MW-17-240530	405479-11		Water	05/30/2026	Stage 2A
12	MW-32-240529MS	405479-05MS	MS	Water	05/29/2024	Stage 2A

Notes:

04-1231 mb		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Texaco Strickland/Aloha Café

LDC Report Date: May 27, 2025

Parameters: Gasoline Range Organics

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 405479

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
MW-18R-240529	405479-01	Water	05/29/24
MW-25R-240529	405479-02	Water	05/29/24
MW-26-240529	405479-03	Water	05/29/24
MW-19-240529	405479-04	Water	05/29/24
MW-32-240529	405479-05	Water	05/29/24
MW-31-240529	405479-06	Water	05/29/24
MW-30-240529	405479-07	Water	05/29/24
MW-29-240529	405479-08	Water	05/29/24
MW-27-240530	405479-09	Water	05/30/25
MW-16-240530	405479-10	Water	05/30/25
MW-17-240530	405479-11	Water	05/30/25

Introduction

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The analyses were performed by the following method:

Gasoline Range Organics by NWTPH-Gx

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary reports.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

III. Field Blank

No field blanks were identified in this SDG.

IV. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

V. Matrix Spike/Matrix Spike Duplicate

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VI. Laboratory Control Sample

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VII. Field Duplicate

No field duplicates were identified in this SDG.

VIII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

IX. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Texaco Strickland/Aloha Café
Gasoline Range Organics - Data Qualification Summary - SDG 405479

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Gasoline Range Organics - Laboratory Blank Data Qualification Summary - SDG 405479

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Gasoline Range Organics - Field Blank Data Qualification Summary - SDG 405479

No Sample Data Qualified in this SDG

VALIDATION COMPLETENESS WORKSHEET

LDC #: 60968B
SDG #: 405479
Laboratory: Friedman & Bruya Inc., Seattle, WA

Date: 5/1/2025
Page: 1
Reviewer: MN
2nd Reviewer: [illegible]

Method: Gasoline Range Organics (NWTPH-Gx)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I	Sample Receipt/Technical Holding Time	I / A	
II	Laboratory Blanks	A	
III	Field Blank	N	
IV	Surrogate Spikes	A	
V	Matrix Spike/Matrix Spike Duplicate	N	
VI	Laboratory Control Sample	A	LCS/D
VII	Field Duplicate	N	
VIII	Target Analyte Quantitation	A	
IX	Overall Assessment of Data	A	

Note: A = Acceptable; ND = Not detected; FT = Field triplicate; AB= Ambient blank; R = Rinsate
N = Not provided/applicable; NQ = Not qualified; TB = Trip blank; SB = Source blank
SW = See worksheet; FD = Field duplicate; FB = Field blank; EB = Equipment blank

	Client ID	Lab ID	QC Type	Matrix	Date	Stage
1	MW-18R-240529	405479-01		Water	05/29/2024	Stage 2A
2	MW-25R-240529	405479-02		Water	05/29/2024	Stage 2A
3	MW-26-240529	405479-03		Water	05/29/2024	Stage 2A
4	MW-19-240529	405479-04		Water	05/29/2024	Stage 2A
5	MW-32-240529	405479-05		Water	05/29/2024	Stage 2A
6	MW-31-240529	405479-06		Water	05/29/2024	Stage 2A
7	MW-30-240529	405479-07		Water	05/29/2024	Stage 2A
8	MW-29-240529	405479-08		Water	05/29/2024	Stage 2A
9	MW-27-240530	405479-09		Water	05/30/2025	Stage 2A
10	MW-16-240530	405479-10		Water	05/30/2025	Stage 2A
11	MW-17-240530	405479-11		Water	05/30/2025	Stage 2A

Notes:

04-914MB		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Texaco Strickland/Aloha Café

LDC Report Date: May 27, 2025

Parameters: Diesel Range Organics

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 405479

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
MW-18R-240529	405479-01	Water	05/29/24
MW-25R-240529	405479-02	Water	05/29/24
MW-26-240529	405479-03	Water	05/29/24
MW-19-240529	405479-04	Water	05/29/24
MW-32-240529	405479-05	Water	05/29/24
MW-31-240529	405479-06	Water	05/29/24
MW-30-240529	405479-07	Water	05/29/24
MW-29-240529	405479-08	Water	05/29/24
MW-27-240530	405479-09	Water	05/30/25
MW-16-240530	405479-10	Water	05/30/25
MW-17-240530	405479-11	Water	05/30/25

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Sampling and Analysis Plan for Groundwater Monitoring, Texaco Strickland Site (August 2023) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Diesel Range Organics by NWTPH-Dx

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary reports.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

III. Field Blank

No field blanks were identified in this SDG.

IV. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

V. Matrix Spike/Matrix Spike Duplicate

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VI. Laboratory Control Sample

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VII. Field Duplicate

No field duplicates were identified in this SDG.

VIII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

IX. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Texaco Strickland/Aloha Café
Diesel Range Organics - Data Qualification Summary - SDG 405479

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Diesel Range Organics - Laboratory Blank Data Qualification Summary - SDG 405479

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Diesel Range Organics - Field Blank Data Qualification Summary - SDG 405479

No Sample Data Qualified in this SDG

VALIDATION COMPLETENESS WORKSHEET

LDC #: 60968B
SDG #: 405479
Laboratory: Friedman & Bruya Inc., Seattle, WA

Date: 5/1/2025
Page: 1
Reviewer: MW
2nd Reviewer: AC

Method: Diesel Range Organics (NWTPH-Dx)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I	Sample Receipt/Technical Holding Time	A/A	
II	Laboratory Blanks	A	
III	Field Blank	N	
IV	Surrogate Spikes	A	
V	Matrix Spike/Matrix Spike Duplicate	N	
VI	Laboratory Control Sample	A	LCSID
VII	Field Duplicate	N	
VIII	Target Analyte Quantitation	N	
IX	Overall Assessment of Data	A	

Note: A = Acceptable; ND = Not detected; FT = Field triplicate; AB= Ambient blank; R = Rinsate
N = Not provided/applicable; NQ = Not qualified; TB = Trip blank; SB = Source blank
SW = See worksheet; FD = Field duplicate; FB = Field blank; EB = Equipment blank

	Client ID	Lab ID	QC Type	Matrix	Date	Stage
1	MW-18R-240529	405479-01		Water	05/29/2024	Stage 2A
2	MW-25R-240529	405479-02		Water	05/29/2024	Stage 2A
3	MW-26-240529	405479-03		Water	05/29/2024	Stage 2A
4	MW-19-240529	405479-04		Water	05/29/2024	Stage 2A
5	MW-32-240529	405479-05		Water	05/29/2024	Stage 2A
6	MW-31-240529	405479-06		Water	05/29/2024	Stage 2A
7	MW-30-240529	405479-07		Water	05/29/2024	Stage 2A
8	MW-29-240529	405479-08		Water	05/29/2024	Stage 2A
9	MW-27-240530	405479-09		Water	05/30/2025	Stage 2A
10	MW-16-240530	405479-10		Water	05/30/2025	Stage 2A
11	MW-17-240530	405479-11		Water	05/30/2025	Stage 2A

Notes:

04-1270MB2		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Texaco Strickland/Aloha Café

LDC Report Date: May 28, 2025

Parameters: Volatile Organic Compounds

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 409456

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
AMB-1-240926	409456-01	Air	09/26/24
AMB-2-240926	409456-02	Air	09/26/24
US-EFF-240927	409456-03	Air	09/27/24
US-EFF-240927DUP	409456-03DUP	Air	09/27/24

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Appendix E, CEMC Review Draft, Sampling and Analysis/Quality Assurance Project Plan (February 2019) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Method TO-15

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary reports.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

The canisters were properly pressurized and handled.

All technical holding time requirements were met.

II. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

Canister blank analyses were performed for every sample canister. No contaminants were found in the canister blanks.

III. Field Blank

Samples AMB-1-240926 and AMB-2-240926 were identified as ambient blanks. No contaminants were found with the following exceptions:

Blank ID	Analyte	Concentration
AMB-1-240926	Benzene Naphthalene	0.38 ug/m^3 0.15 ug/m^3
AMB-2-240926	Naphthalene	0.084 ug/m^3

IV. Surrogates

Although surrogates were not required by the method, surrogate analysis was performed by the laboratory. Surrogate recoveries (%R) were within QC limits.

V. Laboratory Duplicate

Laboratory duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits.

VI. Laboratory Control Sample

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

VII. Field Duplicate

No field duplicates were identified in this SDG.

VIII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

IX. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Data Qualification Summary - SDG 409456

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Laboratory Blank Data Qualification Summary - SDG 409456

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Field Blank Data Qualification Summary - SDG 409456

No Sample Data Qualified in this SDG

VALIDATION COMPLETENESS WORKSHEET

LDC #: 60968C
SDG #: 409456
Laboratory: Friedman & Bruya Inc., Seattle, WA

Date: 5/9/2025
Page: 1
Reviewer: MN
2nd Reviewer: AF

Method: Volatiles (EPA TO-15)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I	Sample Receipt/Technical Holding Time	A/A	
II	Laboratory Blanks /canister	A/	
III	Field Blank	SW	AB=1,2
IV	Surrogate Spikes	A	
V	Laboratory Duplicate	A	
VI	Laboratory Control Sample	A	LCS
VII	Field Duplicate	N	
VIII	Target Analyte Quantitation	N	
IX	Overall Assessment of Data	A	

Note: A = Acceptable; ND = Not detected; FT = Field triplicate; AB= Ambient blank; R = Rinsate
N = Not provided/applicable; NQ = Not qualified; TB = Trip blank; SB = Source blank
SW = See worksheet; FD = Field duplicate; FB = Field blank; EB = Equipment blank

	Client ID	Lab ID	QC Type	Matrix	Date	Stage
1	AMB-1-240926	409456-01		Air	09/26/2024	Stage 2A
2	AMB-2-240926	409456-02		Air	09/26/2024	Stage 2A
3	US-EFF-240927	409456-03		Air	09/27/2024	Stage 2A
4	US-EFF-240927DUP	409456-03DUP	DUP	Air	09/27/2024	Stage 2A

Notes:

1 04-2348 MB		

VALIDATION FINDINGS WORKSHEET
Field Blanks

METHOD: GC/MS Volatiles (EPA Method TO-15)
Field blanks were identified in this SDG.
No contaminants were found in the field blanks with the exceptions identified below.
Sampling date: 9/26/24 **Blank units:** ug/m3 **Associated sample units:** ug/m3
Field blank type: AB **Associated Samples:** none
(TB = Trip Blank; FB = Field Blank; EB = Equipment Blank; SB = Source Blank)

Compound	Blank ID	Blank ID	Sample Identification						
	1	2							
Benzene	0.38								
Naphthalene	0.15	0.084							

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Texaco Strickland/Aloha Café

LDC Report Date: May 28, 2025

Parameters: Volatile Organic Compounds

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 409456

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
AMB-1-240926	409456-01	Air	09/26/24
AMB-2-240926	409456-02	Air	09/26/24
US-EFF-240927	409456-03	Air	09/27/24
US-EFF-240927DUP	409456-03DUP	Air	09/27/24

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Appendix E, CEMC Review Draft, Sampling and Analysis/Quality Assurance Project Plan (February 2019) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Method MA-APH

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary reports.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

The canisters were properly pressurized and handled.

All technical holding time requirements were met.

II. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

III. Field Blank

Samples AMB-1-240926 and AMB-2-240926 were identified as ambient blanks. No contaminants were found with the following exceptions:

Blank ID	Analyte	Concentration
AMB-1-240926	APH EC5-8 aliphatics APH EC9-12 aliphatics	100 ug/m^3 43 ug/m^3

IV. Surrogates

Although surrogates were not required by the method, surrogate analysis was performed by the laboratory. Surrogate recoveries (%R) were within QC limits.

V. Matrix Spike/Matrix Spike Duplicate/Laboratory Duplicate

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

Laboratory duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits.

VI. Laboratory Control Sample

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

VII. Field Duplicate

No field duplicates were identified in this SDG.

VIII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

IX. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Data Qualification Summary - SDG 409456

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Laboratory Blank Data Qualification Summary - SDG 409456

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Field Blank Data Qualification Summary - SDG 409456

No Sample Data Qualified in this SDG

VALIDATION COMPLETENESS WORKSHEET

LDC #: 60968C
SDG #: 409456
Laboratory: Friedman & Bruya Inc., Seattle, WA

Date: 5/1/2025
Page: 1
Reviewer: MM
2nd Reviewer: A

Method: VOCs (APH) (MA-APH)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I	Sample Receipt/Technical Holding Time	A/A	
II	Laboratory Blanks	A	
III	Field Blank	SW	AB=1,2
IV	Surrogate Spikes	A	
V	Matrix Spike/Matrix Spike Duplicate / Lab Dup	N/A	
VI	Laboratory Control Sample	A	LCS
VII	Field Duplicate	N	
VIII	Target Analyte Quantitation	N	
IX	Overall Assessment of Data	A	

Note: A = Acceptable; ND = Not detected; FT = Field triplicate; AB= Ambient blank; R = Rinsate
N = Not provided/applicable; NQ = Not qualified; TB = Trip blank; SB = Source blank
SW = See worksheet; FD = Field duplicate; FB = Field blank; EB = Equipment blank

	Client ID	Lab ID	QC Type	Matrix	Date	Stage
1	AMB-1-240926	409456-01		Air	09/26/2024	Stage 2A
2	AMB-2-240926	409456-02		Air	09/26/2024	Stage 2A
3	US-EFF-240927	409456-03		Air	09/27/2024	Stage 2A
4	US-EFF-240927DUP	409456-03DUP	DUP	Air	09/27/2024	Stage 2A

Notes:

1 04-2348MB		

VALIDATION FINDINGS WORKSHEET
Field Blanks

METHOD: GC/MS Volatiles (EPA Method MA-APH)
Field blanks were identified in this SDG.
No contaminants were found in the field blanks with the exceptions identified below.
Sampling date: 9/26/24 **Blank units:** ug/m3 **Associated sample units:** ug/m3
Field blank type: AB **Associated Samples:** none
(TB = Trip Blank; FB = Field Blank; EB = Equipment Blank; SB = Source Blank)

Compound	Blank ID	Sample Identification							
	1								
APH EC5-8 aliphatics	100								
APH EC9-12 aliphatics	43								

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Texaco Strickland/Aloha Café

LDC Report Date: May 28, 2025

Parameters: Volatile Organic Compounds

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 412508

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
AMB-1-241230	412508-01	Air	12/30/24
AMB-2-241230	412508-02	Air	12/30/24
VS-EFF-241231	412508-03	Air	12/31/24

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Appendix E, CEMC Review Draft, Sampling and Analysis/Quality Assurance Project Plan (February 2019) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Method TO-15

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary reports.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

The canisters were properly pressurized and handled.

All technical holding time requirements were met.

II. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks with the following exceptions:

Blank ID	Analysis Date	Analyte	Concentration (ug/m^3)	Associated Samples
50-003 MB	01/02/25	Naphthalene	0.073	All samples in SDG 412508

Canister blank analyses were performed for every sample canister. No contaminants were found in the canister blanks.

Sample concentrations were compared to concentrations detected in the laboratory blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated laboratory blanks with the following exceptions:

Sample	Analyte	Reported Concentration (ug/m^3)	Modified Final Concentration (ug/m^3)
AMB-1-241230	Naphthalene	0.073	0.073U
AMB-2-241230	Naphthalene	0.11	0.11U
VS-EFF-241231	Naphthalene	0.079	0.079U

III. Field Blank

Samples AMB-1-241230 and AMB-2-241230 were identified as ambient blanks. No contaminants were found with the following exceptions:

Blank ID	Analyte	Concentration
AMB-1-241230	Benzene Naphthalene	0.42 ug/m^3 0.073 ug/m^3
AMB-2-241230	Benzene Naphthalene	0.60 ug/m^3 0.11 ug/m^3

IV. Surrogates

Although surrogates were not required by the method, surrogate analysis was performed by the laboratory. Surrogate recoveries (%R) were within QC limits.

V. Laboratory Duplicate

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VI. Laboratory Control Sample

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

VII. Field Duplicate

No field duplicates were identified in this SDG.

VIII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

IX. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Data qualified due to laboratory blank contamination are summarized and presented in the Data Qualification Summary.

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Data Qualification Summary - SDG 412508

No Sample Data Qualified in this SDG

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Laboratory Blank Data Qualification Summary - SDG 412508

Sample	Analyte	Modified Final Concentration (ug/m^3)
AMB-1-241230	Naphthalene	0.073U
AMB-2-241230	Naphthalene	0.11U
VS-EFF-241231	Naphthalene	0.079U

Texaco Strickland/Aloha Café
Volatile Organic Compounds - Field Blank Data Qualification Summary - SDG 412508

No Sample Data Qualified in this SDG

VALIDATION COMPLETENESS WORKSHEET

LDC #: 60968D
SDG #: 412508
Laboratory: Friedman & Bruya Inc., Seattle, WA

Date: 5/9/2025
Page: 1
Reviewer: MM
2nd Reviewer:

Method: Volatiles (EPA TO-15)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I	Sample Receipt/Technical Holding Time	A/A	
II	Laboratory Blanks / canister	SW/	
III	Field Blank	SW	
IV	Surrogate Spikes	A	
V	Laboratory Duplicate	N	
VI	Laboratory Control Sample	A	LCS/D
VII	Field Duplicate	N	
VIII	Target Analyte Quantitation	N	
IX	Overall Assessment of Data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = Not detected; NQ = Not qualified; FD = Field duplicate; FT = Field triplicate; TB = Trip blank; FB = Field blank; AB= Ambient blank; SB = Source blank; EB = Equipment blank; R = Rinsate

	Client ID	Lab ID	QC Type	Matrix	Date	Stage
1	AMB-1-241230	412508-01		Air	12/30/2024	Stage 2A
2	AMB-2-241230	412508-02		Air	12/30/2024	Stage 2A
3	VS-EFF-241231	412508-03		Air	12/31/2024	Stage 2A

Notes:

1 05-003 MB		

LDC #: _60968D

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: _____MN___

METHOD: GC/MS Volatiles (EPA Method TO-15)
Method blanks were performed at the required frequency and sequence.
No contaminants were found in the method blanks with the exceptions identified below.
Blank analysis date: _____~~05-003 MB~~ 1/2/25 **Associated samples:** _all_____
Conc. units: ___ug/m3_____

Compound	Blank ID	Sample Identification							
	50-003 MB	1	2	3					
Naphthalene	0.073	0.073U	0.11U	0.079U					

LDC# 60968D

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: ____MN_____

METHOD: GC/MS Volatiles (EPA Method TO-15)
Field blanks were identified in this SDG.
No contaminants were found in the field blanks with the exceptions identified below.

Sampling date: 12/30/24 **Blank units:** ug/m3 **Associated sample units:** ug/m3
Field blank type: AB **Associated Samples:** none

(TB = Trip Blank; FB = Field Blank; EB = Equipment Blank; SB = Source Blank)

Compound	Blank ID	Blank ID	Sample Identification						
	1	2							
Benzene	0.42	0.60							
Naphthalene	0.073	0.11							

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Texaco Strickland/Aloha Café

LDC Report Date: May 28, 2025

Parameters: Volatile Organic Compounds

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 412508

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
AMB-1-241230	412508-01	Air	12/30/24
AMB-2-241230	412508-02	Air	12/30/24
VS-EFF-241231	412508-03	Air	12/31/24

Introduction

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The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Method MA-APH

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary reports.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

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UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

The canisters were properly pressurized and handled.

All technical holding time requirements were met.

II. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

III. Field Blank

Samples AMB-1-241230 and AMB-2-241230 were identified as ambient blanks. No contaminants were found with the following exceptions:

Blank ID	Analyte	Concentration
AMB-1-241230	APH EC5-8 aliphatics	86 ug/m^3
AMB-2-241230	APH EC5-8 aliphatics APH EC9-12 aliphatics	86 ug/m^3 34 ug/m^3

IV. Surrogates

Although surrogates were not required by the method, surrogate analysis was performed by the laboratory. Surrogate recoveries (%R) were within QC limits.

V. Matrix Spike/Matrix Spike Duplicate

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VI. Laboratory Control Sample

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

VII. Field Duplicate

No field duplicates were identified in this SDG.

VIII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

VALIDATION COMPLETENESS WORKSHEET

LDC #: 60968D
SDG #: 412508
Laboratory: Friedman & Bruya Inc., Seattle, WA

Date: 5/1/2025
Page: 1
Reviewer: MN
2nd Reviewer: [illegible]

Method: VOCs (APH) (MA-APH)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I	Sample Receipt/Technical Holding Time	A/A	
II	Laboratory Blanks	A	
III	Field Blank	SW	AB=1,2
IV	Surrogate Spikes	A	
V	Matrix Spike/Matrix Spike Duplicate	N	
VI	Laboratory Control Sample	A	LCS
VII	Field Duplicate	N	
VIII	Target Analyte Quantitation	N	
IX	Overall Assessment of Data	A	

Note: A = Acceptable; ND = Not detected; FT = Field triplicate; AB= Ambient blank; R = Rinsate
N = Not provided/applicable; NQ = Not qualified; TB = Trip blank; SB = Source blank
SW = See worksheet; FD = Field duplicate; FB = Field blank; EB = Equipment blank

	Client ID	Lab ID	QC Type	Matrix	Date	Stage
1	AMB-1-241230	412508-01		Air	12/30/2024	Stage 2A
2	AMB-2-241230	412508-02		Air	12/30/2024	Stage 2A
3	VS-EFF-241231	412508-03		Air	12/31/2024	Stage 2A

Notes:

1 05-003 MB		

LDC# 60968D

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: ____MN_____

METHOD: GC/MS Volatiles (EPA Method MA-APH)
Field blanks were identified in this SDG.
No contaminants were found in the field blanks with the exceptions identified below.

Sampling date: 12/30/24 **Blank units:** ug/m3 **Associated sample units:** ug/m3
Field blank type: AB **Associated Samples:** none

(TB = Trip Blank; FB = Field Blank; EB = Equipment Blank; SB = Source Blank)

Compound	Blank ID	Blank ID	Sample Identification						
	1	2							
APH EC5-8 aliphatics	86	86							
APH EC9-12 aliphatics		34							