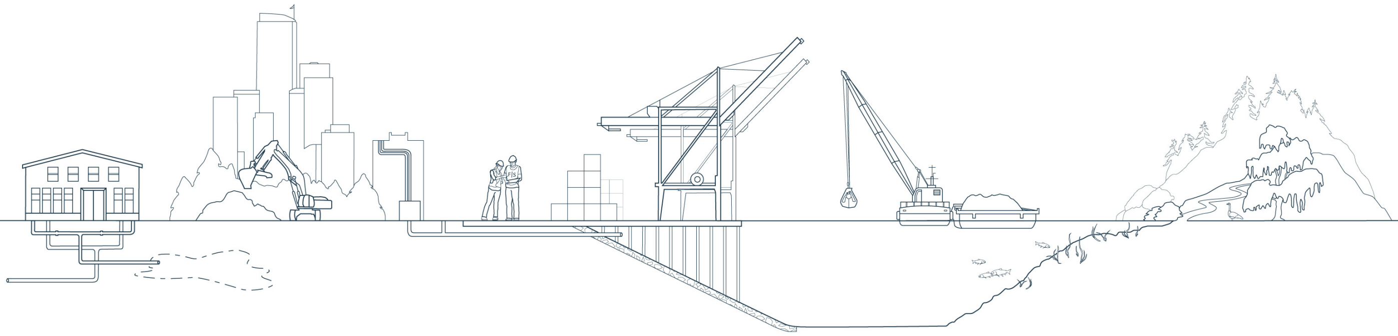
Remedial Action Completion Report

Big B Mini Mart Site

Prepared for
Big B LLC

November 2022



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List of Abbreviations

Abbreviation	**Definition**
AO	Agreed Order
bgs	Below ground surface
BNSF	BNSF Railway Company
BTEX	Benzene, toluene, ethylbenzene, and total xylenes
CAP	Cleanup Action Plan
cfm	Cubic feet per minute
COC	Contaminant of concern

Abbreviation	Definition
CSID	Cleanup Site ID
CUL	Cleanup level
DRO	Diesel-range organics
Ecology	Washington State Department of Ecology
EDR	Engineering Design Report
FSID	Facility Site ID
GRO	Gasoline-range organics
IA	Interim action
LNAPL	Light non-aqueous phase liquid
µg/L	Micrograms per liter
mg/kg	Milligrams per kilogram
MNA	Monitored natural attenuation
MTCA	Model Toxics Control Act
NES	Northwest Environmental Solutions, Inc.
ORO	Oil-range organics
PID	Photoionization detector
PVC	Polyvinyl chloride
RACR	Remedial Action Completion Report
RDM	Robert D. Miller Consulting, Inc.
REL	Remediation level
RI/FS	Remedial Investigation and Feasibility Study
ROI	Radius of influence
ROW	Right-of-way
SAIC	Science Applications International Corporation
Site	Big B Mini Mart Site
TPH	Total petroleum hydrocarbons
UST	Underground storage tank
WAC	Washington Administrative Code

1.0 Introduction

This Remedial Action Completion Report (RACR) summarizes the cleanup action activities and the bioventing pilot test performed at the Big B Mini Mart Site (Site; Facility Site ID [FSID] #386, Cleanup Site ID [CSID] #4901) located at 1611 Canyon Road in Ellensburg, Washington (referred to at the Big B property; Figure 1.1). Work was performed in accordance with the Washington State Department of Ecology's (Ecology's) Cleanup Action Plan (CAP; Ecology 2020), which was required as part of the site cleanup process under Chapter 173-340 Washington Administrative Code (WAC), Model Toxics Control Act (MTCA) Cleanup Regulations. Ecology named Gurmit Singh Kaila; BNSF Railway Company (BNSF); Short Stop, LLC; Big B, LLC; Balbir Singh; and Neela Tara, Inc., as the Potentially Liable Persons for the Site. Big B, Short Stop, and BNSF have implemented the CAP under Agreed Order (AO) No. DE 18243 with Ecology.

1.1 SITE DESCRIPTION

Big B is located in Kittitas County within Township 17N, Range 18E, and Section 11. The Site consists of an approximately 43,960 square-foot (1.05 acres) parcel of land (parcel no. 958654). The southern half of the Site consists of the currently inactive service station facilities, and the northern half contains approximately 18,500 square feet of unused paved area. The western portion of the Site is located on land leased from BNSF. The BNSF property boundary extends approximately 50 feet northeast from the railway centerline and the BNSF right-of-way (ROW) is defined as the entire property owned by BNSF (Figure 1.2).

The Big B property was first developed as a service station in the early 1970s. There is no known prior use of the property. The southern half of the property includes two former fuel dispenser islands (northern and southern), a closed convenience store building (station building), and former locations of underground storage tanks (USTs). The former USTs included two 10,000-gallon steel USTs and a 4,000-gallon steel UST on the north side of the station building, and a former 12,000-gallon baffled steel UST (split into 8,000 gallons of diesel fuel storage and 4,000 gallons of unleaded gasoline fuel storage) on the south end of the property.

The Site also includes releases that migrated downgradient to the south. An active gasoline station and convenience shop, Toad's (Astro) Station (herein referred to as Toad's), is located to the south of the Big B property at 1703 Canyon Road. Soil and groundwater on Toad's are impacted by historical releases from the Big B property, and areas impacted are considered by Ecology to be part of the Site. Toad's is also a separate Ecology cleanup site due to releases attributable to on-site gas station operations. A voluntary cleanup action was conducted by Toad's owner that began in 2015 following discovery of free petroleum product under a dispenser in May 2014 that is attributable to operations at Toad's (RDM 2017). The cleanup action consisted of excavation of petroleum-contaminated soil around the dispensers and construction of a perimeter concrete containment wall (RDM 2017).

This RACR focuses on soil and groundwater conditions that are part of the Site. It does not describe releases attributable to the Toad's site nor does it describe cleanup activities to remediate and monitor those releases.

1.2 BIG B PROPERTY HISTORY

This section presents the ownership, operational, and regulatory history of the Site. Additional information regarding environmental investigations referenced in this section is detailed in Section 1.4.

BNSF is a former owner of the Big B property. The Zbinden Oil Company leased the property from BNSF from April 1971 through February 1986. Zbinden Oil transferred certain assets and the business name of “Big Z Mini-Mart” to Bernhard E. Schneider, and Mr. Schneider operated the gas station from March 1986 through August 1989. In 1989, BNSF entered a new lease with Balbir Singh and Gurmit Singh Kaila from September 1989 through March 2002 (Ecology 2019). Mr. Singh and Mr. Kaila continued operation of the facility until Neela Tara assumed operations in September 2007, which continued until September 2009. Short Stop acquired operation of the station following the end of Neela Tara’s business tenure and operated the gas station from approximately November 2009 through at least August 2014. The property transferred from BNSF to Big B, the current owner, on June 30, 2014.

In 1990, during an excavation for a UST replacement, a diesel-range organics (DRO) release was discovered from a leak in a fuel distribution line. In December 1990, a former operator, Mr. Singh, performed an interim action (IA) as part of an independent remedial action to remove DRO-contaminated soil and free product. A report of a release was received by Ecology and an initial investigation conducted in 1990 to 1991 that resulted in a “Further Action” determination and a Site Hazard Assessment. As a result of the Site Hazard Assessment, the Site was assigned a hazard ranking of a “3” by Ecology.

Short Stop ceased active operations by pumping the product from all USTs in July 2014, thus placing the station’s status into temporary closure. The four USTs were removed in November 2016, and all USTs were recorded as permanently closed in April 2017.

In May 2019, Big B and BNSF entered into an AO (No. DE 16307). The work to be performed under the 2019 AO required that Big B and BNSF (1) implement an interim action to excavate contaminated soil and evaluate the performance of an on-site treatment technology and evaluate its effectiveness over time, and (2) prepare a draft CAP for the Site. In October 2020, Big B and BNSF entered into a new AO (No. DE 18243), which superseded and replaced 2019 AO No. DE 16307. The work performed under the 2020 AO required BNSF and Big B to implement the CAP.

1.3 LAND USE

The Big B property is currently vacant aside from the former station building. The property and the surrounding properties are zoned for commercial use. The closest residence is located approximately 0.4 miles to the northeast. It is anticipated that the Big B property will eventually be used as a fueling station or other commercial use. Canyon Road, a major arterial roadway, is present at the east property boundary. The area to the north and to the west of the property beyond the railroad tracks is undeveloped. A gasoline service station (Toad's) is located adjacent to the property to the south.

1.4 PREVIOUS STUDIES

Several environmental investigations and IAs have been conducted at the Site since 1990, as described in the Remedial Investigation and Feasibility Study (RI/FS) submitted to Ecology in 2018 (Floyd|Snider 2018). These include studies completed prior to the 2019 and 2020 AOs by SEACOR, Inc., Science Applications International Corporation (SAIC), and Northwest Environmental Solutions, Inc. (NES) between 1990 and 2011 and investigations completed by Floyd|Snider pursuant to the AOs between 2015 and present. A 2017 soil and groundwater investigation performed by Robert D. Miller Consulting, Inc., on the Toad's property is also summarized; the results of this investigation informed the lateral and vertical extent of remedial excavation at Big B.

1.4.1 1990 SEACOR UST Interim Action

In November 1990, light non-aqueous phase liquid (LNAPL) was observed to be accumulating on the groundwater surface within a test pit that was excavated north of the northern 10,000-gallon UST basin for the purpose of installing another UST. Subsequently, a fuel leak in the fiberglass fuel supply line near the northern fuel dispenser island was discovered and repaired. In December 1990, SEACOR conducted an IA and excavated approximately 420 cubic yards of petroleum-impacted soil between the 10,000-gallon diesel fuel UST and the northern fuel dispenser island (Figure 1.2). DRO at concentrations exceeding the MTCA Method A cleanup level (CUL) was detected in western and southern sidewalls of the excavation. The extent of the excavation was limited due to utilities to the east, the property boundary to the west, the fuel dispenser island to the north, and the UST basin to the south. Due to the limited extent of excavation, soil contamination remained in place following this IA. Imported fill was transported to the Site and used to backfill the excavation. Impacted soil was disposed of off-site (SEACOR 1991).

In conjunction with the excavation activities, five monitoring wells (MW-1 through MW-5) were installed on the property.[1] Soil samples from MW-2 contained gasoline-range organics (GRO) and total xylene concentrations exceeding their respective MTCA Method A CULs. Two rounds of groundwater sampling were conducted, and results indicated that total petroleum hydrocarbons (TPH; as DRO and GRO) and benzene were present at concentrations that exceeded their respective MTCA Method A CULs in monitoring wells MW-2 through MW-5. The second round of groundwater sampling and analysis showed that benzene concentrations varied from 81 to 580 micrograms per liter (µg/L), and DRO was detected at concentrations ranging from 2,100 to 160,000 µg/L. Analysis for lead was not performed for either soil or groundwater samples even though it was likely that the UST system once contained leaded gasoline. The SEACOR investigation did not define the extent of the groundwater contamination; the impacted

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[1] MW-1 and MW-4 were damaged or missing as of 2015 and replaced with MW-1A and MW-4A, respectively. MW-2, MW-4A, and MW-5 were abandoned during the 2021 excavation activities, and MW-2 and MW-4A were replaced with MW-2A and MW-4B, respectively.

downgradient wells (MW-4 and MW-5) were located near the southern property boundary, and no attempts were made to find the downgradient extent of the contamination plume.

1.4.2 1991 DPRA and SAIC Site Hazard Assessment

In April 1991, on the behalf of Ecology, DPRA and SAIC conducted site hazard assessment activities, which included installing a hydrologically upgradient monitoring well (MW-6) and collecting groundwater and surface water samples (DPRA and SAIC 1991). The surface water sample was collected at the irrigation ditch outfall underneath the Interstate 90 overpass at Canyon Road, approximately 0.3 miles southeast of the Site. Soil samples were not collected from monitoring well MW-6 due to no recovery during drilling. Groundwater samples from monitoring well MW-6 and the irrigation ditch outfall indicated that benzene, toluene, ethylbenzene, and total xylenes (BTEX) and TPH (as gasoline and diesel) were not detected, with concentrations less than their respective laboratory detection limits.

1.4.3 2011 NES Groundwater Investigation

In June 2010, three of the four USTs at the property failed cathodic protection audits. In December 2010, the tanks failed corrosion protection tests. In February 2011, NES collected groundwater samples that showed DRO, GRO, lead, and BTEX at concentrations greater than the MTCA Method A groundwater CULs.

On April 6, 2011, 2 months after the groundwater sampling, a field investigation by Ecology UST inspectors detected free product liquid consisting of GRO floating on groundwater in multiple monitoring or observation wells at the Site. The estimated thickness of free product (LNAPL) was at least 0.04 feet (approximately 0.5 inches).

In February 2011, contractor NES collected groundwater samples from four Site wells (the specific well locations sampled are not conclusively identified). The analyses showed DRO, GRO, lead, and BTEX at concentrations greater than the MTCA Method A groundwater CULs.

1.4.4 2015 Floyd|Snider Initial Investigation

In May 2015, Floyd|Snider completed initial site investigation activities to delineate petroleum impacts in soil and to investigate groundwater quality and flow direction. Twenty-two test pits (TP-1 through TP-22) were advanced on the Site to delineate the nature and extent of soil impacts, and four monitoring wells (MW-1A, MW-4A, MW-5A, and MW-7) were installed. Monitoring wells MW-1, MW-4, and MW-5 previously installed on the Big B property were either damaged or missing; therefore, they were replaced with MW-1A, MW-4A, and MW-5A in the same approximate locations (MW-7 and MW-5A have since been abandoned, as shown on Figure 1.2). Subsequently, three rounds of groundwater monitoring and sampling events were conducted.

Twenty-six soil samples were collected and analyzed during test pit and monitoring well installation activities. GRO, DRO, BTEX, and naphthalene were detected at concentrations exceeding unrestricted MTCA Method A CULs. GRO was detected at a maximum concentration of 3,700 milligrams per kilograms (mg/kg), and DRO was detected at a maximum concentration of 24,000 mg/kg. The distribution of benzene is generally associated with GRO impacts in soil. Oil-range organics (ORO) was either not detected or detected at concentrations less than the MTCA Method A CUL.

Groundwater sampling results indicated that the lateral extent of dissolved-phase petroleum hydrocarbons in groundwater included the areas east-northeast of the station building and southeast of the former fuel dispensers and 12,000 gallon baffled UST. DRO was the primary contaminant in groundwater. LNAPL was detected in monitoring wells MW-2, MW-4A, and MW-5A. Based on the apparent groundwater flow direction, which is predominantly to the south but varies between the southwest and southeast, it was assumed that the dissolved-phase plume extended off-property to the south beyond MW-4B and MW-5A and further investigation was necessary. The full scope of plume delineation investigations is included in the RI/FS (Floyd|Snider 2018).

1.4.5 2016 Floyd|Snider Supplemental Investigation Activities

Based on the initial investigation results, residual petroleum hydrocarbon impacts in soil were generally delineated beneath the Site; however, data gaps remained, including delineating the extent of LNAPL beneath the Site and delineating the lateral extension of impacted groundwater to the east and southeast. Therefore, the following supplemental investigation activities were conducted to investigate these data gaps:

- Installation of 22 LNAPL piezometers (PZ-1 through PZ-22)
- Installation of three additional groundwater monitoring wells along the eastern property boundary (MW-8, MW-9 [later replaced by MW-9A], and MW-10)
- Groundwater sampling
- Performance of two LNAPL monitoring events

In March 2016, 22 piezometers were installed to investigate the extent and thickness of LNAPL on the Site, and monitoring wells were installed to investigate the extent of dissolved-phase petroleum hydrocarbons off-property to the east. Past and current piezometer and monitoring well locations from Floyd|Snider investigations are shown on Figure 1.2.

LNAPL measurements collected from piezometers and wells at the Site indicated that LNAPL was found to be present predominantly in the southern portion of the Site at a maximum thickness of 0.82 feet in PZ-2. Therefore, an IA was required to address LNAPL migration off-site (Ecology 2015).

1.4.6 2016 Floyd|Snider Interim Action

In 2016, the four USTs at the property were removed by NES; three piezometers (PZ-23, PZ-24, and PZ-25) were installed on the Toad's and BNSF properties using a direct-push/hollow-stem auger combination drill rig; four piezometers (PZ-26 through PZ-29) were installed along the property border between the Big B and the BNSF rail line in test pits using a backhoe; and an IA for the removal of LNAPL was initiated by Floyd|Snider and Big B with the installation of a sump/skimmer system within a recovery trench dug along the southern boundary of Big B (Figure 1.2). The objective of the IA activities was to remove LNAPL, as directed by Ecology (Ecology 2015 and 2016a). The IA also included delineation of the lateral extent of soil contamination and LNAPL that may have migrated beyond the Big B property boundary onto Toad's property or into the BNSF ROW with the installation of PZ-23 through PZ-29. Only PZ-23 had a recordable LNAPL thickness in groundwater; a soil sample collected at that location had a DRO concentration of 13,000 mg/kg.

The LNAPL recovery portion of the IA was concluded in November 2017 due to diminishing free product recovery after the removal of approximately 364 gallons of LNAPL and the reduction of the LNAPL footprint across the Site. An IA Report, dated April 27, 2017, summarized the hydraulic recovery, via trenching and skimming, of LNAPL at the Site and was included as Appendix D in the RI/FS (Floyd|Snider 2018).

1.4.7 2016 Robert D. Miller Consulting, Inc., Free Product and Soil Investigation (Toad's)

In April 2016, Robert D. Miller Consulting, Inc. (RDM), on behalf of WSCO Petroleum Co., conducted a free product and soil investigation at Toad's. One objective of the 2016 investigation was to evaluate potential migration of LNAPL from the Big B property hydrologically downgradient to Toad's. RDM advanced 20 soil borings (P1 to P20; Figure 1.2) and collected approximately 25 soil and groundwater samples to be analyzed for DRO, GRO, and BTEX (RDM 2017). Analytical results from the soil samples collected on the Toad's property showed DRO and GRO concentrations exceeding MTCA Method A CULs at depths ranging from 5.5 to 7 feet below ground surface (bgs). The results of this investigation informed the lateral and vertical extent of the 2021 and 2022 remedial excavations at the Big B and Toad's properties.

1.4.8 2017 TRC Environmental Supplemental Off-Property Investigations

On November 6, 2017, TRC Environmental, on behalf of BNSF and Big B, conducted a supplemental off-property investigation at Ecology's request. Soil and groundwater samples at three off-Site locations (B-1 through B-3) were collected to delineate the extent of petroleum hydrocarbons in soil and groundwater (Figure 1.2). These locations are all due west of the existing BNSF railroad berm, approximately 25 feet west of the rail centerline. Soil and groundwater analytical results from all three borings indicate that TPH concentrations were less than MTCA Method A CULs. These off-Site soil borings were successful in delineating the full extent of soil and groundwater impacts to the west and southwest on the western side of the railroad tracks. Activities and results were summarized in the IA Report, which was included as Appendix D in the RI/FS (Floyd|Snider 2018).

1.4.9 2019 Floyd|Snider Interim Action Landfarming Pilot Test

An IA pilot test of landfarming was performed between July and November 2019 pursuant to the requirements of the 2019 AO. The IA consisted of two key activities: (1) excavation of contaminated soils in an area known to contain residual LNAPL following UST decommissioning in 2016; and (2) landfarming of the excavated soils (Floyd|Snider 2020a). The excavated area was approximately 2,200 square feet as measured at the top of slope. The results of the IA indicate that landfarming activities are a suitable remedial action for treatment of contaminated soils at the Site.

1.5 CONTAMINANTS OF CONCERN AND CLEANUP STANDARDS

After completion of the RI/FS and IA activities, a CAP for the Site was developed in coordination with Ecology (Ecology 2020). The CAP identified contaminants of concern (COCs), which include contaminants associated with the former USTs (GRO, DRO, BTEX, and naphthalene). COCs were selected to include compounds that had consistent exceedances of the most stringent MTCA Method A CULs for unrestricted land use, which are protective of groundwater as well as human health, in either the in situ dataset or in the historical dataset. The COCs and CULs for Site soil and groundwater are presented in Table 1.1.

Table 1.1
Site-Specific Cleanup Levels

Analyte	Soil CUL (1)	Groundwater CUL (1)
Benzene	0.030 mg/kg	5 µg/L
Toluene (2)	7 mg/kg	1,000 µg/L
Ethylbenzene (2)	6 mg/kg	700 µg/L
Total Xylenes (2)	9 mg/kg	1,000 µg/L
Naphthalene (2)	5 mg/kg	160 µg/L
GRO	30 mg/kg (3)	800 µg/L (2)
DRO	2,000 mg/kg	500 µg/L

Notes:
1 The bases for the CULs are MTCA Method A for unrestricted land use.
2 These compounds are not groundwater COCs and have never been detected at concentrations exceeding their respective groundwater CULs.
3 The MTCA Method A CULs presented are for GRO with detectable benzene. The MTCA Method A CUL for GRO without detectable benzene is 100 mg/kg.

As a component of the approved CAP, remediation levels (RELs) were proposed for GRO and DRO that would be used to confirm the removal of LNAPL-saturated soil during excavation activities (Floyd|Snider 2016). RELs proposed for DRO and GRO are 8,000 and 1,700 mg/kg, respectively, which are based on residual saturation values that were proposed in the 2016 Site Investigation Summary Report (Floyd|Snider 2016) and accepted by Ecology. The proposed excavation extent of LNAPL-saturated soil, based on these RELS, is shown on Figure 1.2.

2.0 Cleanup Action Activities

Cleanup action activities were completed as specified in the CAP and in accordance with the Engineering Design Report (EDR) prepared pursuant to the CAP (Floyd|Snider 2020b), between 2021 and 2022. The key cleanup action activities include the following:

- Excavation of LNAPL-impacted soil as shown in Figure 2.1
- On-site landfarming of excavated soil or transportation and disposal of contaminated soil off-site
- Installation of bioventing equipment following a bioventing pilot test
- Installation of monitoring wells and groundwater monitoring
- Sub-slab vapor assessment for the station building

Cleanup action activities occurred in two phases. The first phase of remedial activities was performed on the Big B property and west-adjacent BNSF property to between May and October 2021. The second phase was performed in June 2022 on Toad's and BNSF properties. Remedial action activities were completed in accordance with all MTCA requirements and access agreements with BNSF and Toad's. Each element of both phases is summarized in the following sections. This report summarizes the excavation activities, the results of the bioventing pilot test, and the installation of the replacement monitoring wells and vapor point.

2.1 PERMITS, UTILITY LOCATE, AND WELL DECOMMISSIONING ACTIVITIES

Prior to initiating cleanup actions, a site development permit and critical area waiver were obtained from the City of Ellensburg. In addition, public and private utility locates were conducted in the planned excavation area on Big B and Toad's, and monitoring wells within the excavation areas were decommissioned in accordance with Chapter 18.104 RCW.

2.2 EXCAVATION OF LNAPL-SATURATED SOIL

Excavation of LNAPL-saturated soil beneath the Big B, BNSF, and Toad's properties occurred in two phases in 2021 (Phase I) and 2022 (Phase II). Excavation activities were conducted using standard construction equipment. Base and sidewall samples were collected at the limits of the excavations to confirm the removal of LNAPL-saturated soil. Soil analytical results were compared to Site-specific RELs that were based on the DRO and GRO residual saturation values of 8,000 and 1,700 mg/kg, respectively. In addition, Sudan IV dye field kits were used to facilitate excavation activities and identify the presence of LNAPL (either residually trapped or mobile) in sidewall soil samples. Photographs of the Sudan IV test results are included in the photograph appendix (Appendix A). Impacted soil removed during Phase I was transported and stockpiled on-site for ex situ biological treatment within the landfarming treatment area. Impacted soil removed during Phase II was hauled off-site for disposal at Waste Management's Greater Wenatchee Landfill; trucking tickets are included in Appendix B. The following sections summarize the excavation activities for each Phase.

2.2.1 2021 Phase I Excavation Activities on Big B and BNSF Properties

Between May and June 2021, the entire area of LNAPL-containing soil beneath the Big B and BNSF properties was excavated to the maximum extent possible. Three separate excavations were completed, and base and sidewall samples were collected at the limits of the excavations to confirm the removal of LNAPL-saturated soil. Approximately 500 cubic yards of impacted soil and approximately 875 cubic yards of overburden were excavated. The final lateral dimensions and shape of each excavation is shown on Figure 2.1. Excavation of contaminated soil involved removal and stockpiling of the upper 3 feet of presumed clean overburden (into stockpiles SP01 through SP03) followed by the removal of underlying contaminated soil to a maximum depth 9.5 feet bgs.

Soil impacted by petroleum hydrocarbons was excavated to approximately 1 to 2 feet below the encountered water table, which occurred between 6 and 7 feet bgs, with total depths up to 9.5 feet bgs. If free product was observed running out of the excavated soil, it was allowed to drain back into the excavation (e.g., via drain holes in the excavator bucket), and it was captured using adsorbent pads. Once free of drainable liquids, impacted soil was transported and stockpiled on site for ex situ biological treatment within the landfarming treatment area shown on Figure 2.2.

Sidewalls were generally cut at a 1:1 slope to facilitate the safe excavation of contaminated soil to the required depth of 8 to 9 feet bgs. However, excavation activities on BNSF property and adjacent to the railroad were completed with a sidewall slope ratio of not greater than 2:1 starting from 15.5 feet from the centerline of the railway in accordance with BNSF Guidelines for Temporary Shoring (BNSF and Union 2004).

2.2.1.1 Phase I Excavation Confirmation Samples and Results

One soil confirmation sample was collected from each sidewall approximately every 20 feet laterally and at a depth between 4 and 6 feet or from areas where field screening indicated that contamination was present within the capillary fringe. Samples from the base of the excavation were collected approximately every 400 square feet per Ecology's *Guidance for Remediation of Petroleum Contaminated Sites* (Ecology 2016b).

All soil samples were field screened for the presence of volatile hydrocarbons using a photoionization detector (PID), sheen pan, and Sudan IV dye field kits. Sidewall samples at depths with the greatest presence of impacts via field screening were analyzed for the following:

- GRO by NWTPH-Gx
- DRO and ORO by NWTPH-Dx
- BTEX and naphthalene by USEPA Method 8021B/8260

Soil samples were delivered to Friedman & Bruya, Inc., in Seattle, Washington. Samples were labeled sequentially and designated sidewall (SIDE) or base samples (BASE) appended with their corresponding depth (e.g., BASE-09-8FT). Sample locations with results exceeding their respective REL that were removed via overexcavation and resampled were appended with "R" (e.g., BASE-09R-9.5FT). Sidewall and base sample results along the final excavation extent are shown on Table 2.1, and results for samples that were excavated are shown on Table 2.2. Laboratory reports are included as Appendix C.

Southern Diesel Excavation

Eight confirmation sidewall samples (SIDE-01-5.5FT through SIDE-08-5FT), seven base samples (BASE-01-7FT through BASE-07-8FT), and one duplicate (SIDE-100-5.0FT) were collected along the lateral and vertical extent of the excavation. All sample results were less than their respective REL in all directions except at SIDE-01-5.5FT, the southwest corner of the excavation, and at base sample location BASE-06-8FT (Table 2.1). Due to BNSF setback, shoring requirements, and access agreement restrictions, no further overexcavation to the west was conducted along the southwestern sidewall (SIDE-01-5.5FT) on BNSF property. Despite the results exceeding the RELs at SIDE-01-5.5FT, there were no signs of LNAPL seeping into the excavation from the sidewall at this location or from any other sidewall. In addition, the excavation could not be advanced deeper at BASE-06-8FT without potentially damaging the sewer line at this location. Sidewall samples were not collected along the southern sidewall between the Big B and Toad's properties because the subsequent Phase II excavation would remove the impacted soil between the properties.

The final maximum dimensions of the southern diesel excavation were approximately 85 feet by 85 feet, and the excavation extended to a maximum depth of 8 feet bgs. The final limits of the southern excavation and confirmation sample locations are shown on Figure 2.2, and photographs are included in Appendix A. Soil results are shown on Tables 2.1 and 2.2.

Central Gasoline Excavation

Four confirmation sidewall samples (SIDE-09R through SIDE-12R) and two base samples (BASE-08R-9FT and BASE-09R-9.5FT) were collected along their lateral and vertical extents. All sample results were less than their respective RELs (Table 2.1). There were no field signs of LNAPL seeping into the excavation from the maximum extent of the sidewalls.

The final maximum dimensions of the central gasoline excavation were approximately 30 feet by 56 feet, and the excavation extended to a maximum depth of 9.5 feet bgs. The final limits of the central excavation and confirmation sample locations are shown on Figure 2.1, and photographs are included in Appendix A. Soil results are shown on Tables 2.1 and 2.2.

Northern Excavation

Two confirmation sidewall samples (SIDE-13 and SIDE-15R), one base sample (BASE-10), and one duplicate (SIDE-115-5.5FT) were collected along the lateral and vertical extent of the excavation. Sidewall samples were not able to be collected from the eastern and southern sidewalls in the northern excavation due to the presence of pea gravel fill from prior UST excavations that was encountered when overexcavating along these sidewalls. Therefore, an additional sample could not be collected after removing soil from SIDE-14-5.5FT. All sample results were less than the RELs (Table 2.1). The average of a field duplicate and its corresponding sample was compared to the RELs (e.g., the average of SIDE-15R and its duplicate is 7,400 mg/kg for DRO). There were no field signs of LNAPL seeping into the excavation from the maximum extent of the sidewalls.

The final maximum dimensions of the northern excavation were approximately 40 feet by 38 feet, and the excavation extended to a maximum depth of 9 feet bgs. The final limits of the northern excavation and confirmation sample locations are shown on Figure 2.1, and photographs are included in Appendix A. Soil results are shown on Tables 2.1 and 2.2.

2.2.1.2 Phase I Backfill

The excavations on the Big B and BNSF properties were backfilled with imported fill below the water table and with laboratory-confirmed clean overburden soil above the water table in the top 3 feet, per the access agreement. Soils were compacted between 90% and 95%, per the access agreement and in accordance with BNSF engineering requirements. Overburden stockpile soil sample results (from portions of SP01, SP02, and SP03 that were reused on-site) are shown on Table 2.1. Stockpile samples from locations SP01-1 and SP01-4 contained TPH at concentrations greater than their respective CULs, and soil from these locations was placed in the landfarming area.

2.2.1.3 On-Site Ex Situ Biological Treatment

Excavated contaminated soil was treated on-site by landfarming within seven separate decision units (DU-1 through DU-3, DU-4A, DU-4B, DU-5A, and DU-5B). GRO- and DRO-impacted soil was spread out in 1- to 1.5-foot lifts in the landfarming area in the northern paved portion of the Site in June 2021 (Figure 2.2). Excavated soil was placed on a plastic liner and bermed to contain stormwater. A baseline composite soil sample was collected from each decision unit for initial characterization of TPH, BTEX, and naphthalene immediately after placement. The soil was tilled and amended with fertilizer composed primarily of nitrogen on a biweekly basis between June and October 2021.

Once the landfarmed soil was free of odor and sheen, three discrete samples were collected from each of the seven decision units for laboratory analysis in October 2021. Laboratory results indicated that COC concentrations were less than their respective CULs in all three samples collected from decision units DU-4A and DU-05B, in two discrete samples collected from DU-02, and in one sample collected from DU-03. With Ecology's approval, approximately 179 cubic yards of treated soil from these sample locations was returned to the excavation area and used as backfill within the top 1 foot at Big B. Figure 2.2 shows the landfarming area layout and CUL exceedance locations; Table 2.3 shows the soil analytical results for samples collected within the decision units; and laboratory reports are included as Appendix C.

All treated soil within the decision unit sub-areas that did not meet CULs was transported off-site to Waste Management's Greater Wenatchee Landfill in Wenatchee, Washington. A total of 424.03 tons of treated soil was transported to Waste Management for disposal, and trucking tickets are included as Appendix B.

2.2.2 2022 Phase II Excavation Activities on Toad's and BNSF Properties

In June 2022, the area of LNAPL-containing soil beneath the Toad's and BNSF properties was excavated to the maximum extent possible. The initial excavation occurred from June 13 through June 22, 2022. Approximately 475 cubic yards of impacted soil and approximately 290 cubic yards of presumed clean overburden were excavated from the Toad's and BNSF properties in 2022. The final lateral dimensions of the excavation are shown on Figure 2.1. A total of 625.55 tons of LNAPL-saturated soil was hauled off-site for disposal at Waste Management's Greater Wenatchee Landfill.

Excavation of soil involved removal and stockpiling of the upper 3 feet of presumed clean overburden (into stockpile SP04) followed by the removal of the underlying contaminated soil to a maximum depth of 9.5 feet bgs. Sidewalls were generally cut at a 1:1 slope to facilitate the safe excavation of contaminated soil to the required depth of 8 to 9 feet bgs. However, excavation activities on the BNSF property and adjacent to the railroad were completed with a sidewall slope ratio of not greater than 2:1 starting from 15.5 feet from the centerline of the railway in accordance with BNSF Guidelines for Temporary Shoring (BNSF and Union 2004).

The southern lateral excavation extent was limited because of the presence of a Visqueen groundwater barrier that was installed during a previous remedial excavation on the Toad's property to prevent dissolved-phase hydrocarbons migrating into the clean fill placed within the previous excavation. The Visqueen barrier was exposed above the water table (to a depth of approximately 1 foot) during the 2022 excavation, but the impacted soil adjacent to the barrier could not be fully excavated below the water table without risking puncture of the containment barrier. Additionally, the lateral excavation extent on the BNSF ROW was limited due to shoring and slope stability requirements along the railway.

The former LNAPL collection trench that extended along the southern Big B property boundary was exposed during the 2022 excavation. The collection trench had been exposed in 2021 but was not fully excavated at that time because the pea gravel within the trench began to slough into the southern diesel excavation area. The pea gravel was fully removed in 2022. Field screening of the 2021 backfill did not indicate that the fill had been contaminated by the remaining diesel in the collection trench, and no additional sidewall samples were collected from the 2021 clean backfill. After the excavation of the collection trench pea gravel, the excavator bucket was cleaned of soil and washed before additional confirmation samples were collected elsewhere in the excavation.

In the remainder of the excavation area, soil impacted by TPH was excavated to approximately 3 to 4 feet below the encountered water table, which occurred between 5 and 6 feet bgs, with total depths up to 9.5 feet bgs. If free product was observed running out of the excavated soil, it was allowed to drain back into the excavation (e.g., via drain holes in the excavator bucket), and it was captured using adsorbent pads. Once free of drainable liquids, impacted soil was transported and stockpiled on-site for later disposal. Stockpiles were lined on the base with Visqueen and surrounded by straw baffles to prevent off-site transport of sediment or remnants of draining groundwater.

2.2.2.1 Phase II Excavation Confirmation Samples and Results

One soil sample was collected from the excavation sidewall approximately every 20 feet lateral from a depth of between 4 to 6 feet bgs. Samples from the base of the excavation were collected approximately every 400 square feet. The same naming convention used during the 2021 excavation (Section 2.2.1.1) was applied to the sample names during the Phase II excavation activities. The final limits of the excavation on the Toad's property are shown on Figure 2.1. The maximum excavation depth was 9 feet bgs.

All soil samples were field screened for the presence of volatile hydrocarbons using a PID, sheen pan, and Sudan IV dye field kits. Samples collected were analyzed for the following:

- GRO by NWTPH-Gx
- DRO and ORO by NWTPH-Dx
- BTEX and naphthalene by USEPA Method 8021B/8260

Soil samples were delivered to Friedman & Bruya, Inc., in Seattle, Washington. Sidewall and base sample results for soil remaining in place are shown on Table 2.1, and sample results of excavated soil are shown on Table 2.2. Laboratory reports are included as Appendix C.

Seven sidewall confirmation samples (SIDE-16-6.0FT through SIDE-22-6.0FT), two base samples (BASE-11-9.0FT and BASE-12-9.0FT), and one duplicate (SIDE-119-6.0FT) were collected at the lateral and vertical extents of excavation on the BNSF and Toad's properties (Figure 2.1). Concentrations of DRO and GRO were less than their respective RELs for all samples except for SIDE-18-6.0FT, SIDE-19-6.0FTand SIDE-20-6.0FT, which contained DRO concentrations of 16,000, 12,000, and 13,000 mg/kg, respectively.

Initial soil confirmation samples SIDE-18-6.0FT and SIDE-19-6.0FT were collected from an interval of black, silty sand that extended approximately from the 4- to 8-foot-bgs soil interval along most of the southern excavation boundary (as observed at soil boring locations P12 and P18; refer to Figure 2.1). The black sand layer thins toward the west-southwest and the lithology becomes predominantly organic silt toward the BNSF property (such as observed at soil boring P18). Field observations indicate that the majority of the impacts were present within this black sand layer, which exhibited strong odor, sheen, Sudan IV results that were positive for LNAPL, and elevated PID readings. The sidewall in this area was overexcavated by an additional 5 to 10 lateral feet to the south and as close as practicable to the Visqueen barrier (Photographs 37 and 38 in Appendix A), and resampled (SIDE-18R-6.0FT and SIDE-19R-6.0FT). Prior to sample collection, as much of the contaminated black sand was removed as feasible while maintaining the integrity of the Visqueen barrier. Laboratory results for SIDE-18R-6.0FT and SIDE-19R-6.0FT show that DRO was detected at concentrations of 10,000 and 12,000 mg/kg, respectively. However, there is very little soil remaining in place between the excavation and the Visqueen barrier. Additionally, due to BNSF setback, shoring requirements, and access agreement restrictions, no further overexcavation was conducted along the western sidewall (SIDE-20-6.0FT) on BNSF property where DRO was detected at a concentration of 13,000 mg/kg. Despite the results exceeding the

RELs at these three sidewall sample locations, there were no signs of LNAPL seeping into the excavation from the sidewall at this location or from any other sidewall.

Photographs are included in Appendix A, and soil results are shown on Tables 2.1 (in situ soil) and 2.2 (overexcavated soil).

2.2.2.2 Phase II Backfill

The excavation on the Toad's and BNSF properties was backfilled with imported quarry spalls below the water table and with imported fill and with laboratory-confirmed clean overburden soil above the water table, per the access agreements. The surface of the BNSF and Toad's properties was repaved with asphalt. Soils were compacted between 90% and 95%, per the access agreement and in accordance with BNSF engineering requirements. Overburden stockpile sample results are shown on Table 2.1. Stockpile sample SP04-1 contained a GRO concentration greater than the CUL (30 mg/kg), and soil from this location was placed in the excavation stockpile for transport off-site for disposal at Waste Management's Greater Wenatchee Landfill.

2.3 BIOVENTING

Bioventing is a component of the cleanup design to remediate impacted soil remaining in the vadose zone after excavation activities. Bioventing piping will be installed within remaining areas of impacted soil just above the high groundwater table and a blower will ventilate and encourage aerobic biodegradation of contamination in the remaining soil.

Prior to installation of the full-scale bioventing system, a pilot study was conducted from July 5 through 7, 2022, to determine the radius of influence (ROI) of each bioventing discharge point and the ideal air discharge rate. This pilot test used gas probe implants composed of a 5-foot horizontal polyvinyl chloride (PVC) screen buried in the vadose zone at a depth of 3 feet bgs and existing wells spaced at various distances from the injection point to record measurements during the study. A small blower was placed aboveground and tied into the injection points. This blower provided fresh air at various rates to the subsurface soils. Baseline soil oxygen, volatile organic compound concentrations, and lower explosive limit (methane) measurements were recorded from gas probe implants and existing well locations using a four-gas meter and PID. During the pilot test, these soil gas parameters were compared to the baseline concentrations.

The pilot test study determined a ROI of 30 feet at a discharge rate of approximately 30 cubic feet per minute (cfm). Based on this ROI, Figure 2.3 shows the proposed layout for the bioventing lines. All of the bioventing lines and screens south of the Toad's and Big B property boundary were pre-installed during the Phase II excavation activities. This was conducted with approval from Ecology to avoid having to access the Toad's and BNSF properties and cause subsurface disruption again in a future date. Photographs of the bioventing lines and screens that were installed during the Phase II excavation are included in Appendix A. Because the pilot test had not been completed when the bioventing lines and screens were installed on the Toad's and BNSF properties, the screens were placed in locations shown on Figure 2.3 (Bioventing Line 1) using a 10-foot ROI. The PVC lines and screens were placed directly on remaining impacted soil, just above ground water at approximately 3 feet bgs. Approximately 6 inches of pea gravel was placed over the screens to prevent the screens from being clogged with finer-grained soil. The screens at the end of the piping were placed at a slightly lower elevation then the lines running back toward the blower to allow the lines to drain, in the event of higher than typical groundwater elevations. Imported backfill was placed above the pea gravel.

Operations and maintenance of the bioventing system will include the following components:

- In the first week of blower operation, a daily inspection will be conducted to ensure that any startup problems are quickly corrected.
- In the first 2 months of operation, filter operation will be checked every other week.
- After 2 months of operation, monthly inspections will be conducted of the blower and the bioventing system.

During each inspection, field personnel will record blower pressure, temperature, and air flow from the blower and into each bioventing line.

The pilot study details and conclusions are included in the EDR Addendum memorandum in Appendix D, which includes the operations and maintenance manual.

2.4 MONITORING WELL INSTALLATION AND PERFORMANCE GROUNDWATER SAMPLING

Three monitoring wells, MW-2A, MW-4B, and MW-9A, were reinstalled with a direct-push drill rig after excavation activities to replace MW-2, MW-4A, and MW-9, which were decommissioned during Phase I remediation activities in 2021 (Figure 2.1). No samples were collected during well installation because the replacement wells were installed in clean backfill. Appendix E contains the boring logs and monitoring well construction details for the three replacement wells.

The wells were constructed of 2-inch-diameter Schedule 40 PVC with 0.010-inch slotted screen and a screen depth interval from 3 to 13 feet bgs. The three wells were completed with flush-mounted, traffic grade steel monuments and secured by a lockable gasket cap. Each well was developed by pumping 10 volumes with a submersible pump.

Attempts were made to locate MW-7, which had been buried and damaged during backfill of the 2021 excavation area, but it was not located or reinstalled. MW-3 was also buried during the Phase I excavation activities, but it was located and repaired in July 2022. MW-3 was redeveloped, and a new monument was installed to protect the well from further damage during redevelopment activities.

Performance groundwater sampling will begin after the full-scale bioventing system has been installed and will be conducted on a semiannual basis at wells MW-2A, MW-4B, and MW-9A located on the Big B property and wells MW-1 and MW-2 located on Toad’s property.

2.5 INDOOR VAPOR POINT INSTALLATION

Future Site use plans are assumed to include use of the station building; therefore, a temporary sub-slab vapor point was installed in the slab of the station building footprint for collection of soil gas samples (Figure 2.1). A Cox-Calvin & Associates, Inc., VAPOR PIN® point extended 6 inches below the surface of the concrete floor slab to collect soil vapors accumulating directly under the slab. The standard operating procedure was followed during installation of the vapor point, per Appendix B of the EDR (Floyd|Snider 2020b). Soil gas will be sampled during the first two semiannual groundwater performance sampling events in accordance with the procedures in Appendix B of the EDR.

3.0 Conclusions and Next Steps

In total, 1319.58 tons of LNAPL-saturated soil at concentrations exceeding the RELs was excavated at the Site. A total of 1049.58 tons was transported off-site for disposal during both Phase I and Phase II excavations. The excavations extended to a maximum depth of 9.5 feet bgs and were completed to the maximum extents possible, per the access agreements in place with adjacent property owners. Soil analytical results from samples collected from the excavation sidewalls confirm that the remedial excavation activities meet the Site-specific RELs in all directions except where limited by the conditions of access agreements, including (1) a limited area (two of five sidewall samples) along the western sidewall adjacent to the BNSF property, and (2) a de minimis amount of soil (represented by two sidewall samples) along the southern sidewall lying against the Visqueen barrier that marked the former Toad's property excavation. All base samples met Site-specific RELs except one, BASE-06-8.5FT on the Big B property, which could not be excavated deeper without the potential to damage the sewer line at this location.

The oxygen utilization calculations and ROI results from the bioventing pilot test show that bioventing is feasible at the Site. The proposed final layout will treat all remaining areas with concentrations greater than MTCA Method A CULs and is shown on Figure 2.3.

Three monitoring wells were reinstalled following excavation activities to replace those that were decommissioned, and one soil vapor point was installed within the station building to access vapor risk to indoor occupants. Per the CAP, performance groundwater sampling will be conducted on a semiannual basis on wells MW-2A, MW-4B, and MW-9A located on the Big B property and wells MW-1 and MW-2 located on Toad's property. Wells will be sampled once in the dry season and once in the wet season.

Two rounds of soil gas samples will be collected concurrently during the first two groundwater sampling events. Soil gas results will be compared to screening levels presented in Table B-1 of Ecology's Vapor Intrusion Guidance; furthermore, if needed, results will be used to develop Site-specific indoor air CULs in accordance with Ecology guidance (Ecology 2022).

Monitored natural attenuation (MNA) parameters will be analyzed during the first four sampling events, and total organic carbon will be analyzed once at the following performance wells: MW-2A (Big B), MW-4B (Big B), and MW-1 (Toad's). MNA monitoring will be conducted in accordance with Ecology's MNA Guidance (Ecology 2005), and MNA parameters are summarized in Section 4.1.2.5 of the EDR, which is included as Appendix B in the CAP (Ecology 2020).

Per the CAP, compliance monitoring (including performance and confirmational monitoring) is anticipated to continue for 5 to 10 years and will begin after the full-scale bioventing system has been installed. Performance sampling, including groundwater and soil gas samples, will occur on a semiannual basis, once during the high groundwater season (April) and once in the low groundwater season (October) until groundwater analytical data indicate that CULs have been achieved. When CULs in groundwater are first achieved, the bioventing system will be shut down, and compliance sampling will begin after 3 months following shutdown to allow subsurface conditions to reach equilibrium. The frequency of groundwater monitoring will be increased to quarterly until CULs are met for four consecutive events. If groundwater CULs are not met or do not show a declining trend in concentrations by the 5th year of groundwater performance monitoring, potential contingency actions, such as installation of a biosparging system or additional soil excavation, will be evaluated. An anticipated schedule of the remaining cleanup activities to be performed pursuant to the CAP is shown in Table 3.1.

Table 3.1
System Installation and Compliance Monitoring Schedule

Activity	Estimated Date
Prepare RACR, receive Ecology approval	October 2022
Installation of bioventing system	Spring 2023
Begin semiannual groundwater monitoring after the full-scale bioventing system has been installed	2023

4.0 References

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Tables

Table 2.1
Confirmation Soil Results

Location Type					Confirmation												
Location Name					**BASE-01**	**BASE-02**	**BASE-03R**	**BASE-04**	**BASE-05**	**BASE-06**	**BASE-07**	**BASE-08R**	**BASE-09R**	**BASE-10**	**BASE-11**	**BASE-12**	**SIDE-01**
Sample Name					**BASE-01-7FT**	**BASE-02-8FT**	**BASE-03R-9FT**	**BASE-04-8FT**	**BASE-05-8FT**	**BASE-06-8FT**	**BASE-07-8FT**	**BASE-08R-9FT**	**BASE-09R-9.5FT**	**BASE-10-9FT**	**BASE-11-9.0FT**	**BASE-12-9.0FT**	**SIDE-01-5.5FT**
Sample Date					**5/17/2021**	**5/17/2021**	**5/28/2021**	**5/17/2021**	**5/18/2021**	**5/18/2021**	**5/19/2021**	**6/10/2021**	**5/28/2021**	**5/28/2021**	**6/16/2022**	**6/15/2022**	**5/17/2021**
Sample Depth					**7 feet**	**8 feet**	**9 feet**	**8 feet**	**8 feet**	**8 feet**	**8 feet**	**9 feet**	**9.5 feet**	**9 feet**	**9 feet**	**9 feet**	**5.5 feet**
Analyte	**CAS No.**	**CUL (1)**	**REL (2)**	**Unit**													
Total Petroleum Hydrocarbons																	
Diesel-range organics	DRO	2,000	8,000	mg/kg	460	1,600	410	**4,500**	1,400	**8,700**	800	77	230	50 U	1,800	1,600	**37,000**
Gasoline-range organics	GRO	30	1,700	mg/kg	**46**	**76**	**230**	**880**	**370**	**1,100**	**230**	28	**510**	**84**	**400**	**560**	**2,000 J**
Oil-range organics	ORO	2,000	--	mg/kg	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	730 (3)
Volatile Organic Compounds																	
Benzene	71-43-2	0.030	--	mg/kg	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 UJ	0.030 U	0.030 U	0.030 U	0.030 UJ
Ethylbenzene	100-41-4	6.0	--	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 UJ	0.10	0.050 U	0.050 U	0.050 U
Toluene	108-88-3	7.0	--	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U
Xylene (meta & para)	108-38-3/106-42-3	--	--	mg/kg	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 UJ	0.10 U	0.10 U	0.10 U	0.10 U
Xylene (ortho)	95-47-6	--	--	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U
Xylene (total)	1330-20-7	9.0	--	mg/kg	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 UJ	0.10 U	0.10 U	0.10 U	0.10 U
Naphthalene	91-20-3	5.0	--	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.072	0.050 U	0.050 UJ	0.18	0.050 U	0.050 U	0.89

Notes:

All blank cells are intentional.
All results are rounded to two significant figures.
-- Not available.
RED/BOLD Analyte was detected at a concentration greater than the CUL.
RED/BOLD Analyte was detected at a concentration greater than the CUL and REL.
1 CULs are based on MTCA Method A Unrestricted values.
2 RELs are based on site-specific residual saturation values established.
3 The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Abbreviations:

CAS Chemical Abstracts Service
CUL Cleanup Level
mg/kg Milligrams per kilogram
MTCA Model Toxics Control Act
REL Remediation level

Qualifiers:

J Analyte was detected; concentration is an estimate.
JQ Analyte was detected; concentration is an estimate due to quantitation between the method detection limit and reporting limit.
U Analyte was not detected at the associated reporting limit.
UJ Analyte was not detected at the associated reporting limit, which is an estimate.

Table 2.1
Confirmation Soil Results

Location Type					Confirmation (cont.)												
Location Name					**SIDE-02R**	**SIDE-03RRR**	**SIDE-04**	**SIDE-05R**	**SIDE-06**	**SIDE-07**	**SIDE-08**		**SIDE-09R**	**SIDE-10**	**SIDE-11**	**SIDE-12R**	**SIDE-13**
Sample Name					**SIDE-02R-5.5FT**	**SIDE-03RRR-5.5FT**	**SIDE-04-5FT**	**SIDE-05R-5.5FT**	**SIDE-06-5.5FT**	**SIDE-07-5.5FT**	**SIDE-08-5FT**	**SIDE-100-5FT**	**SIDE-09R-5.5FT**	**SIDE-10-5.5FT**	**SIDE-11-5.5FT**	**SIDE-12R-5.5FT**	**SIDE-13-5.5FT**
Sample Date					**5/28/2021**	**6/24/2021**	**5/18/2021**	**5/28/2021**	**5/18/2021**	**5/18/2021**	**5/19/2021**	**5/19/2021**	**5/28/2021**	**5/19/2021**	**5/19/2021**	**5/28/2021**	**5/28/2021**
Sample Depth					**5.5 feet**	**5.5 feet**	**5 feet**	**5.5 feet**	**5.5 feet**	**5.5 feet**	**5 feet**	**5 feet**	**5.5 feet**	**5.5 feet**	**5.5 feet**	**5.5 feet**	**5.5 feet**
Analyte	**CAS No.**	**CUL [1]**	**REL [2]**	**Unit**													
Total Petroleum Hydrocarbons																	
Diesel-range organics	DRO	2,000	8,000	mg/kg	**6,400**	440	1,400	**2,700**	**6,300**	**6,000**	**3,900**	**2,100**	**2,600**	**4,500**	**7,900**	**5,400**	50 U
Gasoline-range organics	GRO	30	1,700	mg/kg	**1,000**	**79 J**	**230**	**690**	**680**	**1,000**	**370**	**400**	**1,300**	**1,300**	**1,100 J**	**1,100**	21
Oil-range organics	ORO	2,000	--	mg/kg	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
Volatile Organic Compounds																	
Benzene	71-43-2	0.030	--	mg/kg	0.030 U	0.030 U	0.030 U	0.030 U	0.030 UJ	0.030 UJ	0.030 U	0.030 U	**0.17**	**0.16**	**0.048**	0.030 UJ	0.030 U
Ethylbenzene	100-41-4	6.0	--	mg/kg	0.66	0.050 U	0.050 U	0.050 U	0.080 JQ	0.072 JQ	0.050 U	0.050 U	0.20	0.17	0.050 U	0.055	0.050 U
Toluene	108-88-3	7.0	--	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.050 UJ	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Xylene (meta & para)	108-38-3/106-42-3	--	--	mg/kg	0.10 U	0.10 U	0.10 U	0.10 U	0.10 UJ	0.10 UJ	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.11	0.10 U
Xylene (ortho)	95-47-6	--	--	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.067 JQ	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Xylene (total)	1330-20-7	9.0	--	mg/kg	0.10 U	0.10 U	0.10 U	0.10 U	0.067 J	0.10 UJ	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.11	0.10 U
Naphthalene	91-20-3	5.0	--	mg/kg	0.97	0.050 U	0.050 U	0.050 U	0.44	0.050 UJ	0.050 U	0.050 U	0.66	0.15	0.050 U	0.33	0.050 U

Notes:

All blank cells are intentional.

All results are rounded to two significant figures.

-- Not available.

RED/BOLD Analyte was detected at a concentration greater than the CUL.

RED/BOLD Analyte was detected at a concentration greater than the CUL and REL.

1 CULs are based on MTCA Method A Unrestricted values.

2 RELs are based on site-specific residual saturation values established.

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

Abbreviations:

CAS	Chemical Abstracts Service
CUL	Cleanup Level
mg/kg	Milligrams per kilogram
MTCA	Model Toxics Control Act
REL	Remediation level

Qualifiers:

J	Analyte was detected; concentration is an estimate.
JQ	Analyte was detected; concentration is an estimate due to quantitation between the method detection limit and reporting limit.
U	Analyte was not detected at the associated reporting limit.
UJ	Analyte was not detected at the associated reporting limit, which is an estimate.

Table 2.1
Confirmation Soil Results

Location Type					**Confirmation (cont.)**								
Location Name					**SIDE-15R**		**SIDE-16**	**SIDE-17**	**SIDE-18R**	**SIDE-19R**	**SIDE-20**	**SIDE-21**	**SIDE-22**
Sample Name					**SIDE-15R-5.5FT**	**SIDE-115-5.5FT**	**SIDE-16-6.0FT**	**SIDE-17-6.0FT**	**SIDE-18R-6.0FT**	**SIDE-19R-6.0FT**	**SIDE-20-6.0FT**	**SIDE-21-6.0FT**	**SIDE-22-6.0FT**
Sample Date					**6/10/2021**	**6/10/2021**	**6/14/2022**	**6/15/2022**	**6/22/2022**	**6/22/2022**	**6/16/2022**	**6/17/2022**	**6/22/2022**
Sample Depth					**5.5 feet**	**5.5 feet**	**6 feet**	**6 feet**	**6 feet**	**6 feet**	**6 feet**	**6 feet**	**6 feet**
Analyte	**CAS No.**	**CUL (1)**	**REL (2)**	**Unit**									
Total Petroleum Hydrocarbons													
Diesel-range organics	DRO	2,000	8,000	mg/kg	**6,600**	**8,200**	160	**3,900**	**10,000**	**12,000**	**13,000**	**4,300**	570
Gasoline-range organics	GRO	30	1,700	mg/kg	**350 J**	**250**	**56**	**1,000**	**1,200**	**1,100**	**3,100**	**680**	**230**
Oil-range organics	ORO	2,000	--	mg/kg	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
Volatile Organic Compounds													
Benzene	71-43-2	0.030	--	mg/kg	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
Ethylbenzene	100-41-4	6.0	--	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.15	0.050 U	0.096
Toluene	108-88-3	7.0	--	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.051
Xylene (meta & para)	108-38-3/106-42-3	--	--	mg/kg	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.21	0.10 U	0.25
Xylene (ortho)	95-47-6	--	--	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.059
Xylene (total)	1330-20-7	9.0	--	mg/kg	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.21	0.10 U	0.31
Naphthalene	91-20-3	5.0	--	mg/kg	0.050 U	0.050 U	0.068	0.050 U	0.45	1.1	1.1	0.050 U	0.056

Notes:

	All blank cells are intentional.
	All results are rounded to two significant figures.
--	Not available.
RED/BOLD	Analyte was detected at a concentration greater than the CUL.
RED/BOLD	Analyte was detected at a concentration greater than the CUL and REL.
1	CULs are based on MTCA Method A Unrestricted values.
2	RELs are based on site-specific residual saturation values established.
3	The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Abbreviations:

CAS	Chemical Abstracts Service
CUL	Cleanup Level
mg/kg	Milligrams per kilogram
MTCA	Model Toxics Control Act
REL	Remediation level

Qualifiers:

J	Analyte was detected; concentration is an estimate.
JQ	Analyte was detected; concentration is an estimate due to quantitation between the method detection limit and reporting limit.
U	Analyte was not detected at the associated reporting limit.
UJ	Analyte was not detected at the associated reporting limit, which is an estimate.

Table 2.1
Confirmation Soil Results

				Location Type	Stockpile												
				Location Name	**SP01**			**SP02**			**SP03**			**SP04**			
				Sample Name	**SP01-2**	**SP01-3**	**SP01-5**	**SP02-1**	**SP02-2**	**SP02-3**	**SP03-1**	**SP03-2**	**SP03-3**	**SP-04-1**	**SP-04-2**	**SP-04-3**	**SP-04-4**
				Sample Date	**5/19/2021**	**5/19/2021**	**5/19/2021**	**5/28/2021**	**5/28/2021**	**5/28/2021**	**6/10/2021**	**6/10/2021**	**6/10/2021**	**6/15/2022**	**6/15/2022**	**6/15/2022**	**6/15/2022**
				Sample Depth	**0.5 feet**	**0.5 feet**	**0.5 feet**	**0.5 feet**	**0.5 feet**	**0.5 feet**	**0.5 feet**	**0.5 feet**	**0.5 feet**	**0.5 feet**	**0.5 feet**	**0.5 feet**	**0.5 feet**
Analyte	**CAS No.**	**CUL (1)**	**REL (2)**	**Unit**													
Total Petroleum Hydrocarbons																	
Diesel-range organics	DRO	2,000	8,000	mg/kg	210	96	25	5.0 U	5.0 U	24	5.0 U	15	26	520	100	240	50 U
Gasoline-range organics	GRO	30	1,700	mg/kg	28	5.0 U	6.8	5.0 U	5.0 U	5.0 U	5.0 U	6.3	5.0 U	15	5.0 U	5.0 U	5.0 U
Oil-range organics	ORO	2,000	--	mg/kg	50	66	47	25 U	25 U	25 U	25 U	41	69	250 U	250 U	250 U	250 U
Volatile Organic Compounds																	
Benzene	71-43-2	0.030	--	mg/kg	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U		0.030 U		0.030 U	0.030 U	0.030 U	0.030 U
Ethylbenzene	100-41-4	6.0	--	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U		0.050 U		0.050 U	0.050 U	0.050 U	0.050 U
Toluene	108-88-3	7.0	--	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U		0.050 U		0.050 U	0.050 U	0.050 U	0.050 U
Xylene (meta & para)	108-38-3/106-42-3	--	--	mg/kg	0.10 U	0.10 U	0.12	0.10 U	0.10 U	0.10 U		0.10 U		0.10 U	0.10 U	0.10 U	0.10 U
Xylene (ortho)	95-47-6	--	--	mg/kg	0.050 U	0.050 U	0.063	0.050 U	0.050 U	0.050 U		0.050 U		0.050 U	0.050 U	0.050 U	0.050 U
Xylene (total)	1330-20-7	9.0	--	mg/kg	0.10 U	0.10 U	0.18	0.10 U	0.10 U	0.10 U		0.10 U		0.10 U	0.10 U	0.10 U	0.10 U
Naphthalene	91-20-3	5.0	--	mg/kg	0.050 U	0.050 U	0.051	0.050 U	0.050 U	0.050 U		0.050 U		0.050 U	0.050 U	0.050 U	0.050 U

Notes:

All blank cells are intentional.

All results are rounded to two significant figures.

-- Not available.

RED/BOLD Analyte was detected at a concentration greater than the CUL.

RED/BOLD Analyte was detected at a concentration greater than the CUL and REL.

1 CULs are based on MTCA Method A Unrestricted values.

2 RELs are based on site-specific residual saturation values established.

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

Abbreviations:

CAS	Chemical Abstracts Service
CUL	Cleanup Level
mg/kg	Milligrams per kilogram
MTCA	Model Toxics Control Act
REL	Remediation level

Qualifiers:

J	Analyte was detected; concentration is an estimate.
JQ	Analyte was detected; concentration is an estimate due to quantitation between the method detection limit and reporting limit.
U	Analyte was not detected at the associated reporting limit.
UJ	Analyte was not detected at the associated reporting limit, which is an estimate.

Table 2.2
Overexcavated Soil Sample Results

Location Type					**Confirmation**											
Location Name					**BASE-03**	**BASE-08**	**BASE-09**	**SIDE-02**	**SIDE-03**	**SIDE-03R**	**SIDE-03RR**	**SIDE-05**	**SIDE-09**	**SIDE-12**	**SIDE-14**	**SIDE-15**
Sample Name					**BASE-03-8FT**	**BASE-08-8FT**	**BASE-09-8FT**	**SIDE-02-5.5FT**	**SIDE-03-5.5FT**	**SIDE-03R-5.5FT**	**SIDE-03RR-5.5FT**	**SIDE-05-5.5FT**	**SIDE-09-5.5FT**	**SIDE-12-5.5FT**	**SIDE-14-5.5FT**	**SIDE-15-5.5FT**
Sample Date					**5/17/2021**	**5/19/2021**	**5/19/2021**	**5/17/2021**	**5/17/2021**	**5/28/2021**	**6/10/2021**	**5/18/2021**	**5/19/2021**	**5/19/2021**	**5/28/2021**	**5/28/2021**
Sample Depth					**8 feet**	**8 feet**	**8 feet**	**5.5 feet**	**5.5 feet**	**5.5 feet**	**5.5 feet**	**5.5 feet**	**5.5 feet**	**5.5 feet**	**5.5 feet**	**5.5 feet**
Analyte	**CAS No.**	**CUL (1)**	**REL (2)**	**Unit**												
Total Petroleum Hydrocarbons																
Diesel-range organics	DRO	2,000	8,000	mg/kg	**18,000**	**7,700**	**14,000**	**10,000**	**11,000**	**8,900**	**20,000**	**6,200**	**9,500**	**26,000**	**11,000**	**10,000**
Gasoline-range organics	GRO	30	1,700	mg/kg	**1,200 J**	**4,000**	**2,200 J**	**1,500**	**2,000**	**3,300 J**	**2,100**	**1,900**	**2,400**	**2,000**	**2,000**	**2,000**
Oil-range organics	ORO	2,000	--	mg/kg	370 (3)	250 U	250 U	250 U	250 U	250 U	380 (3)	250 U	250 U	630 (3)	250 U	250 U
Volatile Organic Compounds																
Benzene	71-43-2	0.030	--	mg/kg	0.030 UJ	**0.39**	**0.056 JQ**	0.030 UJ	0.030 UJ	0.030 UJ	0.030 U	0.030 UJ	**0.25**	0.030 UJ	0.030 UJ	0.030 UJ
Ethylbenzene	100-41-4	6.0	--	mg/kg	0.050 UJ	1.3	0.16	0.050 U	0.15	0.050 U	0.050 U	0.050 U	1.1	0.050 UJ	0.43	0.050 U
Toluene	108-88-3	7.0	--	mg/kg	0.050 UJ	0.054 JQ	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 UJ	0.050 UJ	0.050 U	0.050 U
Xylene (meta & para)	108-38-3/106-42-3	--	--	mg/kg	0.10 UJ	0.11 JQ	0.10 UJ	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 UJ	0.10 UJ	0.10 U	0.10 U
Xylene (ortho)	95-47-6	--	--	mg/kg	0.050 UJ	0.051 JQ	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.069 JQ	0.050 UJ	0.050 U	0.050 U
Xylene (total)	1330-20-7	9.0	--	mg/kg	0.10 UJ	0.16 J	0.10 UJ	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.069 J	0.10 UJ	0.10 U	0.10 U
Naphthalene	91-20-3	5.0	--	mg/kg	0.050 UJ	0.15	2.0	1.2	2.8	2.7	2.9	0.57	2.8	0.050 UJ	0.32	0.050 U

Notes:

All blank cells are intentional.
All results are rounded to two significant figures.
-- Not available.
Italic Analyte was not detected; the reporting limit is greater than the CUL.
RED/BOLD Analyte was detected at a concentration greater than the CUL.
RED/BOLD Analyte was detected at a concentration greater than the CUL and REL.
1 CULs are based on MTCA Method A Unrestricted values.
2 RELs are based on site-specific residual saturation values established.
3 The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Abbreviations:

CAS	Chemical Abstracts Service
CUL	Cleanup Level
mg/kg	Milligrams per kilogram
MTCA	Model Toxics Control Act
REL	Remediation level

Qualifiers:

J	Analyte was detected; concentration is an estimate.
JQ	Analyte was detected; concentration is an estimate due to quantitation between the method detection limit and reporting limit.
U	Analyte was not detected at the associated reporting limit.
UJ	Analyte was not detected at the associated reporting limit, which is an estimate.

Table 2.2
Overexcavated Soil Sample Results

				Location Type	Confirmation (cont.)			Stockpile		
				Location Name	**SIDE-18**	**SIDE-19**		**SP01**		**SP04**
				Sample Name	**SIDE-18-6.0FT**	**SIDE-19-6.0FT**	**SIDE-119-6.0FT**	**SP01-1**	**SP01-4**	**SP04-5**
				Sample Date	**6/16/2022**	**6/16/2022**	**6/16/2022**	**5/19/2021**	**5/19/2021**	**6/15/2022**
				Sample Depth	**6 feet**	**6 feet**	**6 feet**	**0.5 feet**	**0.5 feet**	**0.5 feet**
Analyte	**CAS No.**	**CUL $^{(1)}$**	**REL$^{(2)}$**	**Unit**						
Total Petroleum Hydrocarbons										
Diesel-range organics	DRO	2,000	8,000	mg/kg	**16,000**	**12,000**	**12,000**	120	640	50 U
Gasoline-range organics	GRO	30	1,700	mg/kg	**1,700**	**1,600**	**2,000**	**52**	**74**	**32**
Oil-range organics	ORO	2,000	--	mg/kg	250 U	250 U	250 U	31	130	250 U
Volatile Organic Compounds										
Benzene	71-43-2	0.030	--	mg/kg	0.030 U	0.030 U	*0.30 U*	0.030 U	0.030 U	0.030 U
Ethylbenzene	100-41-4	6.0	--	mg/kg	0.050 U	0.050 U	0.50 U	0.050 U	0.050 U	0.050 U
Toluene	108-88-3	7.0	--	mg/kg	0.050 U	0.050 U	0.50 U	0.050 U	0.050 U	0.050 U
Xylene (meta & para)	108-38-3/106-42-3	--	--	mg/kg	0.10 U	0.10 U	1.0 U	0.10 U	0.10 U	0.10 U
Xylene (ortho)	95-47-6	--	--	mg/kg	0.050 U	0.050 U	0.50 U	0.050 U	0.050 U	0.050 U
Xylene (total)	1330-20-7	9.0	--	mg/kg	0.10 U	0.10 U	1.0 U	0.10 U	0.10 U	0.10 U
Naphthalene	91-20-3	5.0	--	mg/kg	3.5	2.4	3.0	0.050 U	0.050 U	0.050 U

Notes:

	All blank cells are intentional.
	All results are rounded to two significant figures.
--	Not available.
Italic	Analyte was not detected; the reporting limit is greater than the CUL.
RED/BOLD	Analyte was detected at a concentration greater than the CUL.
RED/BOLD	Analyte was detected at a concentration greater than the CUL and REL.
1	CULs are based on MTCA Method A Unrestricted values.
2	RELs are based on site-specific residual saturation values established.
3	The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Abbreviations:

CAS	Chemical Abstracts Service
CUL	Cleanup Level
mg/kg	Milligrams per kilogram
MTCA	Model Toxics Control Act
REL	Remediation level

Qualifiers:

J	Analyte was detected; concentration is an estimate.
JQ	Analyte was detected; concentration is an estimate due to quantitation between the method detection limit and reporting limit.
U	Analyte was not detected at the associated reporting limit.
UJ	Analyte was not detected at the associated reporting limit, which is an estimate.

Table 2.3
Landfarming Decision Unit Results

				Location Name	**DU-01**			**DU-02**				**DU-03**			**DU-4A**		
				Sample Name	**DU-01-1-101121**	**DU-01-2-101121**	**DU-01-3-101121**	**DU-02-1-101121**	**DU-100-1-101121**	**DU-02-2-101121**	**DU-02-3-101121**	**DU-03-1-101121**	**DU-03-2-101121**	**DU-03-3-101121**	**DU-4A-1-101121**	**DU-4A-2-101121**	**DU-4A-3-101121**
				Sample Date	**10/11/2021**	**10/11/2021**	**10/11/2021**	**10/11/2021**	**10/11/2021**	**10/11/2021**	**10/11/2021**	**10/11/2021**	**10/11/2021**	**10/11/2021**	**10/11/2021**	**10/11/2021**	**10/11/2021**
				Sample Depth	**8 inches**	**8 inches**	**8 inches**	**8 inches**	**8 inches**	**8 inches**	**8 inches**	**8 inches**	**8 inches**	**8 inches**	**8 inches**	**8 inches**	**8 inches**
Analyte	**CAS No.**	**CUL [1]**	**REL[2]**	**Unit**													
Total Petroleum Hydrocarbons																	
Diesel-range organics	DRO	2,000	8,000	mg/kg	**3,600**	**3,600**	**3,500**	730	1,000	1,900	1,800	1,000	**2,100**	2,000	2,000	1,900	1,400
Gasoline-range organics [3]	GRO	100	1,700	mg/kg	**110 J**	**140**	77	**110**	**150**	81	59	85	**110**	**160 J**	65	69	24
Oil-range organics	ORO	2,000	--	mg/kg	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
Volatile Organic Compounds																	
Benzene	71-43-2	0.030	--	mg/kg	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
Ethylbenzene	100-41-4	6.0	--	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.056	0.050 U	0.050 U	0.050 U
Toluene	108-88-3	7.0	--	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Xylene (meta & para)	108-38-3/106-42-3	--	--	mg/kg	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Xylene (ortho)	95-47-6	--	--	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Xylene (total)	1330-20-7	9.0	--	mg/kg	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Naphthalene	91-20-3	5.0	--	mg/kg	0.15	0.050 U	0.065	0.077	0.059	0.064	0.050 U	0.16	0.28	0.27	0.12	0.10	0.099

Notes:

All blank cells are intentional.

All results are rounded to two significant figures.

-- Not available.

RED/BOLD Analyte was detected at a concentration greater than the CUL.

1 CULs are based on MTCA Method A Unrestricted values.

2 RELs are based on site-specific residual saturation values established.

3 The CUL is 100 mg/kg because benzene concentrations are less than detection limits.

Abbreviations:

CAS	Chemical Abstracts Service
CUL	Cleanup level
mg/kg	Milligrams per kilogram
MTCA	Model Toxics Control Act
REL	Remediation level

Qualifiers:

J	Analyte was detected; concentration is an estimate.
U	Analyte was not detected at the associated reporting limit.

Table 2.3
Landfarming Decision Unit Results

Location Name					DU-4B			DU-5A			DU-5B			
Sample Name					**DU-4B-1-101121**	**DU-4B-2-101121**	**DU-4B-3-101121**	**DU-5A-1-101121**	**DU-5A-2-101121**	**DU-5A-3-101121**	**DU-5B-1-101121**	**DU-200-1-101121**	**DU-5B-2-101121**	**DU-5B-3-101121**
Sample Date					**10/11/2021**	**10/11/2021**	**10/11/2021**	**10/11/2021**	**10/11/2021**	**10/11/2021**	**10/11/2021**	**10/11/2021**	**10/11/2021**	**10/11/2021**
Sample Depth					**8 inches**	**8 inches**	**8 inches**	**8 inches**	**8 inches**	**8 inches**	**8 inches**	**8 inches**	**8 inches**	**8 inches**
Analyte	**CAS No.**	**CUL (1)**	**REL(2)**	**Unit**										
Total Petroleum Hydrocarbons														
Diesel-range organics	DRO	2,000	8,000	mg/kg	**3,100**	**2,900**	**2,600**	**2,400**	**2,200**	1,800	1,500	1,500	1,100	1,100
Gasoline-range organics (3)	GRO	100	1,700	mg/kg	99	74	60	100	**150**	**150**	85	83	93	50
Oil-range organics	ORO	2,000	--	mg/kg	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
Volatile Organic Compounds														
Benzene	71-43-2	0.030	--	mg/kg	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
Ethylbenzene	100-41-4	6.0	--	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Toluene	108-88-3	7.0	--	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Xylene (meta & para)	108-38-3/106-42-3	--	--	mg/kg	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Xylene (ortho)	95-47-6	--	--	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Xylene (total)	1330-20-7	9.0	--	mg/kg	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Naphthalene	91-20-3	5.0	--	mg/kg	0.069	0.069	0.071	0.050 U	0.11	0.13	0.050 U	0.050 U	0.050 U	0.050 U

Notes:

All blank cells are intentional.
All results are rounded to two significant figures.
-- Not available.
RED/BOLD Analyte was detected at a concentration greater than the CUL.
1 CULs are based on MTCA Method A Unrestricted values.
2 RELs are based on site-specific residual saturation values established.
3 The CUL is 100 mg/kg because benzene concentrations are less than detection limits.

Abbreviations:

CAS	Chemical Abstracts Service
CUL	Cleanup level
mg/kg	Milligrams per kilogram
MTCA	Model Toxics Control Act
REL	Remediation level

Qualifiers:

J	Analyte was detected; concentration is an estimate.
U	Analyte was not detected at the associated reporting limit.

Remedial Action Completion Report

Big B Mini Mart Site

Figures

Note:
· Orthoimagery obtained from Esri, accessed 2022.

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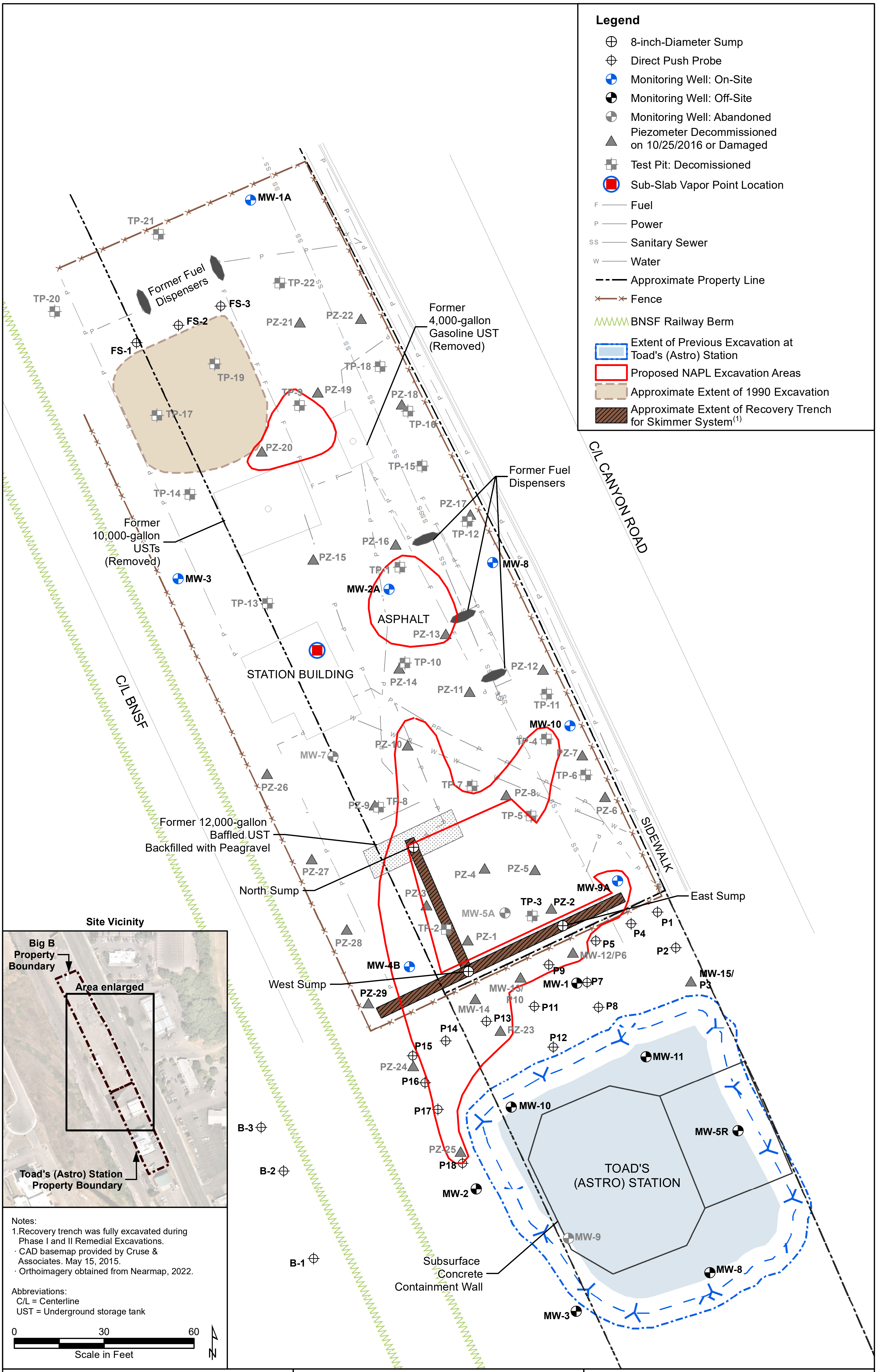
Remedial Action Completion Report
Big B Mini Mart Site
Ellensburg, Washington

Figure 1.1
Vicinity Map

I:\GIS\Projects\CL-Ellensburg\MXD\Remedial Action Completion Report\Figure 1.1 Vicinity Map.mxd
9/7/2022



Notes:
1. Recovery trench was fully excavated during Phase I and II Remedial Excavations.
· CAD basemap provided by Cruse & Associates. May 15, 2015.
· Orthoimagery obtained from Nearmap, 2022.

Abbreviations:
C/L = Centerline
UST = Underground storage tank

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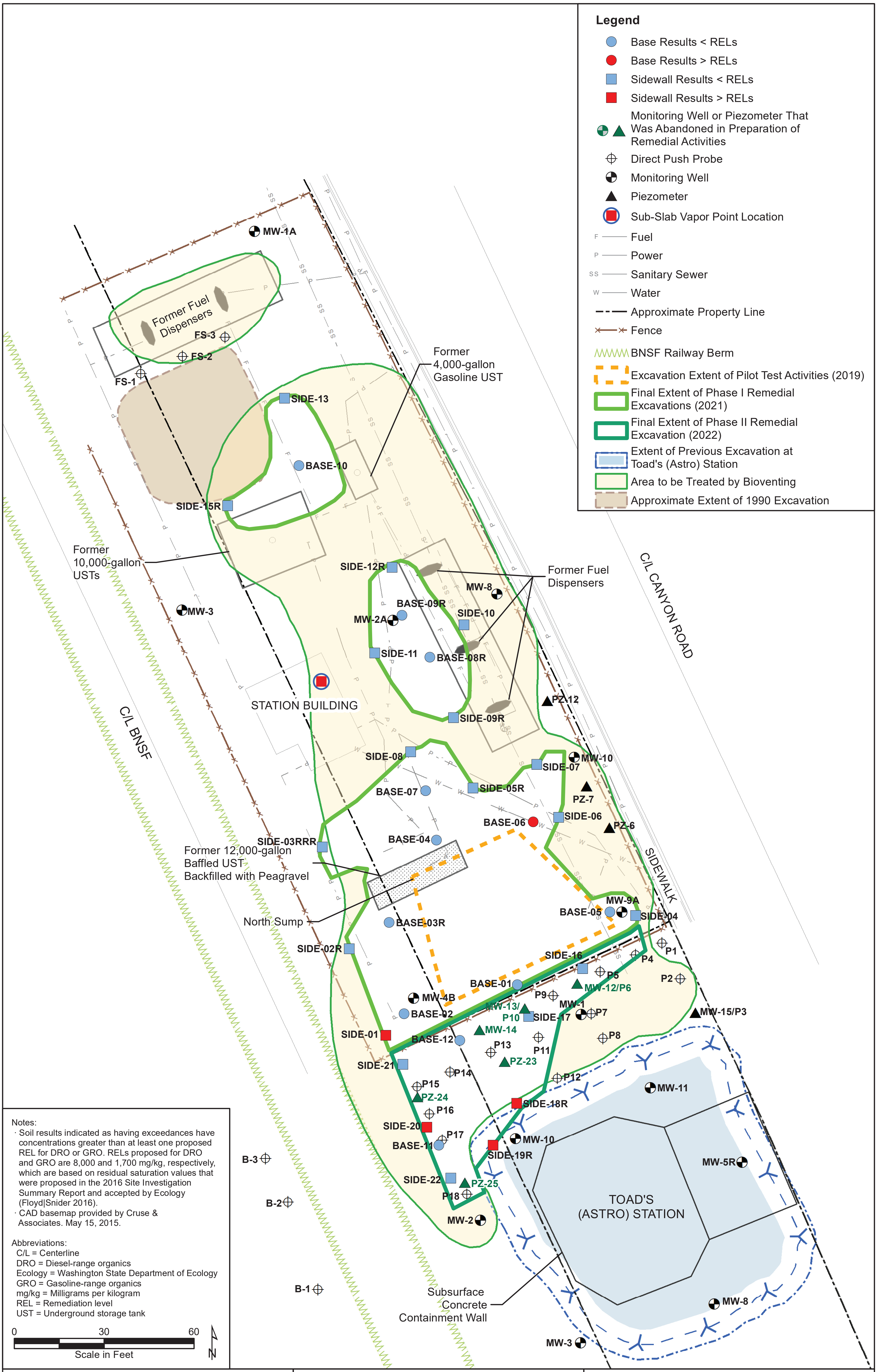
Remedial Action Completion Report
Big B Mini Mart Site
Ellensburg, Washington

Figure 1.2
Site Map

I:\GIS\Projects\CL-Ellensburg\MXD\Remedial Action Completion Report\Figure 1.2 Site Map.mxd
9/7/2022



Notes:

- Soil results indicated as having exceedances have concentrations greater than at least one proposed REL for DRO or GRO. RELs proposed for DRO and GRO are 8,000 and 1,700 mg/kg, respectively, which are based on residual saturation values that were proposed in the 2016 Site Investigation Summary Report and accepted by Ecology (Floyd|Snider 2016).
- CAD basemap provided by Cruse & Associates. May 15, 2015.

Abbreviations:
C/L = Centerline
DRO = Diesel-range organics
Ecology = Washington State Department of Ecology
GRO = Gasoline-range organics
mg/kg = Milligrams per kilogram
REL = Remediation level
UST = Underground storage tank

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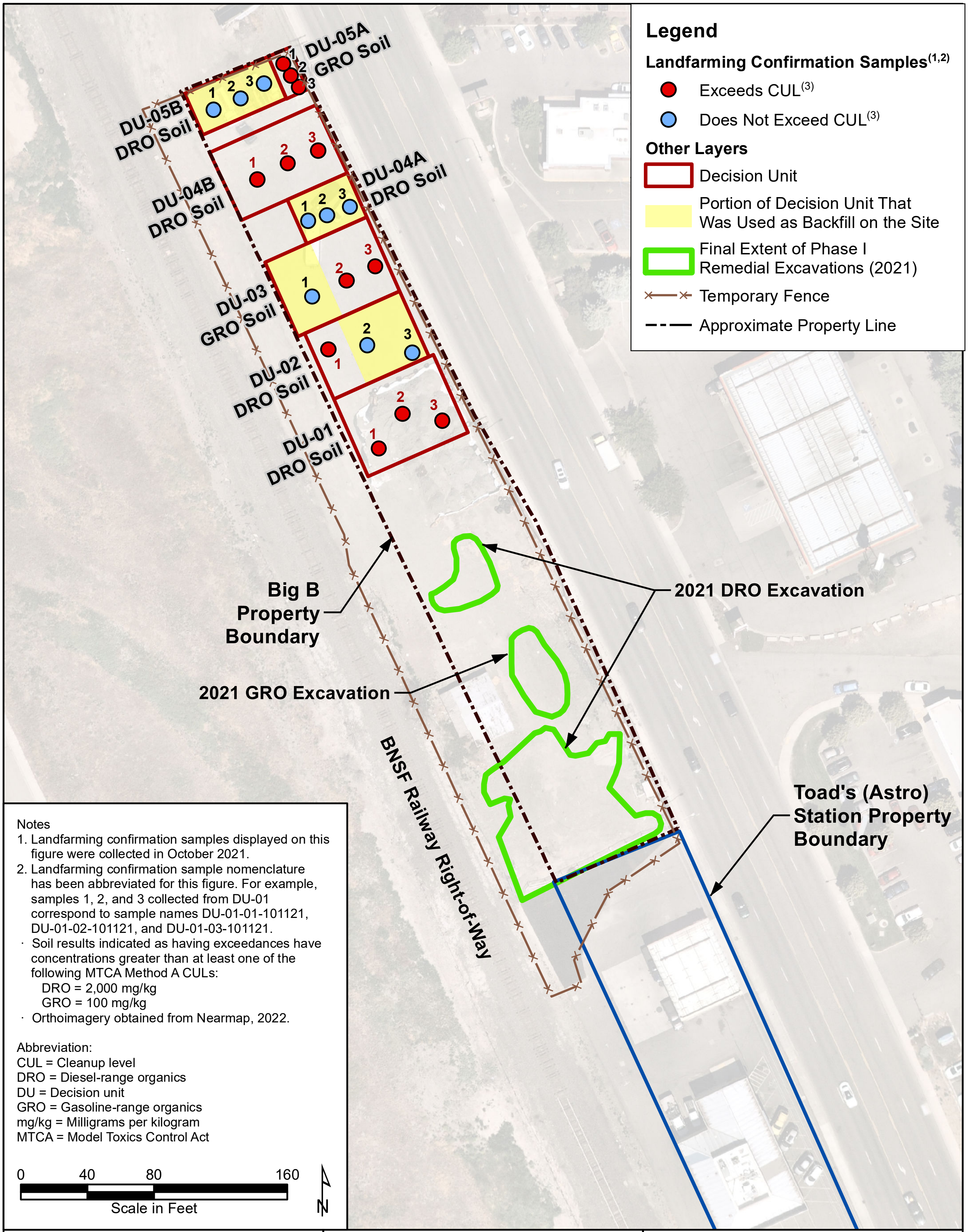
Remedial Action Completion Report
Big B Mini Mart Site
Ellensburg, Washington

Figure 2.1
Extent of Phases I and II Remedial Excavations

I:\GIS\Projects\CL-Ellensburg\MXD\Remedial Action Completion Report\Figure 2.1 Extent of Phases I and II Remedial Excavations.mxd
9/26/2022



Notes
1. Landfarming confirmation samples displayed on this figure were collected in October 2021.
2. Landfarming confirmation sample nomenclature has been abbreviated for this figure. For example, samples 1, 2, and 3 collected from DU-01 correspond to sample names DU-01-01-101121, DU-01-02-101121, and DU-01-03-101121.
· Soil results indicated as having exceedances have concentrations greater than at least one of the following MTCA Method A CULs:
  DRO = 2,000 mg/kg
  GRO = 100 mg/kg
· Orthoimagery obtained from Nearmap, 2022.

Abbreviation:
CUL = Cleanup level
DRO = Diesel-range organics
DU = Decision unit
GRO = Gasoline-range organics
mg/kg = Milligrams per kilogram
MTCA = Model Toxics Control Act

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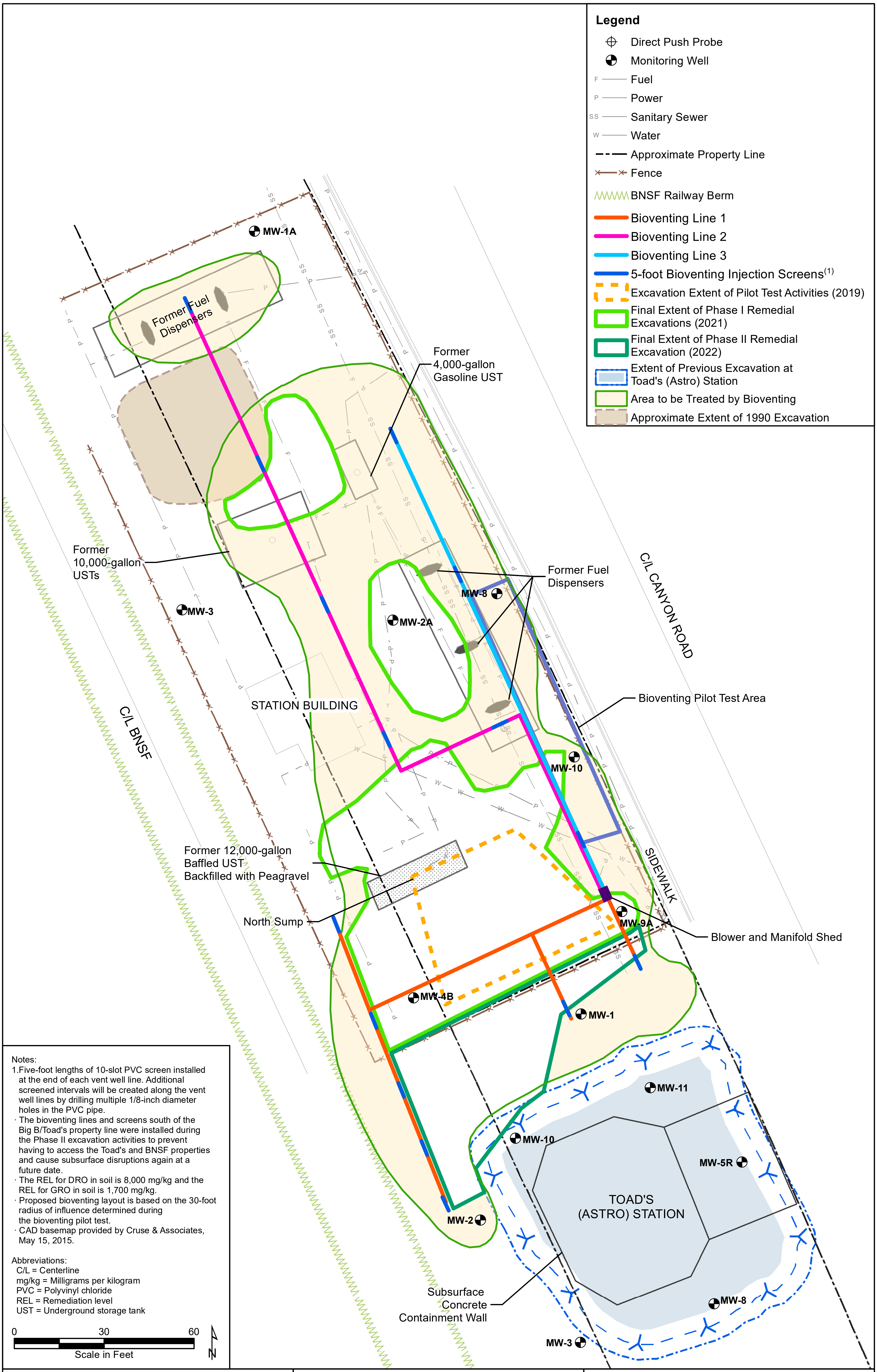
Remedial Action Completion Report
Big B Mini Mart Site
Ellensburg, Washington

Figure 2.2
Landfarming Treatment Area and Decision Units

I:\GIS\Projects\CL-Ellensburg\MXD\Remedial Action Completion Report\Figure 2.2 Landfarming Treatment Area and Decision Units.mxd
9/7/2022



Notes:

1. Five-foot lengths of 10-slot PVC screen installed at the end of each vent well line. Additional screened intervals will be created along the vent well lines by drilling multiple 1/8-inch diameter holes in the PVC pipe.

- The bioventing lines and screens south of the Big B/Toad's property line were installed during the Phase II excavation activities to prevent having to access the Toad's and BNSF properties and cause subsurface disruptions again at a future date.
- The REL for DRO in soil is 8,000 mg/kg and the REL for GRO in soil is 1,700 mg/kg.
- Proposed bioventing layout is based on the 30-foot radius of influence determined during the bioventing pilot test.
- CAD basemap provided by Cruse & Associates, May 15, 2015.

Abbreviations:
C/L = Centerline
mg/kg = Milligrams per kilogram
PVC = Polyvinyl chloride
REL = Remediation level
UST = Underground storage tank

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Remedial Action Completion Report
Big B Mini Mart Site
Ellensburg, Washington

Figure 2.3
Bioventing System Layout

Remedial Action Completion Report

Big B Mini Mart Site

Appendix A
Photographs

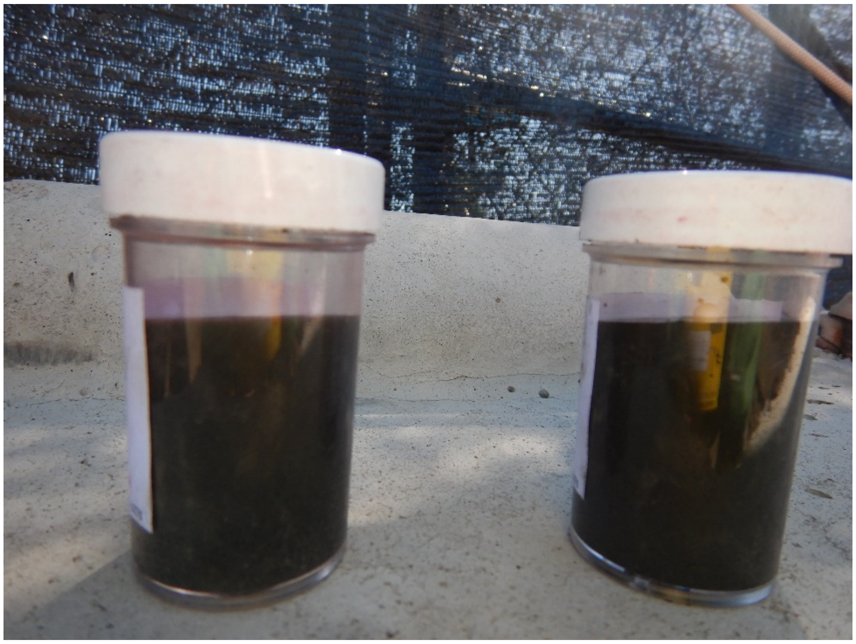
Photograph 1. Overburden removal in southern diesel-range organics (DRO) excavation area. View SW.

Photograph 2. Excavation along Toad's property boundary. View SW.

Photograph 3. Exposed pea gravel within light non-aqueous phase liquid (LNAPL) collection trench. View SW.

Photograph 4. Excavation above sewer line. View S.

Photograph 5. Southern DRO excavation within BNSF Railway Company (BNSF) right of way (ROW). View SW.



Photograph 6. Sudan IV results for BASE-01 (left) and BASE-02 (right).

Photograph 7. Sampling location of SIDE-02R-5.5FT. View W.

Photograph 8. Sampling locations of SIDE-03RR and SIDE-03RRR after being backfilled. View SW.

Photograph 9. Gasoline-range organics (GRO) excavation. View E.

Photograph 10. Sudan IV results for SIDE-09 and SIDE-10 areas before overexcavation at SIDE-09.

Photograph 11. Sampling location of SIDE-9R-5.5 within GRO excavation. View NE.

Photograph 12. Northern DRO excavation. View SE.

Photograph 13. Sampling location of SIDE-15R within northern DRO excavation. View SW.

Photograph 14. Sudan IV results for BASE-10 at 7 and 8 feet below ground surface (bgs). Results of field screening indicated that deeper excavation was required.

Photograph 15. Mixing of impacted soil to prepare for landfarming. View S.

Photograph 16. Application of fertilizer to impacted soil. View SW.

Photograph 17. Covered landfarming area. View NE.

Photograph 18. Overview of DU-03 prior to landfarming confirmation soil sample collection. View NE.

Photograph 19. Landfarming confirmation soil sample collection and field screening at DU-01-1.

Photograph 20. Soil compositing at DU-05A. View SE.

Photograph 21. Toad's property asphalt removal and fencing extent. View SW.

Photograph 22. Toad's property clean overburden. View NE.

Photograph 23. Excavation on Toad's property and removal of LNAPL collection trench. View W.

Photograph 24. Cleaning of excavator bucket after removal of LNAPL collection trench, before beginning excavation in SW corner on Toad's property. View NW.

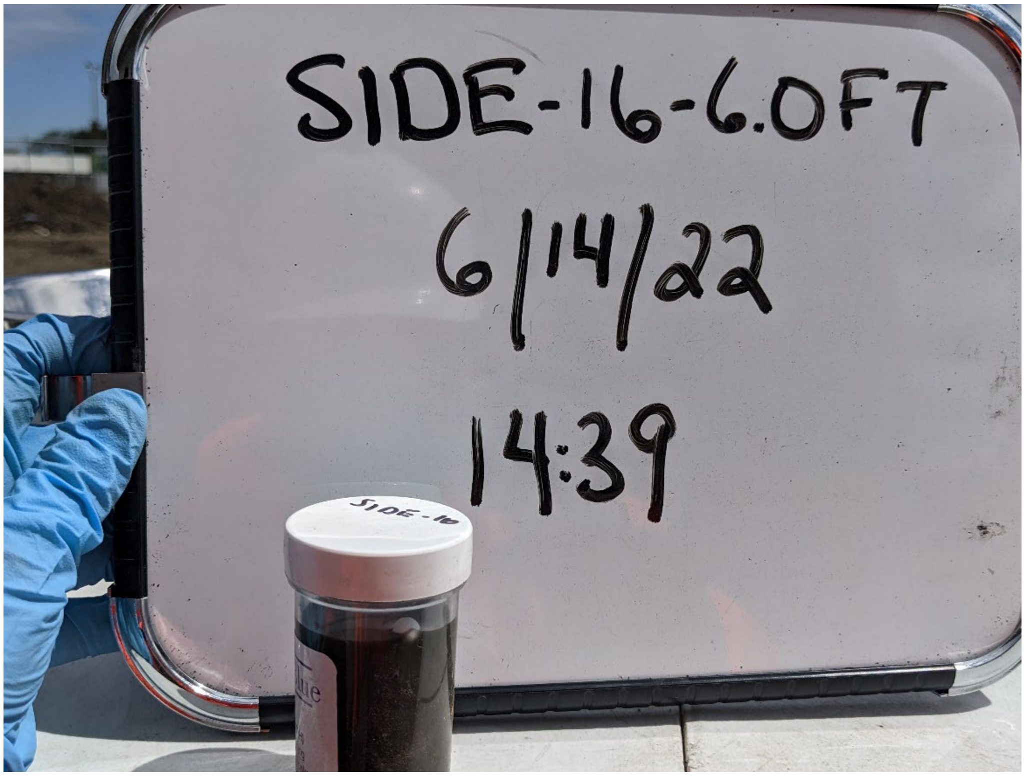
Photograph 25. Sudan IV field screening results from 2021 backfill on the southeast corner of the Big B property adjacent to excavated LNAPL collection trench. No visible meniscus or styrene ball discoloration, indicating total petroleum hydrocarbon concentrations less than residual saturation limits.

Photograph 26. Impacted soil staging area prior to removal and disposal off-site. View NE.

Photograph 27. Excavation to 6.5 feet below ground surface (bgs) above storm sewer, after removal of LNAPL collection trench. View N.

Photograph 28. Sudan IV field screening results from soil collected above storm sewer at 6.5 feet bgs. Lack of meniscus indicates total petroleum hydrocarbon concentrations less than residual saturation limits.

Photograph 29. Excavation extent on Toad's property, view of black silty sand. View S.



Photograph 30. Sudan IV field screening results for SIDE-16-6.0FT. Analytical results yielded concentrations of DRO and gasoline-range organics less than their respective remediation levels.

Photograph 31. Post-excavation slope shoring along Toad's property. LNAPL in excavation emerged during removal of LNAPL collection trench pea gravel that was still present on the southern end of the Big B property. View W.

Photograph 32. Excavation and slope shoring in BNSF ROW. View S.

Photograph 33. Excavation and slope shoring. No visible leaching of LNAPL from Toad's or Big B properties. View SW.

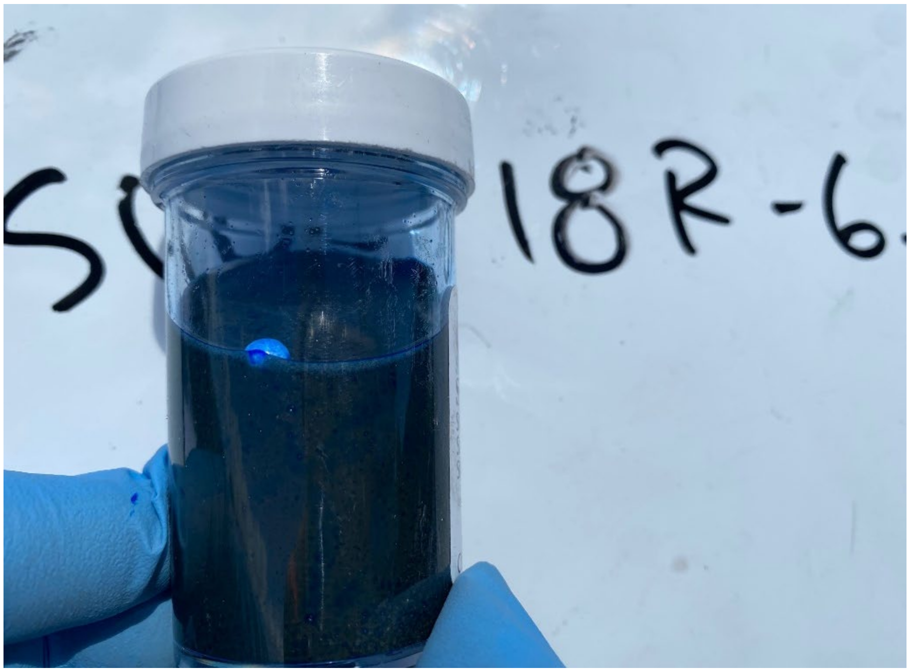
Photograph 34. Excavation of LNAPL collection trench in BNSF ROW. LNAPL visible leaching from pea gravel. View N.

Photograph 35. Overexcavation of LNAPL collection trench. View W.

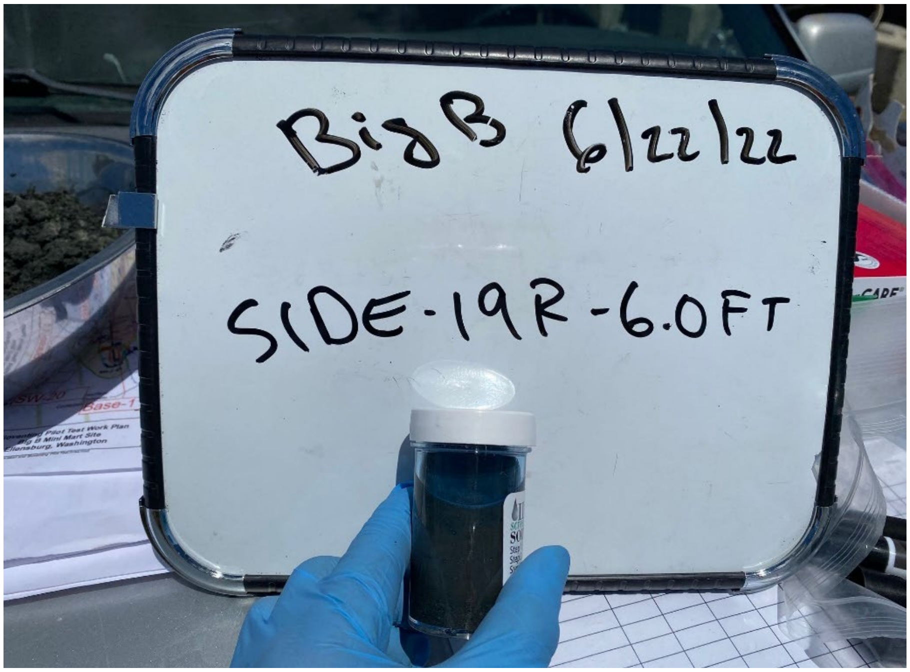
Photograph 36. Slope stabilization and adsorbent material in BNSF ROW. View S.

Photograph 37. Toad's Visqueen barrier exposed in upper 1 foot bgs near SIDE-19R to guide overexcavation. View S.

Photograph 38. Toad's Visqueen barrier exposed in upper 1 foot bgs to guide excavation past SIDE-18 and SIDE-19. View SE.



Photograph 39. Sudan IV field screening at SIDE-18R-6.0FT. Slight blue layer and tint indicating that LNAPL impacts are present.



Photograph 40. Sudan IV field screening at SIDE-19R-6.0FT. Slight blue layer and tint indicating that LNAPL impacts are present.

Photograph 41. Sudan IV field screening at SIDE-22-6.0FT; no blue meniscus.

Photograph 42. Installation of easternmost Toad's property bioventing line placed at 3 feet bgs on remaining impacted soil.

Photograph 43. Installation of easternmost Toad's property bioventing line on impacted soil and placement of pea gravel. View S.

Photograph 44. Installation of center Toad's property bioventing line. View S.

Photograph 45. Installation of westernmost bioventing line on Toad's property. View SW.

Photograph 46. Installation of westernmost bioventing line on Toad's property. View S.

Photograph 47. Aboveground stick-up locations of three Toad's property bioventing lines, after backfilling. View SW.

Photograph 48. Final paved surface on Toad's property. View S.

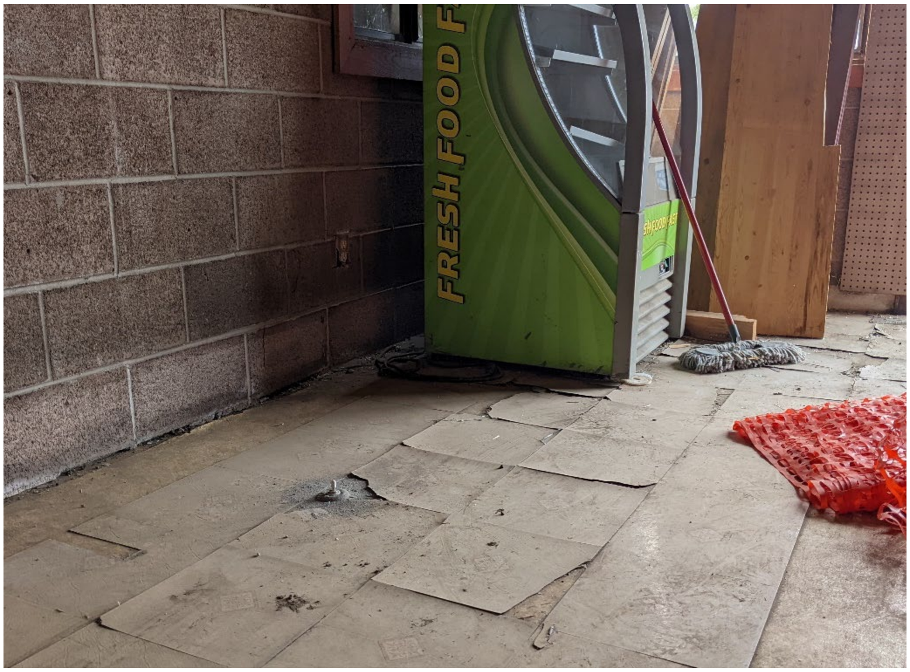
Photograph 49. Installation of horizontal bioventing injection point.

Photograph 50. Monument completion of MW-2A.

Photograph 51. Monument completion of MW-4B.

Photograph 52. Monument completion of MW-9A.

Photograph 53. Monument replacement of MW-3. View SW.



Photograph 54. Indoor vapor monitoring point inside former Big B minimart building. View NE.

Photograph 55. Installation of bioventing soil vapor monitoring points to 3 feet bgs. Alternating layers of sand and bentonite flakes were poured into the 0.75-inch PVC annular space to prevent short-circuiting.

Photograph 56. Three-inch-long, stainless steel soil vapor screen. The screen was attached to tubing and installed at 3 feet bgs.

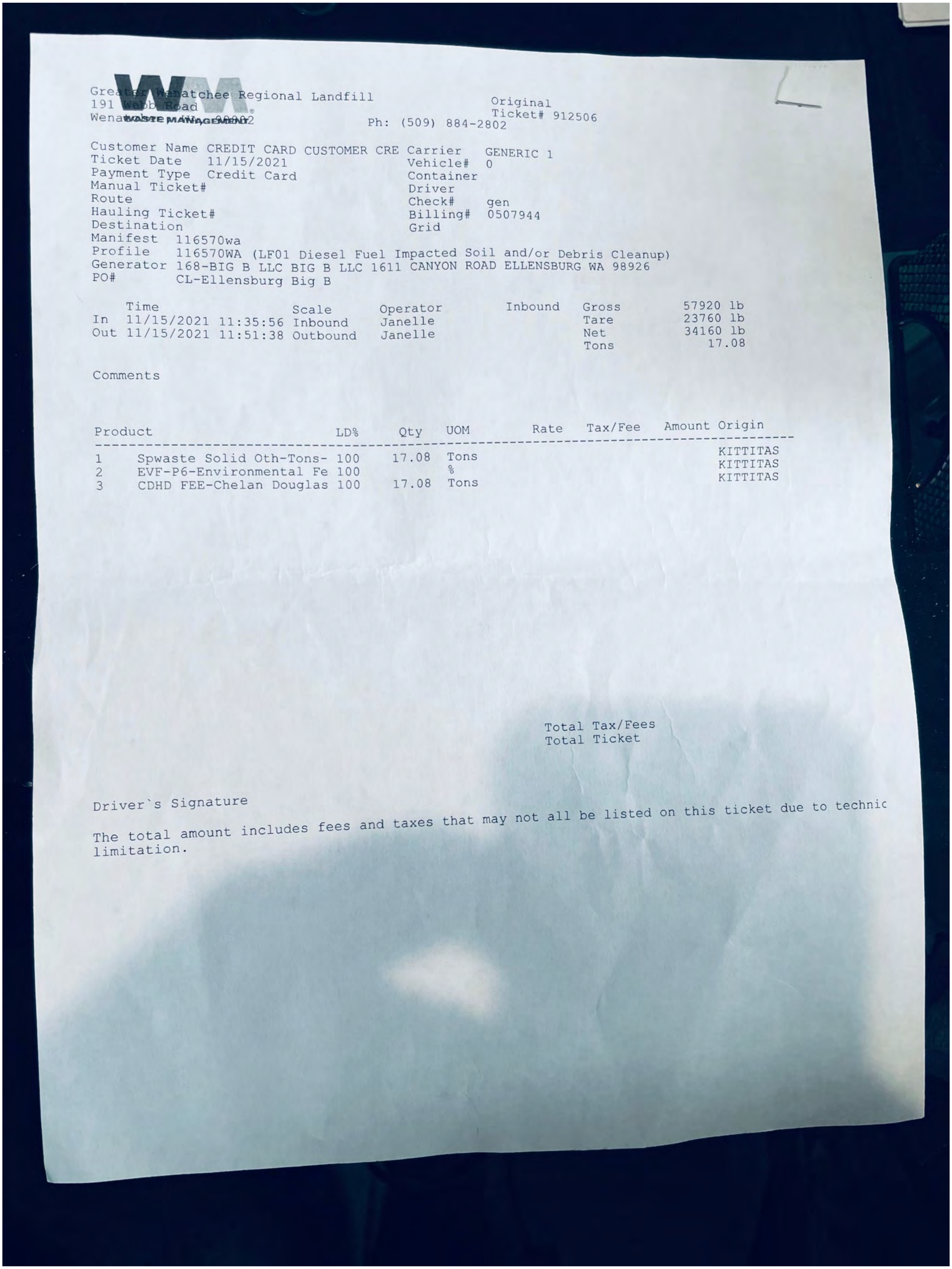
Photograph 57. Final locations of injection point (foreground) and soil vapor monitoring points. View N.

Photograph 58. Soil vapor monitoring at MW-10 during bioventing pilot test.

Remedial Action Completion Report

Big B Mini Mart Site

Appendix B
Trucking Tickets



WASTE MANAGEMENT

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee WA 98802
Ph: (509) 884-2802

Original
Ticket# 912506

Customer Name CREDIT CARD CUSTOMER CRE
Ticket Date 11/15/2021
Payment Type Credit Card
Manual Ticket#
Route
Hauling Ticket#
Destination
Manifest 116570wa
Profile 116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO# CL-Ellensburg Big B

Carrier GENERIC 1
Vehicle# 0
Container
Driver
Check# gen
Billing# 0507944
Grid

	Time	Scale	Operator
In	11/15/2021 11:35:56	Inbound	Janelle
Out	11/15/2021 11:51:38	Outbound	Janelle

Inbound

Gross	57920 lb
Tare	23760 lb
Net	34160 lb
Tons	17.08

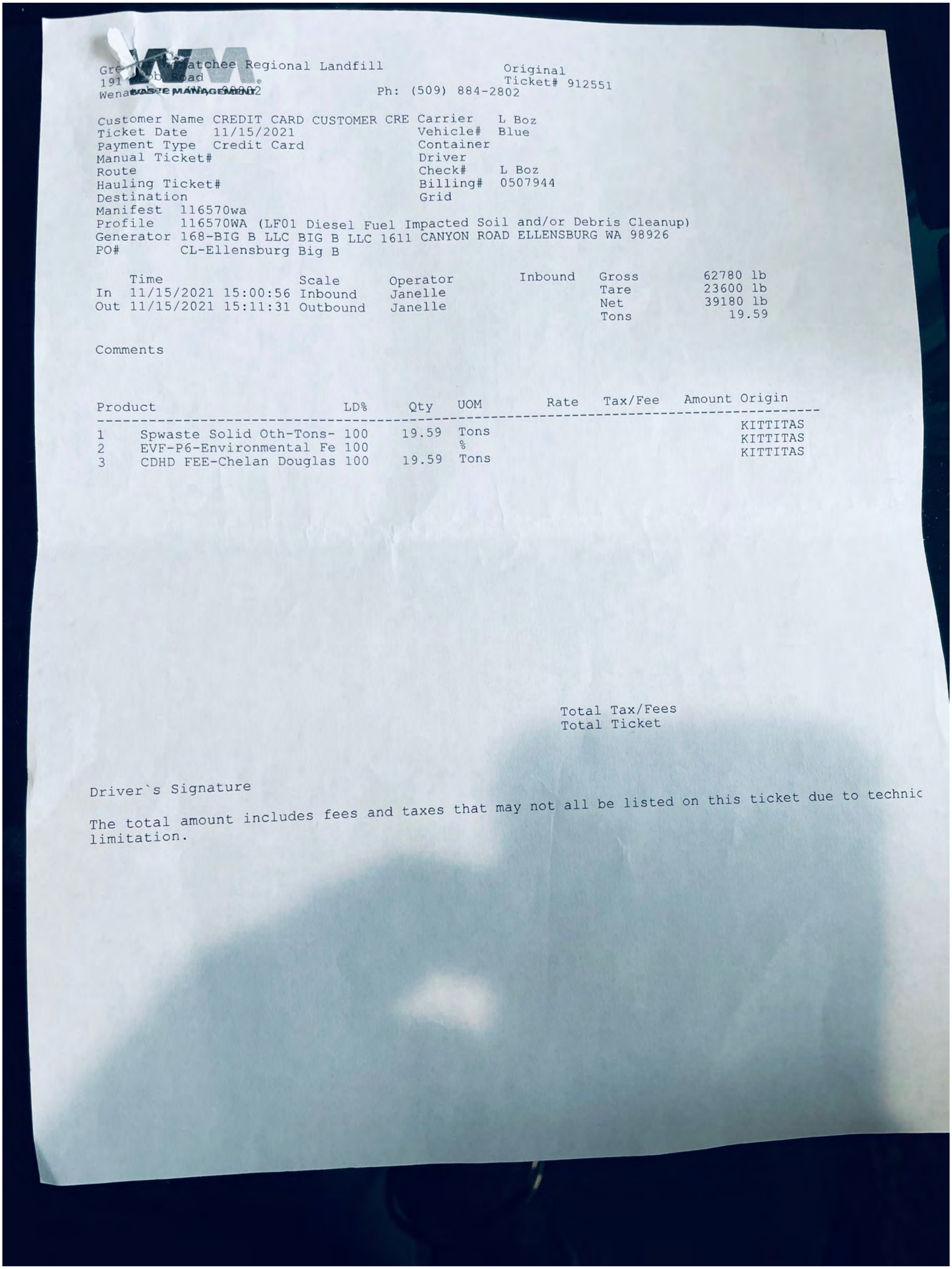
Comments

Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1 Spwaste Solid Oth-Tons-	100	17.08	Tons				KITTITAS
2 EVF-P6-Environmental Fe	100		%				KITTITAS
3 CDHD FEE-Chelan Douglas	100	17.08	Tons				KITTITAS

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic limitation.



```
Gre        atchee Regional Landfill                    Original
191      b Road                                        Ticket# 912551
Wena                  2              Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date    11/15/2021              Vehicle#  Blue
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                 Scale      Operator        Inbound   Gross       62780 lb
In  11/15/2021 15:00:56 Inbound    Janelle                   Tare        23600 lb
Out 11/15/2021 15:11:31 Outbound   Janelle                   Net         39180 lb
                                                              Tons           19.59

Comments

Product                          LD%     Qty   UOM       Rate   Tax/Fee   Amount Origin
-------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    19.59  Tons                              KITTITAS
2    EVF-P6-Environmental Fe 100           %                                 KITTITAS
3    CDHD FEE-Chelan Douglas 100    19.59  Tons                              KITTITAS




                                                    Total Tax/Fees
                                                    Total Ticket



Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
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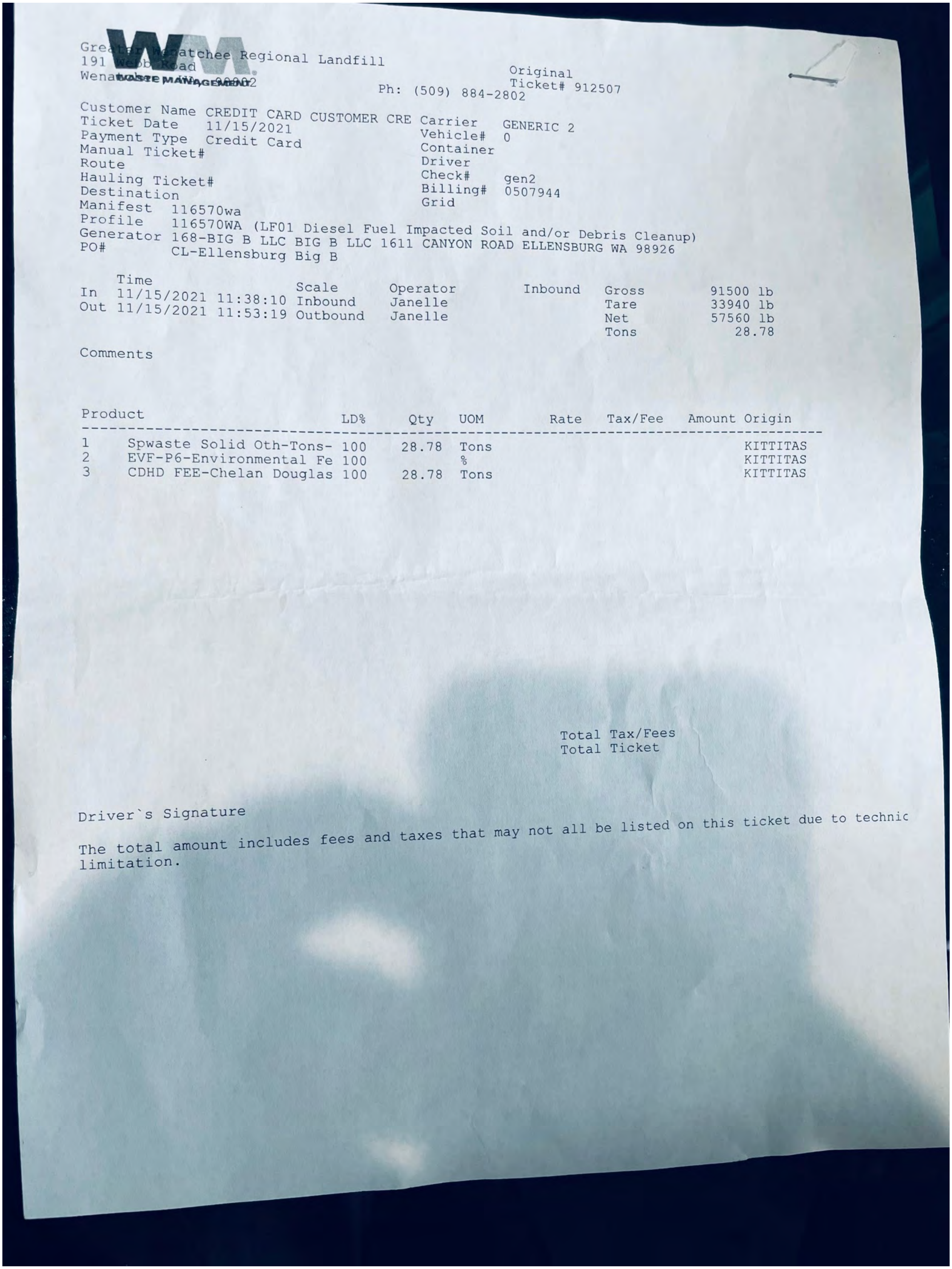


WASTE MANAGEMENT

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee WA 98802

Ph: (509) 884-2802

Original
Ticket# 912507

Customer Name CREDIT CARD CUSTOMER CRE
Ticket Date 11/15/2021
Payment Type Credit Card
Manual Ticket#
Route
Hauling Ticket#
Destination
Manifest 116570wa
Profile 116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO# CL-Ellensburg Big B

Carrier GENERIC 2
Vehicle# 0
Container
Driver
Check# gen2
Billing# 0507944
Grid

	Time	Scale	Operator	Inbound
In	11/15/2021 11:38:10	Inbound	Janelle	
Out	11/15/2021 11:53:19	Outbound	Janelle	

Gross	91500 lb
Tare	33940 lb
Net	57560 lb
Tons	28.78

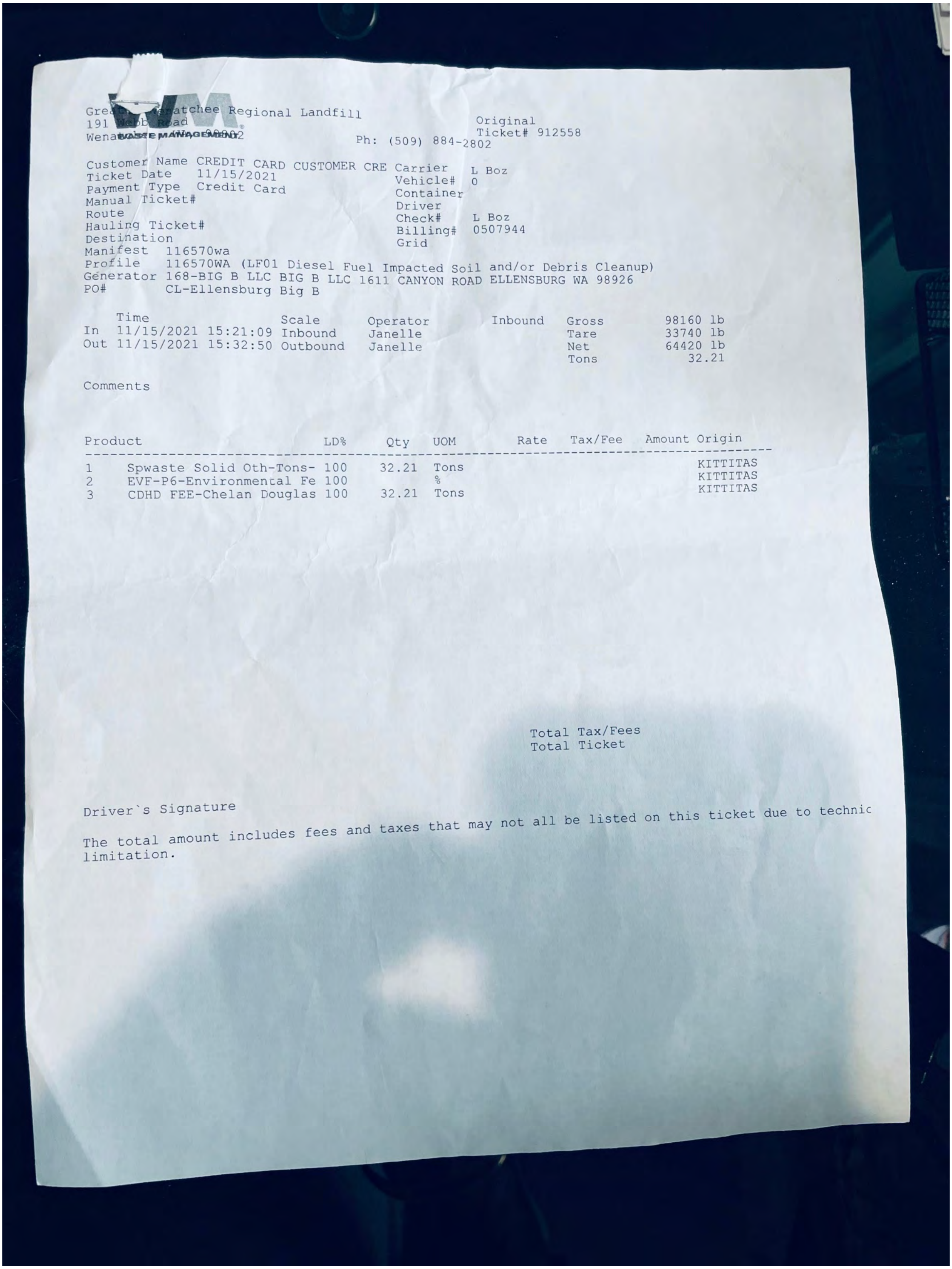
Comments

	Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Spwaste Solid Oth-Tons-	100	28.78	Tons				KITTITAS
2	EVF-P6-Environmental Fe	100		%				KITTITAS
3	CDHD FEE-Chelan Douglas	100	28.78	Tons				KITTITAS

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.



Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee WA 98802
Ph: (509) 884-2802

Original
Ticket# 912558

Customer Name	CREDIT CARD CUSTOMER CRE	Carrier	L Boz
Ticket Date	11/15/2021	Vehicle#	0
Payment Type	Credit Card	Container	
Manual Ticket#		Driver	
Route		Check#	L Boz
Hauling Ticket#		Billing#	0507944
Destination		Grid	

Manifest 116570wa
Profile 116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO# CL-Ellensburg Big B

	Time	Scale	Operator	Inbound		
In	11/15/2021 15:21:09	Inbound	Janelle		Gross	98160 lb
Out	11/15/2021 15:32:50	Outbound	Janelle		Tare	33740 lb
					Net	64420 lb
					Tons	32.21

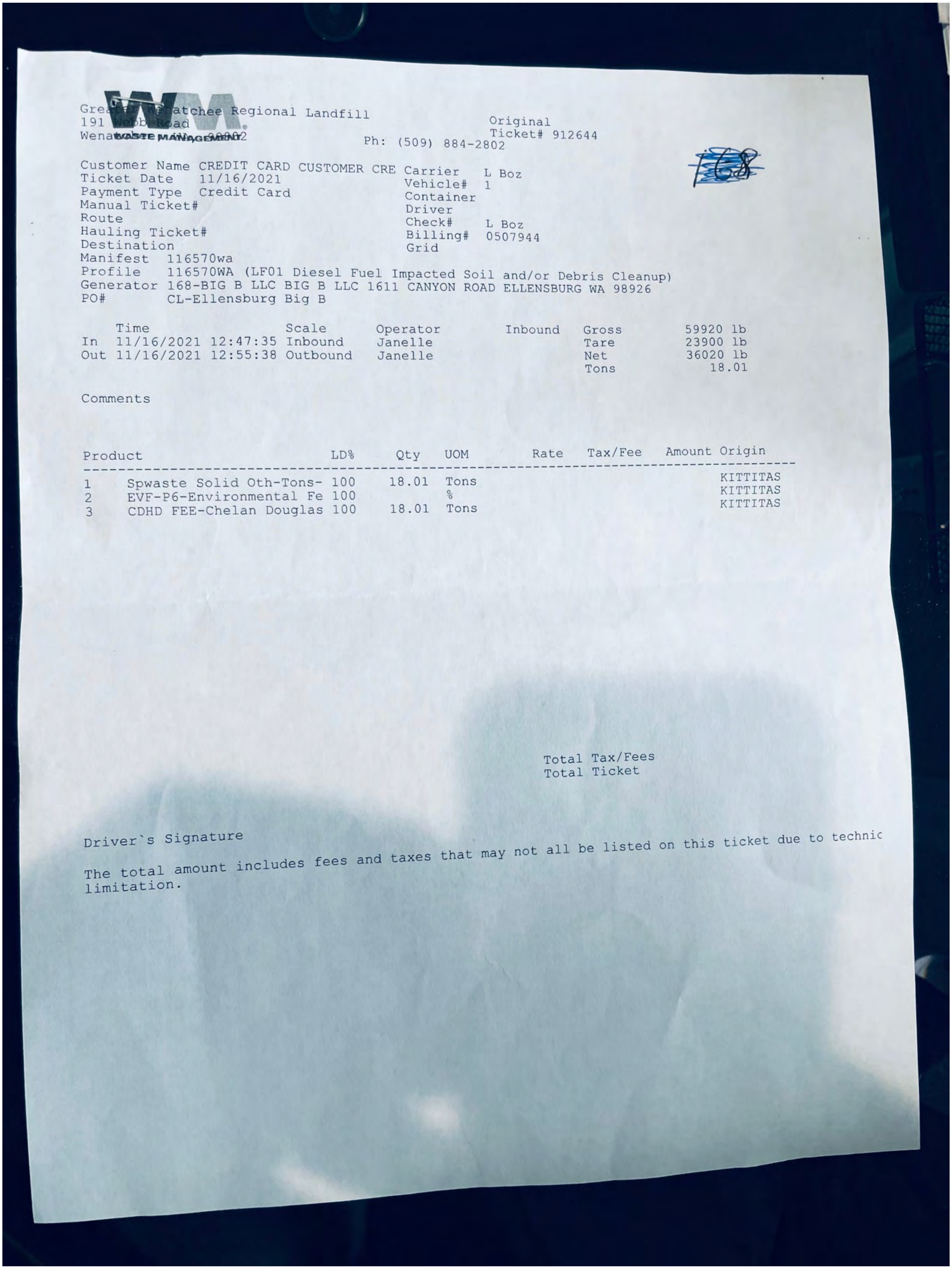
Comments

Product		LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Spwaste Solid Oth-Tons-	100	32.21	Tons				KITTITAS
2	EVF-P6-Environmental Fe	100		%				KITTITAS
3	CDHD FEE-Chelan Douglas	100	32.21	Tons				KITTITAS

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.



Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee WA 98802

Original
Ticket# 912644
Ph: (509) 884-2802

[redacted] 168

Customer Name	CREDIT CARD CUSTOMER CRE	Carrier	L Boz
Ticket Date	11/16/2021	Vehicle#	1
Payment Type	Credit Card	Container	
Manual Ticket#		Driver	
Route		Check#	L Boz
Hauling Ticket#		Billing#	0507944
Destination		Grid	

Manifest 116570wa
Profile 116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO# CL-Ellensburg Big B

	Time	Scale	Operator	Inbound		
In	11/16/2021 12:47:35	Inbound	Janelle		Gross	59920 lb
Out	11/16/2021 12:55:38	Outbound	Janelle		Tare	23900 lb
					Net	36020 lb
					Tons	18.01

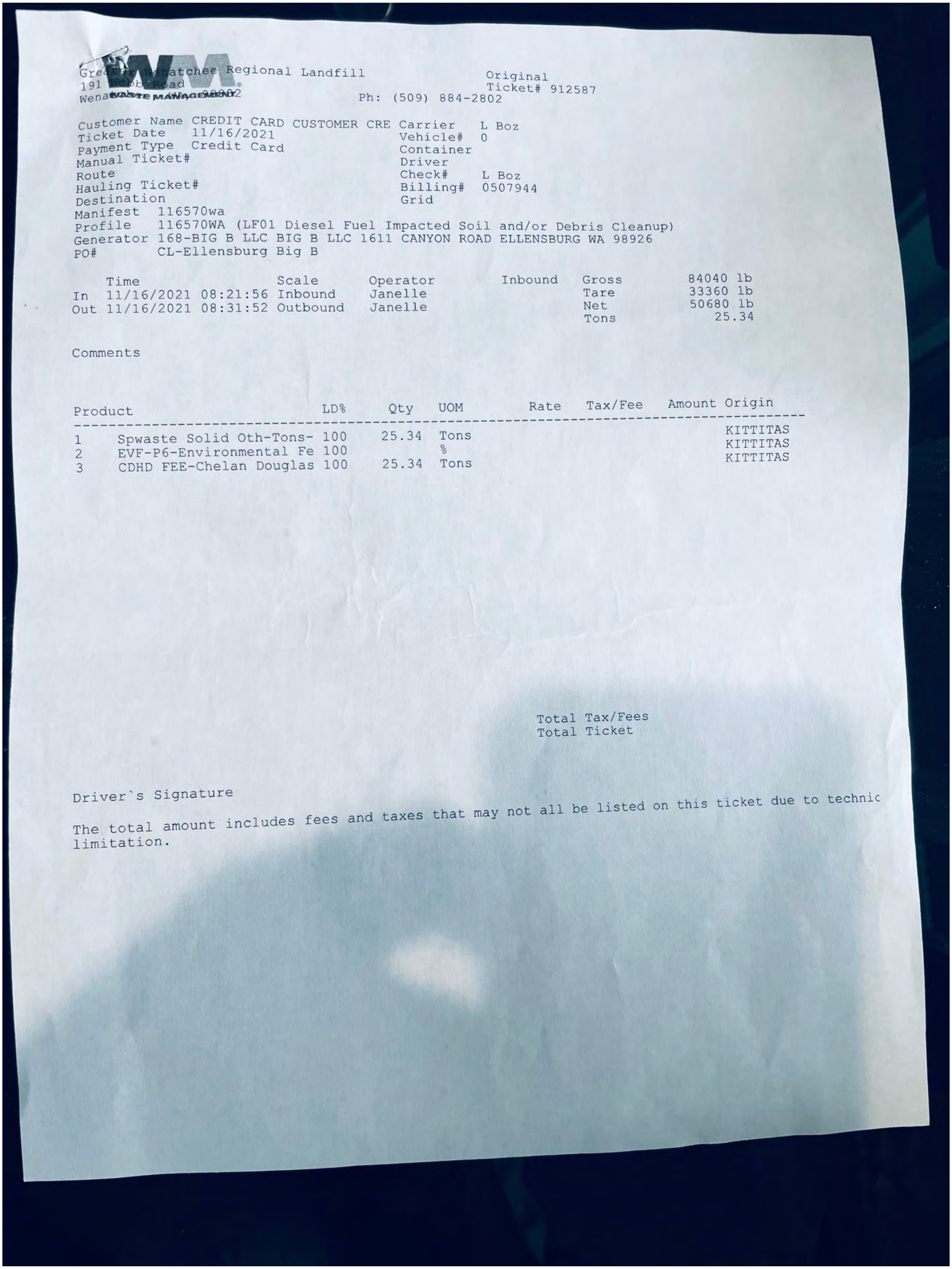
Comments

	Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Spwaste Solid Oth-Tons-	100	18.01	Tons				KITTITAS
2	EVF-P6-Environmental Fe	100		%				KITTITAS
3	CDHD FEE-Chelan Douglas	100	18.01	Tons				KITTITAS

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.



Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee WA 98802
Ph: (509) 884-2802

Original
Ticket# 912587

Customer Name CREDIT CARD CUSTOMER CRE
Ticket Date 11/16/2021
Payment Type Credit Card
Manual Ticket#
Route
Hauling Ticket#
Destination
Manifest 116570wa
Profile 116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO# CL-Ellensburg Big B

Carrier L Boz
Vehicle# 0
Container
Driver
Check# L Boz
Billing# 0507944
Grid

	Time	Scale	Operator	Inbound		
In	11/16/2021 08:21:56	Inbound	Janelle		Gross	84040 lb
Out	11/16/2021 08:31:52	Outbound	Janelle		Tare	33360 lb
					Net	50680 lb
					Tons	25.34

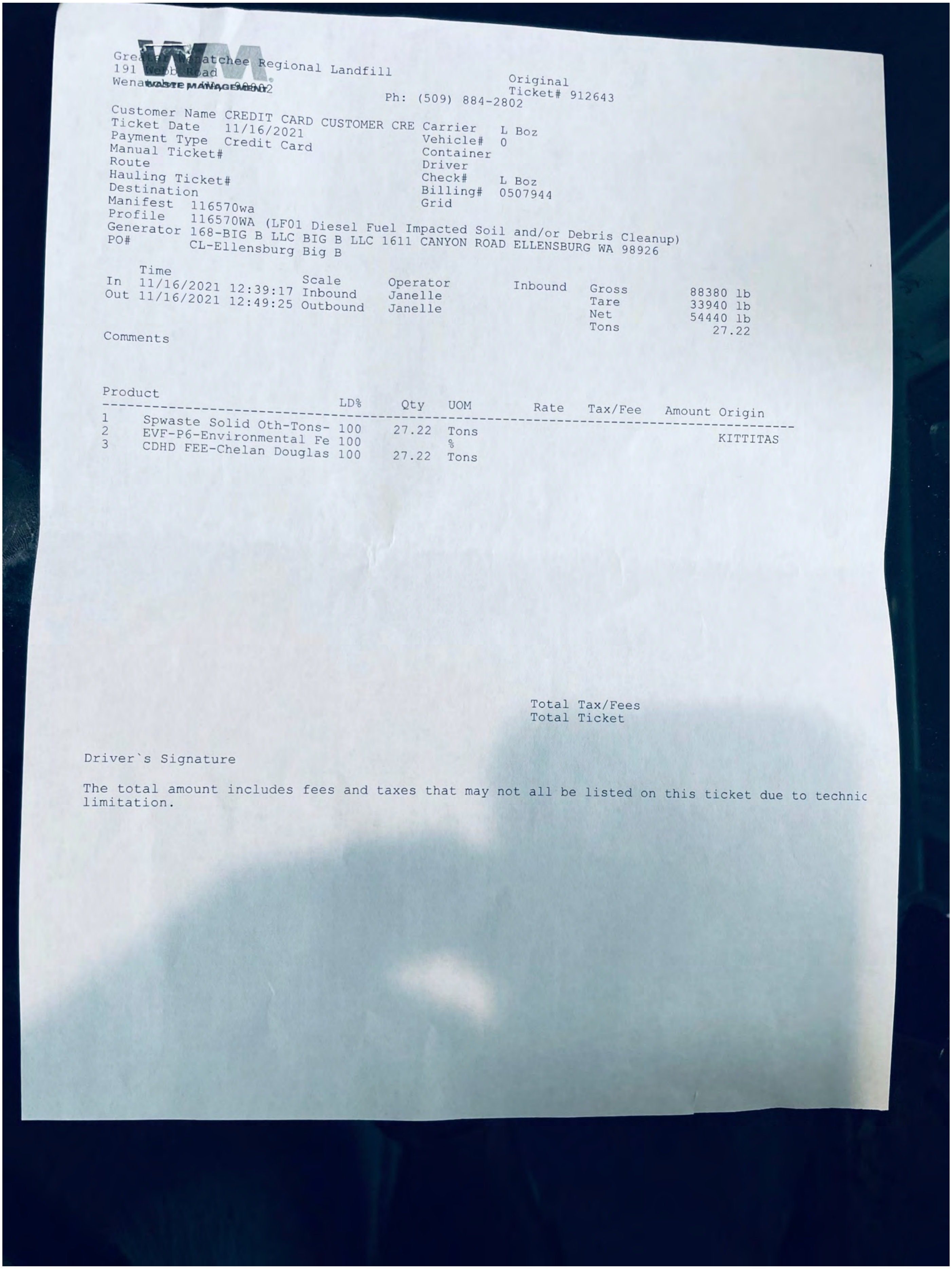
Comments

	Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Spwaste Solid Oth-Tons-	100	25.34	Tons				KITTITAS
2	EVF-P6-Environmental Fe	100		%				KITTITAS
3	CDHD FEE-Chelan Douglas	100	25.34	Tons				KITTITAS

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic limitation.



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Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee WA 98802                                          Original
                                                            Ticket# 912643
                                          Ph: (509) 884-2802
Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   11/16/2021               Vehicle#  0
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest   116570wa
Profile    116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#        CL-Ellensburg Big B

    Time                       Scale       Operator          Inbound    Gross          88380 lb
In  11/16/2021 12:39:17 Inbound     Janelle                      Tare           33940 lb
Out 11/16/2021 12:49:25 Outbound    Janelle                      Net            54440 lb
                                                                        Tons             27.22
Comments


Product
----------------------------------------------------------------------------------------------
                                     LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
1     Spwaste Solid Oth-Tons- 100     27.22  Tons
2     EVF-P6-Environmental Fe 100             %                                    KITTITAS
3     CDHD FEE-Chelan Douglas 100     27.22  Tons

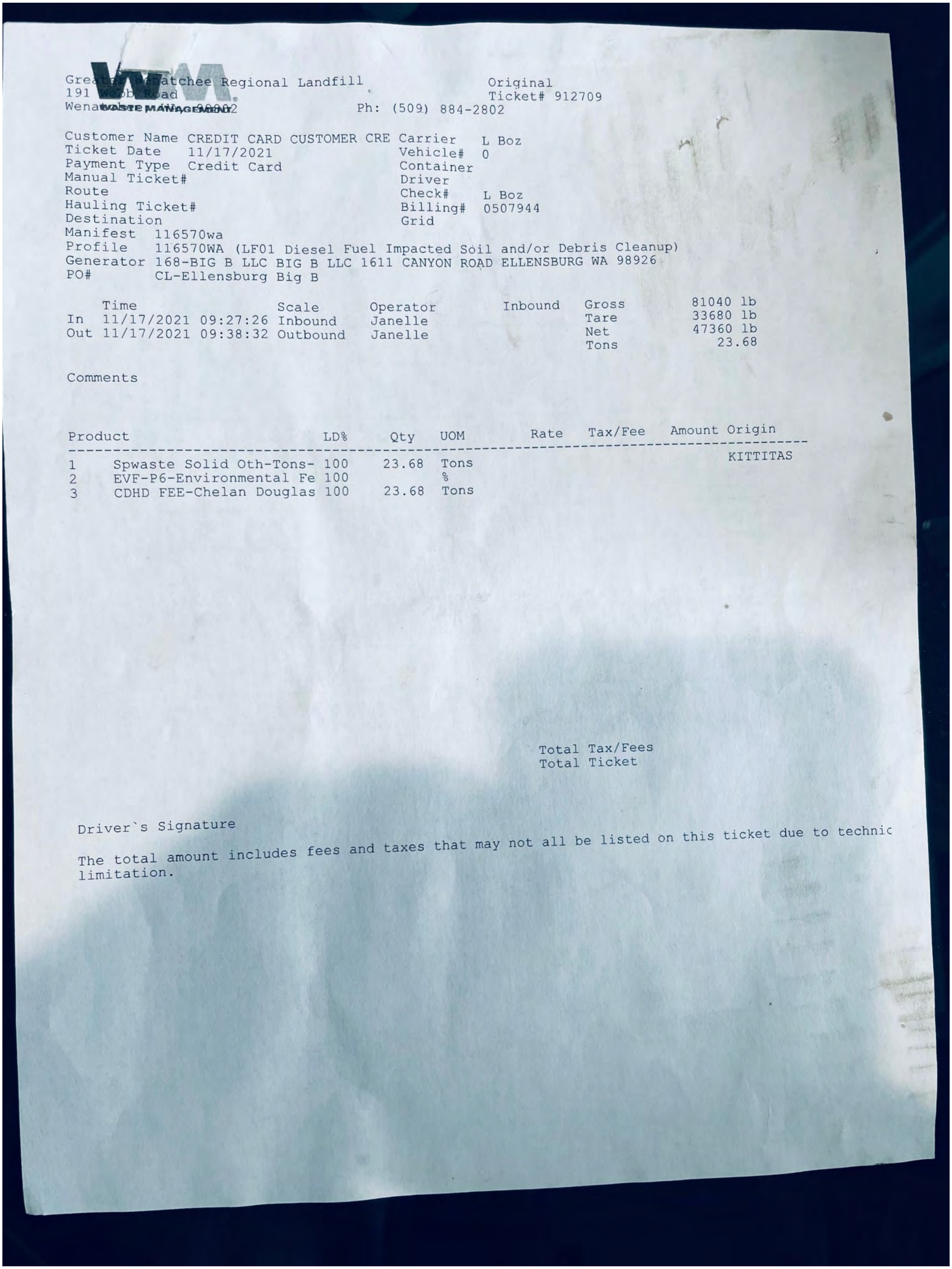




                                                       Total Tax/Fees
                                                       Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
```



```
Greater Wenatchee Regional Landfill                Original
191 Webb Road                                      Ticket# 912709
Wenatchee WA 98802                 Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   11/17/2021               Vehicle#  0
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                 Scale      Operator      Inbound   Gross          81040 lb
In  11/17/2021 09:27:26  Inbound    Janelle                 Tare           33680 lb
Out 11/17/2021 09:38:32  Outbound   Janelle                 Net            47360 lb
                                                            Tons              23.68

Comments

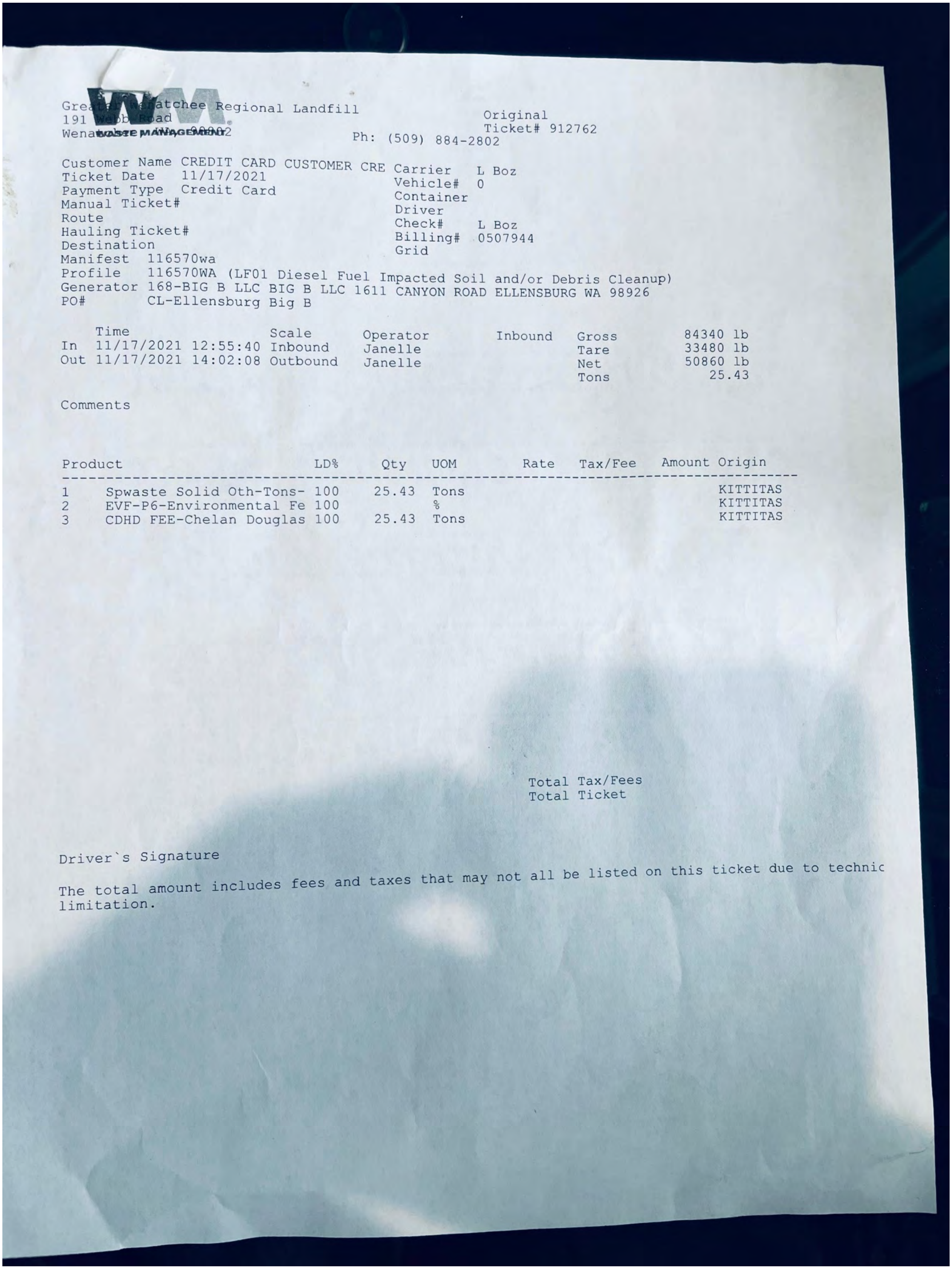

Product                          LD%     Qty   UOM      Rate   Tax/Fee   Amount Origin
-----------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons-  100    23.68  Tons                              KITTITAS
2    EVF-P6-Environmental Fe  100           %
3    CDHD FEE-Chelan Douglas  100    23.68  Tons




                                                  Total Tax/Fees
                                                  Total Ticket


 Driver`s Signature

 The total amount includes fees and taxes that may not all be listed on this ticket due to technic
 limitation.
```



```
Greater Wenatchee Regional Landfill
191 Webb Road                                   Original
Wenatchee WA 98802                              Ticket# 912762
                                    Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   11/17/2021               Vehicle#  0
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator      Inbound  Gross       84340 lb
In  11/17/2021 12:55:40 Inbound    Janelle                Tare        33480 lb
Out 11/17/2021 14:02:08 Outbound   Janelle                Net         50860 lb
                                                          Tons           25.43

Comments

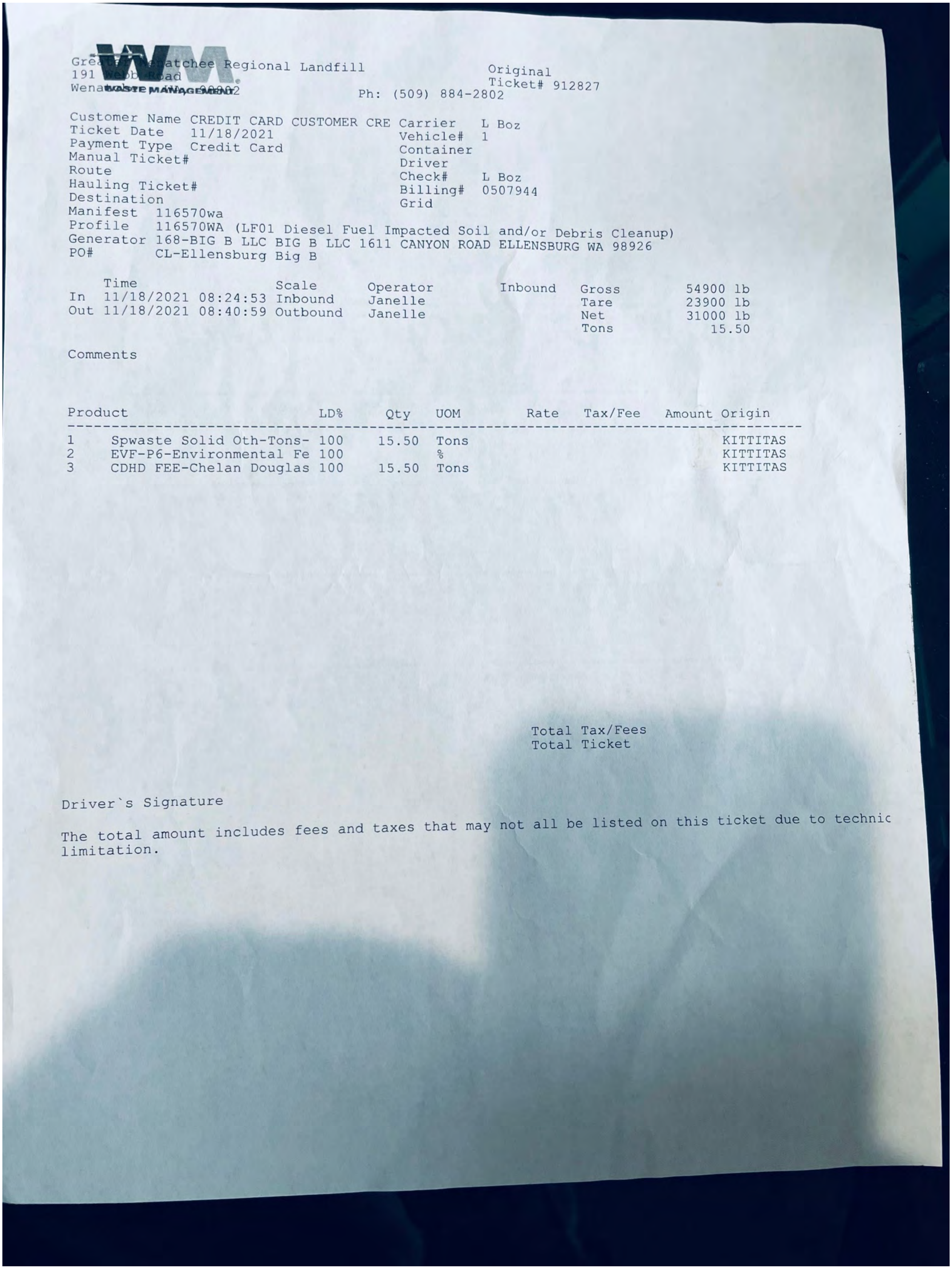

Product                       LD%    Qty   UOM      Rate   Tax/Fee  Amount Origin
-------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    25.43  Tons                            KITTITAS
2    EVF-P6-Environmental Fe 100           %                               KITTITAS
3    CDHD FEE-Chelan Douglas 100    25.43  Tons                            KITTITAS




                                                   Total Tax/Fees
                                                   Total Ticket


Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
```



```
Greater Wenatchee Regional Landfill                  Original
191 Webb Road                                        Ticket# 912827
Wenatchee WA 98802                Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   11/18/2021               Vehicle#  1
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator       Inbound  Gross        54900 lb
In  11/18/2021 08:24:53 Inbound    Janelle                 Tare         23900 lb
Out 11/18/2021 08:40:59 Outbound   Janelle                 Net          31000 lb
                                                           Tons            15.50

Comments

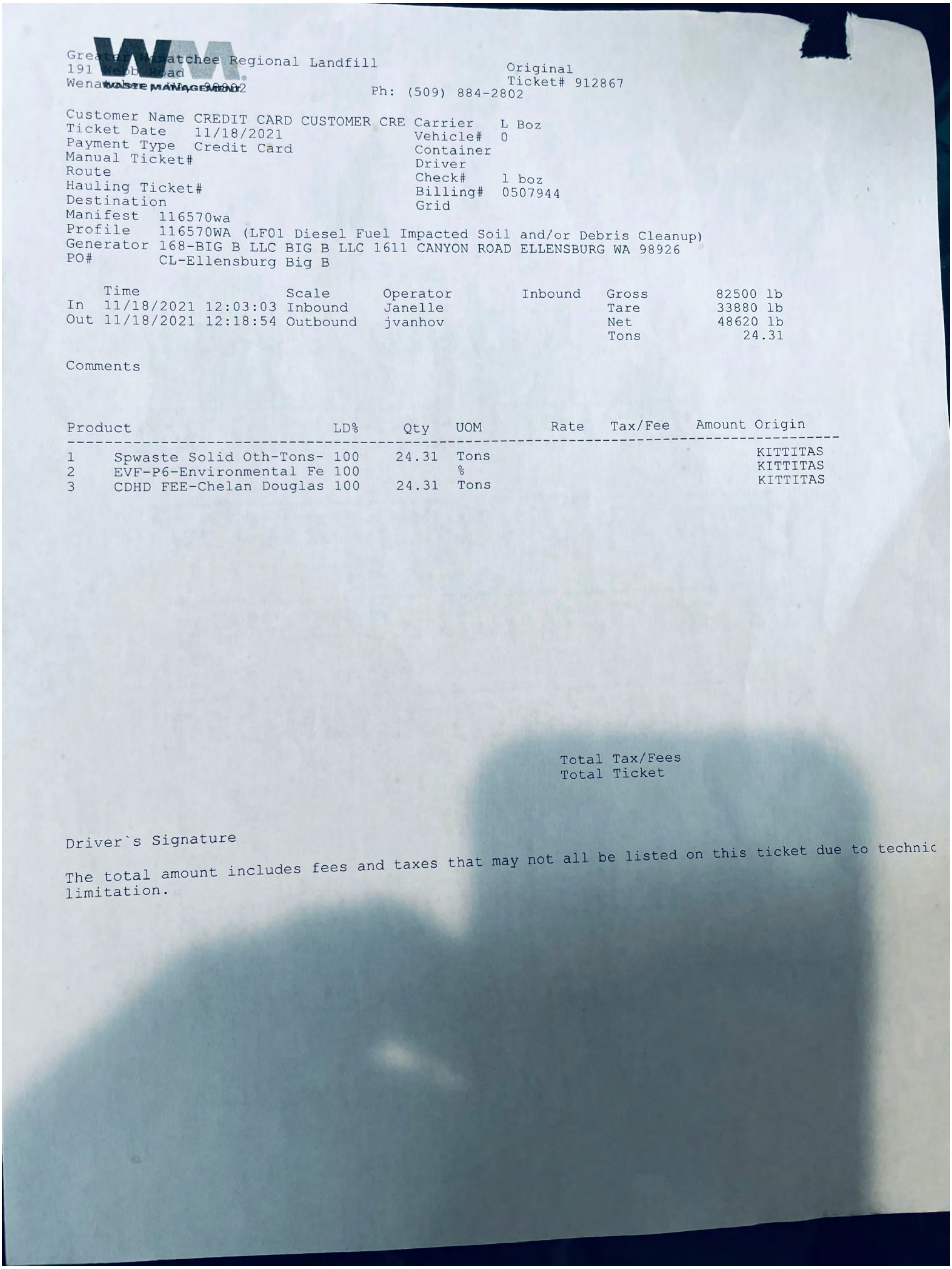

Product                      LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    15.50  Tons                               KITTITAS
2    EVF-P6-Environmental Fe 100           %                                  KITTITAS
3    CDHD FEE-Chelan Douglas 100    15.50  Tons                               KITTITAS




                                                    Total Tax/Fees
                                                    Total Ticket


Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
```



Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee WA 98802

Ph: (509) 884-2802

Original
Ticket# 912867

Customer Name CREDIT CARD CUSTOMER CRE
Ticket Date 11/18/2021
Payment Type Credit Card
Manual Ticket#
Route
Hauling Ticket#
Destination
Manifest 116570wa
Profile 116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO# CL-Ellensburg Big B

Carrier L Boz
Vehicle# 0
Container
Driver
Check# l boz
Billing# 0507944
Grid

	Time	Scale	Operator	Inbound		
In	11/18/2021 12:03:03	Inbound	Janelle		Gross	82500 lb
Out	11/18/2021 12:18:54	Outbound	jvanhov		Tare	33880 lb
					Net	48620 lb
					Tons	24.31

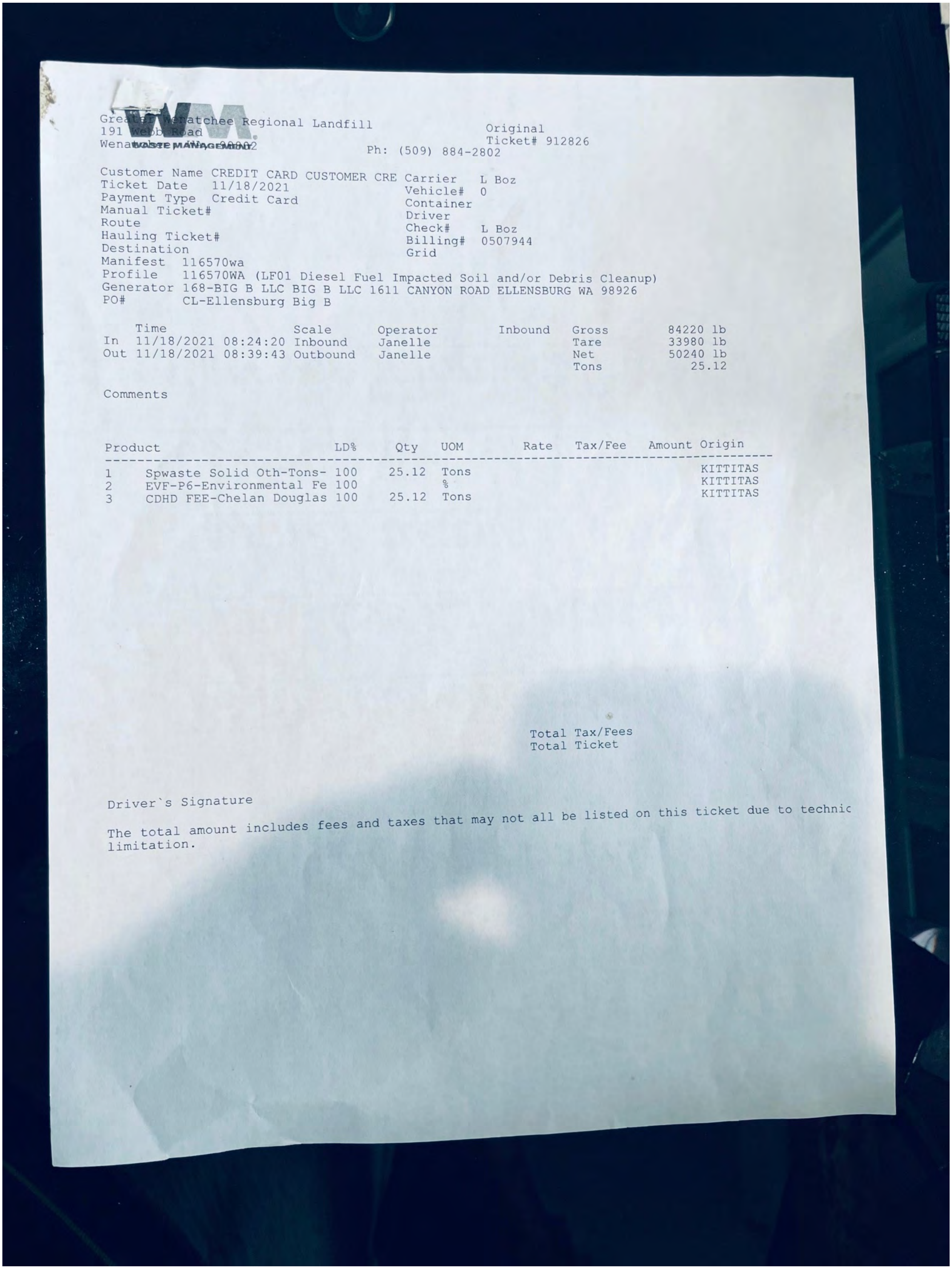
Comments

	Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Spwaste Solid Oth-Tons-	100	24.31	Tons				KITTITAS
2	EVF-P6-Environmental Fe	100		%				KITTITAS
3	CDHD FEE-Chelan Douglas	100	24.31	Tons				KITTITAS

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.



```
Greater Wenatchee Regional Landfill
191 Webb Road                                        Original
Wenatchee WA 98802                                   Ticket# 912826
                                     Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   11/18/2021               Vehicle#  0
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                 Scale      Operator        Inbound   Gross        84220 lb
In  11/18/2021 08:24:20 Inbound    Janelle                   Tare         33980 lb
Out 11/18/2021 08:39:43 Outbound   Janelle                   Net          50240 lb
                                                             Tons            25.12

Comments


Product                       LD%     Qty   UOM       Rate   Tax/Fee   Amount Origin
-------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100     25.12  Tons                              KITTITAS
2    EVF-P6-Environmental Fe 100            %                                 KITTITAS
3    CDHD FEE-Chelan Douglas 100     25.12  Tons                              KITTITAS

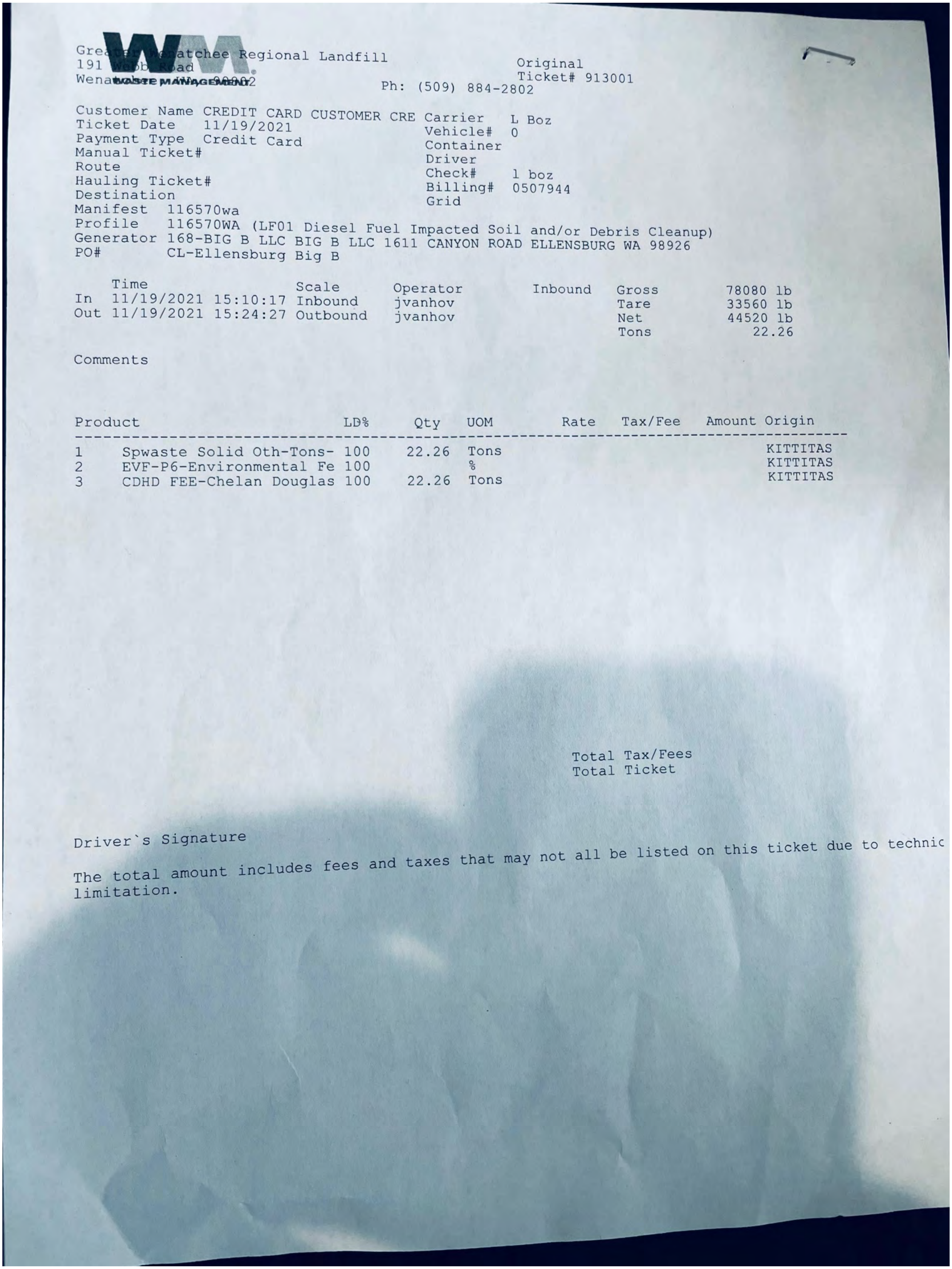



                                                   Total Tax/Fees
                                                   Total Ticket



Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
```



```
Greater Wenatchee Regional Landfill
191 Webb Road                                       Original
Wenatchee WA 98802                                  Ticket# 913001
                                     Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   11/19/2021               Vehicle#  0
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    l boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator       Inbound    Gross        78080 lb
In  11/19/2021 15:10:17 Inbound    jvanhov                   Tare         33560 lb
Out 11/19/2021 15:24:27 Outbound   jvanhov                   Net          44520 lb
                                                             Tons            22.26

Comments

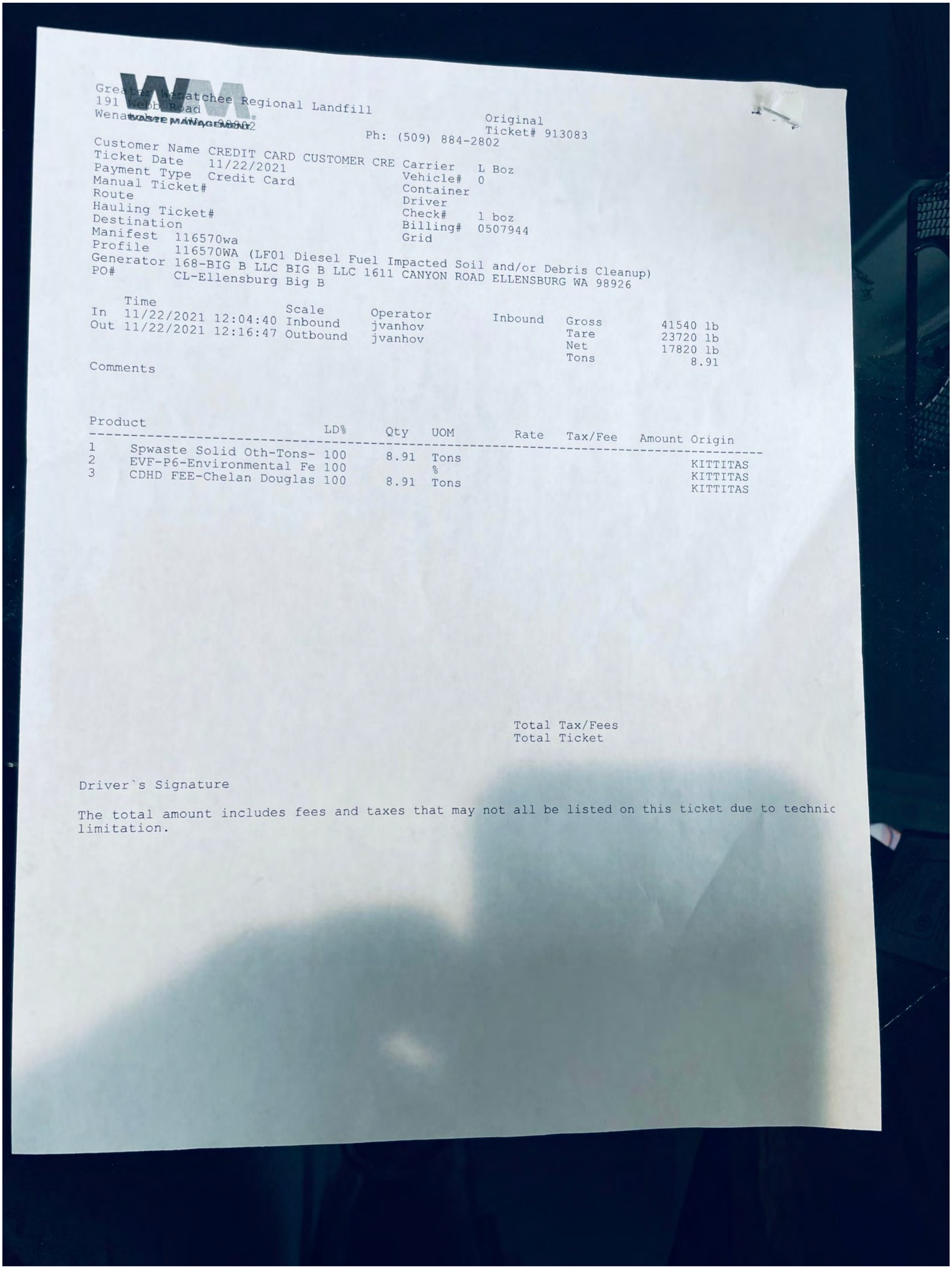

Product                        LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
-------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    22.26   Tons                                KITTITAS
2    EVF-P6-Environmental Fe 100            %                                   KITTITAS
3    CDHD FEE-Chelan Douglas 100    22.26   Tons                                KITTITAS




                                                   Total Tax/Fees
                                                   Total Ticket


Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
```



Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee WA 98802

Ph: (509) 884-2802

Original
Ticket# 913083

Customer Name CREDIT CARD CUSTOMER CRE
Ticket Date 11/22/2021
Payment Type Credit Card
Manual Ticket#
Route
Hauling Ticket#
Destination
Manifest 116570wa
Profile 116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO# CL-Ellensburg Big B

Carrier L Boz
Vehicle# 0
Container
Driver
Check# 1 boz
Billing# 0507944
Grid

	Time	Scale	Operator
In	11/22/2021 12:04:40	Inbound	jvanhov
Out	11/22/2021 12:16:47	Outbound	jvanhov

Inbound

Gross	41540 lb
Tare	23720 lb
Net	17820 lb
Tons	8.91

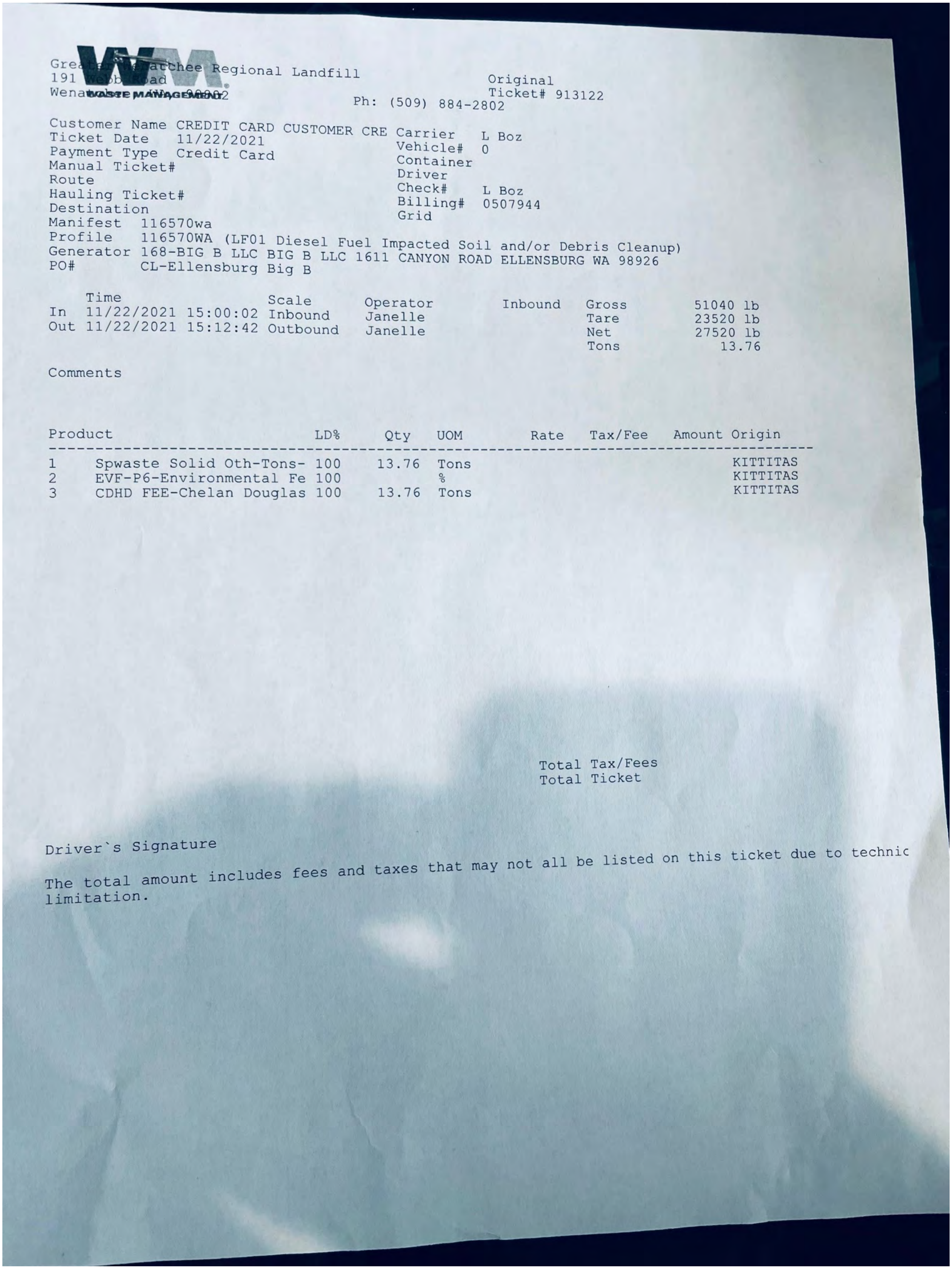
Comments

	Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Spwaste Solid Oth-Tons-	100	8.91	Tons				KITTITAS
2	EVF-P6-Environmental Fe	100		%				KITTITAS
3	CDHD FEE-Chelan Douglas	100	8.91	Tons				KITTITAS

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic limitation.



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Greater Wenatchee Regional Landfill
191 Webb Road                                         Original
Wenatchee WA 98802                                    Ticket# 913122
                                    Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   11/22/2021               Vehicle#  0
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                      Scale      Operator       Inbound   Gross        51040 lb
In  11/22/2021 15:00:02 Inbound    Janelle                  Tare         23520 lb
Out 11/22/2021 15:12:42 Outbound   Janelle                  Net          27520 lb
                                                                 Tons            13.76

Comments


Product                        LD%     Qty   UOM       Rate   Tax/Fee   Amount Origin
-------------------------------------------------------------------------------------
1     Spwaste Solid Oth-Tons- 100    13.76  Tons                              KITTITAS
2     EVF-P6-Environmental Fe 100           %                                 KITTITAS
3     CDHD FEE-Chelan Douglas 100    13.76  Tons                              KITTITAS




                                                       Total Tax/Fees
                                                       Total Ticket


Driver`s Signature

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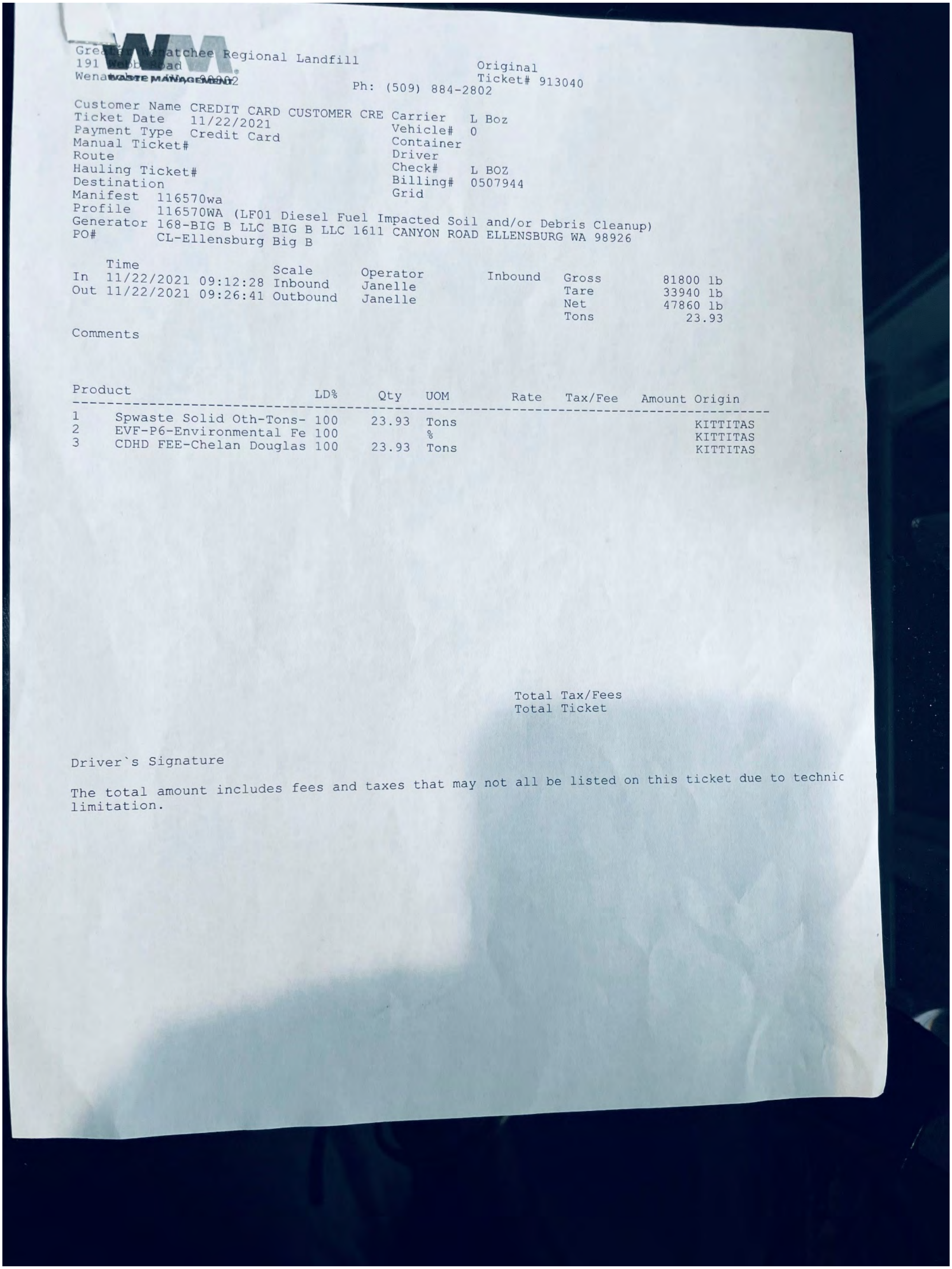
limitation.
```



Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee WA 98802
Ph: (509) 884-2802

Original
Ticket# 913040

Customer Name	CREDIT CARD CUSTOMER CRE	Carrier	L Boz
Ticket Date	11/22/2021	Vehicle#	0
Payment Type	Credit Card	Container	
Manual Ticket#		Driver	
Route		Check#	L BOZ
Hauling Ticket#		Billing#	0507944
Destination		Grid	
Manifest	116570wa		
Profile	116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)		
Generator	168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926		
PO#	CL-Ellensburg Big B		

	Time	Scale	Operator	Inbound		
In	11/22/2021 09:12:28	Inbound	Janelle		Gross	81800 lb
Out	11/22/2021 09:26:41	Outbound	Janelle		Tare	33940 lb
					Net	47860 lb
					Tons	23.93

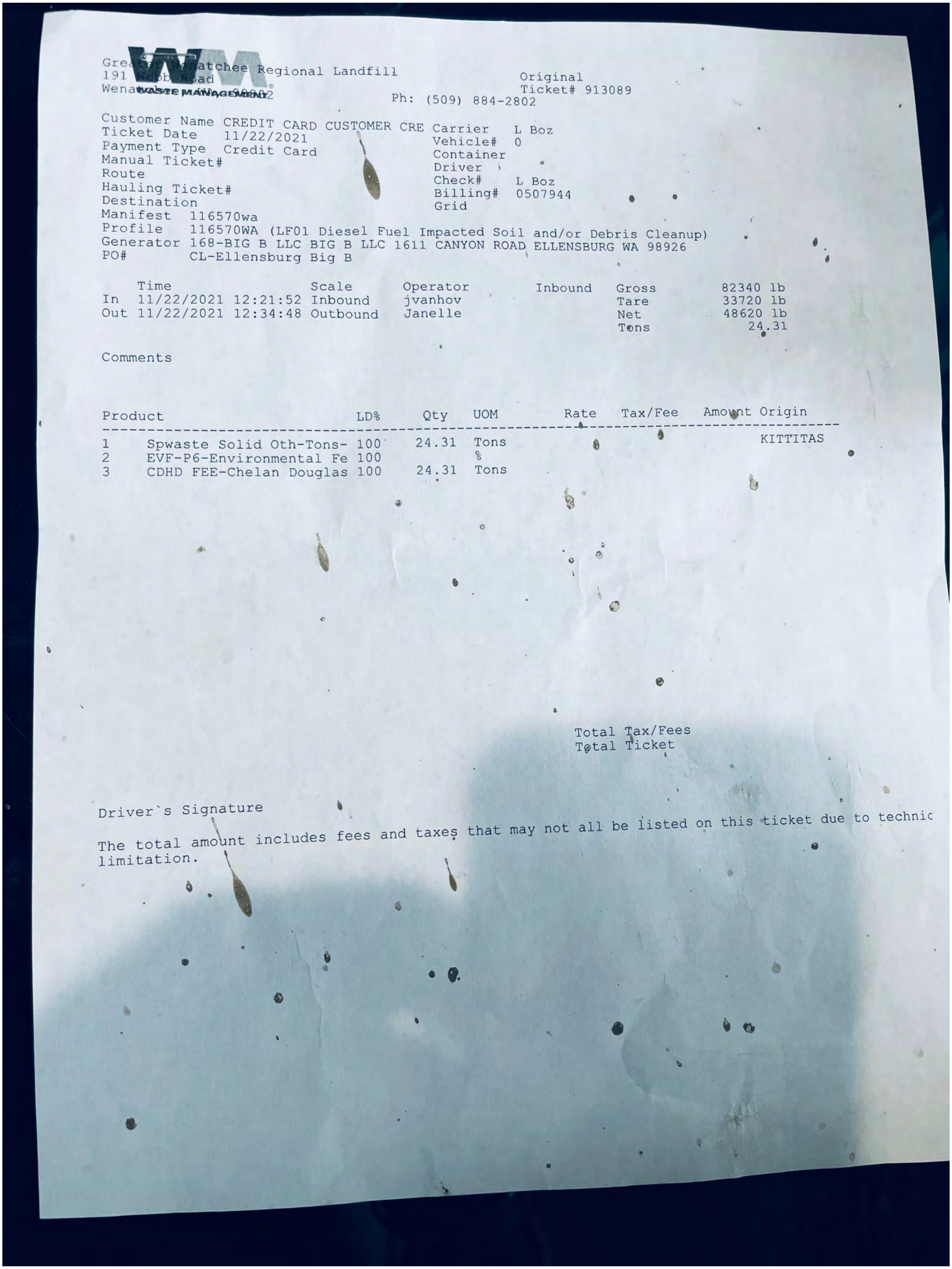
Comments

Product		LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Spwaste Solid Oth-Tons-	100	23.93	Tons				KITTITAS
2	EVF-P6-Environmental Fe	100		%				KITTITAS
3	CDHD FEE-Chelan Douglas	100	23.93	Tons				KITTITAS

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic limitation.



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Greater Wenatchee Regional Landfill
191 Webb Road                                     Original
Wena[illegible]2                                   Ticket# 913089
                                Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier    L Boz
Ticket Date   11/22/2021               Vehicle#   0
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#     L Boz
Hauling Ticket#                        Billing#   0507944
Destination                            Grid
Manifest   116570wa
Profile    116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#        CL-Ellensburg Big B

    Time                  Scale      Operator       Inbound   Gross        82340 lb
In  11/22/2021 12:21:52 Inbound    jvanhov                  Tare         33720 lb
Out 11/22/2021 12:34:48 Outbound   Janelle                  Net          48620 lb
                                                             Tons            24.31

Comments


Product                        LD%     Qty    UOM       Rate   Tax/Fee   Amount Origin
------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    24.31  Tons                            KITTITAS
2    EVF-P6-Environmental Fe 100           %
3    CDHD FEE-Chelan Douglas 100    24.31  Tons



                                                   Total Tax/Fees
                                                   Total Ticket


Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
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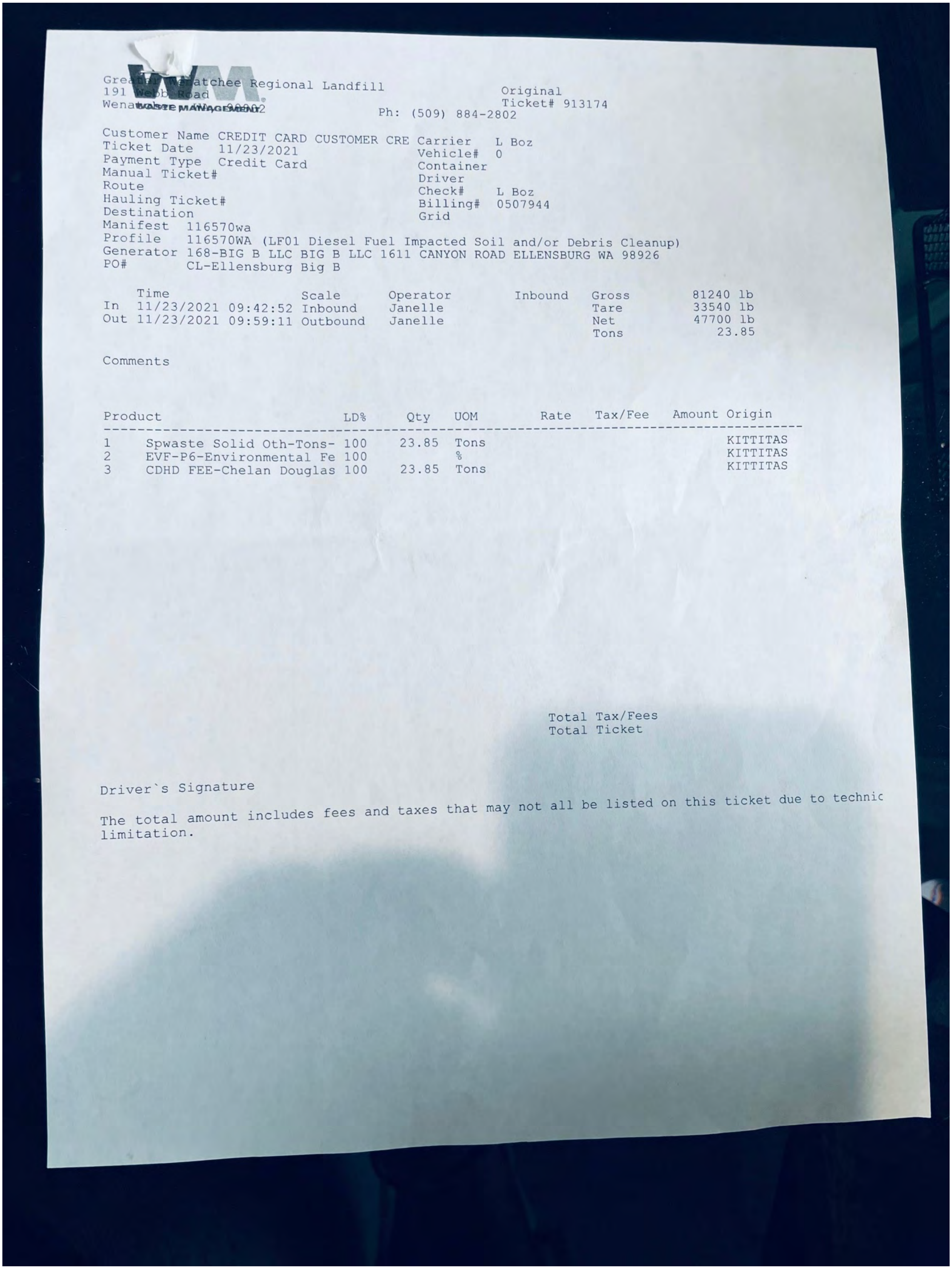

```
Greater Wenatchee Regional Landfill
191 Webb Road                                   Original
Wenatchee WA 98802                              Ticket# 913174
                                    Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   11/23/2021               Vehicle#  0
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale     Operator       Inbound  Gross      81240 lb
In  11/23/2021 09:42:52 Inbound   Janelle                 Tare       33540 lb
Out 11/23/2021 09:59:11 Outbound  Janelle                 Net        47700 lb
                                                          Tons          23.85

Comments


Product                      LD%    Qty   UOM       Rate   Tax/Fee   Amount Origin
------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    23.85  Tons                             KITTITAS
2    EVF-P6-Environmental Fe 100           %                                KITTITAS
3    CDHD FEE-Chelan Douglas 100    23.85  Tons                             KITTITAS




                                                 Total Tax/Fees
                                                 Total Ticket



Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
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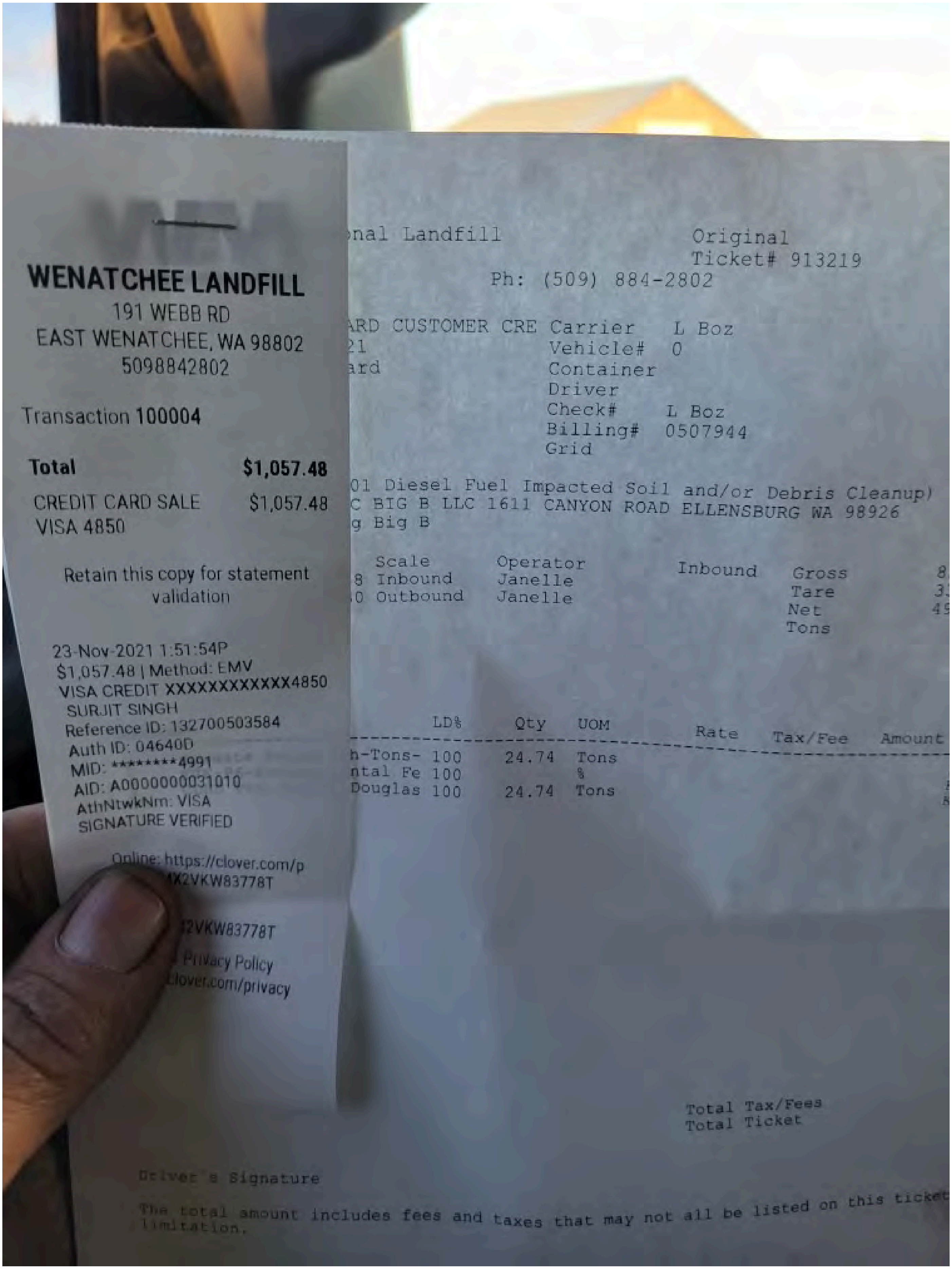

WENATCHEE LANDFILL
191 WEBB RD
EAST WENATCHEE, WA 98802
5098842802

Transaction **100004**

Total	**$1,057.48**
CREDIT CARD SALE	$1,057.48
VISA 4850	

Retain this copy for statement validation

23-Nov-2021 1:51:54P
$1,057.48 | Method: EMV
VISA CREDIT XXXXXXXXXXXX4850
SURJIT SINGH
Reference ID: 132700503584
Auth ID: 04640D
MID: ********4991
AID: A0000000031010
AthNtwkNm: VISA
SIGNATURE VERIFIED

Online: https://clover.com/p
MX2VKW83778T

2VKW83778T

Privacy Policy
clover.com/privacy

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nal Landfill Original
Ticket# 913219
Ph: (509) 884-2802

ARD CUSTOMER CRE Carrier L Boz
21 Vehicle# 0
ard Container
Driver
Check# L Boz
Billing# 0507944
Grid

01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
C BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
g Big B

	Scale	Operator			
8	Inbound	Janelle	Inbound	Gross	8
0	Outbound	Janelle		Tare	3
				Net	49
				Tons	

	LD%	Qty	UOM	Rate	Tax/Fee	Amount
h-Tons-	100	24.74	Tons			
ntal Fe	100		%			
Douglas	100	24.74	Tons			

Total Tax/Fees
Total Ticket

Driver's Signature

The total amount includes fees and taxes that may not all be listed on this ticket
limitation.

Transaction Detail Report
Ticket Created Criteria: 11/01/2021 12:00 AM to 11/29/2021 11:59 PM
Business Unit Name: Greater Wenatchee Regional LF - B01048 (USA)
User: jisaacs1
Date: Nov 29 2021, 3:48:32 PM - Central Standard Time
Operation Type: All
Customer Name: All
Ticket Type: All
Customer Type: All
PMT Category: All
Profile: 116570WA

Ticket Creation Date	Time In	Time Out	Oper. In	Oper. Out	Ticket	Manifest	Profile	Material	Rate Unit	Tons	Total	Gross Wt	Tare Wt	Net Wt
11/15/2021 11:35	11/15/2021 11:35	11/15/2021 11:51	Janelle	Janelle	912506	116570wa	116570WA / LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup	Spwaste Solid Oth-Tons	TON	17.08	$730.07	57920	23760	34160
11/15/2021 11:38	11/15/2021 11:38	11/15/2021 11:53	Janelle	Janelle	912507	116570wa	116570WA / LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup	Spwaste Solid Oth-Tons	TON	28.78	$1,230.18	91500	33940	57560
11/15/2021 15:00	11/15/2021 15:00	11/15/2021 15:11	Janelle	Janelle	912551	116570wa	116570WA / LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup	Spwaste Solid Oth-Tons	TON	19.59	$837.36	62780	23600	39180
11/15/2021 15:21	11/15/2021 15:21	11/15/2021 15:32	Janelle	Janelle	912558	116570wa	116570WA / LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup	Spwaste Solid Oth-Tons	TON	32.21	$1,376.78	98160	33740	64420
11/16/2021 8:21	11/16/2021 8:21	11/16/2021 8:31	Janelle	Janelle	912587	116570wa	116570WA / LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup	Spwaste Solid Oth-Tons	TON	25.34	$1,083.14	84040	33360	50680
11/16/2021 12:39	11/16/2021 12:39	11/16/2021 12:49	Janelle	Janelle	912643	116570wa	116570WA / LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup	Spwaste Solid Oth-Tons	TON	27.22	$1,163.49	88380	33940	54440
11/16/2021 12:47	11/16/2021 12:47	11/16/2021 12:55	Janelle	Janelle	912644	116570wa	116570WA / LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup	Spwaste Solid Oth-Tons	TON	18.01	$769.82	59920	23900	36020
11/17/2021 9:27	11/17/2021 9:27	11/17/2021 9:38	Janelle	Janelle	912709	116570wa	116570WA / LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup	Spwaste Solid Oth-Tons	TON	23.68	$1,012.17	81040	33680	47360
11/17/2021 12:55	11/17/2021 12:55	11/17/2021 14:02	Janelle	Janelle	912762	116570wa	116570WA / LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup	Spwaste Solid Oth-Tons	TON	25.43	$1,086.99	84340	33480	50860
11/18/2021 8:24	11/18/2021 8:24	11/18/2021 8:39	Janelle	Janelle	912826	116570wa	116570WA / LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup	Spwaste Solid Oth-Tons	TON	25.12	$1,073.72	84220	33980	50240
11/18/2021 8:24	11/18/2021 8:24	11/18/2021 8:40	Janelle	Janelle	912827	116570wa	116570WA / LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup	Spwaste Solid Oth-Tons	TON	15.5	$662.53	54900	23900	31000
11/18/2021 12:03	11/18/2021 12:03	11/18/2021 12:18	Janelle	jvanhov	912867	116570wa	116570WA / LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup	Spwaste Solid Oth-Tons	TON	24.31	$1,039.12	82500	33880	48620
11/19/2021 15:10	11/19/2021 15:10	11/19/2021 15:24	jvanhov	jvanhov	913001	116570wa	116570WA / LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup	Spwaste Solid Oth-Tons	TON	22.26	$951.48	78080	33560	44520
11/22/2021 9:12	11/22/2021 9:12	11/22/2021 9:26	Janelle	Janelle	913040	116570wa	116570WA / LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup	Spwaste Solid Oth-Tons	TON	23.93	$1,022.87	81800	33940	47860
11/22/2021 12:04	11/22/2021 12:04	11/22/2021 12:16	jvanhov	jvanhov	913083	116570wa	116570WA / LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup	Spwaste Solid Oth-Tons	TON	8.91	$380.85	41540	23720	17820
11/22/2021 12:21	11/22/2021 12:21	11/22/2021 12:34	jvanhov	Janelle	913089	116570wa	116570WA / LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup	Spwaste Solid Oth-Tons	TON	24.31	$1,039.12	82340	33720	48620
11/22/2021 15:00	11/22/2021 15:00	11/22/2021 15:12	Janelle	Janelle	913122	116570wa	116570WA / LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup	Spwaste Solid Oth-Tons	TON	13.76	$588.16	51040	23520	27520
11/23/2021 9:42	11/23/2021 9:42	11/23/2021 9:59	Janelle	Janelle	913174	116570wa	116570WA / LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup	Spwaste Solid Oth-Tons	TON	23.85	$1,019.45	81240	33540	47700
11/23/2021 13:32	11/23/2021 13:32	11/23/2021 13:51	Janelle	Janelle	913219	116570wa	116570WA / LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup	Spwaste Solid Oth-Tons	TON	24.74	$1,057.48	83440	33960	49480
Total										**424.03**	**$18,124.78**			

```
Greater Wenatchee Regional Landfill               Reprint
191 Webb Road                                     Ticket# 928660
Wenatchee, WA, 98802              Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   06/21/2022               Vehicle#  yellow
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    l boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator        Inbound   Gross        81800 lb
In  06/21/2022 10:01:33 Outbound   Janelle                   Tare         33800 lb
Out 06/21/2022 10:19:33 Outbound   Janelle                   Net          48000 lb
                                                             Tons            24.00

Comments


Product                      LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
----------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    24.00  Tons                                 KITTITAS
2    EVF-P6-Environmental Fe 100           %                                    KITTITAS
3    FUEL-Fuel Surcharge - L 100           %                                    KITTITAS
4    CDHD FEE-Chelan Douglas 100    24.00  Tons                                 KITTITAS









                                                      Total Tax/Fees
                                                      Total Ticket


Driver`s Signature


The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
```

```
Greater Wenatchee Regional Landfill               Reprint
191 Webb Road                                     Ticket# 928661
Wenatchee, WA, 98802              Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   06/21/2022               Vehicle#  blue
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator        Inbound   Gross        55000 lb
In  06/21/2022 10:04:52 Outbound   Janelle                   Tare         23860 lb
Out 06/21/2022 10:18:30 Outbound   Janelle                   Net          31140 lb
                                                             Tons            15.57

Comments


Product                      LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
----------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    15.57  Tons                               KITTITAS
2    EVF-P6-Environmental Fe 100           %                                  KITTITAS
3    FUEL-Fuel Surcharge - L 100           %                                  KITTITAS
4    CDHD FEE-Chelan Douglas 100    15.57  Tons                               KITTITAS








                                                      Total Tax/Fees
                                                      Total Ticket


Driver`s Signature


The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
```

```
Greater Wenatchee Regional Landfill              Reprint
191 Webb Road                                    Ticket# 928719
Wenatchee, WA, 98802              Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   06/21/2022               Vehicle#  blue
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator        Inbound   Gross        54520 lb
In  06/21/2022 14:36:06 Outbound   Janelle                   Tare         23740 lb
Out 06/21/2022 14:50:44 Outbound   Janelle                   Net          30780 lb
                                                             Tons            15.39

Comments



Product                      LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
-----------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    15.39  Tons                               KITTITAS
2    EVF-P6-Environmental Fe 100           %                                  KITTITAS
3    FUEL-Fuel Surcharge - L 100           %                                  KITTITAS
4    CDHD FEE-Chelan Douglas 100    15.39  Tons                               KITTITAS









                                                       Total Tax/Fees
                                                       Total Ticket


Driver`s Signature


The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
```

```
Greater Wenatchee Regional Landfill                 Reprint
191 Webb Road                                       Ticket# 928729
Wenatchee, WA, 98802                Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   06/21/2022               Vehicle#  yellow
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator        Inbound   Gross        81480 lb
In  06/21/2022 15:00:32 Outbound   Janelle                   Tare         33720 lb
Out 06/21/2022 15:08:52 Outbound   Janelle                   Net          47760 lb
                                                             Tons            23.88

Comments


Product                        LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
-------------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    23.88  Tons                                 KITTITAS
2    EVF-P6-Environmental Fe 100           %                                    KITTITAS
3    FUEL-Fuel Surcharge - L 100           %                                    KITTITAS
4    CDHD FEE-Chelan Douglas 100    23.88  Tons                                 KITTITAS










                                                       Total Tax/Fees
                                                       Total Ticket


Driver`s Signature


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limitation.
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```
Greater Wenatchee Regional Landfill               Reprint
191 Webb Road                                     Ticket# 928806
Wenatchee, WA, 98802              Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   06/22/2022               Vehicle#  Yellow
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator        Inbound   Gross        74560 lb
In  06/22/2022 11:10:05 Outbound   Janelle                   Tare         33740 lb
Out 06/22/2022 11:18:20 Outbound   Janelle                   Net          40820 lb
                                                             Tons            20.41

Comments



Product                      LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
----------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    20.41  Tons                                  KITTITAS
2    EVF-P6-Environmental Fe 100           %                                     KITTITAS
3    FUEL-Fuel Surcharge - L 100           %                                     KITTITAS
4    CDHD FEE-Chelan Douglas 100    20.41  Tons                                  KITTITAS













                                                      Total Tax/Fees
                                                      Total Ticket



Driver`s Signature


The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
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Greater Wenatchee Regional Landfill Reprint
191 Webb Road Ticket# 928807
Wenatchee, WA, 98802 Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier L Boz
Ticket Date 06/22/2022 Vehicle# blue
Payment Type Credit Card Container
Manual Ticket# Driver
Route Check# L Boz
Hauling Ticket# Billing# 0507944
Destination Grid
Manifest 116570wa
Profile 116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO# CL-Ellensburg Big B

	Time	Scale	Operator	Inbound	Gross	52540 lb
In	06/22/2022 11:12:44	Outbound	Janelle		Tare	23920 lb
Out	06/22/2022 11:25:07	Outbound	Janelle		Net	28620 lb
					Tons	14.31

Comments

Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1 Spwaste Solid Oth-Tons-	100	14.31	Tons				KITTITAS
2 EVF-P6-Environmental Fe	100		%				KITTITAS
3 FUEL-Fuel Surcharge - L	100		%				KITTITAS
4 CDHD FEE-Chelan Douglas	100	14.31	Tons				KITTITAS

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.

```
Greater Wenatchee Regional Landfill              Reprint
191 Webb Road                                    Ticket# 937078
Wenatchee, WA, 98802                Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   09/30/2022               Vehicle#  0
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    LBOZ
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator        Inbound   Gross        47140 lb
In  09/30/2022 08:43:02 Inbound    jvanhov                   Tare         24000 lb
Out 09/30/2022 09:03:09 Inbound    jvanhov                   Net          23140 lb
                                                             Tons            11.57

Comments



Product                     LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
-------------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    11.57  Tons                                KITTITAS
2    EVF-P6-Environmental Fe 100           %                                   KITTITAS
3    FUEL-Fuel Surcharge - L 100           %                                   KITTITAS
4    CDHD FEE-Chelan Douglas 100    11.57  Tons                                KITTITAS









                                                        Total Tax/Fees
                                                        Total Ticket


Driver`s Signature


The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
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Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Ph: (509) 884-2802

Reprint
Ticket# 937079

Customer Name	CREDIT CARD CUSTOMER CRE	Carrier	L Boz
Ticket Date	09/30/2022	Vehicle#	1
Payment Type	Credit Card	Container	
Manual Ticket#		Driver	
Route		Check#	BOZA
Hauling Ticket#		Billing#	0507944
Destination		Grid	

Manifest 116570wa
Profile 116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO# CL-Ellensburg Big B

	Time	Scale	Operator	Inbound
In	09/30/2022 08:44:43	Inbound	jvanhov	
Out	09/30/2022 09:05:27	Inbound	jvanhov	

Gross	72860 lb
Tare	33920 lb
Net	38940 lb
Tons	19.47

Comments

	Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Spwaste Solid Oth-Tons-	100	19.47	Tons				KITTITAS
2	EVF-P6-Environmental Fe	100		%				KITTITAS
3	FUEL-Fuel Surcharge - L	100		%				KITTITAS
4	CDHD FEE-Chelan Douglas	100	19.47	Tons				KITTITAS

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.

```
Greater Wenatchee Regional Landfill               Reprint
191 Webb Road                                     Ticket# 937121
Wenatchee, WA, 98802              Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   09/30/2022               Vehicle#  0
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L BOZ
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570WA
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator        Inbound   Gross        48000 lb
In  09/30/2022 12:22:23 Inbound    jvanhov                   Tare         23700 lb
Out 09/30/2022 12:32:41 Inbound    jvanhov                   Net          24300 lb
                                                             Tons            12.15

Comments



Product                      LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
----------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    12.15  Tons                               KITTITAS
2    EVF-P6-Environmental Fe 100           %                                  KITTITAS
3    FUEL-Fuel Surcharge - L 100           %                                  KITTITAS
4    CDHD FEE-Chelan Douglas 100    12.15  Tons                               KITTITAS













                                                      Total Tax/Fees
                                                      Total Ticket


Driver`s Signature


The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
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```
Greater Wenatchee Regional Landfill                Reprint
191 Webb Road                                      Ticket# 937122
Wenatchee, WA, 98802                Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   09/30/2022               Vehicle#  1
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    LBOZ
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570WA
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator        Inbound   Gross        76140 lb
In  09/30/2022 12:22:58 Inbound    jvanhov                   Tare         33660 lb
Out 09/30/2022 12:37:00 Inbound    jvanhov                   Net          42480 lb
                                                             Tons            21.24

Comments



Product                      LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
-----------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    21.24  Tons                               KITTITAS
2    EVF-P6-Environmental Fe 100           %                                  KITTITAS
3    FUEL-Fuel Surcharge - L 100           %                                  KITTITAS
4    CDHD FEE-Chelan Douglas 100    21.24  Tons                               KITTITAS









                                                       Total Tax/Fees
                                                       Total Ticket


Driver`s Signature


The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
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```
Greater Wenatchee Regional Landfill              Reprint
191 Webb Road                                    Ticket# 937164
Wenatchee, WA, 98802               Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   09/30/2022               Vehicle#  0
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    l boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator        Inbound   Gross        48400 lb
In  09/30/2022 15:44:26 Inbound    jvanhov                   Tare         23660 lb
Out 09/30/2022 15:54:24 Inbound    jvanhov                   Net          24740 lb
                                                             Tons            12.37

Comments


Product                        LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
------------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    12.37  Tons                                 KITTITAS
2    EVF-P6-Environmental Fe 100           %                                    KITTITAS
3    FUEL-Fuel Surcharge - L 100           %                                    KITTITAS
4    CDHD FEE-Chelan Douglas 100    12.37  Tons                                 KITTITAS




                                                       Total Tax/Fees
                                                       Total Ticket


Driver`s Signature


The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
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```
Greater Wenatchee Regional Landfill              Reprint
191 Webb Road                                    Ticket# 937166
Wenatchee, WA, 98802               Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   09/30/2022               Vehicle#  1
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    l oz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator       Inbound   Gross        75100 lb
In  09/30/2022 15:45:46 Inbound    jvanhov                  Tare         33420 lb
Out 09/30/2022 15:57:03 Inbound    jvanhov                  Net          41680 lb
                                                            Tons            20.84

Comments



Product                      LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
-------------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    20.84  Tons                               KITTITAS
2    EVF-P6-Environmental Fe 100           %                                  KITTITAS
3    FUEL-Fuel Surcharge - L 100           %                                  KITTITAS
4    CDHD FEE-Chelan Douglas 100    20.84  Tons                               KITTITAS
```

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                                                        Total Tax/Fees
                                                        Total Ticket


Driver`s Signature


The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
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```
Greater Wenatchee Regional Landfill                 Reprint
191 Webb Road                                       Ticket# 937193
Wenatchee, WA, 98802                Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   10/03/2022               Vehicle#  0
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L BOz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator        Inbound   Gross        47500 lb
In  10/03/2022 07:55:08 Inbound    Janelle                   Tare         23980 lb
Out 10/03/2022 08:10:32 Inbound    Janelle                   Net          23520 lb
                                                             Tons            11.76

Comments



Product                      LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
-----------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    11.76  Tons                               KITTITAS
2    EVF-P6-Environmental Fe 100           %                                  KITTITAS
3    FUEL-Fuel Surcharge - L 100           %                                  KITTITAS
4    CDHD FEE-Chelan Douglas 100    11.76  Tons                               KITTITAS














                                                        Total Tax/Fees
                                                        Total Ticket



Driver`s Signature



The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
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Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Ph: (509) 884-2802

Reprint
Ticket# 937195

Customer Name	CREDIT CARD CUSTOMER CRE	Carrier	L Boz
Ticket Date	10/03/2022	Vehicle#	1
Payment Type	Credit Card	Container	
Manual Ticket#		Driver	
Route		Check#	Lboz
Hauling Ticket#		Billing#	0507944
Destination		Grid	

Manifest 116570wa
Profile 116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO# CL-Ellensburg Big B

	Time	Scale	Operator	Inbound
In	10/03/2022 08:00:32	Inbound	Janelle	
Out	10/03/2022 08:17:15	Inbound	Janelle	

Gross	76720 lb
Tare	33840 lb
Net	42880 lb
Tons	21.44

Comments

Product		LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Spwaste Solid Oth-Tons-	100	21.44	Tons				KITTITAS
2	EVF-P6-Environmental Fe	100		%				KITTITAS
3	FUEL-Fuel Surcharge - L	100		%				KITTITAS
4	CDHD FEE-Chelan Douglas	100	21.44	Tons				KITTITAS

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802 Ph: (509) 884-2802

Reprint
Ticket# 937241

Customer Name CREDIT CARD CUSTOMER CRE
Ticket Date 10/03/2022
Payment Type Credit Card
Manual Ticket#
Route
Hauling Ticket#
Destination
Manifest 116570wa
Profile 116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO# CL-Ellensburg Big B

Carrier L Boz
Vehicle# blue
Container
Driver
Check# L BOZ
Billing# 0507944
Grid

	Time	Scale	Operator	Inbound
In	10/03/2022 11:40:07	Inbound	Janelle	
Out	10/03/2022 11:51:02	Inbound	Janelle	

Gross 47800 lb
Tare 23840 lb
Net 23960 lb
Tons 11.98

Comments

Product		LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Spwaste Solid Oth-Tons-	100	11.98	Tons				KITTITAS
2	EVF-P6-Environmental Fe	100		%				KITTITAS
3	FUEL-Fuel Surcharge - L	100		%				KITTITAS
4	CDHD FEE-Chelan Douglas	100	11.98	Tons				KITTITAS

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802 Ph: (509) 884-2802

Reprint
Ticket# 937245

Customer Name	CREDIT CARD CUSTOMER CRE	Carrier	L Boz
Ticket Date	10/03/2022	Vehicle#	Yellow
Payment Type	Credit Card	Container	
Manual Ticket#		Driver	
Route		Check#	l boz
Hauling Ticket#		Billing#	0507944
Destination		Grid	

Manifest 116570wa
Profile 116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO# CL-Ellensburg Big B

	Time	Scale	Operator	Inbound		
					Gross	75960 lb
In	10/03/2022 12:16:36	Inbound	Janelle		Tare	33620 lb
Out	10/03/2022 12:24:45	Inbound	Janelle		Net	42340 lb
					Tons	21.17

Comments

Product		LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Spwaste Solid Oth-Tons-	100	21.17	Tons				KITTITAS
2	EVF-P6-Environmental Fe	100		%				KITTITAS
3	FUEL-Fuel Surcharge - L	100		%				KITTITAS
4	CDHD FEE-Chelan Douglas	100	21.17	Tons				KITTITAS

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.

```
Greater Wenatchee Regional Landfill                  Reprint
191 Webb Road                                        Ticket# 937279
Wenatchee, WA, 98802                Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   10/03/2022               Vehicle#  0
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator        Inbound   Gross        44700 lb
In  10/03/2022 15:14:57 Inbound    Janelle                   Tare         23680 lb
Out 10/03/2022 15:26:42 Inbound    Janelle                   Net          21020 lb
                                                             Tons            10.51

Comments


Product                        LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
-----------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    10.51  Tons                                 KITTITAS
2    EVF-P6-Environmental Fe 100           %                                    KITTITAS
3    FUEL-Fuel Surcharge - L 100           %                                    KITTITAS
4    CDHD FEE-Chelan Douglas 100    10.51  Tons                                 KITTITAS








                                                       Total Tax/Fees
                                                       Total Ticket


Driver`s Signature


The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
```

```
Greater Wenatchee Regional Landfill                 Reprint
191 Webb Road                                       Ticket# 937280
Wenatchee, WA, 98802               Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   10/03/2022               Vehicle#  Yellow
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator        Inbound   Gross        77800 lb
In  10/03/2022 15:15:47 Inbound    Janelle                   Tare         33400 lb
Out 10/03/2022 15:23:27 Inbound    Janelle                   Net          44400 lb
                                                             Tons            22.20

Comments



Product                        LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
-----------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    22.20  Tons                                 KITTITAS
2    EVF-P6-Environmental Fe 100           %                                    KITTITAS
3    FUEL-Fuel Surcharge - L 100           %                                    KITTITAS
4    CDHD FEE-Chelan Douglas 100    22.20  Tons                                 KITTITAS








                                                        Total Tax/Fees
                                                        Total Ticket


Driver`s Signature


The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
```

```
Greater Wenatchee Regional Landfill               Reprint
191 Webb Road                                     Ticket# 937310
Wenatchee, WA, 98802               Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   10/04/2022               Vehicle#  Blue
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator        Inbound   Gross        50780 lb
In  10/04/2022 08:13:41 Inbound    Janelle                   Tare         24060 lb
Out 10/04/2022 08:26:08 Inbound    Janelle                   Net          26720 lb
                                                             Tons            13.36

Comments



Product                        LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
-----------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    13.36  Tons                                 KITTITAS
2    EVF-P6-Environmental Fe 100           %                                    KITTITAS
3    FUEL-Fuel Surcharge - L 100           %                                    KITTITAS
4    CDHD FEE-Chelan Douglas 100    13.36  Tons                                 KITTITAS











                                                       Total Tax/Fees
                                                       Total Ticket



Driver`s Signature



The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
```

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Ph: (509) 884-2802

Reprint
Ticket# 937311

Customer Name CREDIT CARD CUSTOMER CRE
Ticket Date 10/04/2022
Payment Type Credit Card
Manual Ticket#
Route
Hauling Ticket#
Destination

Carrier L Boz
Vehicle# yellow
Container
Driver
Check# L Boz
Billing# 0507944
Grid

Manifest 116570wa
Profile 116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO# CL-Ellensburg Big B

	Time	Scale	Operator	Inbound		
In	10/04/2022 08:18:41	Inbound	Janelle		Gross	80660 lb
Out	10/04/2022 08:27:52	Inbound	Janelle		Tare	33780 lb
					Net	46880 lb
					Tons	23.44

Comments

Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1 Spwaste Solid Oth-Tons-	100	23.44	Tons				KITTITAS
2 EVF-P6-Environmental Fe	100		%				KITTITAS
3 FUEL-Fuel Surcharge - L	100		%				KITTITAS
4 CDHD FEE-Chelan Douglas	100	23.44	Tons				KITTITAS

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802 Ph: (509) 884-2802

Reprint
Ticket# 937355

Customer Name	CREDIT CARD CUSTOMER CRE	Carrier	L Boz
Ticket Date	10/04/2022	Vehicle#	Yellow
Payment Type	Credit Card	Container	
Manual Ticket#		Driver	
Route		Check#	L Boz
Hauling Ticket#		Billing#	0507944
Destination		Grid	

Manifest 116570wa
Profile 116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO# CL-Ellensburg Big B

	Time	Scale	Operator	Inbound
In	10/04/2022 11:37:59	Inbound	Janelle	
Out	10/04/2022 11:47:22	Inbound	Janelle	

Gross	75400 lb
Tare	33560 lb
Net	41840 lb
Tons	20.92

Comments

Product		LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Spwaste Solid Oth-Tons-	100	20.92	Tons				KITTITAS
2	EVF-P6-Environmental Fe	100		%				KITTITAS
3	FUEL-Fuel Surcharge - L	100		%				KITTITAS
4	CDHD FEE-Chelan Douglas	100	20.92	Tons				KITTITAS

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.

```
Greater Wenatchee Regional Landfill              Reprint
191 Webb Road                                    Ticket# 937356
Wenatchee, WA, 98802                Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   10/04/2022               Vehicle#  Blue
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator        Inbound   Gross        50300 lb
In  10/04/2022 11:39:03 Inbound    Janelle                   Tare         23920 lb
Out 10/04/2022 11:50:05 Outbound   Janelle                   Net          26380 lb
                                                             Tons            13.19

Comments



Product                      LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
-----------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    13.19  Tons                               KITTITAS
2    EVF-P6-Environmental Fe 100           %                                  KITTITAS
3    FUEL-Fuel Surcharge - L 100           %                                  KITTITAS
4    CDHD FEE-Chelan Douglas 100    13.19  Tons                               KITTITAS






















                                                       Total Tax/Fees
                                                       Total Ticket


Driver`s Signature


The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
```

```
Greater Wenatchee Regional Landfill             Reprint
191 Webb Road                                   Ticket# 937408
Wenatchee, WA, 98802              Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   10/04/2022               Vehicle#  0
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator        Inbound   Gross        49780 lb
In  10/04/2022 14:54:40 Inbound    Janelle                   Tare        23800 lb*
Out 10/04/2022 15:05:28 Outbound   Janelle                   Net          25980 lb
                                   * Manual Weight           Tons            12.99

Comments



Product                      LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
-------------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    12.99  Tons                               KITTITAS
2    EVF-P6-Environmental Fe 100           %                                  KITTITAS
3    FUEL-Fuel Surcharge - L 100           %                                  KITTITAS
4    CDHD FEE-Chelan Douglas 100    12.99  Tons                               KITTITAS












                                                        Total Tax/Fees
                                                        Total Ticket



Driver`s Signature


The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
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```
Greater Wenatchee Regional Landfill              Reprint
191 Webb Road                                    Ticket# 937409
Wenatchee, WA, 98802                Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   10/04/2022               Vehicle#  Yellow
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator        Inbound   Gross        75320 lb
In  10/04/2022 14:56:21 Inbound    Janelle                   Tare         33340 lb
Out 10/04/2022 15:04:10 Inbound    Janelle                   Net          41980 lb
                                                             Tons            20.99

Comments


Product                        LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
-------------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    20.99  Tons                                KITTITAS
2    EVF-P6-Environmental Fe 100           %                                   KITTITAS
3    FUEL-Fuel Surcharge - L 100           %                                   KITTITAS
4    CDHD FEE-Chelan Douglas 100    20.99  Tons                                KITTITAS





                                                       Total Tax/Fees
                                                       Total Ticket


Driver`s Signature


The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
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```
Greater Wenatchee Regional Landfill                 Reprint
191 Webb Road                                       Ticket# 937454
Wenatchee, WA, 98802               Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   10/05/2022               Vehicle#  Blue
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator        Inbound   Gross        52720 lb
In  10/05/2022 08:18:15 Inbound    Janelle                   Tare         24080 lb
Out 10/05/2022 08:41:15 Outbound   Janelle                   Net          28640 lb
                                                             Tons            14.32

Comments



Product                      LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
------------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    14.32  Tons                               KITTITAS
2    EVF-P6-Environmental Fe 100           %                                  KITTITAS
3    FUEL-Fuel Surcharge - L 100           %                                  KITTITAS
4    CDHD FEE-Chelan Douglas 100    14.32  Tons                               KITTITAS
```

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                                                        Total Tax/Fees
                                                        Total Ticket


Driver`s Signature


The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
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Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Reprint
Ticket# 937457

Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE
Ticket Date 10/05/2022
Payment Type Credit Card
Manual Ticket#
Route
Hauling Ticket#
Destination

Carrier L Boz
Vehicle# Yellow
Container
Driver
Check# L Boz
Billing# 0507944
Grid

Manifest 116570wa
Profile 116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO# CL-Ellensburg Big B

	Time	Scale	Operator	Inbound
In	10/05/2022 08:23:12	Inbound	Janelle	
Out	10/05/2022 08:42:36	Outbound	Janelle	

Gross	77900 lb
Tare	33900 lb
Net	44000 lb
Tons	22.00

Comments

Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1 Spwaste Solid Oth-Tons-	100	22.00	Tons				KITTITAS
2 EVF-P6-Environmental Fe	100		%				KITTITAS
3 FUEL-Fuel Surcharge - L	100		%				KITTITAS
4 CDHD FEE-Chelan Douglas	100	22.00	Tons				KITTITAS

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.

```
Greater Wenatchee Regional Landfill                Reprint
191 Webb Road                                      Ticket# 937498
Wenatchee, WA, 98802               Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   10/05/2022               Vehicle#  Yellow
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator        Inbound   Gross        76240 lb
In  10/05/2022 11:37:25 Inbound    Janelle                   Tare         33720 lb
Out 10/05/2022 11:44:34 Outbound   Janelle                   Net          42520 lb
                                                             Tons            21.26

Comments


Product                      LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
-----------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    21.26  Tons                               KITTITAS
2    EVF-P6-Environmental Fe 100           %                                  KITTITAS
3    FUEL-Fuel Surcharge - L 100           %                                  KITTITAS
4    CDHD FEE-Chelan Douglas 100    21.26  Tons                               KITTITAS







                                                       Total Tax/Fees
                                                       Total Ticket


Driver`s Signature


The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
```

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Ph: (509) 884-2802

Reprint
Ticket# 937499

Customer Name	CREDIT CARD CUSTOMER CRE	Carrier	L Boz
Ticket Date	10/05/2022	Vehicle#	blue
Payment Type	Credit Card	Container	
Manual Ticket#		Driver	
Route		Check#	L Boz
Hauling Ticket#		Billing#	0507944
Destination		Grid	

Manifest 116570wa
Profile 116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO# CL-Ellensburg Big B

	Time	Scale	Operator	Inbound		
					Gross	51860 lb
In	10/05/2022 11:38:37	Inbound	Janelle		Tare	23920 lb
Out	10/05/2022 11:50:30	Outbound	Janelle		Net	27940 lb
					Tons	13.97

Comments

Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1 Spwaste Solid Oth-Tons-	100	13.97	Tons				KITTITAS
2 EVF-P6-Environmental Fe	100		%				KITTITAS
3 FUEL-Fuel Surcharge - L	100		%				KITTITAS
4 CDHD FEE-Chelan Douglas	100	13.97	Tons				KITTITAS

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.

Greater Wenatchee Regional Landfill Reprint
191 Webb Road Ticket# 937543
Wenatchee, WA, 98802 Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE
Ticket Date 10/05/2022
Payment Type Credit Card
Manual Ticket#
Route
Hauling Ticket#
Destination

Carrier L Boz
Vehicle# Yellow
Container
Driver
Check# L Boz
Billing# 0507944
Grid

Manifest 116570wa
Profile 116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO# CL-Ellensburg Big B

	Time	Scale	Operator	Inbound	Gross	71800 lb
In	10/05/2022 14:48:42	Inbound	Janelle		Tare	33540 lb
Out	10/05/2022 14:56:27	Outbound	Janelle		Net	38260 lb
					Tons	19.13

Comments

Product		LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Spwaste Solid Oth-Tons-	100	19.13	Tons				KITTITAS
2	EVF-P6-Environmental Fe	100		%				KITTITAS
3	FUEL-Fuel Surcharge - L	100		%				KITTITAS
4	CDHD FEE-Chelan Douglas	100	19.13	Tons				KITTITAS

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic limitation.

```
Greater Wenatchee Regional Landfill              Reprint
191 Webb Road                                    Ticket# 937544
Wenatchee, WA, 98802               Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   10/05/2022               Vehicle#  blue
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator        Inbound   Gross        49720 lb
In  10/05/2022 14:49:29 Inbound    Janelle                   Tare         23680 lb
Out 10/05/2022 15:00:20 Outbound   Janelle                   Net          26040 lb
                                                             Tons            13.02

Comments


Product                        LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
-------------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    13.02  Tons                                 KITTITAS
2    EVF-P6-Environmental Fe 100           %                                    KITTITAS
3    FUEL-Fuel Surcharge - L 100           %                                    KITTITAS
4    CDHD FEE-Chelan Douglas 100    13.02  Tons                                 KITTITAS




                                                      Total Tax/Fees
                                                      Total Ticket


Driver`s Signature


The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
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```
Greater Wenatchee Regional Landfill                  Reprint
191 Webb Road                                        Ticket# 937579
Wenatchee, WA, 98802                Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   10/06/2022               Vehicle#  blue
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator        Inbound   Gross        53200 lb
In  10/06/2022 08:19:32 Inbound    Janelle                   Tare         24100 lb
Out 10/06/2022 08:29:36 Outbound   Janelle                   Net          29100 lb
                                                             Tons            14.55

Comments



Product                     LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
------------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    14.55  Tons                              KITTITAS
2    EVF-P6-Environmental Fe 100           %                                 KITTITAS
3    FUEL-Fuel Surcharge - L 100           %                                 KITTITAS
4    CDHD FEE-Chelan Douglas 100    14.55  Tons                              KITTITAS














                                                       Total Tax/Fees
                                                       Total Ticket



Driver`s Signature


The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
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Greater Wenatchee Regional Landfill Reprint
191 Webb Road Ticket# 937580
Wenatchee, WA, 98802 Ph: (509) 884-2802

Customer Name	CREDIT CARD CUSTOMER CRE	Carrier	L Boz
Ticket Date	10/06/2022	Vehicle#	Yellow
Payment Type	Credit Card	Container	
Manual Ticket#		Driver	
Route		Check#	L Boz
Hauling Ticket#		Billing#	0507944
Destination		Grid	

Manifest 116570wa
Profile 116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO# CL-Ellensburg Big B

	Time	Scale	Operator	Inbound	Gross	77780 lb
In	10/06/2022 08:20:39	Inbound	Janelle		Tare	33940 lb
Out	10/06/2022 08:28:00	Outbound	Janelle		Net	43840 lb
					Tons	21.92

Comments

Product		LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Spwaste Solid Oth-Tons-	100	21.92	Tons				KITTITAS
2	EVF-P6-Environmental Fe	100		%				KITTITAS
3	FUEL-Fuel Surcharge - L	100		%				KITTITAS
4	CDHD FEE-Chelan Douglas	100	21.92	Tons				KITTITAS

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.

```
Greater Wenatchee Regional Landfill                 Reprint
191 Webb Road                                       Ticket# 937624
Wenatchee, WA, 98802                Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   10/06/2022               Vehicle#  Yellow
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator        Inbound   Gross        74280 lb
In  10/06/2022 11:32:09 Inbound    Janelle                   Tare         33700 lb
Out 10/06/2022 11:39:26 Outbound   Janelle                   Net          40580 lb
                                                             Tons            20.29

Comments



Product                        LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
-----------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    20.29  Tons                                KITTITAS
2    EVF-P6-Environmental Fe 100           %                                   KITTITAS
3    FUEL-Fuel Surcharge - L 100           %                                   KITTITAS
4    CDHD FEE-Chelan Douglas 100    20.29  Tons                                KITTITAS
```

```
                                                      Total Tax/Fees
                                                      Total Ticket


Driver`s Signature


The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
```

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Ph: (509) 884-2802

Reprint
Ticket# 937625

Customer Name CREDIT CARD CUSTOMER CRE
Ticket Date 10/06/2022
Payment Type Credit Card
Manual Ticket#
Route
Hauling Ticket#
Destination
Manifest 116570wa
Profile 116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO# CL-Ellensburg Big B

Carrier L Boz
Vehicle# blue
Container
Driver
Check# L Boz
Billing# 0507944
Grid

	Time	Scale	Operator	Inbound		
					Gross	49680 lb
In	10/06/2022 11:33:09	Inbound	Janelle		Tare	23920 lb
Out	10/06/2022 11:42:08	Outbound	Janelle		Net	25760 lb
					Tons	12.88

Comments

	Product	LD%	Qty	UOM	Rate	Tax/Fee	Amount	Origin
1	Spwaste Solid Oth-Tons-	100	12.88	Tons				KITTITAS
2	EVF-P6-Environmental Fe	100		%				KITTITAS
3	FUEL-Fuel Surcharge - L	100		%				KITTITAS
4	CDHD FEE-Chelan Douglas	100	12.88	Tons				KITTITAS

Total Tax/Fees
Total Ticket

Driver`s Signature

The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.

```
Greater Wenatchee Regional Landfill               Reprint
191 Webb Road                                     Ticket# 937659
Wenatchee, WA, 98802              Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   10/06/2022               Vehicle#  Yellow
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator        Inbound   Gross        78400 lb
In  10/06/2022 14:43:40 Inbound    Janelle                   Tare         33520 lb
Out 10/06/2022 14:51:09 Outbound   Janelle                   Net          44880 lb
                                                             Tons            22.44

Comments



Product                      LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
----------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    22.44  Tons                               KITTITAS
2    EVF-P6-Environmental Fe 100           %                                  KITTITAS
3    FUEL-Fuel Surcharge - L 100           %                                  KITTITAS
4    CDHD FEE-Chelan Douglas 100    22.44  Tons                               KITTITAS










                                                      Total Tax/Fees
                                                      Total Ticket


Driver`s Signature


The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
```

```
Greater Wenatchee Regional Landfill               Reprint
191 Webb Road                                     Ticket# 937660
Wenatchee, WA, 98802              Ph: (509) 884-2802

Customer Name CREDIT CARD CUSTOMER CRE Carrier   L Boz
Ticket Date   10/06/2022               Vehicle#  blue
Payment Type  Credit Card              Container
Manual Ticket#                         Driver
Route                                  Check#    L Boz
Hauling Ticket#                        Billing#  0507944
Destination                            Grid
Manifest  116570wa
Profile   116570WA (LF01 Diesel Fuel Impacted Soil and/or Debris Cleanup)
Generator 168-BIG B LLC BIG B LLC 1611 CANYON ROAD ELLENSBURG WA 98926
PO#       CL-Ellensburg Big B

    Time                Scale      Operator        Inbound   Gross        53040 lb
In  10/06/2022 14:44:31 Inbound    Janelle                   Tare         23800 lb
Out 10/06/2022 14:57:16 Outbound   Janelle                   Net          29240 lb
                                                             Tons            14.62

Comments


Product                      LD%     Qty   UOM        Rate   Tax/Fee   Amount Origin
----------------------------------------------------------------------------------------
1    Spwaste Solid Oth-Tons- 100    14.62  Tons                                 KITTITAS
2    EVF-P6-Environmental Fe 100           %                                    KITTITAS
3    FUEL-Fuel Surcharge - L 100           %                                    KITTITAS
4    CDHD FEE-Chelan Douglas 100    14.62  Tons                                 KITTITAS




                                                      Total Tax/Fees
                                                      Total Ticket


Driver`s Signature


The total amount includes fees and taxes that may not all be listed on this ticket due to technic
limitation.
```

Remedial Action Completion Report

Big B Mini Mart Site

Appendix C
Laboratory Reports

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

June 3, 2021

Gabriel Cisneros, Project Manager
Floyd-Snider
Two Union Square, Suite 600
601 Union St
Seattle, WA 98101

Dear Mr Cisneros:

Included are the results from the testing of material submitted on May 20, 2021 from the CL-Ellensburg, F&BI 105363 project. There are 49 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 should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Kristin Anderson
FDS0603R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on May 20, 2021 by Friedman & Bruya, Inc. from the Floyd-Snider CL-Ellensburg, F&BI 105363 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Floyd-Snider
105363 -01	BASE-01-7FT
105363 -02	SIDE-01-5.5FT
105363 -03	BASE-02-8FT
105363 -04	SIDE-02-5.5FT
105363 -05	BASE-03-8FT
105363 -06	SIDE-03-5.5FT
105363 -07	BASE-04-8FT
105363 -08	SIDE-04-5FT
105363 -09	BASE-05-8FT
105363 -10	BASE-06-8FT
105363 -11	SIDE-05-5.5FT
105363 -12	SIDE-06-5.5FT
105363 -13	SIDE-07-5.5FT
105363 -14	SIDE-08-5FT
105363 -15	SIDE-100-5FT
105363 -16	BASE-07-8FT
105363 -17	SP01-1
105363 -18	SP01-2
105363 -19	TB-05192021
105363 -20	SP01-3
105363 -21	SP01-4
105363 -22	SIDE-09-5.5FT
105363 -23	BASE-08-8FT
105363 -24	SIDE-10-5.5FT
105363 -25	SIDE-11-5.5FT
105363 -26	SP01-5
105363 -27	BASE-09-8FT
105363 -28	SIDE-12-5.5FT

Several 8260D samples were analyzed at a dilution due to high PID readings and NWTPH-Gx detections. Analytes were reported between the method detection limit and the lowest calibration point and qualified accordingly.

All quality control requirements were acceptable.

Date of Report: 06/03/21
Date Received: 05/20/21
Project: CL-Ellensburg, F&BI 105363
Date Extracted: 05/21/21
Date Analyzed: 05/24/21 and 05/25/21

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
BASE-01-7FT 105363-01	46	75
SIDE-01-5.5FT 105363-02 1/5	2,000	ip
BASE-02-8FT 105363-03 1/5	76	80
SIDE-02-5.5FT 105363-04 1/5	1,500	135
BASE-03-8FT 105363-05 1/5	1,200	ip
SIDE-03-5.5FT 105363-06 1/5	2,000	142
BASE-04-8FT 105363-07 1/5	880	127
SIDE-04-5FT 105363-08 1/5	230	81
BASE-05-8FT 105363-09 1/5	370	91
BASE-06-8FT 105363-10 1/10	1,100	108
SIDE-05-5.5FT 105363-11 1/5	1,900	131

Date of Report: 06/03/21
Date Received: 05/20/21
Project: CL-Ellensburg, F&BI 105363
Date Extracted: 05/21/21
Date Analyzed: 05/24/21 and 05/25/21

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SIDE-06-5.5FT 105363-12 1/5	680	131
SIDE-07-5.5FT 105363-13 1/5	1,000	112
SIDE-08-5FT 105363-14	370	125
SIDE-100-5FT 105363-15	400	115
BASE-07-8FT 105363-16	230	124
SP01-1 105363-17	52	80
SP01-2 105363-18	28	80
SP01-3 105363-20	<5	65
SP01-4 105363-21	74	83
SIDE-09-5.5FT 105363-22 1/10	2,400	126

Date of Report: 06/03/21
Date Received: 05/20/21
Project: CL-Ellensburg, F&BI 105363
Date Extracted: 05/21/21
Date Analyzed: 05/24/21 and 05/25/21

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
BASE-08-8FT 105363-23 1/50	4,000	111
SIDE-10-5.5FT 105363-24 1/5	1,300	129
SIDE-11-5.5FT 105363-25 1/5	1,100	ip
SP01-5 105363-26	6.8	82
BASE-09-8FT 105363-27 1/10	2,200	ip
SIDE-12-5.5FT 105363-28 1/10	2,000	135
Method Blank 01-1021 MB	<5	83
Method Blank 01-1022 MB	<5	81

Date of Report: 06/03/21
Date Received: 05/20/21
Project: CL-Ellensburg, F&BI 105363
Date Extracted: 05/21/21
Date Analyzed: 05/21/21

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 53-144)
BASE-01-7FT 105363-01	460	<250	96
SIDE-01-5.5FT 105363-02	37,000	730 x	87
BASE-02-8FT 105363-03	1,600	<250	98
SIDE-02-5.5FT 105363-04	10,000	<250	77
BASE-03-8FT 105363-05	18,000	370 x	121
SIDE-03-5.5FT 105363-06	11,000	<250	69
BASE-04-8FT 105363-07	4,500	<250	97
SIDE-04-5FT 105363-08	1,400	<250	88
BASE-05-8FT 105363-09	1,400	<250	102
BASE-06-8FT 105363-10	8,700	<250	83

Date of Report: 06/03/21
Date Received: 05/20/21
Project: CL-Ellensburg, F&BI 105363
Date Extracted: 05/21/21
Date Analyzed: 05/21/21

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 53-144)
SIDE-05-5.5FT 105363-11	6,200	<250	82
SIDE-06-5.5FT 105363-12	6,300	<250	77
SIDE-07-5.5FT 105363-13	6,000	<250	77
SIDE-08-5FT 105363-14	3,900	<250	97
SIDE-100-5FT 105363-15	2,100	<250	88
BASE-07-8FT 105363-16	800	<250	101
SIDE-09-5.5FT 105363-22	9,500	<250	87
BASE-08-8FT 105363-23	7,700	<250	80
SIDE-10-5.5FT 105363-24	4,500	<250	79
SIDE-11-5.5FT 105363-25	7,900	<250	84

Date of Report: 06/03/21
Date Received: 05/20/21
Project: CL-Ellensburg, F&BI 105363
Date Extracted: 05/21/21
Date Analyzed: 05/21/21

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 53-144)
BASE-09-8FT 105363-27	14,000	<250	69
SIDE-12-5.5FT 105363-28	26,000	630 x	80
Method Blank 01-1272 MB	<50	<250	89
Method Blank 01-1273 MB	<50	<250	102

Date of Report: 06/03/21
Date Received: 05/20/21
Project: CL-Ellensburg, F&BI 105363
Date Extracted: 05/21/21
Date Analyzed: 05/21/21

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 53-144)
SP01-1 105363-17	120	31	75
SP01-2 105363-18	210	50	78
SP01-3 105363-20	96	66	70
SP01-4 105363-21	640	130	82
SP01-5 105363-26	25	47	76
Method Blank 01-1271 MB2	<5	<25	78

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	BASE-01-7FT	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/21/21	Lab ID:	105363-01
Date Analyzed:	05/21/21	Data File:	052119.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	90	109
Toluene-d8	93	89	112
4-Bromofluorobenzene	103	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SIDE-01-5.5FT	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/21/21	Lab ID:	105363-02 1/2
Date Analyzed:	05/21/21	Data File:	052134.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	90	109
Toluene-d8	92	89	112
4-Bromofluorobenzene	92	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03 j
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.89

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	BASE-02-8FT	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/21/21	Lab ID:	105363-03
Date Analyzed:	05/21/21	Data File:	052120.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	90	109
Toluene-d8	91	89	112
4-Bromofluorobenzene	102	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SIDE-02-5.5FT	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/21/21	Lab ID:	105363-04 1/2
Date Analyzed:	05/21/21	Data File:	052135.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	90	109
Toluene-d8	90	89	112
4-Bromofluorobenzene	96	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03 j
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	1.2

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	BASE-03-8FT	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/21/21	Lab ID:	105363-05 1/5
Date Analyzed:	05/21/21	Data File:	052138.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	90	109
Toluene-d8	92	89	112
4-Bromofluorobenzene	92	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03 j
Toluene	<0.05 j
Ethylbenzene	<0.05 j
m,p-Xylene	<0.1 j
o-Xylene	<0.05 j
Naphthalene	<0.05 j

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SIDE-03-5.5FT	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/21/21	Lab ID:	105363-06 1/2
Date Analyzed:	05/21/21	Data File:	052136.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	90	109
Toluene-d8	91	89	112
4-Bromofluorobenzene	93	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03 j
Toluene	<0.05
Ethylbenzene	0.15
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	2.8

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	BASE-04-8FT	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/21/21	Lab ID:	105363-07
Date Analyzed:	05/21/21	Data File:	052127.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	90	109
Toluene-d8	93	89	112
4-Bromofluorobenzene	112	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SIDE-04-5FT	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/21/21	Lab ID:	105363-08
Date Analyzed:	05/21/21	Data File:	052121.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	90	109
Toluene-d8	93	89	112
4-Bromofluorobenzene	103	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	BASE-05-8FT pc	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/21/21	Lab ID:	105363-09
Date Analyzed:	05/21/21	Data File:	052122.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	90	109
Toluene-d8	94	89	112
4-Bromofluorobenzene	106	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	BASE-06-8FT	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/21/21	Lab ID:	105363-10
Date Analyzed:	05/21/21	Data File:	052128.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	90	109
Toluene-d8	91	89	112
4-Bromofluorobenzene	113	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SIDE-05-5.5FT	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/21/21	Lab ID:	105363-11 1/2
Date Analyzed:	05/21/21	Data File:	052137.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	90	109
Toluene-d8	91	89	112
4-Bromofluorobenzene	96	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03 j
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.57

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SIDE-06-5.5FT	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/21/21	Lab ID:	105363-12 1/5
Date Analyzed:	05/21/21	Data File:	052139.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	90	109
Toluene-d8	93	89	112
4-Bromofluorobenzene	108	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03 j
Toluene	<0.05 j
Ethylbenzene	0.080 j
m,p-Xylene	<0.1 j
o-Xylene	0.067 j
Naphthalene	0.44

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SIDE-07-5.5FT	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/21/21	Lab ID:	105363-13 1/5
Date Analyzed:	05/21/21	Data File:	052140.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	90	109
Toluene-d8	94	89	112
4-Bromofluorobenzene	106	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03 j
Toluene	<0.05 j
Ethylbenzene	0.072 j
m,p-Xylene	<0.1 j
o-Xylene	<0.05 j
Naphthalene	<0.05 j

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SIDE-08-5FT	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/21/21	Lab ID:	105363-14
Date Analyzed:	05/21/21	Data File:	052123.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	90	109
Toluene-d8	93	89	112
4-Bromofluorobenzene	105	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SIDE-100-5FT	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/21/21	Lab ID:	105363-15
Date Analyzed:	05/21/21	Data File:	052124.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	90	109
Toluene-d8	92	89	112
4-Bromofluorobenzene	101	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	BASE-07-8FT	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/21/21	Lab ID:	105363-16
Date Analyzed:	05/21/21	Data File:	052125.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	90	109
Toluene-d8	91	89	112
4-Bromofluorobenzene	103	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.072

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SP01-1	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/26/21	Lab ID:	105363-17
Date Analyzed:	05/27/21	Data File:	052715.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	90	109
Toluene-d8	94	89	112
4-Bromofluorobenzene	98	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SP01-2	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/26/21	Lab ID:	105363-18
Date Analyzed:	05/27/21	Data File:	052716.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	90	109
Toluene-d8	96	89	112
4-Bromofluorobenzene	101	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SP01-3	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/26/21	Lab ID:	105363-20
Date Analyzed:	05/27/21	Data File:	052717.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	90	109
Toluene-d8	97	89	112
4-Bromofluorobenzene	101	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SP01-4	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/21/21	Lab ID:	105363-21
Date Analyzed:	05/21/21	Data File:	052126.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	90	109
Toluene-d8	94	89	112
4-Bromofluorobenzene	104	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SIDE-09-5.5FT	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/21/21	Lab ID:	105363-22 1/5
Date Analyzed:	05/21/21	Data File:	052141.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	90	109
Toluene-d8	96	89	112
4-Bromofluorobenzene	103	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	0.25
Toluene	<0.05 j
Ethylbenzene	1.1
m,p-Xylene	<0.1 j
o-Xylene	0.069 j
Naphthalene	2.8

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	BASE-08-8FT	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/21/21	Lab ID:	105363-23 1/5
Date Analyzed:	05/21/21	Data File:	052142.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	90	109
Toluene-d8	98	89	112
4-Bromofluorobenzene	116	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	0.39
Toluene	0.054 j
Ethylbenzene	1.3
m,p-Xylene	0.11 j
o-Xylene	0.051 j
Naphthalene	0.15

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SIDE-10-5.5FT	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/20/21	Lab ID:	105363-24 1/2
Date Analyzed:	05/21/21	Data File:	052113.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	90	109
Toluene-d8	95	89	112
4-Bromofluorobenzene	97	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	0.16
Toluene	<0.05
Ethylbenzene	0.17
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.15

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SIDE-11-5.5FT	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/20/21	Lab ID:	105363-25 1/2
Date Analyzed:	05/21/21	Data File:	052114.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	90	109
Toluene-d8	94	89	112
4-Bromofluorobenzene	93	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	0.048
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SP01-5	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	06/01/21	Lab ID:	105363-26
Date Analyzed:	06/01/21	Data File:	060111.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	94	79	128
Toluene-d8	93	84	121
4-Bromofluorobenzene	102	84	116

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	0.12
o-Xylene	0.063
Naphthalene	0.051

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	BASE-09-8FT	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/20/21	Lab ID:	105363-27 1/5
Date Analyzed:	05/21/21	Data File:	052115.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	90	109
Toluene-d8	93	89	112
4-Bromofluorobenzene	108	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	0.056 j
Toluene	<0.05 j
Ethylbenzene	0.16
m,p-Xylene	<0.1 j
o-Xylene	<0.05 j
Naphthalene	2.0

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SIDE-12-5.5FT	Client:	Floyd-Snider
Date Received:	05/20/21	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/20/21	Lab ID:	105363-28 1/5
Date Analyzed:	05/21/21	Data File:	052116.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	90	109
Toluene-d8	92	89	112
4-Bromofluorobenzene	94	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03 j
Toluene	<0.05 j
Ethylbenzene	<0.05 j
m,p-Xylene	<0.1 j
o-Xylene	<0.05 j
Naphthalene	<0.05 j

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Floyd-Snider
Date Received:	Not Applicable	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/20/21	Lab ID:	01-1140 mb
Date Analyzed:	05/20/21	Data File:	052009.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	90	109
Toluene-d8	94	89	112
4-Bromofluorobenzene	103	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.006 j
Toluene	<0.01 j
Ethylbenzene	<0.01 j
m,p-Xylene	<0.02 j
o-Xylene	<0.01 j
Naphthalene	<0.01 j

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Floyd-Snider
Date Received:	Not Applicable	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/21/21	Lab ID:	01-1149 mb
Date Analyzed:	05/21/21	Data File:	052131.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	90	109
Toluene-d8	93	89	112
4-Bromofluorobenzene	101	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.006 j
Toluene	<0.01 j
Ethylbenzene	<0.01 j
m,p-Xylene	<0.02 j
o-Xylene	<0.01 j
Naphthalene	<0.01 j

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Floyd-Snider
Date Received:	Not Applicable	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	05/26/21	Lab ID:	01-1153 mb
Date Analyzed:	05/26/21	Data File:	052609.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	90	109
Toluene-d8	94	89	112
4-Bromofluorobenzene	100	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Floyd-Snider
Date Received:	Not Applicable	Project:	CL-Ellensburg, F&BI 105363
Date Extracted:	06/01/21	Lab ID:	01-1180 mb
Date Analyzed:	06/01/21	Data File:	060105.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	79	128
Toluene-d8	103	84	121
4-Bromofluorobenzene	102	84	116

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Date of Report: 06/03/21
Date Received: 05/20/21
Project: CL-Ellensburg, F&BI 105363

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

Laboratory Code: 105298-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	90	71-131

Date of Report: 06/03/21
Date Received: 05/20/21
Project: CL-Ellensburg, F&BI 105363

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

Laboratory Code: 105186-06 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	85	71-131

Date of Report: 06/03/21
Date Received: 05/20/21
Project: CL-Ellensburg, F&BI 105363

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

Laboratory Code: 105363-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	360	92	82	64-133	11

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	84	58-147

Date of Report: 06/03/21
Date Received: 05/20/21
Project: CL-Ellensburg, F&BI 105363

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

Laboratory Code: 105361-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	82	92	64-133	11

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	84	58-147

Date of Report: 06/03/21
Date Received: 05/20/21
Project: CL-Ellensburg, F&BI 105363

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

Laboratory Code: 105377-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	500	27	71	68	63-146	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	500	74	79-144

Date of Report: 06/03/21
Date Received: 05/20/21
Project: CL-Ellensburg, F&BI 105363

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

Laboratory Code: 105361-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Benzene	mg/kg (ppm)	1	<0.03	58	57	29-129	2
Toluene	mg/kg (ppm)	1	<0.05	66	66	35-130	0
Ethylbenzene	mg/kg (ppm)	1	<0.05	68	69	32-137	1
m,p-Xylene	mg/kg (ppm)	2	<0.1	70	70	34-136	0
o-Xylene	mg/kg (ppm)	1	<0.05	69	70	33-134	1
Naphthalene	mg/kg (ppm)	1	<0.05	72	73	14-157	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	1	90	71-118
Toluene	mg/kg (ppm)	1	99	66-126
Ethylbenzene	mg/kg (ppm)	1	102	64-123
m,p-Xylene	mg/kg (ppm)	2	103	78-122
o-Xylene	mg/kg (ppm)	1	103	77-124
Naphthalene	mg/kg (ppm)	1	107	63-140

Date of Report: 06/03/21
Date Received: 05/20/21
Project: CL-Ellensburg, F&BI 105363

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

Laboratory Code: 105363-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Benzene	mg/kg (ppm)	1	<0.03	69	68	29-129	1
Toluene	mg/kg (ppm)	1	<0.05	78	80	35-130	3
Ethylbenzene	mg/kg (ppm)	1	<0.05	80	81	32-137	1
m,p-Xylene	mg/kg (ppm)	2	<0.1	81	82	34-136	1
o-Xylene	mg/kg (ppm)	1	<0.05	81	82	33-134	1
Naphthalene	mg/kg (ppm)	1	<0.05	95	95	14-157	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	1	93	71-118
Toluene	mg/kg (ppm)	1	104	66-126
Ethylbenzene	mg/kg (ppm)	1	106	64-123
m,p-Xylene	mg/kg (ppm)	2	108	78-122
o-Xylene	mg/kg (ppm)	1	106	77-124
Naphthalene	mg/kg (ppm)	1	120	63-140

Date of Report: 06/03/21
Date Received: 05/20/21
Project: CL-Ellensburg, F&BI 105363

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

Laboratory Code: 105441-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Benzene	mg/kg (ppm)	1	<0.03	78	80	29-129	3
Toluene	mg/kg (ppm)	1	<0.05	88	91	35-130	3
Ethylbenzene	mg/kg (ppm)	1	<0.05	92	92	32-137	0
m,p-Xylene	mg/kg (ppm)	2	<0.1	93	94	34-136	1
o-Xylene	mg/kg (ppm)	1	<0.05	92	95	33-134	3
Naphthalene	mg/kg (ppm)	1	<0.05	98	102	14-157	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	1	91	71-118
Toluene	mg/kg (ppm)	1	99	66-126
Ethylbenzene	mg/kg (ppm)	1	102	64-123
m,p-Xylene	mg/kg (ppm)	2	105	78-122
o-Xylene	mg/kg (ppm)	1	103	77-124
Naphthalene	mg/kg (ppm)	1	112	63-140

Date of Report: 06/03/21
Date Received: 05/20/21
Project: CL-Ellensburg, F&BI 105363

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

Laboratory Code: 105564-19 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Benzene	mg/kg (ppm)	1.0	<0.03	73	74	50-150	1
Toluene	mg/kg (ppm)	1.0	<0.05	72	73	50-150	1
Ethylbenzene	mg/kg (ppm)	1.0	<0.05	75	76	50-150	1
m,p-Xylene	mg/kg (ppm)	2.0	<0.1	74	75	50-150	1
o-Xylene	mg/kg (ppm)	1.0	<0.05	74	75	50-150	1
Naphthalene	mg/kg (ppm)	1.0	<0.05	68	68	50-150	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	1.0	97	70-130
Toluene	mg/kg (ppm)	1.0	94	70-130
Ethylbenzene	mg/kg (ppm)	1.0	97	70-130
m,p-Xylene	mg/kg (ppm)	2.0	95	70-130
o-Xylene	mg/kg (ppm)	1.0	95	70-130
Naphthalene	mg/kg (ppm)	1.0	90	69-119

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

105363

SAMPLE CHAIN OF CUSTODY

ME 05-20-21

Page # 1 of 3 vwl

[redacted] Gabe Cisneros

Company Floyd Snider

Address 601 Union St, Ste 600

City, State, ZIP Seattle, WA 98101

Phone 206-292-2078 Email gabe.cisneros@floydsnider.com

cc: kristin.anderson@floydsnider.com

SAMPLERS (*signature*) [redacted]

PROJECT NAME CL - Ellensburg

PO #

REMARKS

INVOICE TO

Project specific RLs? - Yes [✓ No] Except as noted

TURNAROUND TIME B04 CI3

☒ Standard turnaround

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Archive samples

☐ Other

[✓ Default:] Dispose after 30 days

						ANALYSES REQUESTED										
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA ~~8021~~ 8260	Naphthalene NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082				Notes
BASE-01-7FT	01 A-E	5/17/21	1115	Soil	5	X	X	X								
SIDE-01-5.5FT	02	↓	1340	↓	5	X	X	X								
BASE-02-8FT	03		1425		5	X	X	X								
SIDE-02-5.5FT	04		1450		5	X	X	X								
BASE-03-8FT	05 A-D		1530		4	X	X	X								
SIDE-03-5.5FT	06 A-E		1625		5	X	X	X								
BASE-04-8FT	07	↓	1650		5	X	X	X					—			
SIDE-04-5FT	08	5/18/21	0920		5	X	X	X								
BASE-05-8FT	09	↓	0950		5	X	X	X								
BASE-06-8FT	10	↓	1455	↓		X	X	X								

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Kristin Andersen	Floyd Snider	5/20/21	0835
Received by: Hong	HONGUYEN	FBI	✓	✓
Relinquished by:		Samples received at 3 °C		
Received by:				

105363

SAMPLE CHAIN OF CUSTODY

ME 05-20-21 [redacted]

Page # 2 of 3

VW1
B04

[redacted] Gabe Cisneros

Company Floyd Snider

Address

City, State, ZIP (See p 2)

Phone Email

SAMPLERS (*signature*) [redacted]

PROJECT NAME CL-Ellensburg

PO #

REMARKS

INVOICE TO

Project specific RLs? - Yes [✓ No] Except as noted

TURNAROUND TIME CS3

☒ Standard turnaround

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Archive samples

☐ Other

[✓ Default:] Dispose after 30 days

						ANALYSES REQUESTED											
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA ~~8021~~ 8260	~~NWTPH-HCID~~ Naphthalene	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	GRO (5 mg/kg)	DRO (25 mg/kg)	ORO (100 mg/kg)	HOLD	Notes
SIDE-05-5.5FT	11 A-E	5/18/21	1600	soil	5	X	X	X									✓ per KA
SIDE-06-5.5FT	12	↓	1640	↓	5	X	X	X									5/26
SIDE-07-5.5FT	13	↓	1700		5	X	X	X									
SIDE-08-5FT	14	5/19/21	1030		5	X	X	X									Time on 4oz: 1035
SIDE-100-5FT	15	↓	1035		5	X	X	X									Time on 4oz: 1030
BASE-07-8FT	16		1045		5	X	X	X									
SP01-1	17		1150		5			✓					X	X			if GRO detected: run 8260 analyse
SP01-2	18		1200	↓	5			✓					X	X			" "
TB-05192021	19		1245	water	1											X	run for GRO/BTEX if no ND soil sample
SP01-3	20 A-E	↓	1435	soil	5			✓					X	X			If GRO detected, run 8260

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Kristin Anderson	FS	5/20/21	0835
Received by:	Honga	HONG NGUYEN	FBI	✓	✓
Relinquished by:					
Received by:					

105363

SAMPLE CHAIN OF CUSTODY

ME 05-20-21

[redacted] Gabe Cisneros

Company Floyd Snider

Address (see p1

City, State, ZIP

Phone Email

SAMPLERS (signature)

PROJECT NAME CL - Ellensburg

PO #

REMARKS

INVOICE TO

Project specific RLs? - Yes [✓ No] Except as noted

[redacted] Page # 3 of 3 VW1

TURNAROUND TIME B04

☒ Standard turnaround

☐ RUSH C13

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Archive samples

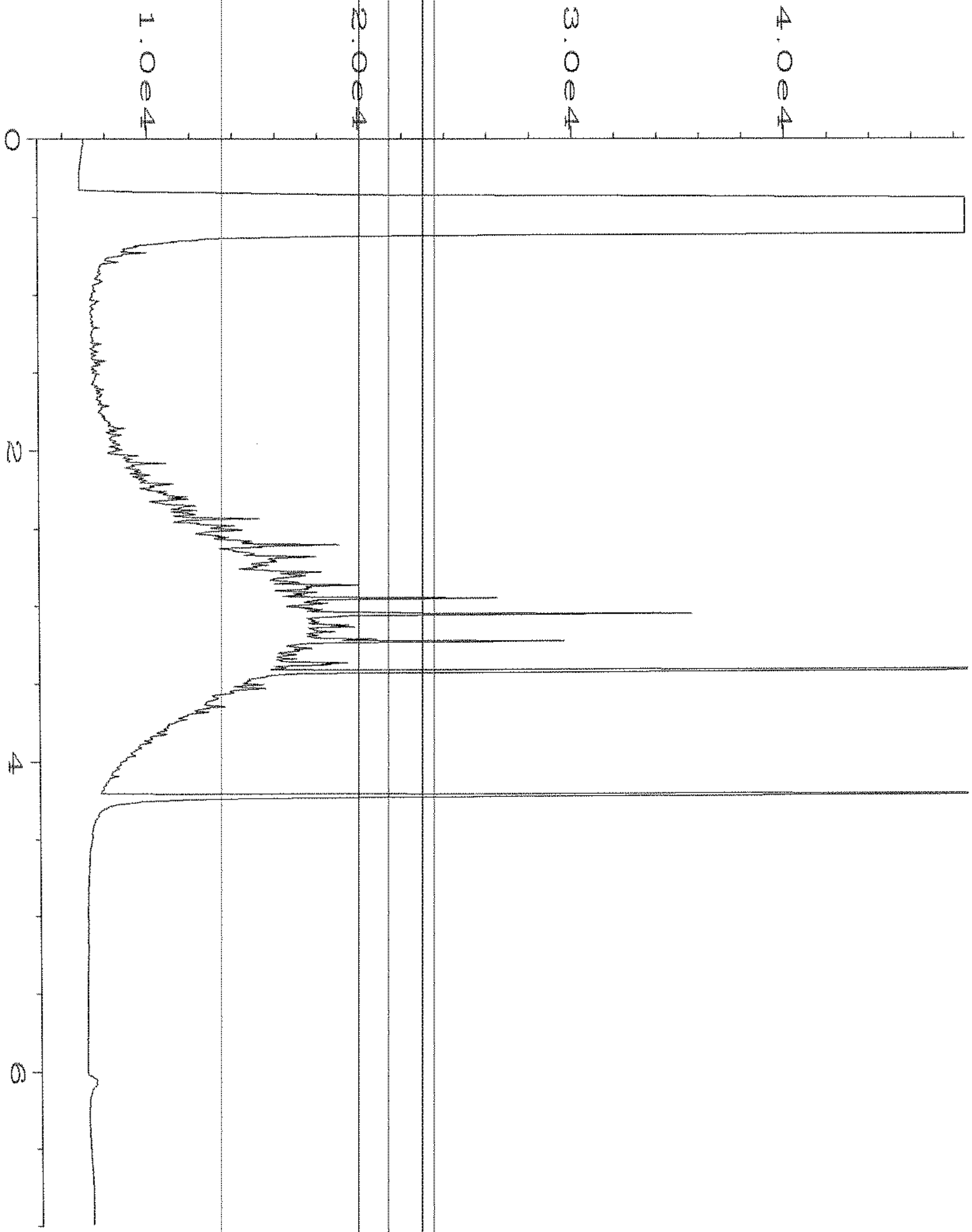
☐ Other

[✓ Default: Dispose after 30 days]

						ANALYSES REQUESTED											
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA ~~8021~~ 8260	~~NWTPH-HCID~~	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	GRO (5mg/kg)	DRO (25mg/kg)/ ORO (100mg/kg)			Notes
SP01-4	21 A-E	5/19/21	1445	soil	5	X	X	X					X	X			if GRO detected, run 8260
SIDE-09-5.5FT	22		1515		5	X	X	X									
BASE-08-8FT	23		1605		5	X	X	X									
SIDE-10-5.5FT	24		1625		5	X	X	X									
SIDE-11-5.5FT	25		1640		5	X	X	X									
SP01-5	26		1655		5	~~X~~	KH	✓					X	X			
BASE-09-8FT	27		1715		5	X	X	X									
SIDE-12-5.5FT	28		1740		5	X	X	X									

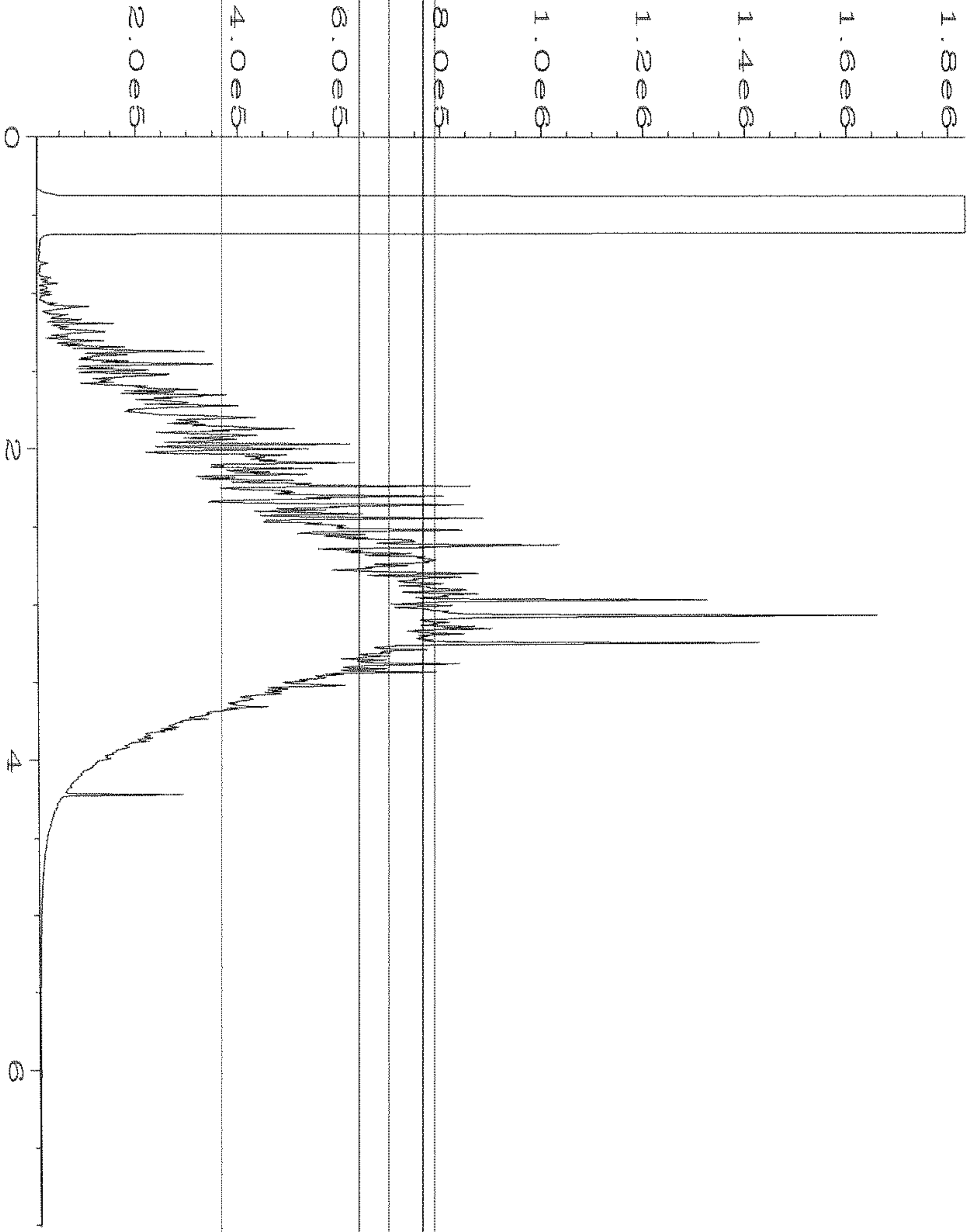
Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Kristin Anderson	FS	5/20/21	0835
Received by:		HONG NGUYEN	FBI	✓	✓
Relinquished by:					
Received by:					



Data File Name : C:\HPCHEM\6\DATA\05-21-21\010F0301.D
Operator : TL
Instrument : GC6
Sample Name : 105363-01
Run Time Bar Code:
Acquired on : 21 May 21 09:06 AM
Report Created on: 24 May 21 09:32 AM

Page Number : 1
Vial Number : 10
Injection Number : 1
Sequence Line : 3
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



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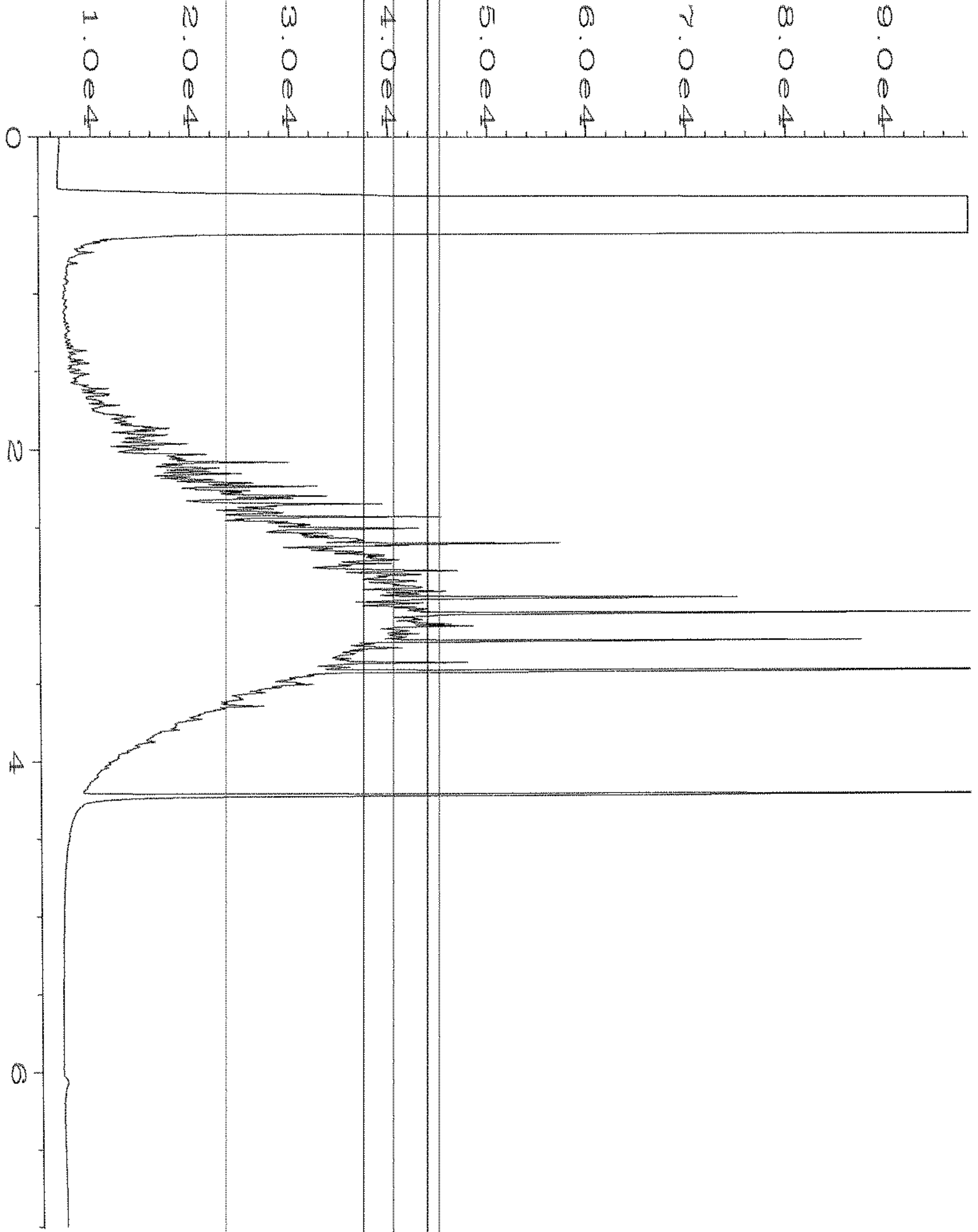
Operator : TL
Instrument : GC6
Sample Name : 105363-02
Run Time Bar Code:
Acquired on : 21 May 21 09:17 AM
Report Created on: 24 May 21 09:32 AM

Page Number : 1
Vial Number : 11
Injection Number : 1
Sequence Line : 3
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



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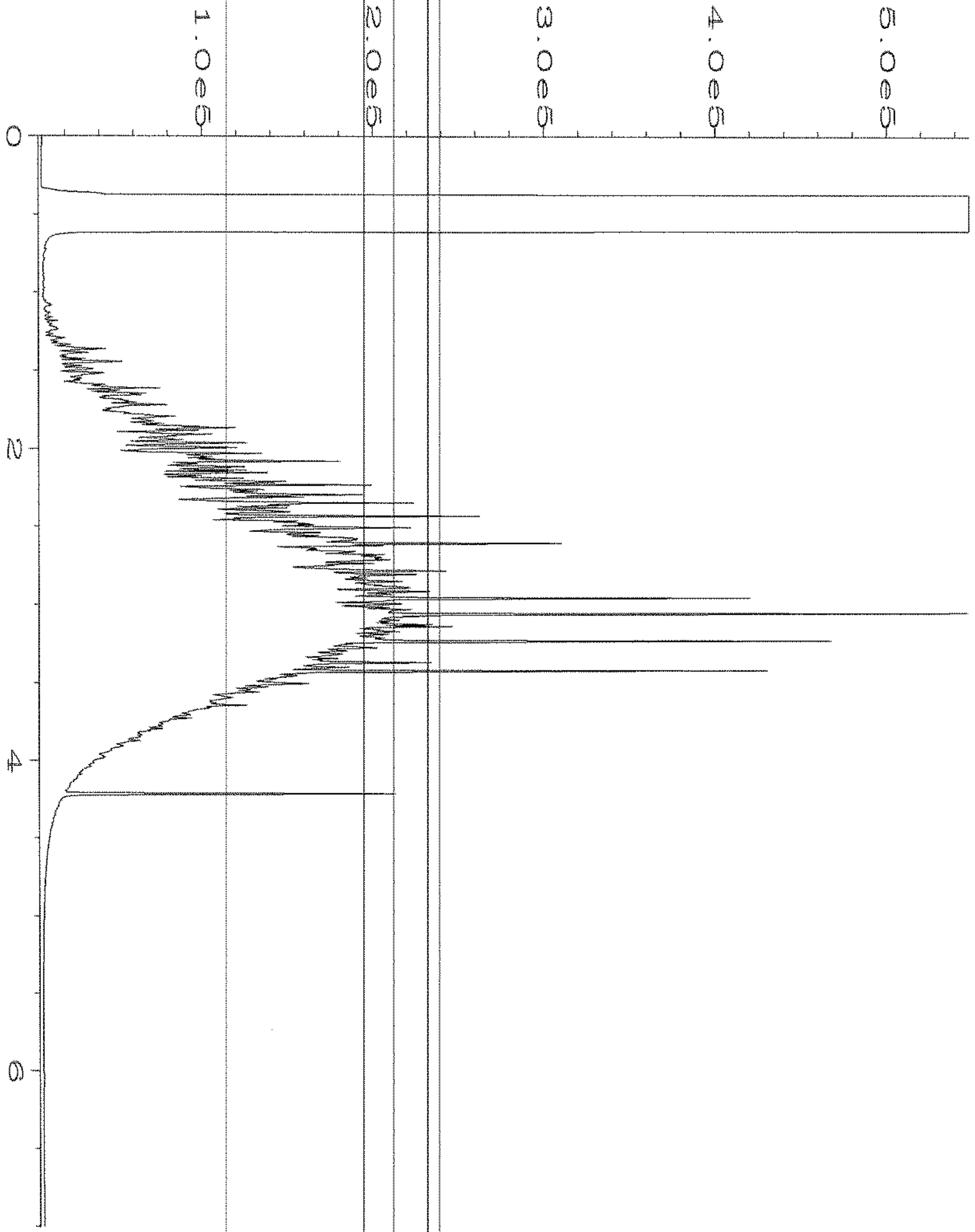
Operator : TL
Instrument : GC6
Sample Name : 105363-03
Run Time Bar Code:
Acquired on : 21 May 21 09:39 AM
Report Created on: 24 May 21 09:32 AM

Page Number : 1
Vial Number : 12
Injection Number : 1
Sequence Line : 5
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



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Operator          : TL                                  Page Number      : 1
Instrument        : GC6                                 Vial Number      : 13
Sample Name       : 105363-04                           Injection Number : 1
Run Time Bar Code:                                      Sequence Line    : 5
Acquired on       : 21 May 21   09:49 AM                Instrument Method: DX.MTH
Report Created on: 24 May 21   09:33 AM                 Analysis Method  : DEFAULT.MTH
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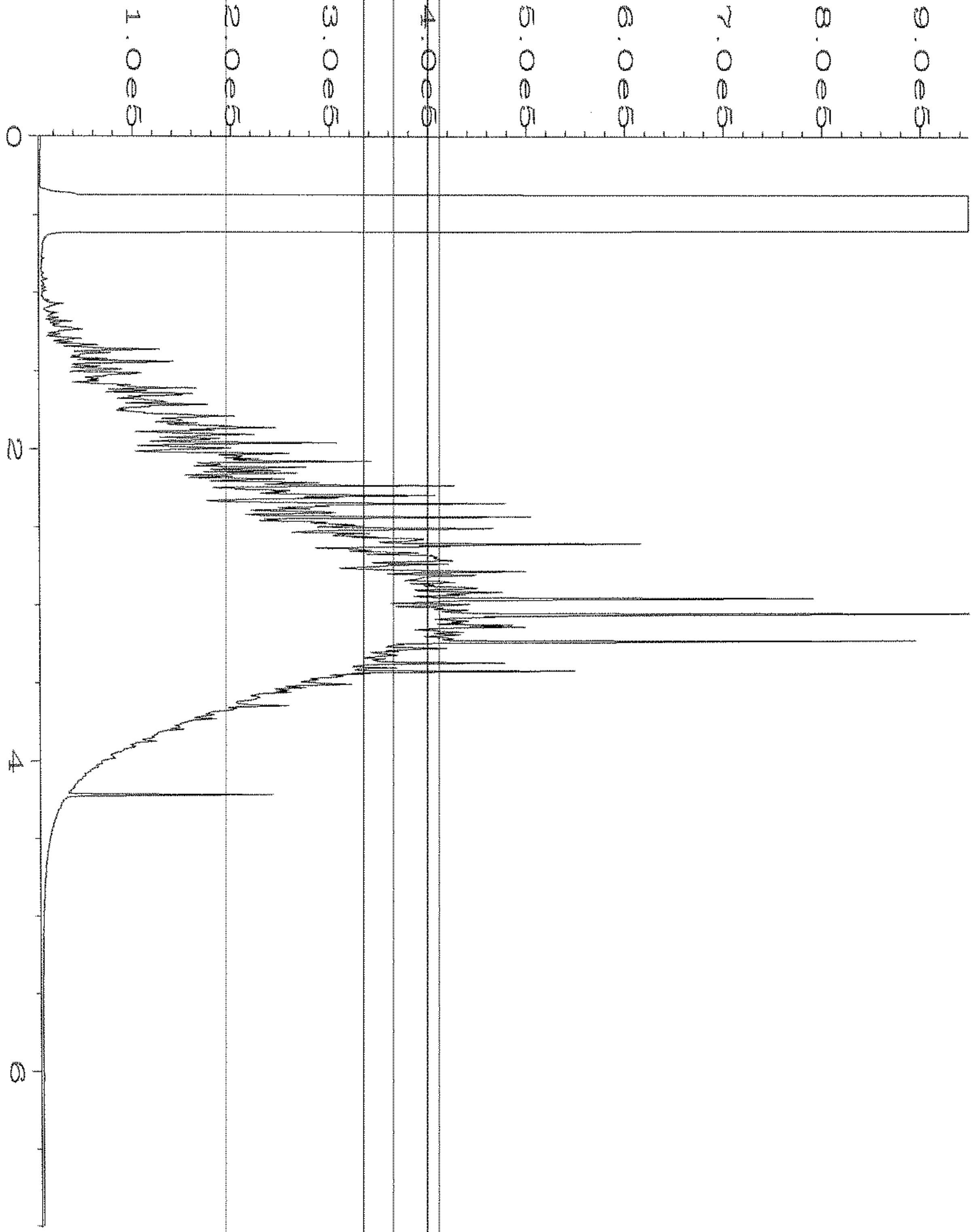

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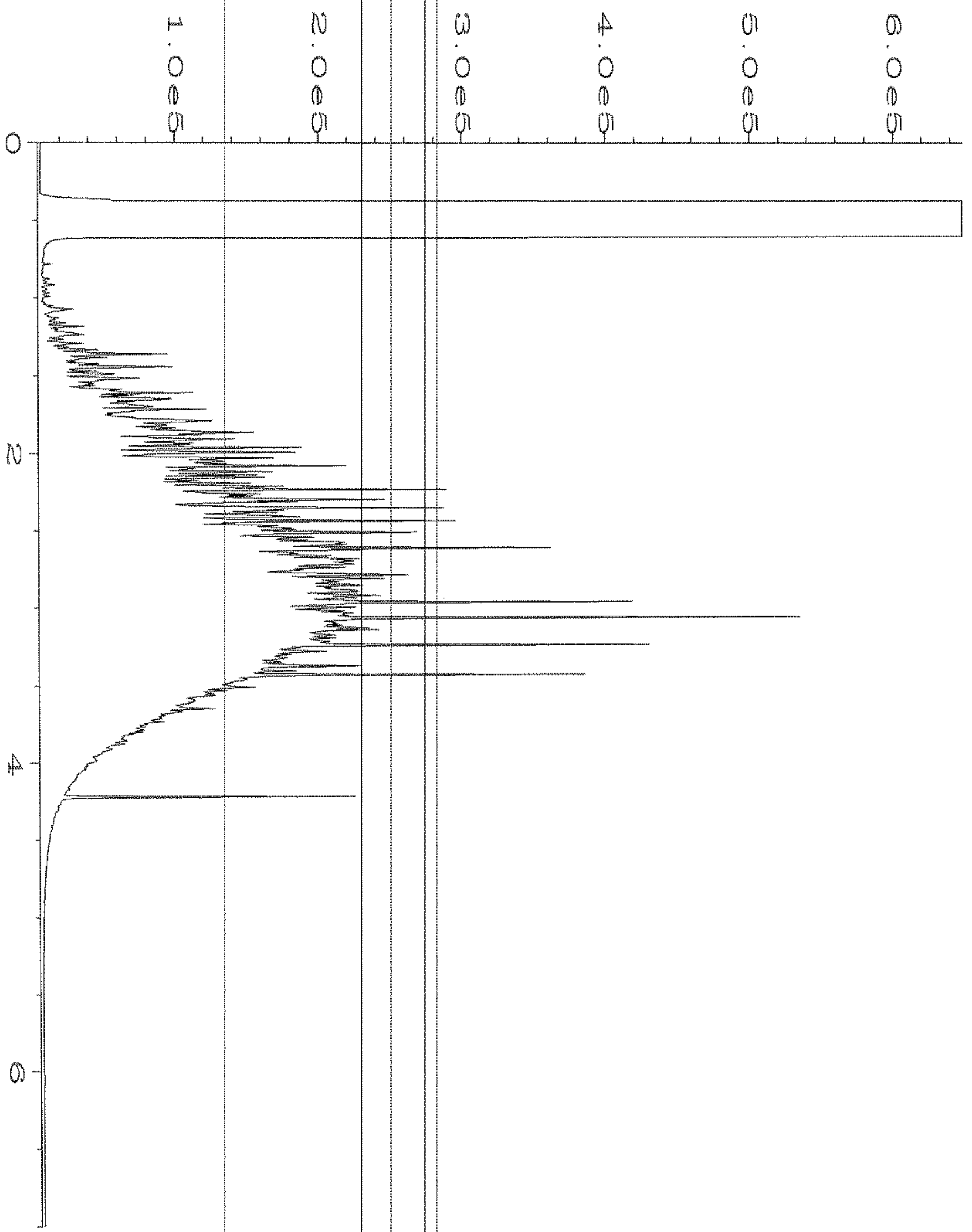
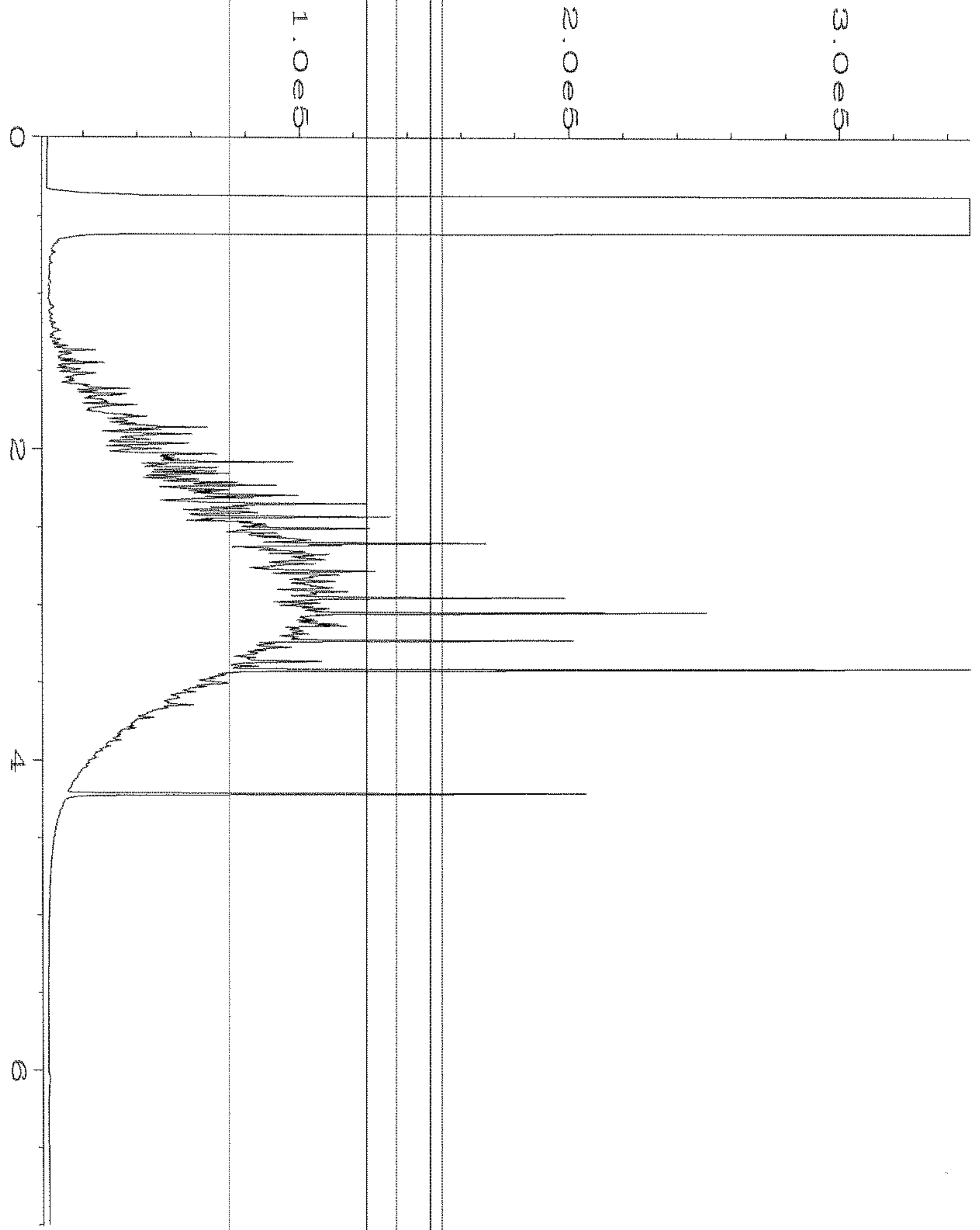
Operator   : TL
Instrument   : GC6
Sample Name   : 105363-05
Run Time Bar Code:
Acquired on   : 21 May 21   10:00 AM
Report Created on: 24 May 21   09:33 AM

Page Number   : 1
Vial Number   : 14
Injection Number : 1
Sequence Line   : 5
Instrument Method: DX.MTH
Analysis Method   : DEFAULT.MTH



Data File Name : C:\HPCHEM\6\DATA\05-21-21\015F0501.D
Operator : TL
Instrument : GC6
Sample Name : 105363-06
Run Time Bar Code:
Acquired on : 21 May 21 10:11 AM
Report Created on: 24 May 21 09:33 AM

Page Number : 1
Vial Number : 15
Injection Number : 1
Sequence Line : 5
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



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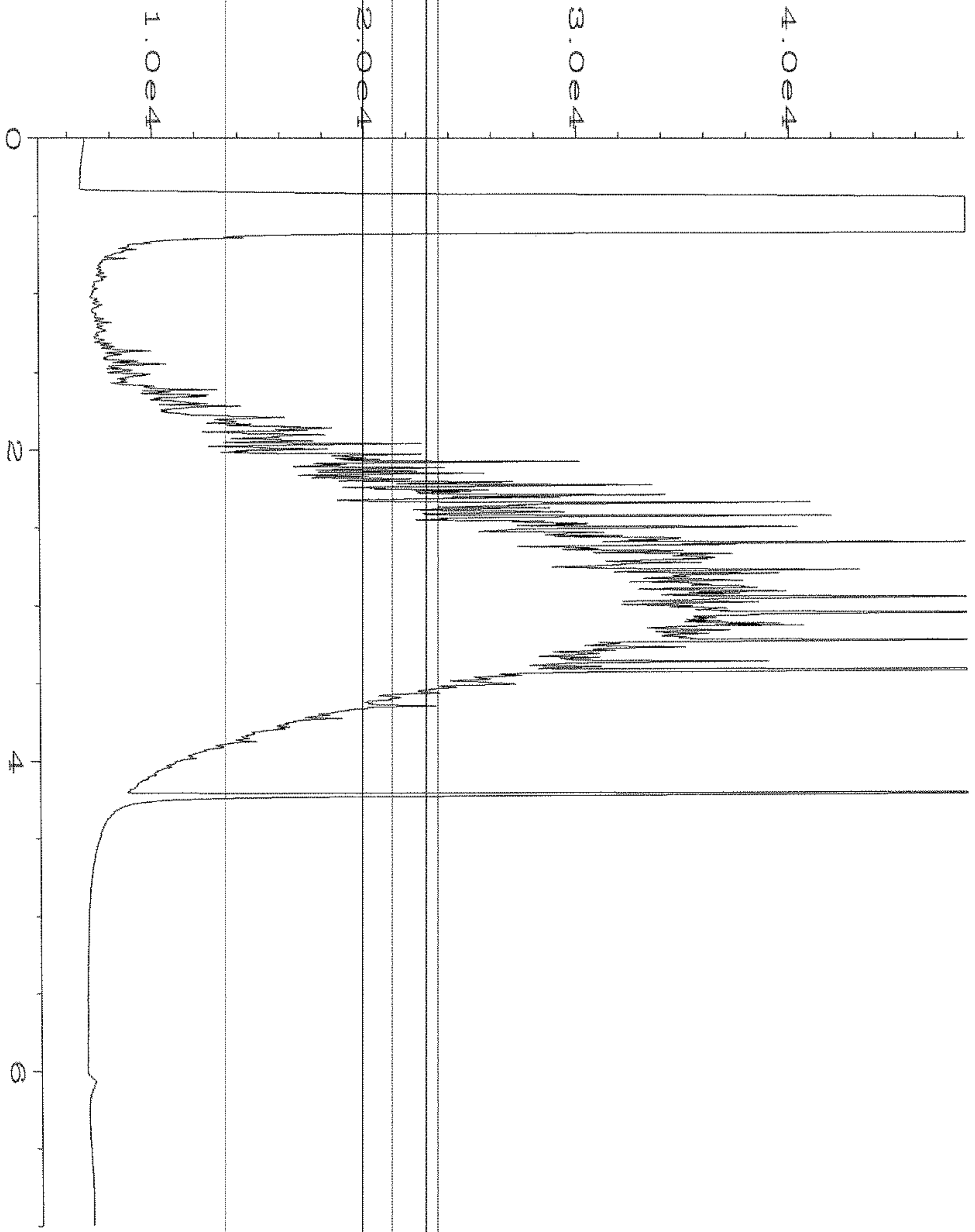
Operator   : TL
Instrument   : GC6
Sample Name   : 105363-07
Run Time Bar Code:
Acquired on   : 21 May 21   10:22 AM
Report Created on: 24 May 21   09:33 AM

Page Number   : 1
Vial Number   : 16
Injection Number : 1
Sequence Line   : 5
Instrument Method: DX.MTH
Analysis Method   : DEFAULT.MTH



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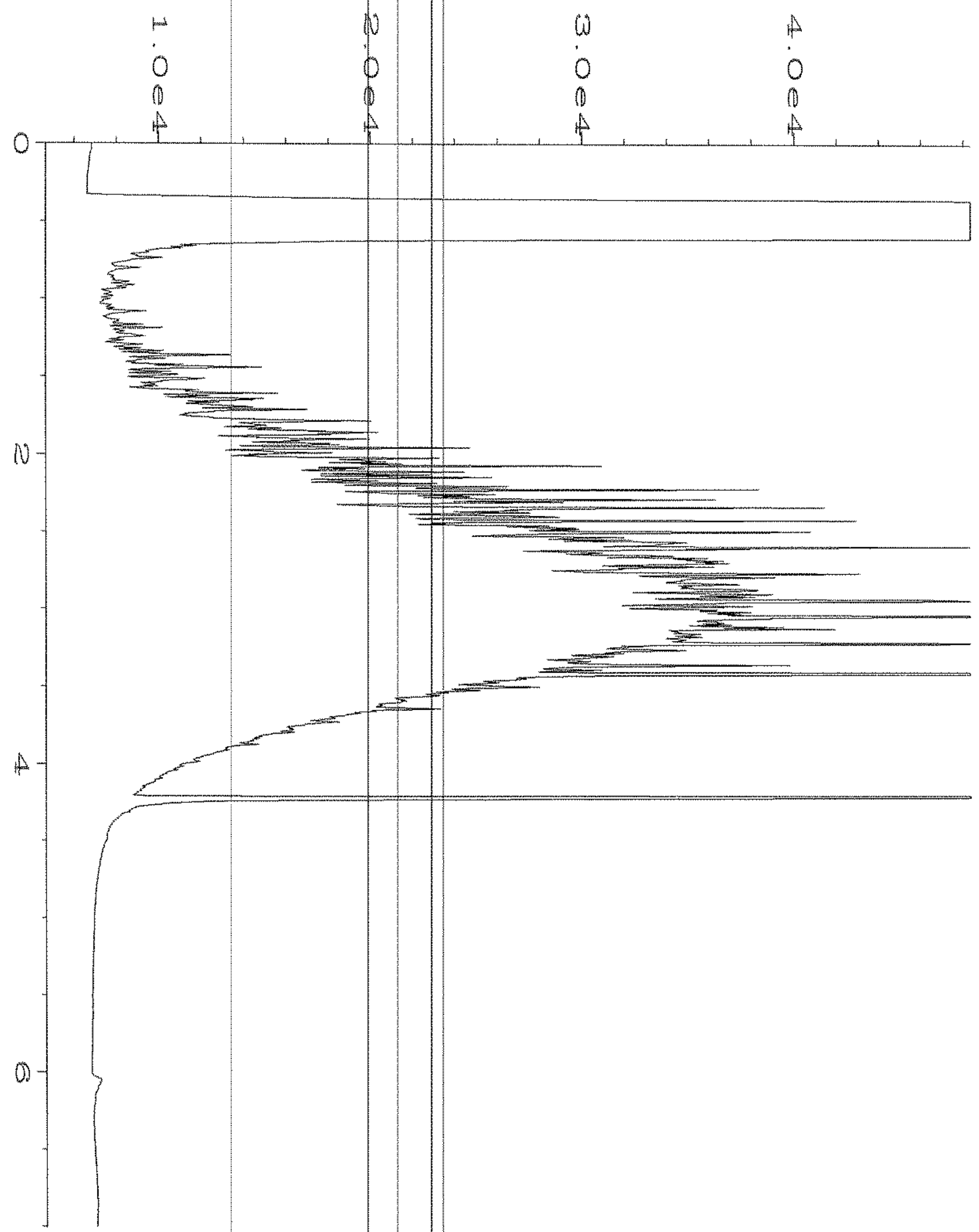
Data File Name    : C:\HPCHEM\6\DATA\05-21-21\017F0501.D
Operator          : TL                                    Page Number      : 1
Instrument        : GC6                                   Vial Number      : 17
Sample Name       : 105363-08                             Injection Number : 1
Run Time Bar Code:                                        Sequence Line    : 5
Acquired on       : 21 May 21   10:33 AM                  Instrument Method: DX.MTH
Report Created on: 24 May 21   09:33 AM                   Analysis Method  : DEFAULT.MTH
```



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Data File Name    : C:\HPCHEM\6\DATA\05-21-21\018F0501.D
Operator          : TL                                Page Number      : 1
Instrument        : GC6                               Vial Number      : 18
Sample Name       : 105363-09                         Injection Number : 1
Run Time Bar Code:                                    Sequence Line    : 5
Acquired on       : 21 May 21   10:43 AM              Instrument Method: DX.MTH
Report Created on: 24 May 21   09:34 AM               Analysis Method  : DEFAULT.MTH
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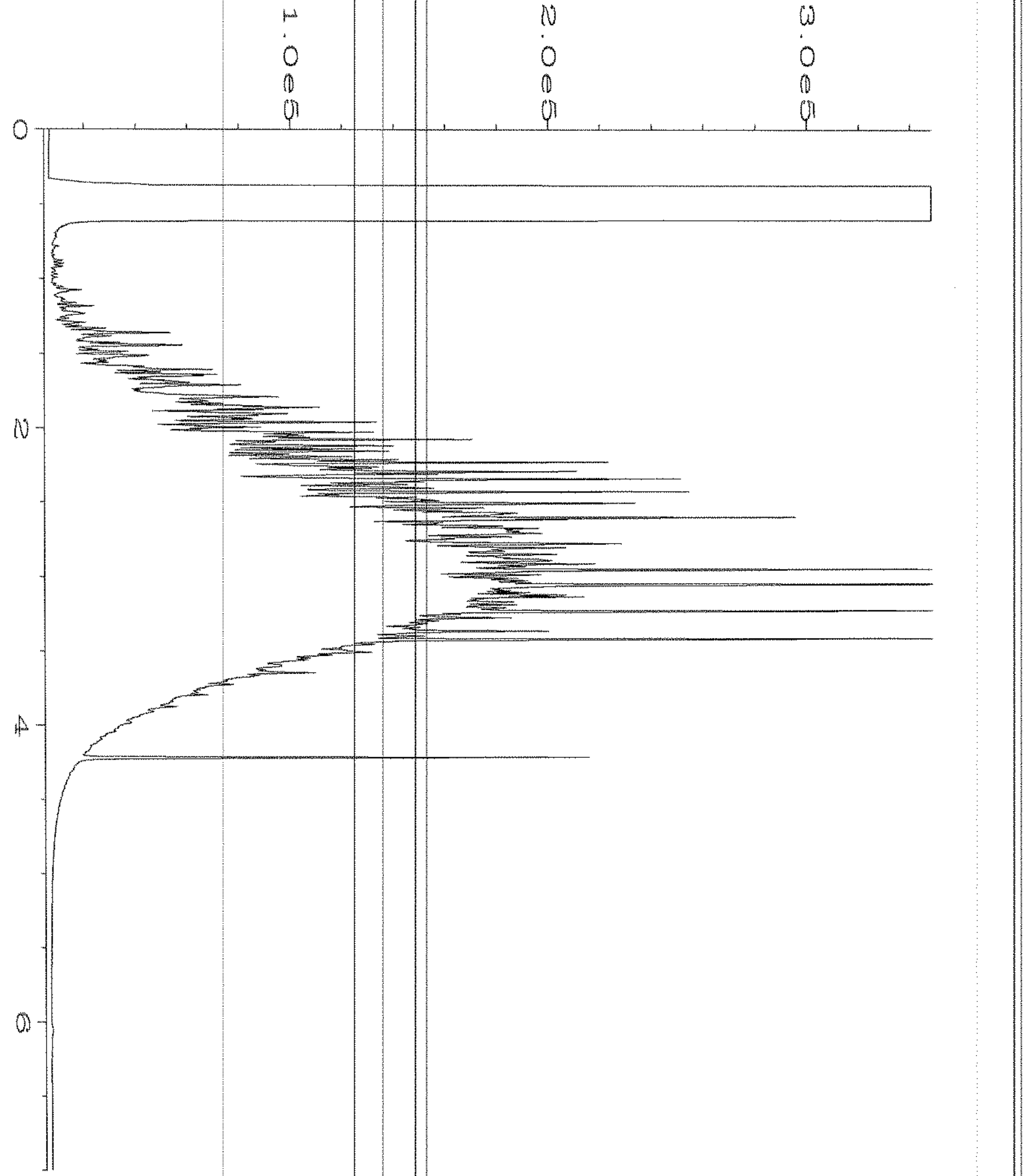

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Operator          : TL                             Page Number      : 1
Instrument        : GC6                            Vial Number      : 19
Sample Name       : 105363-10                      Injection Number : 1
Run Time Bar Code:                                 Sequence Line    : 5
Acquired on       : 21 May 21   10:54 AM           Instrument Method: DX.MTH
Report Created on: 24 May 21   09:34 AM            Analysis Method  : DEFAULT.MTH
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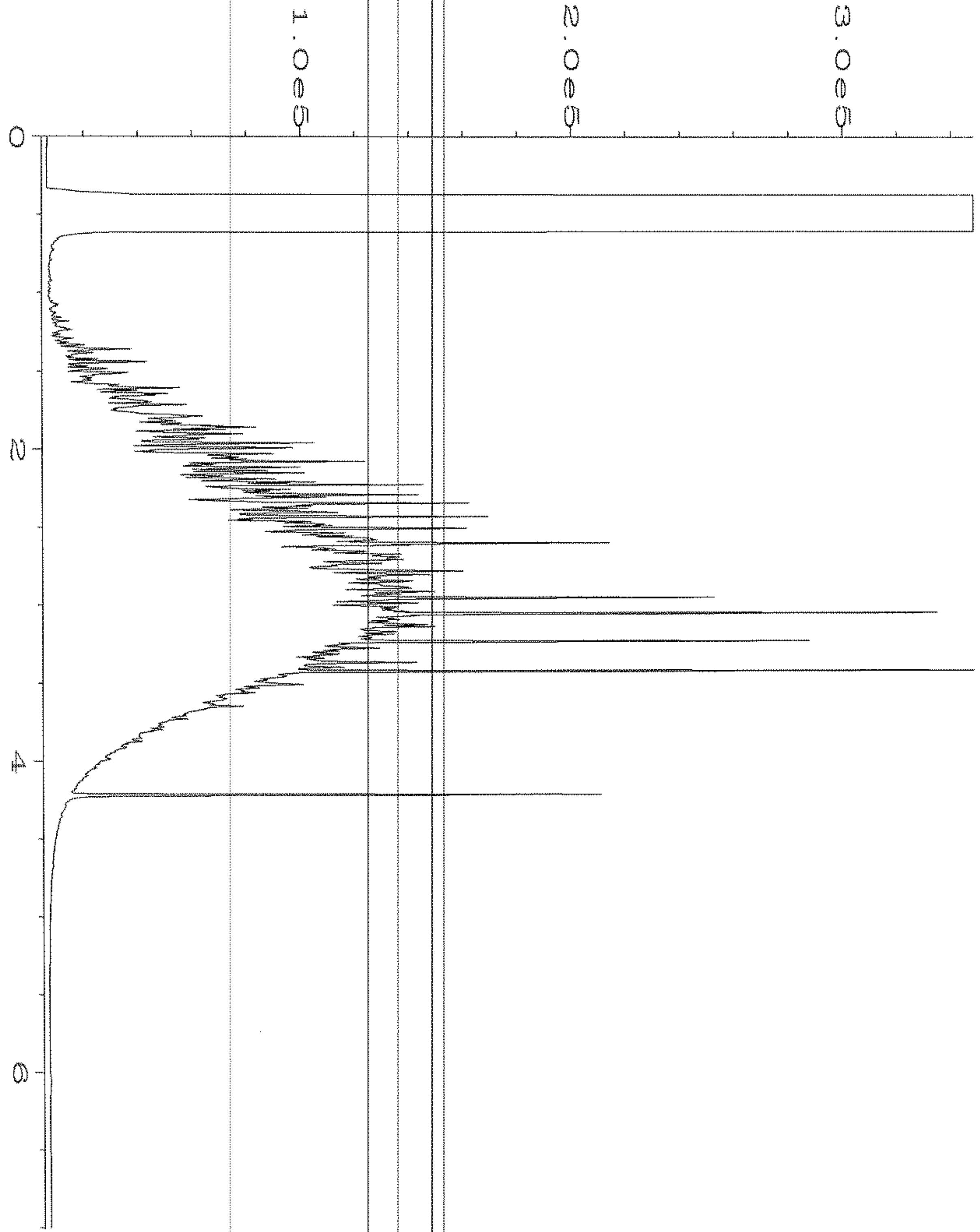

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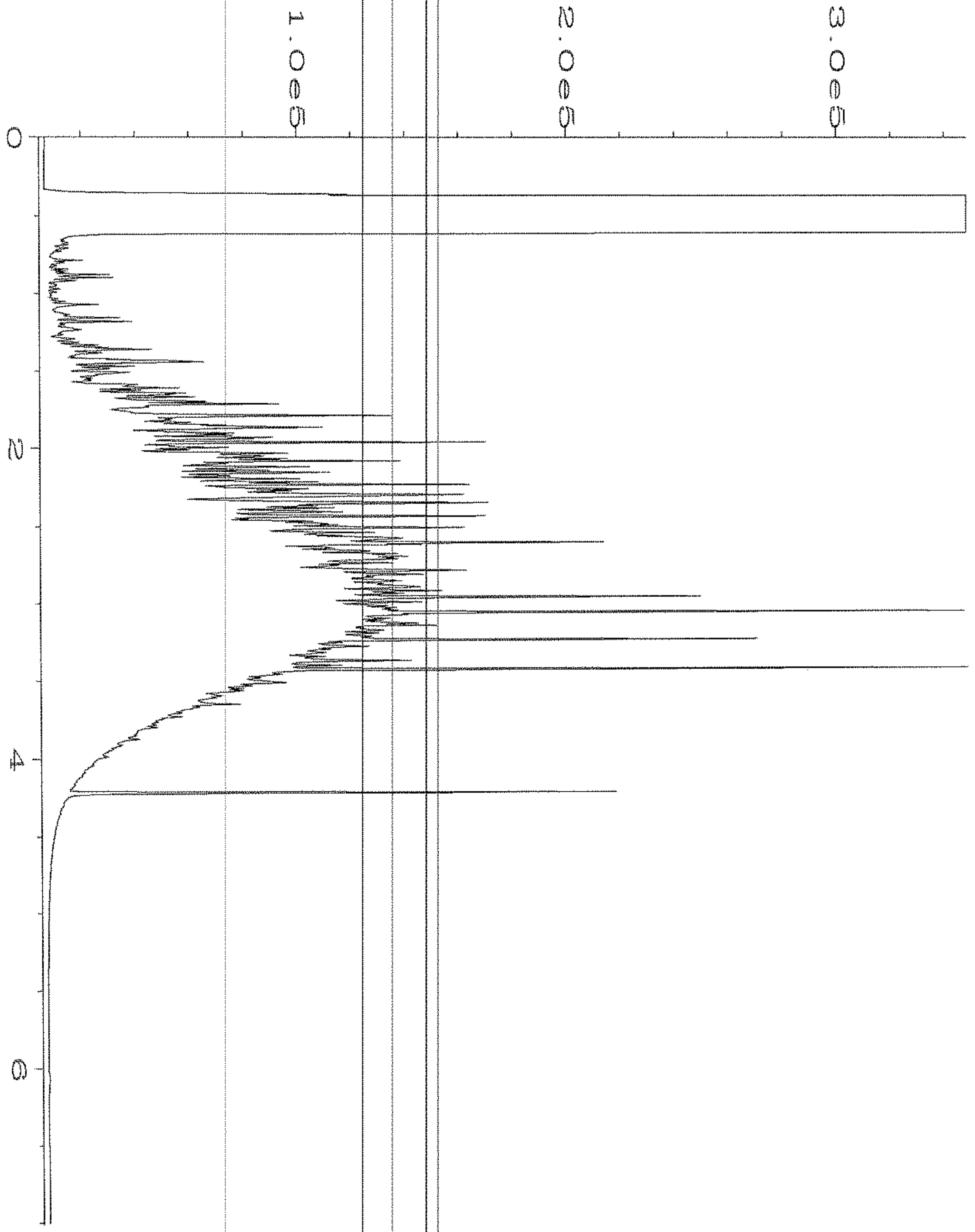
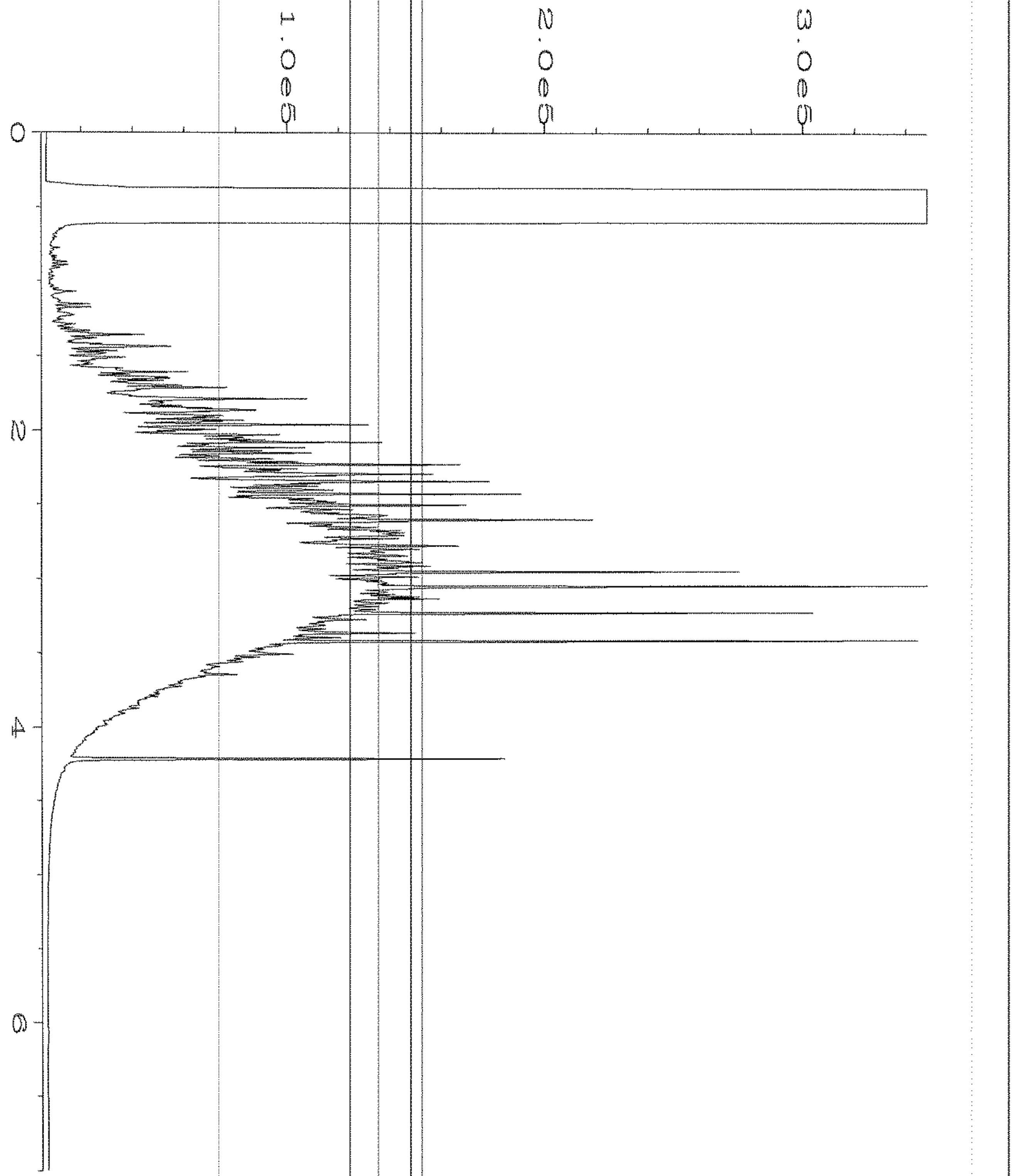
Operator          : TL                              Page Number      : 1
Instrument        : GC6                             Vial Number      : 20
Sample Name       : 105363-11                       Injection Number : 1
Run Time Bar Code:                                  Sequence Line    : 5
Acquired on       : 21 May 21   11:05 AM            Instrument Method: DX.MTH
Report Created on: 24 May 21   09:34 AM             Analysis Method  : DEFAULT.MTH
```



Data File Name : C:\HPCHEM\6\DATA\05-21-21\021F0501.D
Operator : TL
Instrument : GC6
Sample Name : 105363-12
Run Time Bar Code:
Acquired on : 21 May 21 11:16 AM
Report Created on: 24 May 21 09:34 AM

Page Number : 1
Vial Number : 21
Injection Number : 1
Sequence Line : 5
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



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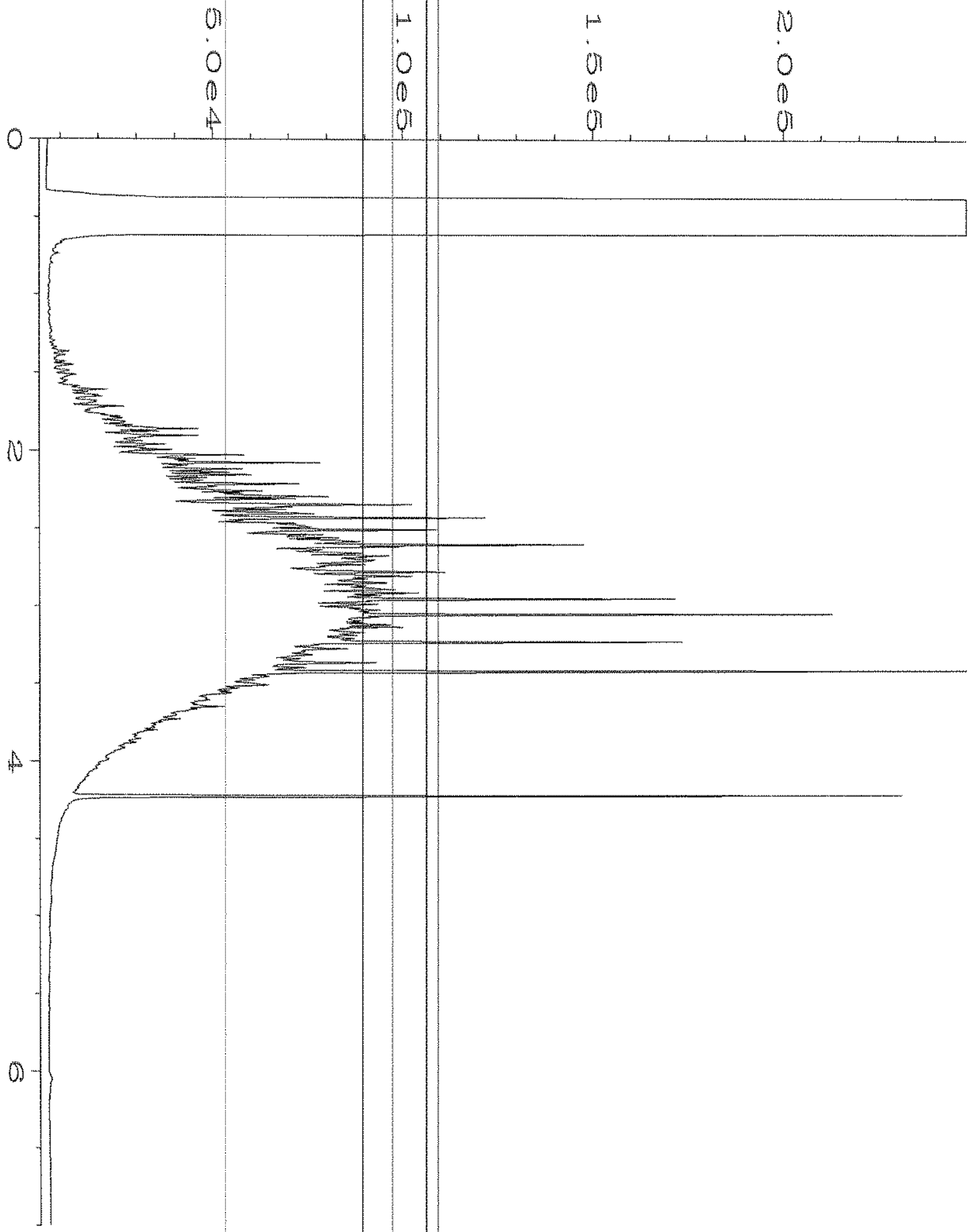
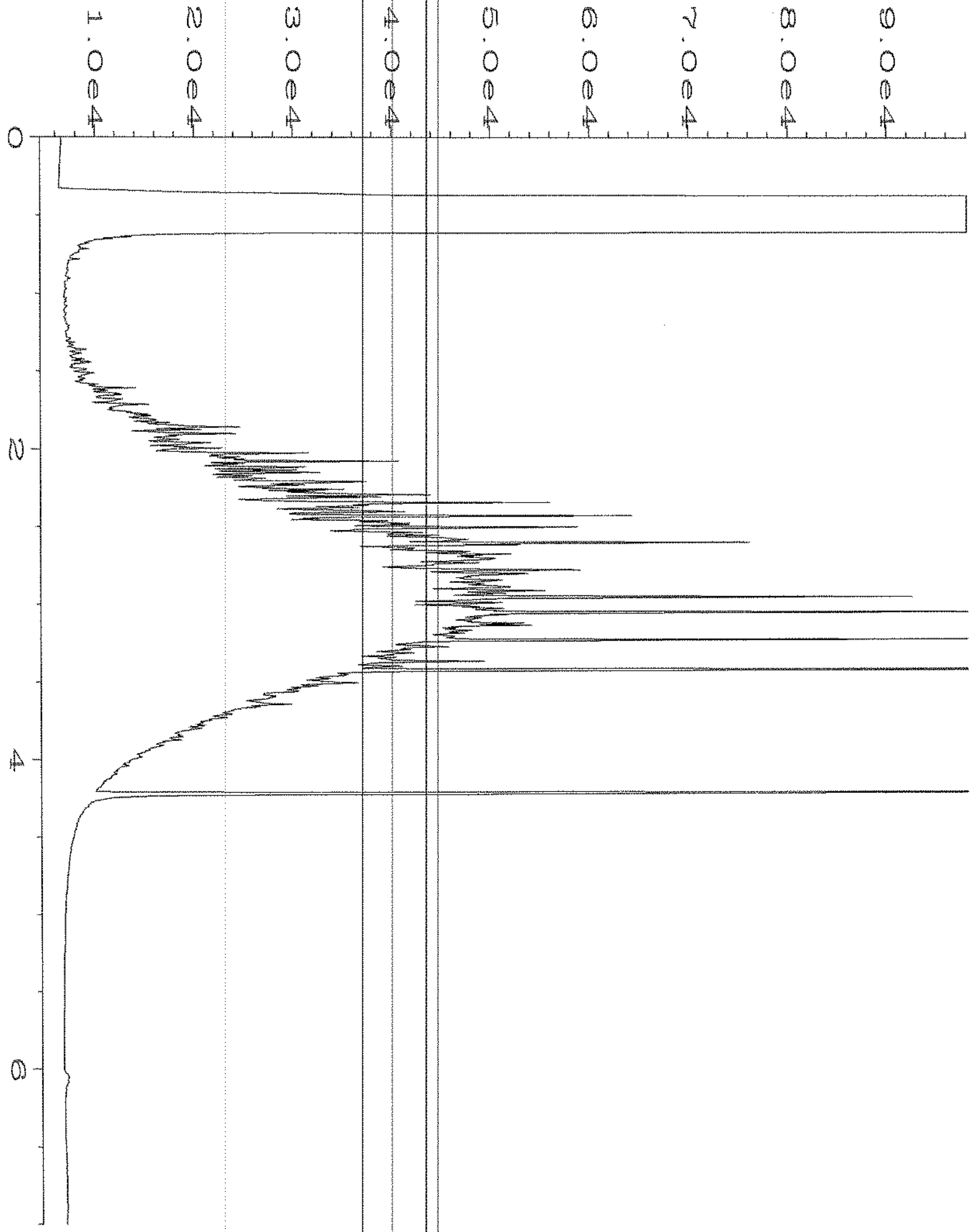
Operator   : TL
Instrument   : GC6
Sample Name   : 105363-13
Run Time Bar Code:
Acquired on   : 21 May 21   11:27 AM
Report Created on: 24 May 21   09:34 AM

Page Number   : 1
Vial Number   : 22
Injection Number : 1
Sequence Line   : 5
Instrument Method: DX.MTH
Analysis Method   : DEFAULT.MTH



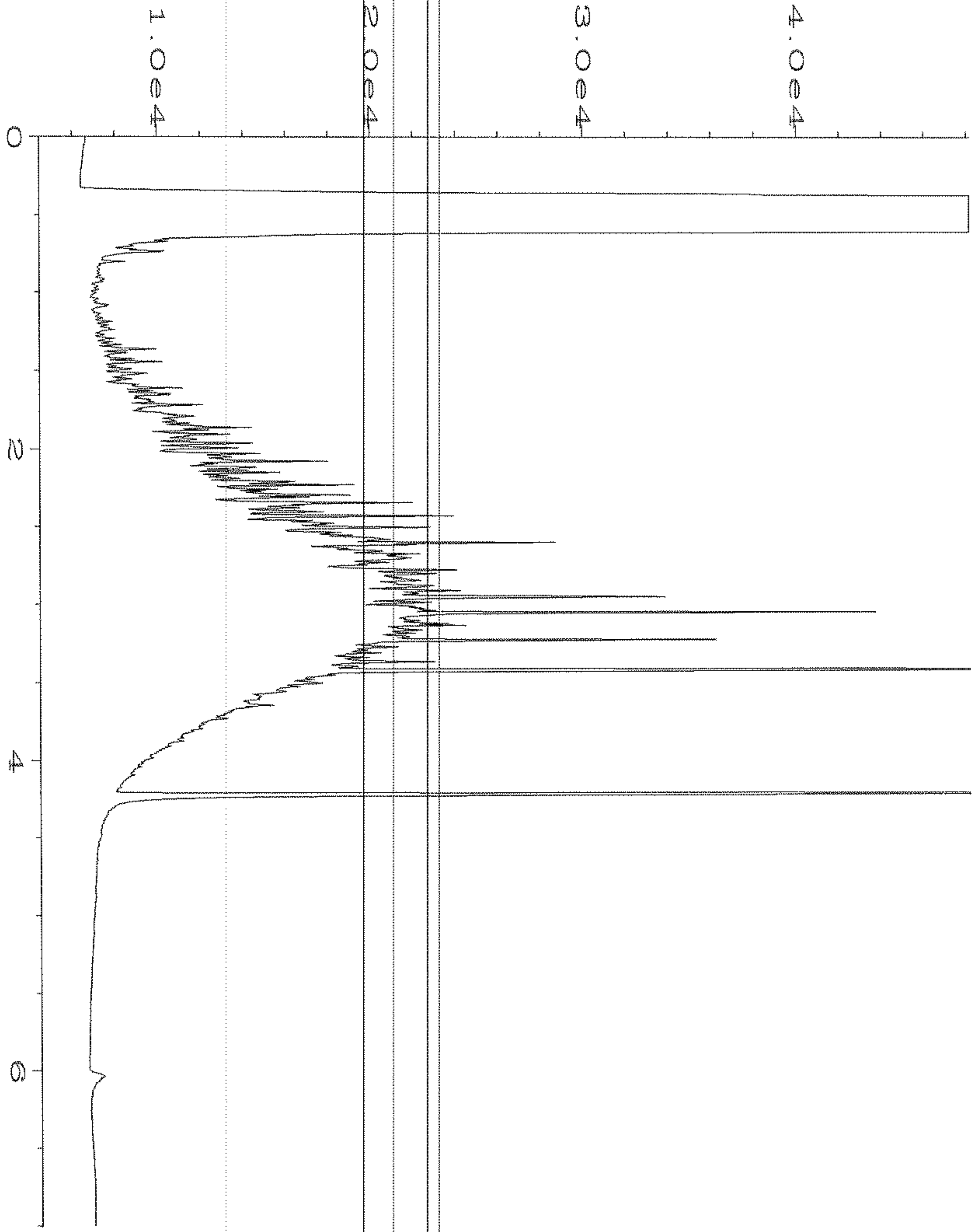
Data File Name   : C:\HPCHEM\6\DATA\05-21-21\023F0801.D
Operator   : TL
Instrument   : GC6
Sample Name   : 105363-14
Run Time Bar Code:
Acquired on   : 21 May 21   12:55 PM
Report Created on: 24 May 21   09:34 AM

Page Number   : 1
Vial Number   : 23
Injection Number : 1
Sequence Line   : 8
Instrument Method: DX.MTH
Analysis Method   : DEFAULT.MTH



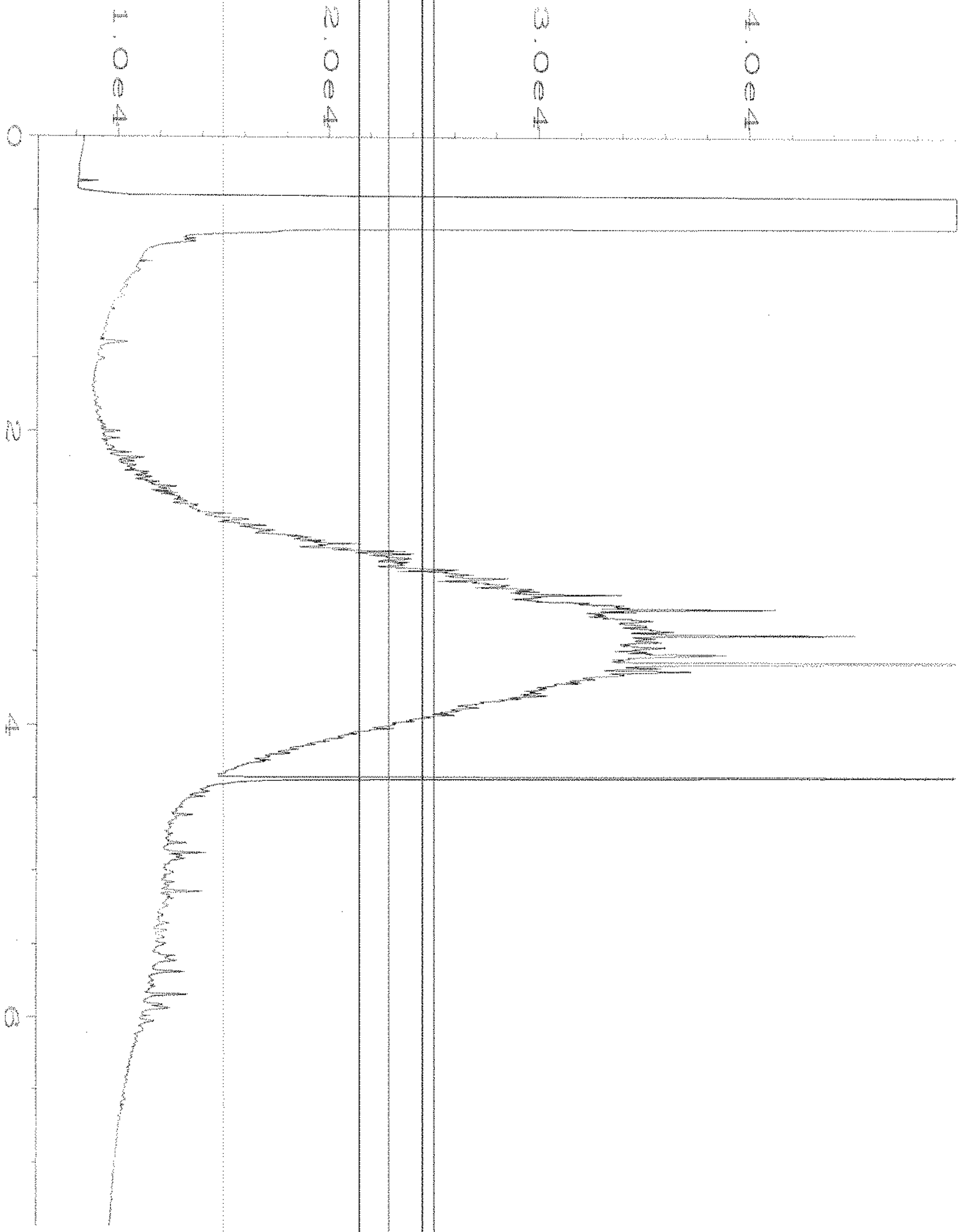
Data File Name : C:\HPCHEM\6\DATA\05-21-21\024F0801.D
Operator : TL
Instrument : GC6
Sample Name : 105363-15
Run Time Bar Code:
Acquired on : 21 May 21 01:05 PM
Report Created on: 24 May 21 09:35 AM

Page Number : 1
Vial Number : 24
Injection Number : 1
Sequence Line : 8
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



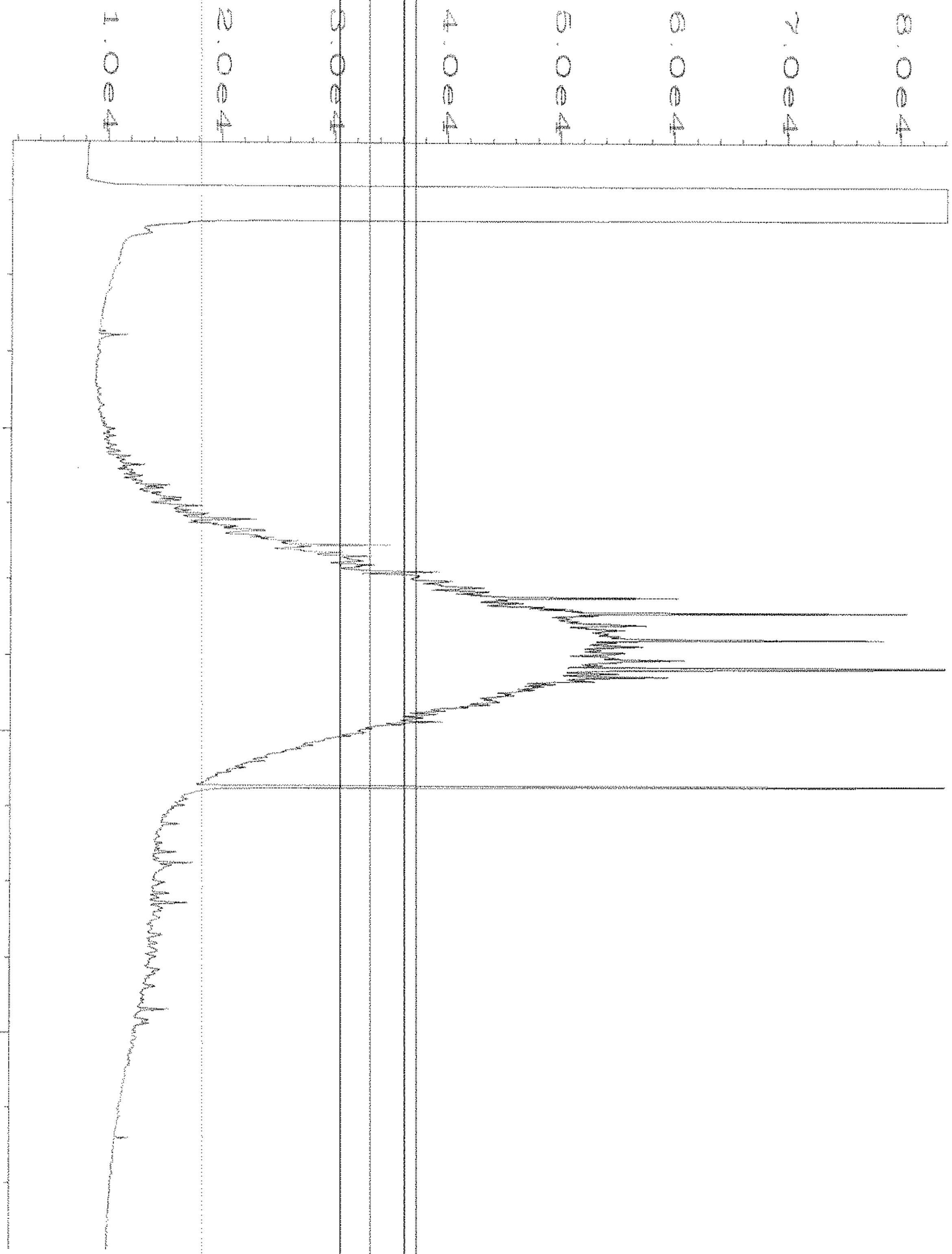
Data File Name : C:\HPCHEM\6\DATA\05-21-21\025F0801.D
Operator : TL
Instrument : GC6
Sample Name : 105363-16
Run Time Bar Code:
Acquired on : 21 May 21 01:15 PM
Report Created on: 24 May 21 09:35 AM

Page Number : 1
Vial Number : 25
Injection Number : 1
Sequence Line : 8
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



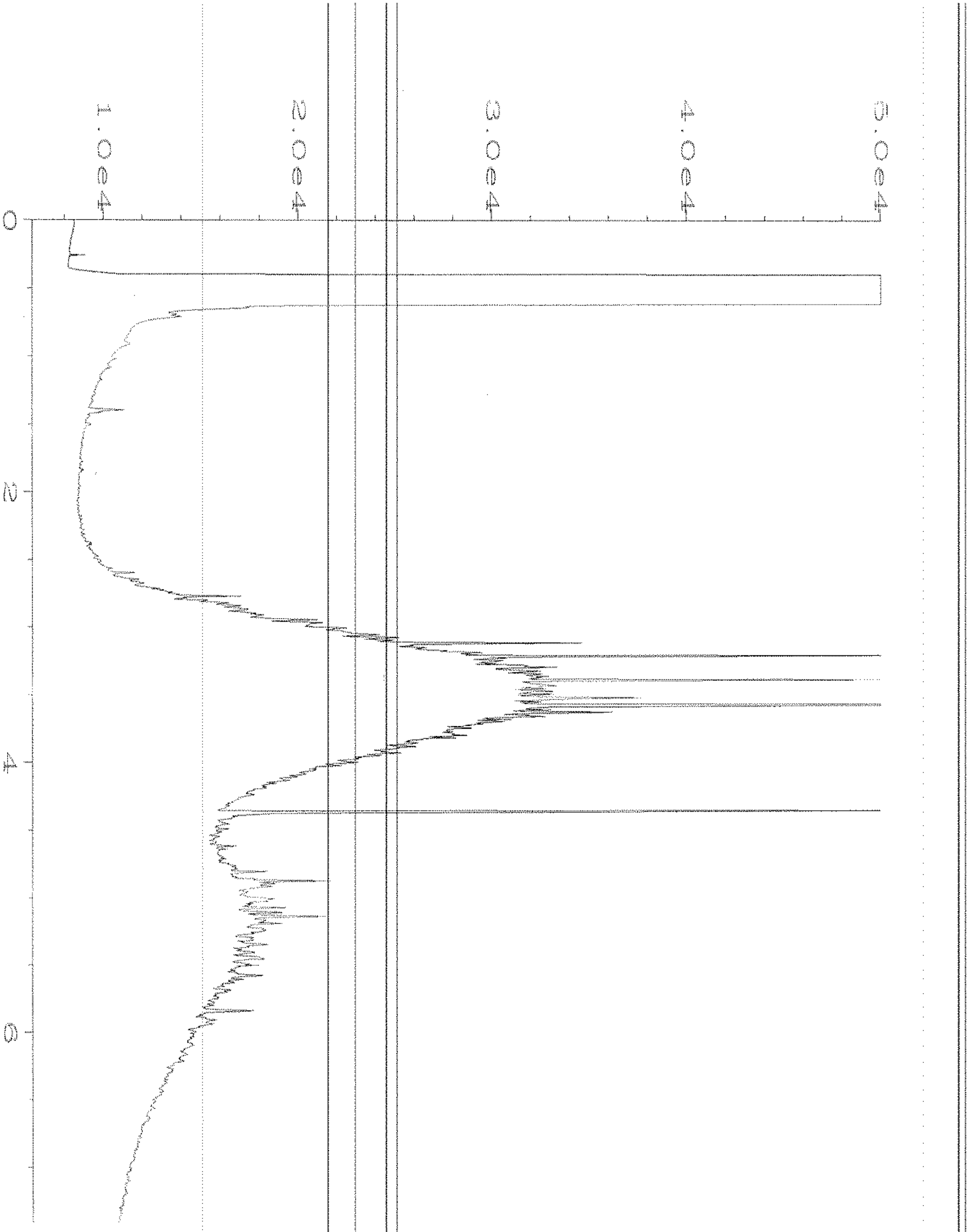
Data File Name : C:\HPCHEM\1\DATA\05-21-21\038F0901.D
Operator : TL
Instrument : GC1
Sample Name : 105363-17
Run Time Bar Code:
Acquired on : 21 May 21 07:37 PM
Report Created on: 24 May 21 10:52 AM

Page Number : 1
Vial Number : 38
Injection Number : 1
Sequence Line : 9
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH

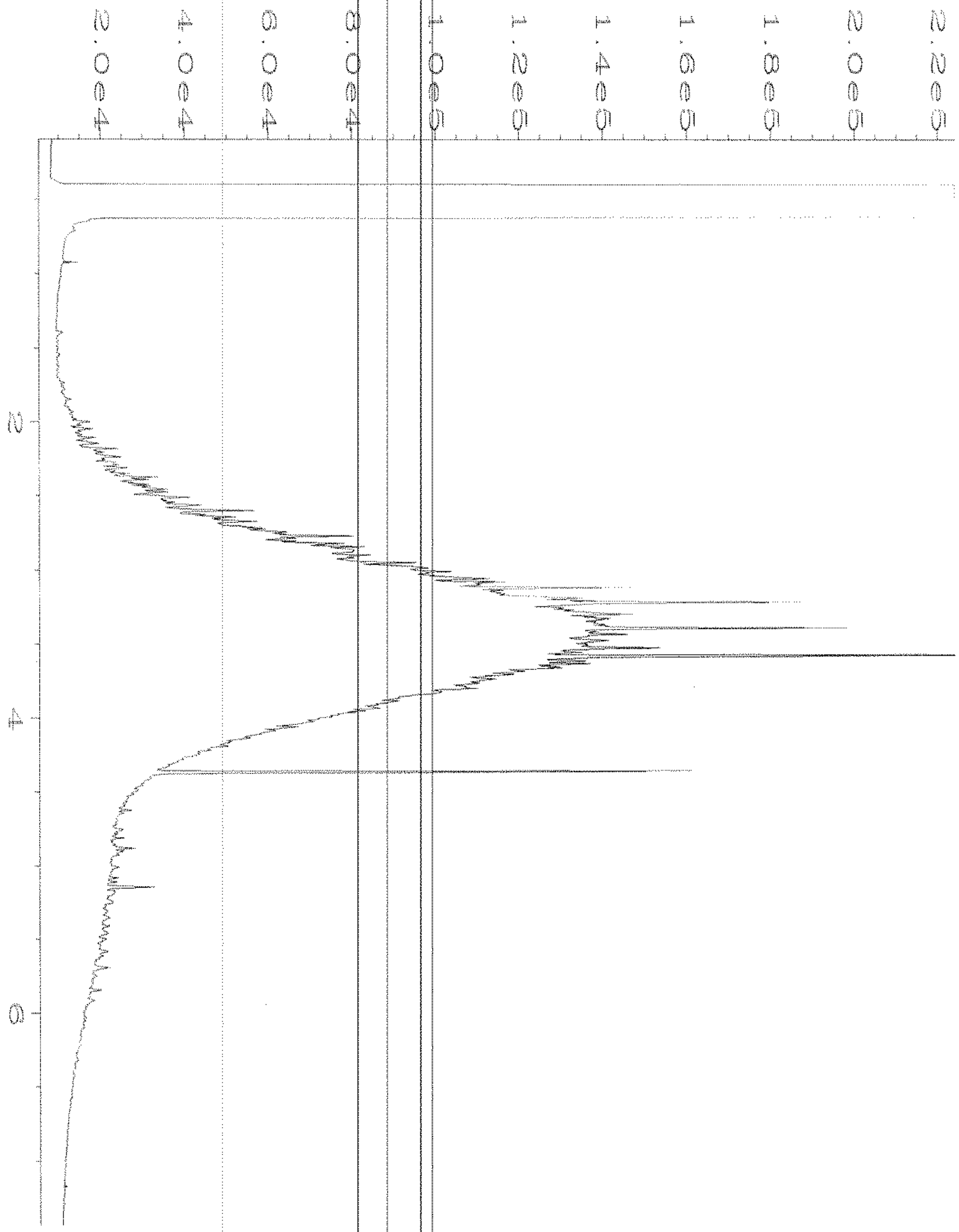


Data File Name : C:\HPCHEM\1\DATA\05-21-21\039F0901.D
Operator : TL
Instrument : GC1
Sample Name : 105363-18
Run Time Bar Code:
Acquired on : 21 May 21 07:48 PM
Report Created on: 24 May 21 10:52 AM

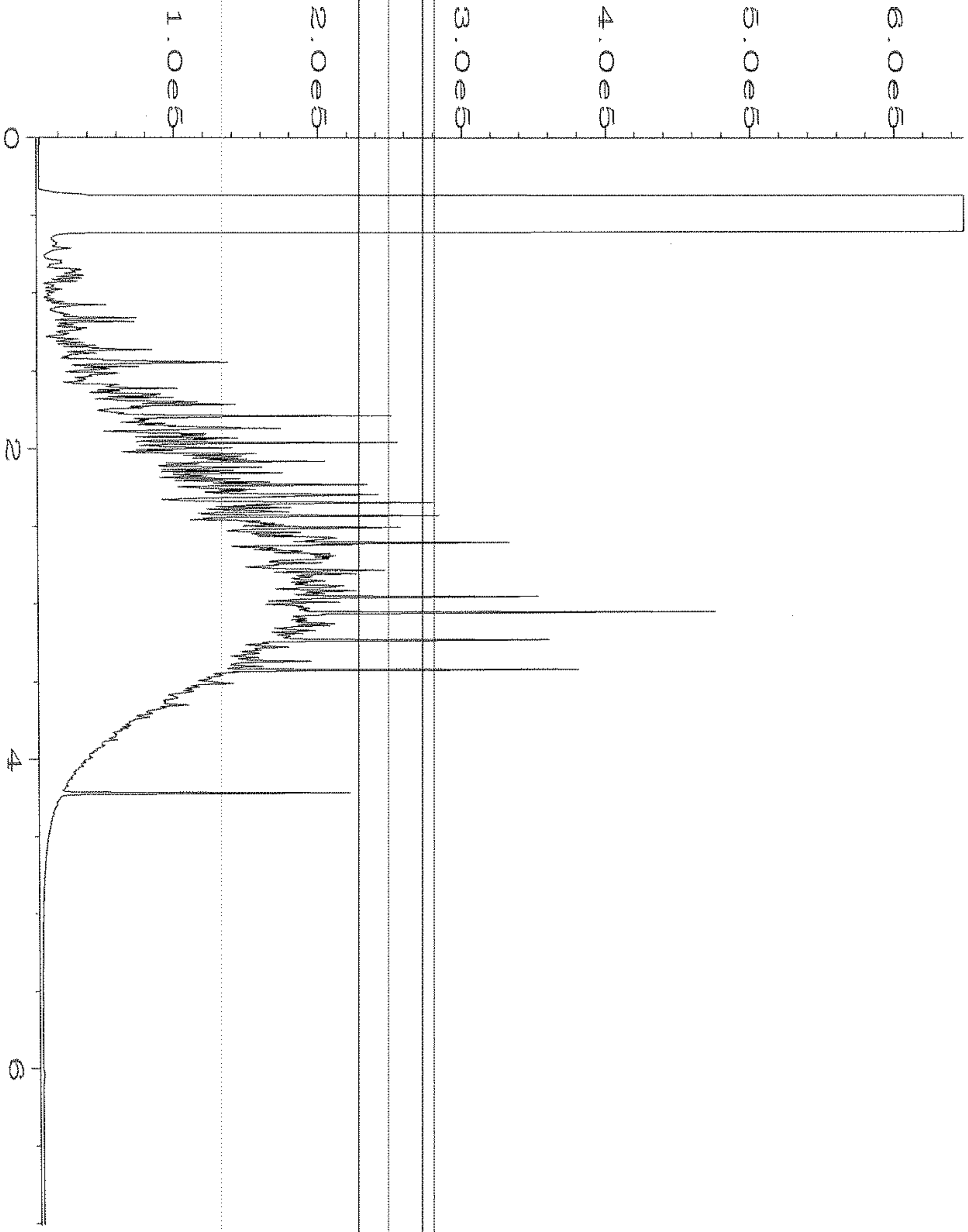
Page Number : 1
Vial Number : 39
Injection Number : 1
Sequence Line : 9
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



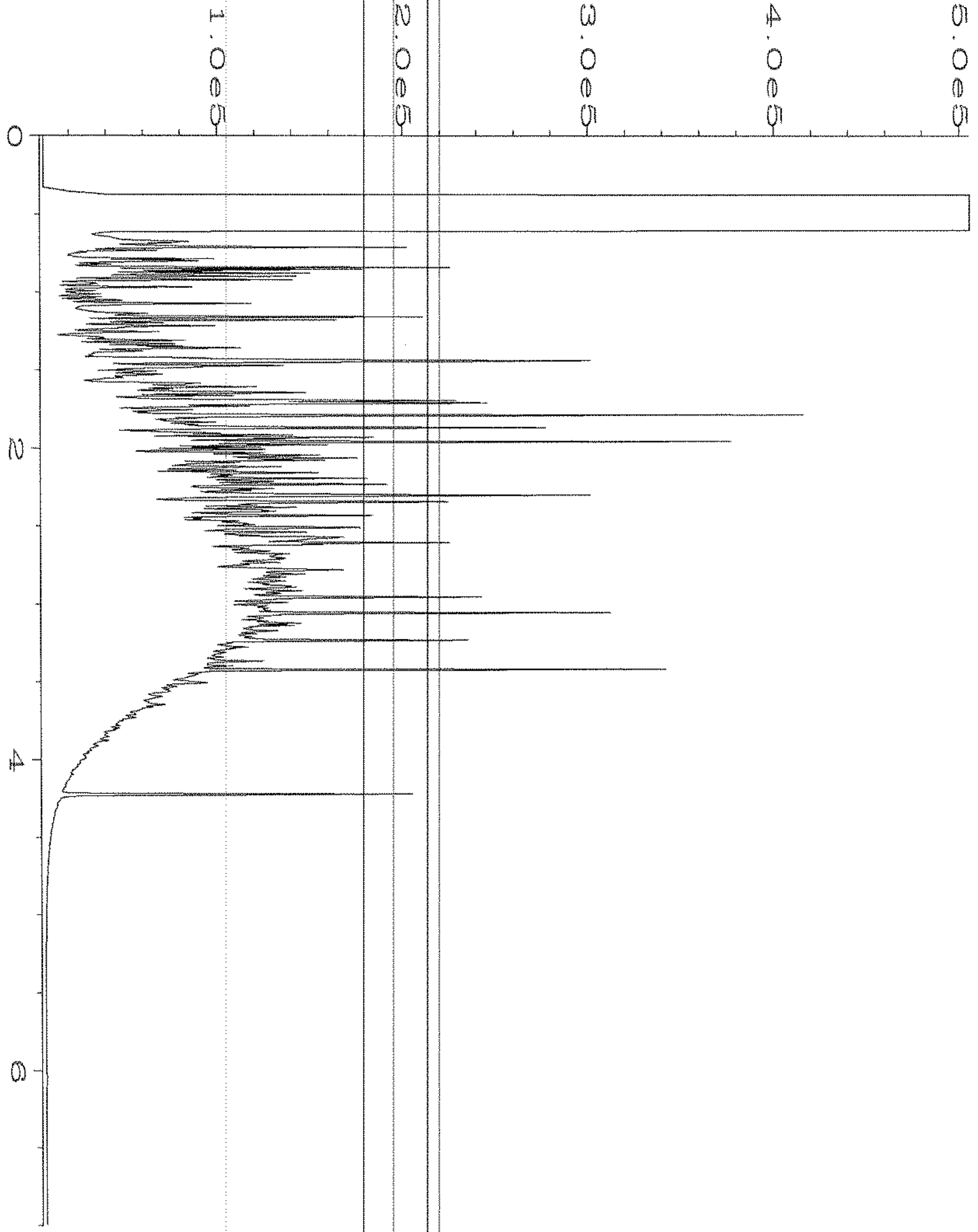
```
Data File Name    : C:\HPCHEM\1\DATA\05-21-21\040F0901.D
Operator          : TL                              Page Number      : 1
Instrument        : GC1                             Vial Number      : 40
Sample Name       : 105363-20                       Injection Number : 1
Run Time Bar Code:                                  Sequence Line    : 9
Acquired on       : 21 May 21   08:00 PM            Instrument Method: DX.MTH
Report Created on: 24 May 21   10:53 AM             Analysis Method  : DEFAULT.MTH
```



```
Data File Name    : C:\HPCHEM\1\DATA\05-21-21\041F0901.D
Operator          : TL                                    Page Number       : 1
Instrument        : GC1                                   Vial Number       : 41
Sample Name       : 105363-21                             Injection Number  : 1
Run Time Bar Code:                                        Sequence Line     : 9
Acquired on       : 21 May 21   08:12 PM                  Instrument Method: DX.MTH
Report Created on: 24 May 21   10:54 AM                   Analysis Method   : DEFAULT.MTH
```

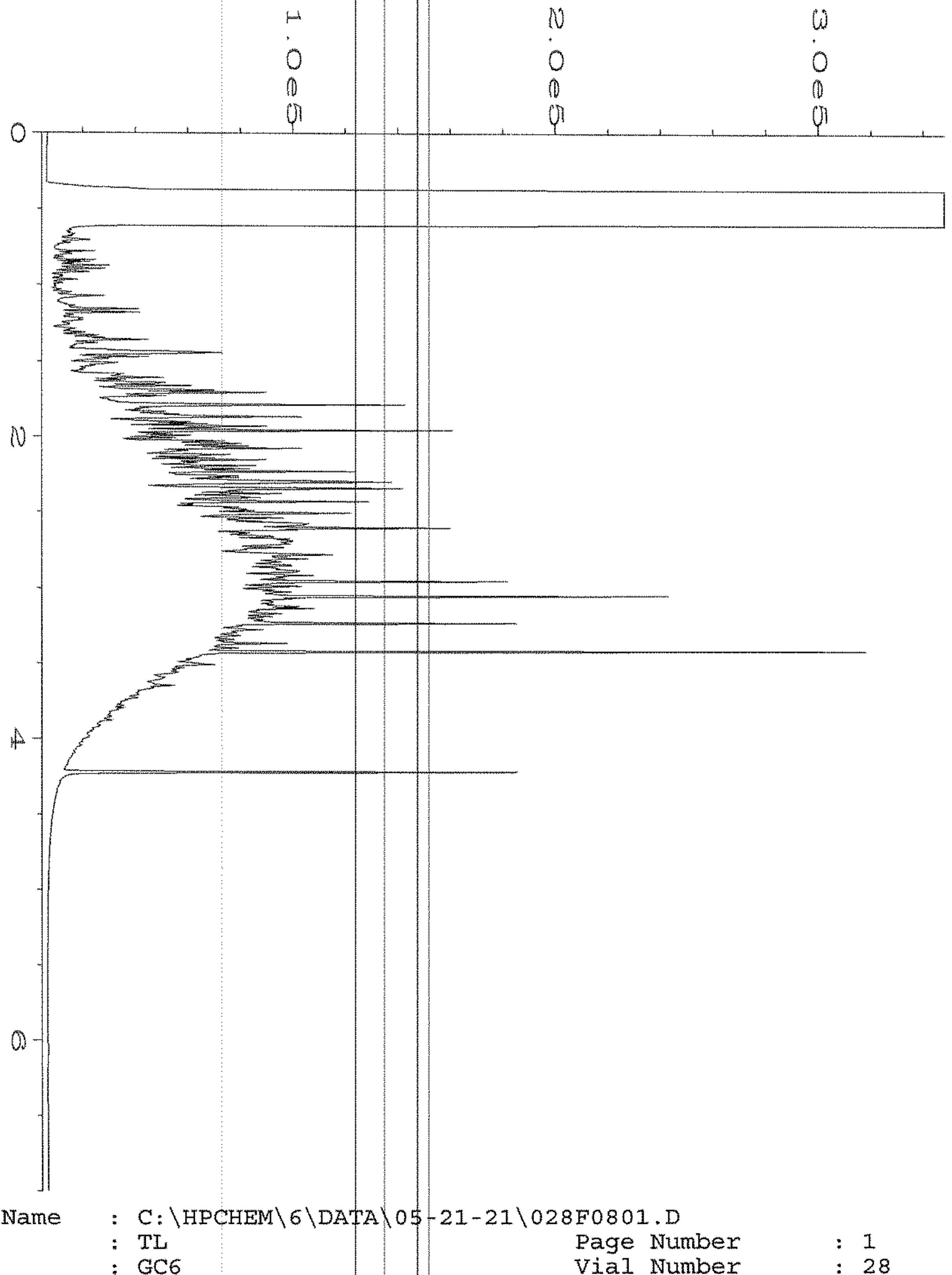


Data File Name	: C:\HPCHEM\6\DATA\05-21-21\026F0801.D				
Operator	: TL		Page Number	:	1
Instrument	: GC6		Vial Number	:	26
Sample Name	: 105363-22		Injection Number	:	1
Run Time Bar Code:			Sequence Line	:	8
Acquired on	: 21 May 21	01:26 PM	Instrument Method:		DX.MTH
Report Created on:	24 May 21	09:35 AM	Analysis Method	:	DEFAULT.MTH



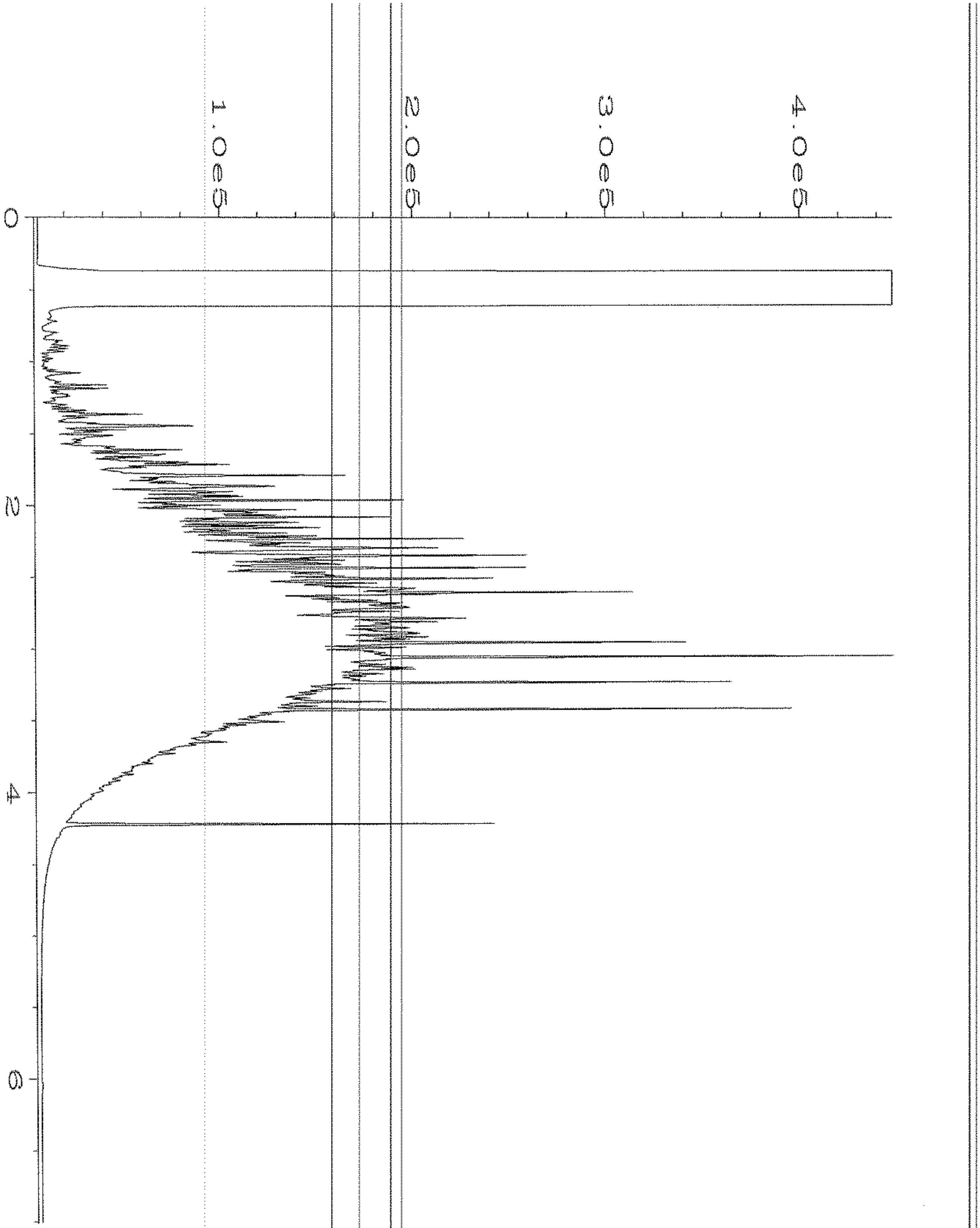
Data File Name   : C:\HPCHEM\6\DATA\05-21-21\027F0801.D
Operator   : TL
Instrument   : GC6
Sample Name   : 105363-23
Run Time Bar Code:
Acquired on   : 21 May 21   01:37 PM
Report Created on: 24 May 21   09:35 AM

Page Number   : 1
Vial Number   : 27
Injection Number : 1
Sequence Line   : 8
Instrument Method: DX.MTH
Analysis Method   : DEFAULT.MTH

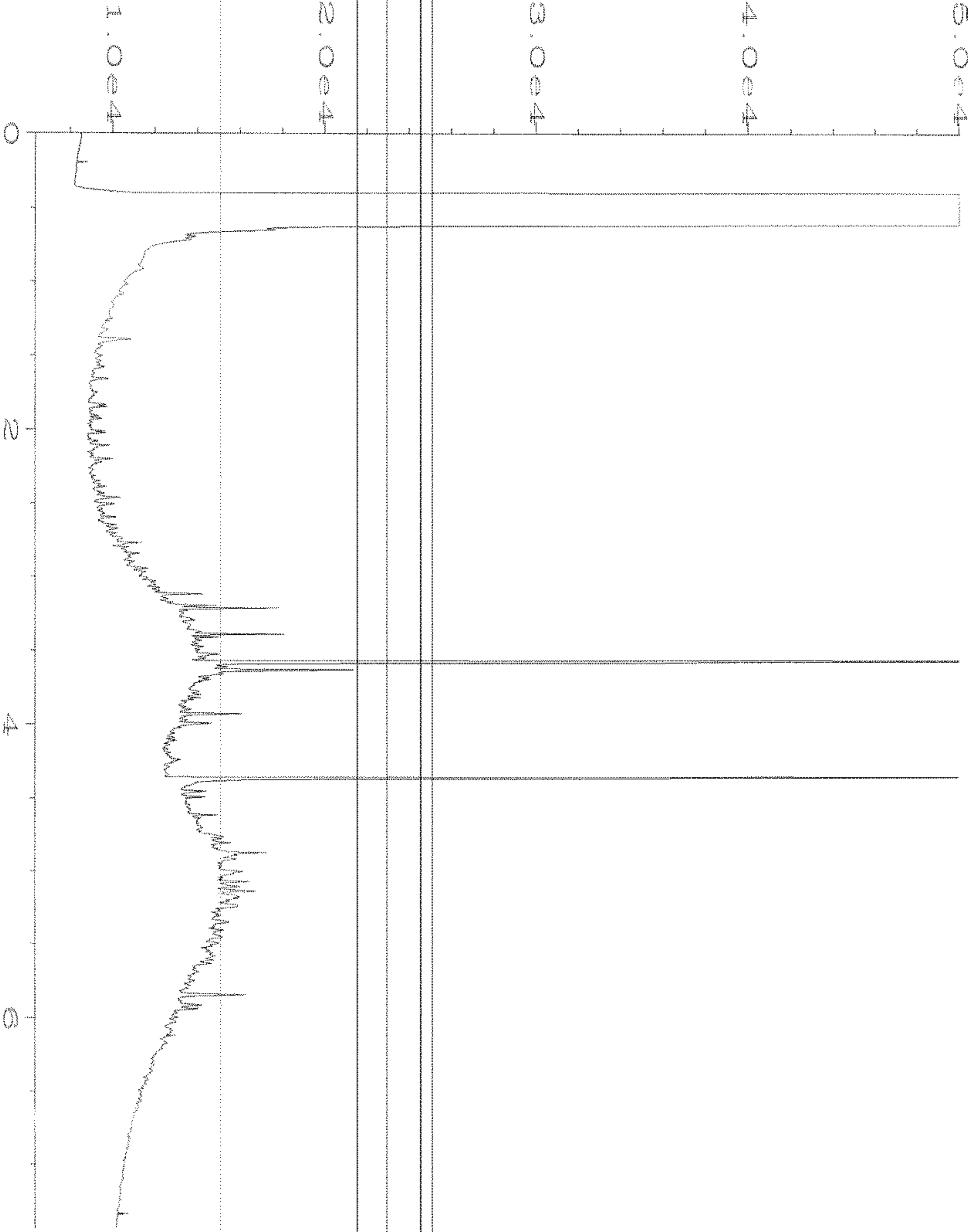


Data File Name   : C:\HPCHEM\6\DATA\05-21-21\028F0801.D
Operator   : TL
Instrument   : GC6
Sample Name   : 105363-24
Run Time Bar Code:
Acquired on   : 21 May 21   01:48 PM
Report Created on: 24 May 21   09:35 AM

Page Number   : 1
Vial Number   : 28
Injection Number : 1
Sequence Line   : 8
Instrument Method: DX.MTH
Analysis Method   : DEFAULT.MTH

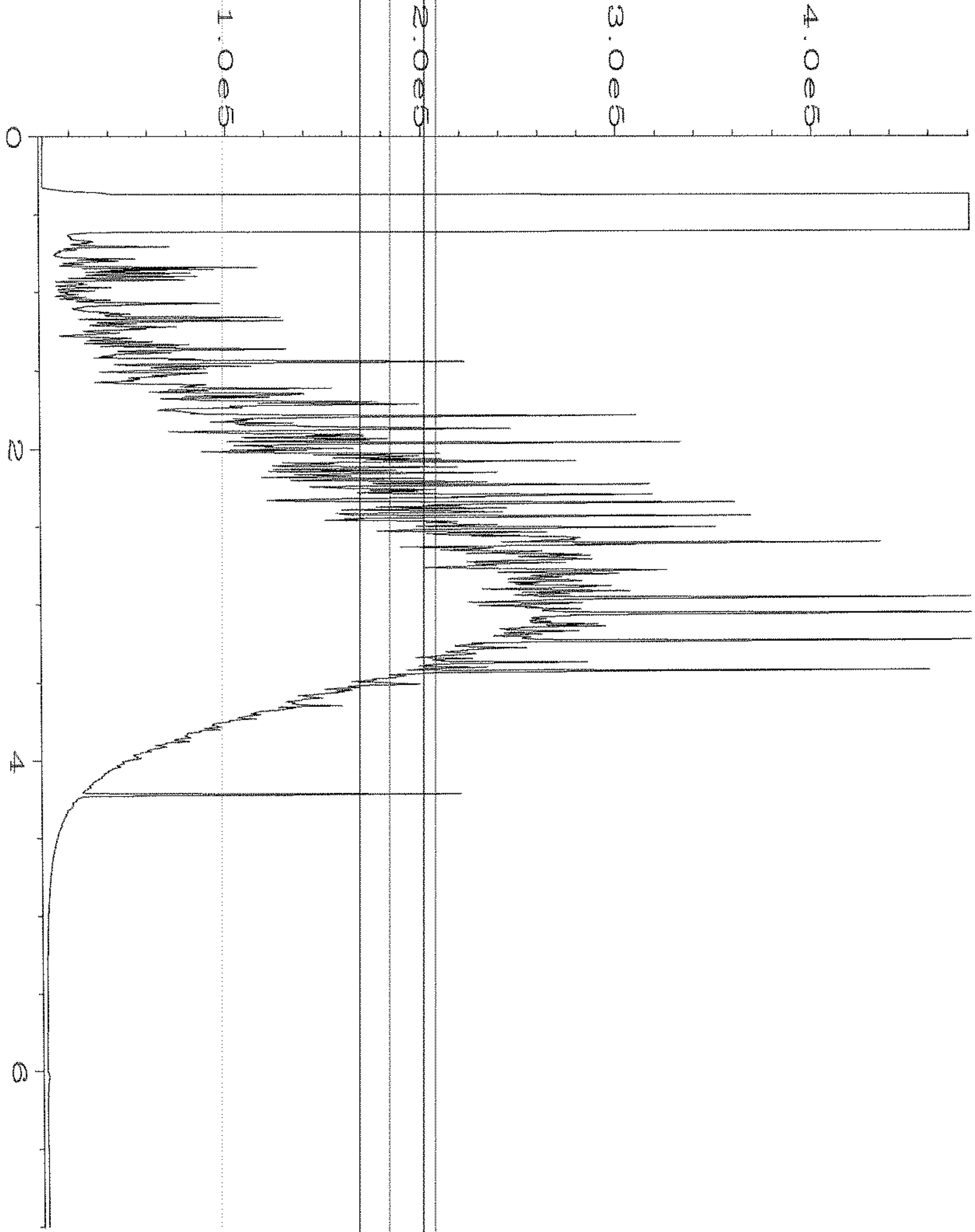


```
Data File Name    : C:\HPCHEM\6\DATA\05-21-21\029F0801.D
Operator          : TL                               Page Number      : 1
Instrument        : GC6                              Vial Number      : 29
Sample Name       : 105363-25                        Injection Number : 1
Run Time Bar Code:                                   Sequence Line    : 8
Acquired on       : 21 May 21   01:59 PM             Instrument Method: DX.MTH
Report Created on: 24 May 21   09:36 AM              Analysis Method  : DEFAULT.MTH
```



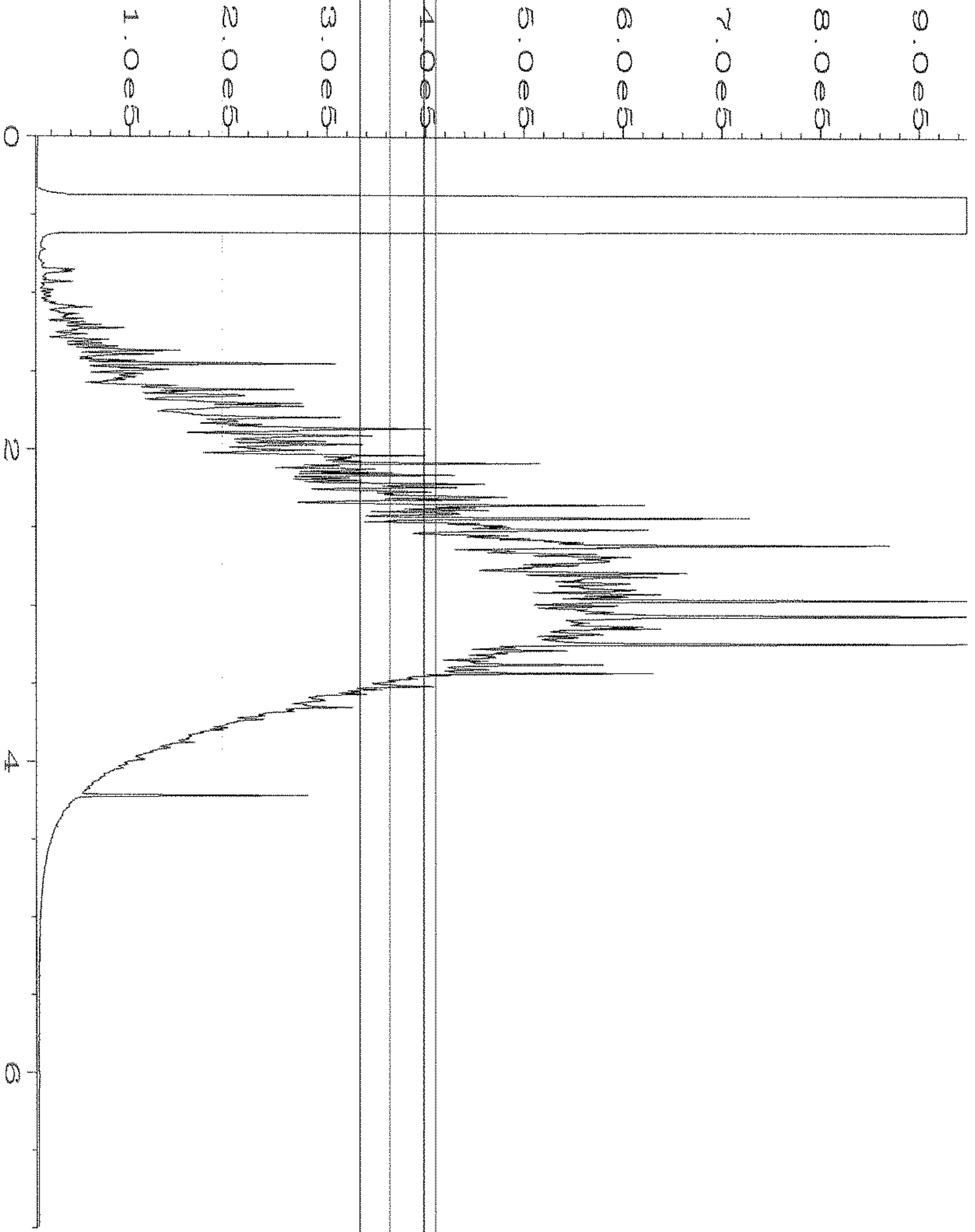
Data File Name : C:\HPCHEM\1\DATA\05-21-21\042F0901.D
Operator : TL
Instrument : GC1
Sample Name : 105363-26
Run Time Bar Code:
Acquired on : 21 May 21 08:23 PM
Report Created on: 24 May 21 10:54 AM

Page Number : 1
Vial Number : 42
Injection Number : 1
Sequence Line : 9
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH

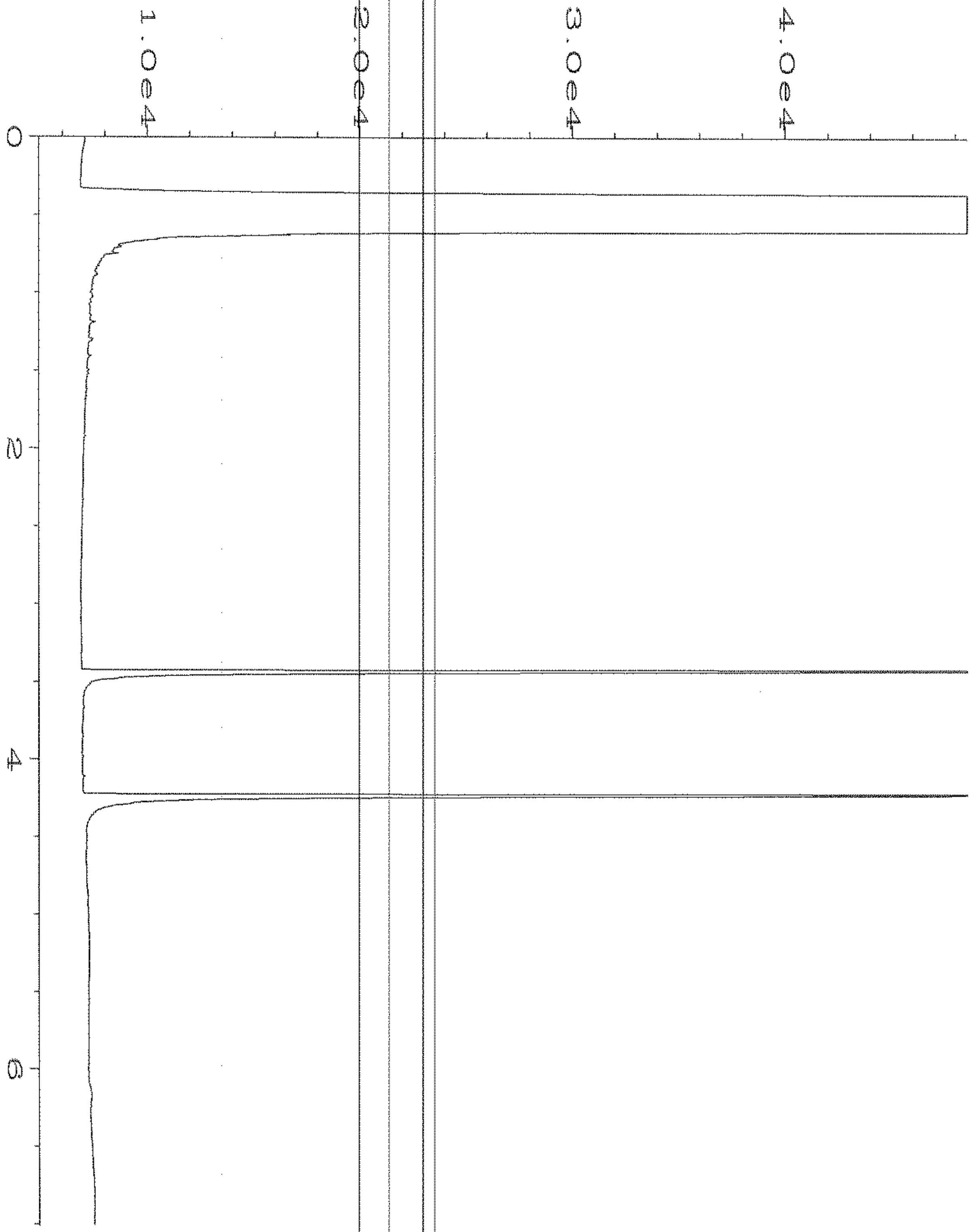


Data File Name : C:\HPCHEM\6\DATA\05-21-21\030F0801.D
Operator : TL
Instrument : GC6
Sample Name : 105363-27
Run Time Bar Code:
Acquired on : 21 May 21 02:10 PM
Report Created on: 24 May 21 09:36 AM

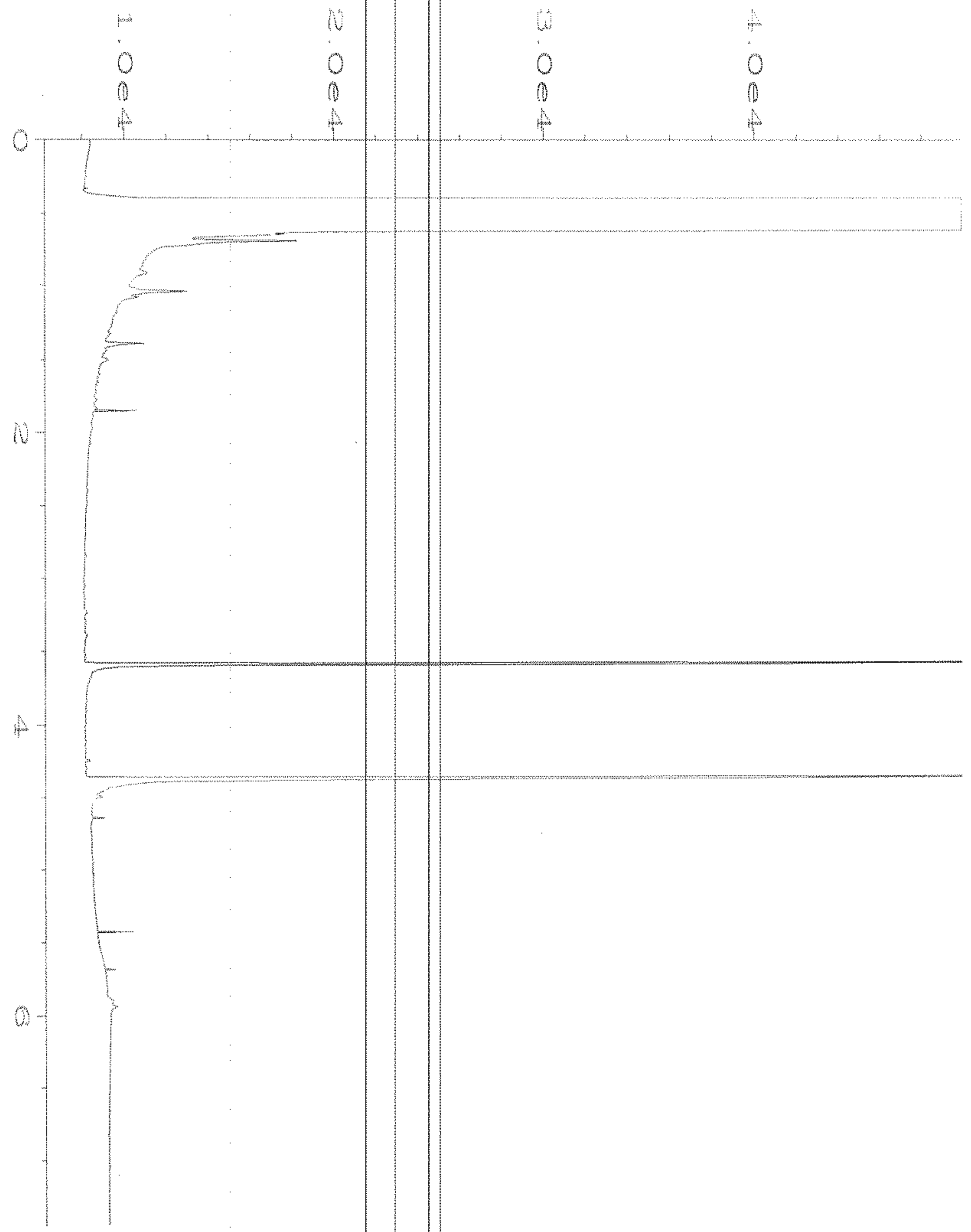
Page Number : 1
Vial Number : 30
Injection Number : 1
Sequence Line : 8
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



```
Data File Name    : C:\HPCHEM\6\DATA\05-21-21\031F0801.D
Operator          : TL                              Page Number       : 1
Instrument        : GC6                             Vial Number       : 31
Sample Name       : 105363-28                       Injection Number  : 1
Run Time Bar Code:                                  Sequence Line     : 8
Acquired on       : 21 May 21   02:21 PM            Instrument Method: DX.MTH
Report Created on: 24 May 21   09:36 AM            Analysis Method   : DEFAULT.MTH
```

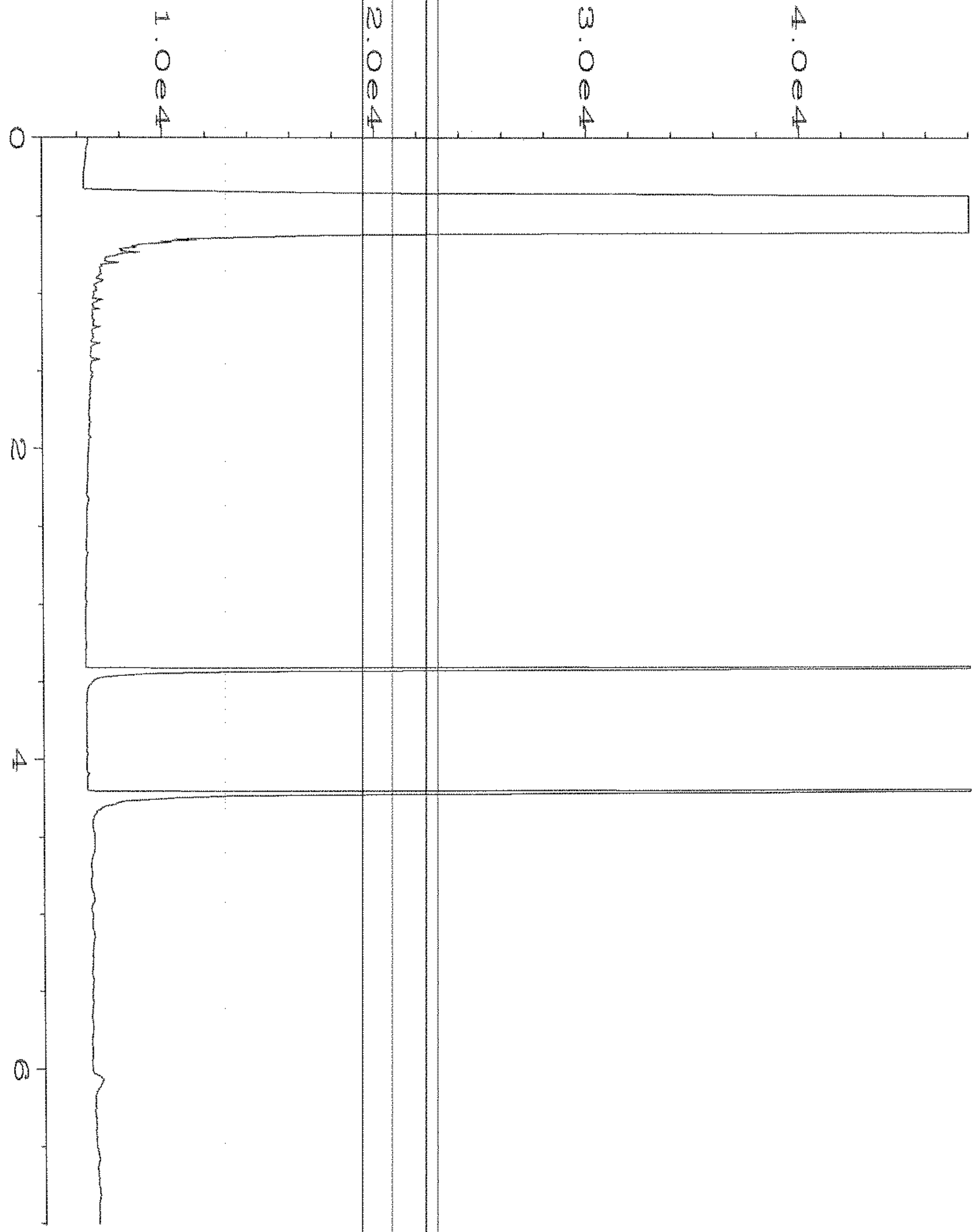


```
Data File Name    : C:\HPCHEM\6\DATA\05-21-21\006F0301.D
Operator          : TL                                   Page Number      : 1
Instrument        : GC6                                  Vial Number      : 6
Sample Name       : 01-1272 mb                           Injection Number : 1
Run Time Bar Code:                                       Sequence Line    : 3
Acquired on       : 21 May 21   08:25 AM                 Instrument Method: DX.MTH
Report Created on: 24 May 21   09:36 AM                  Analysis Method  : DEFAULT.MTH
```



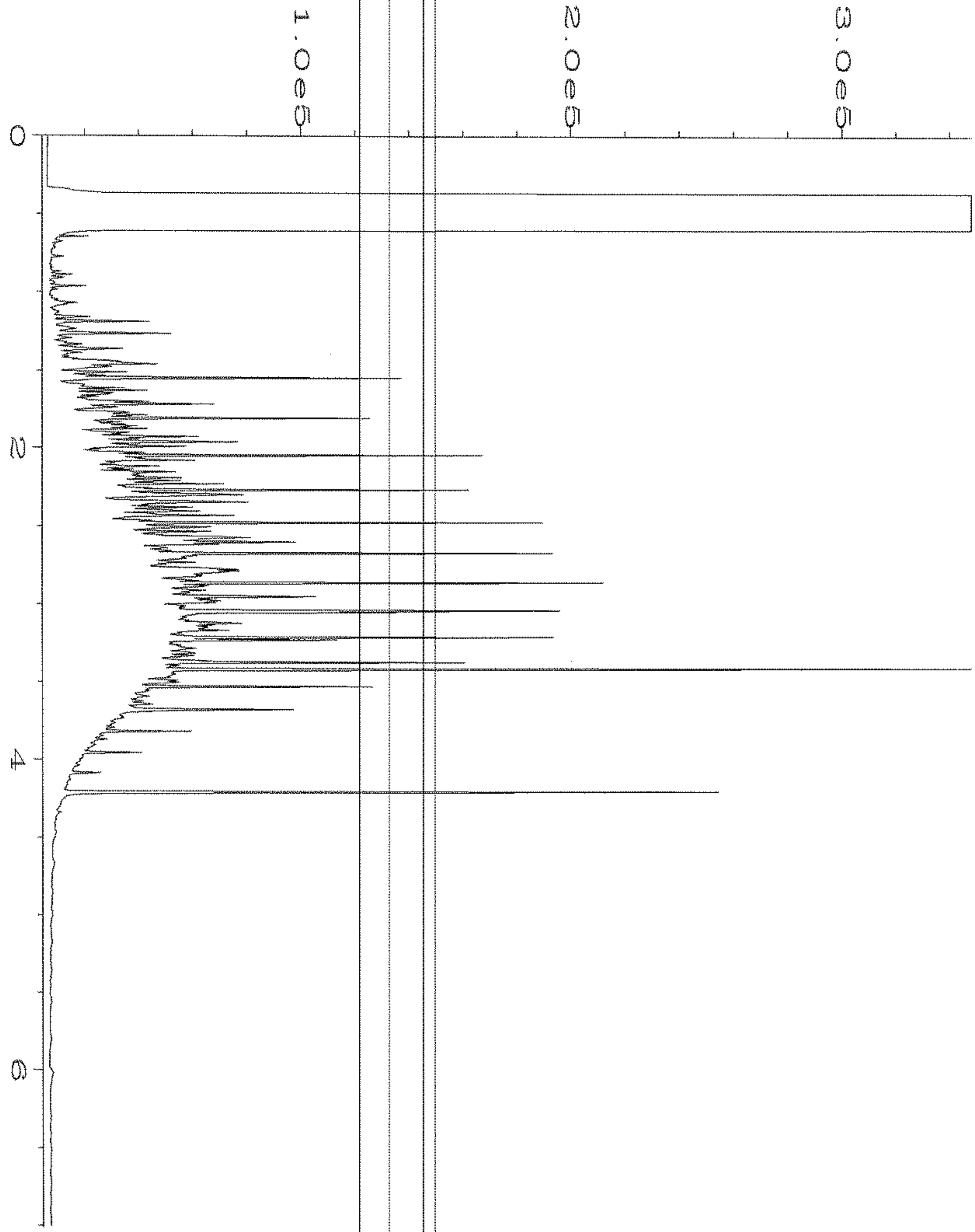
Data File Name : C:\HPCHEM\1\DATA\05-21-21\037F0901.D
Operator : TL
Instrument : GC1
Sample Name : 01-1271 mb2
Run Time Bar Code:
Acquired on : 21 May 21 07:25 PM
Report Created on: 24 May 21 10:52 AM

Page Number : 1
Vial Number : 37
Injection Number : 1
Sequence Line : 9
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



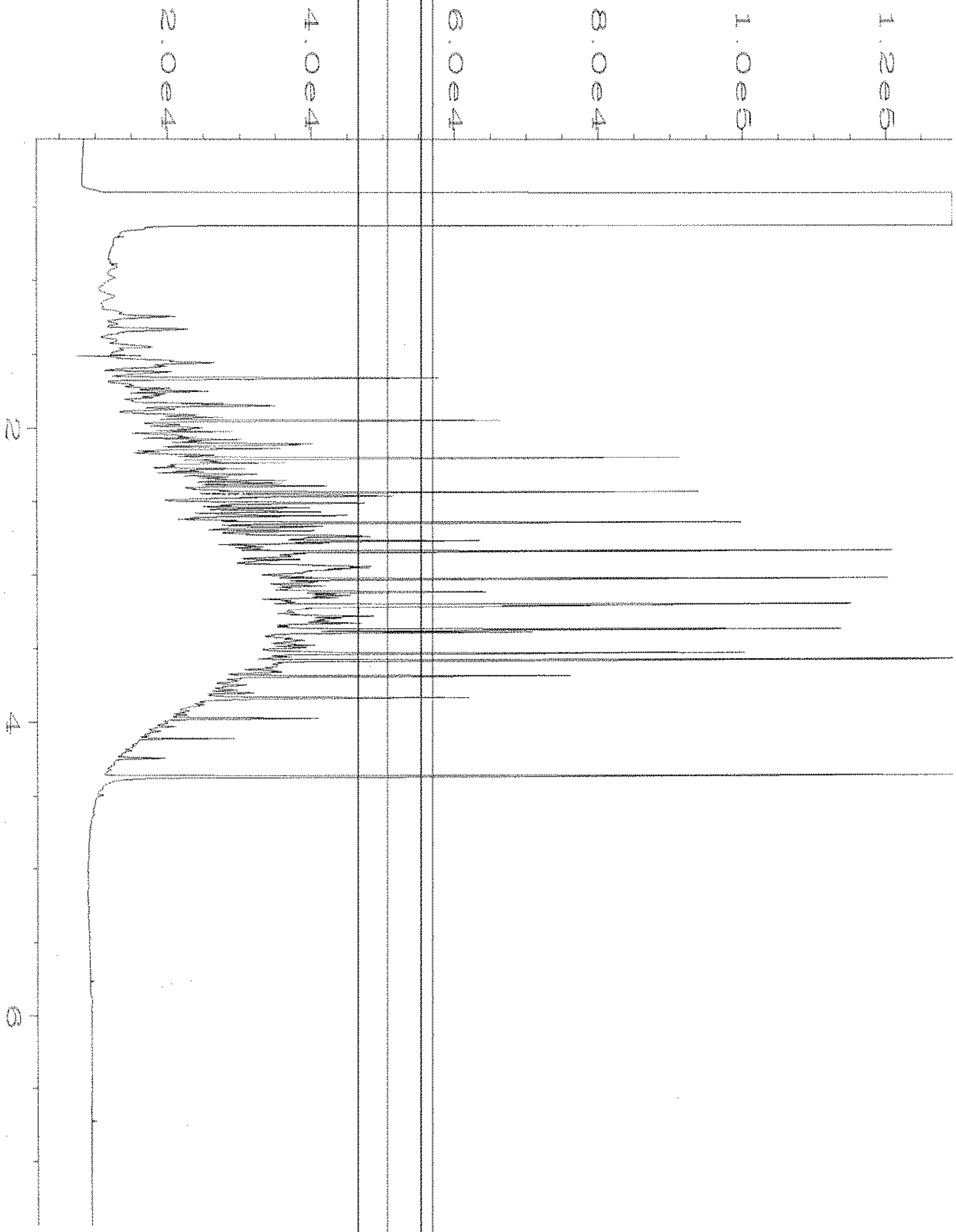
Data File Name   : C:\HPCHEM\6\DATA\05-21-21\032F1001.D
Operator   : TL
Instrument   : GC6
Sample Name   : 01-1273 mb
Run Time Bar Code:
Acquired on   : 21 May 21   02:54 PM
Report Created on: 24 May 21   09:37 AM

Page Number   : 1
Vial Number   : 32
Injection Number : 1
Sequence Line   : 10
Instrument Method: DX.MTH
Analysis Method   : DEFAULT.MTH



Data File Name : C:\HPCHEM\6\DATA\05-21-21\003F0901.D
Operator : TL
Instrument : GC6
Sample Name : 500 Dx 62-142D
Run Time Bar Code:
Acquired on : 21 May 21 02:43 PM
Report Created on: 24 May 21 09:37 AM

Page Number : 1
Vial Number : 3
Injection Number : 1
Sequence Line : 9
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



Data File Name : C:\HPCHEM\1\DATA\05-21-21\003F0601.D
Operator : TL
Instrument : GC1
Sample Name : 500 Dx 62-142D
Run Time Bar Code:
Acquired on : 21 May 21 03:58 PM
Report Created on: 24 May 21 10:50 AM

Page Number : 1
Vial Number : 3
Injection Number : 1
Sequence Line : 6
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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June 8, 2021

Gabriel Cisneros, Project Manager
Floyd-Snider
Two Union Square, Suite 600
601 Union St
Seattle, WA 98101

Dear Mr Cisneros:

Included are the results from the testing of material submitted on June 1, 2021 from the Cl - Ellensburg, F&BI 106001 project. There are 29 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 should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Kristin Anderson
FDS0608R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on June 1, 2021 by Friedman & Bruya, Inc. from the Floyd-Snider Cl - Ellensburg, F&BI 106001 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Floyd-Snider
106001 -01	Side-02R-5.5 Ft
106001 -02	Base-03R-9 Ft
106001 -03	DU1-052821
106001 -04	DU2-052821
106001 -05	DU3-052821
106001 -06	Side-03R-5.5 Ft
106001 -07	Side-05R-5.5 Ft
106001 -08	Side-09R-5.5 Ft
106001 -09	Base-09R-9.5 Ft
106001 -10	Side-12R-5.5
106001 -11	SP02-1
106001 -12	SP02-2
106001 -13	Side-13-5.5 Ft
106001 -14	Base-10-9 Ft
106001 -15	SP02-3
106001 -16	Side-14-5.5 Ft
106001 -17	Side-15-5.5 Ft

Several 8260D samples were analyzed at a dilution due to high PID readings and NWTPH-Gx detections. Analytes were reported between the method detection limit and the lowest calibration point and qualified accordingly.

All quality control requirements were acceptable.

Date of Report: 06/08/21
Date Received: 06/01/21
Project: Cl - Ellensburg, F&BI 106001
Date Extracted: 06/03/21
Date Analyzed: 06/04/21

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
Side-02R-5.5 Ft 106001-01 1/10	1,000	119
Base-03R-9 Ft 106001-02 1/10	230	76
DU1-052821 106001-03 1/10	2,100	97
DU2-052821 106001-04 1/10	2,200	102
DU3-052821 106001-05 1/10	2,700	121
Side-03R-5.5 106001-06 1/10	3,300	ip
Side-05R-5.5 Ft 106001-07 1/10	690	97
Side-09R-5.5 Ft 106001-08 1/10	1,300	103
Base-09R-9.5 Ft 106001-09 1/50	510	90
Side-12R-5.5 106001-10 1/10	1,100	135

Date of Report: 06/08/21
Date Received: 06/01/21
Project: Cl - Ellensburg, F&BI 106001
Date Extracted: 06/03/21
Date Analyzed: 06/04/21

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SP02-1 106001-11	<5	75
SP02-2 106001-12	<5	91
Side-13-5.5 Ft 106001-13	21	90
Base-10-9 Ft 106001-14	84	109
SP02-3 106001-15	<5	88
Side-14-5.5 Ft 106001-16 1/10	2,000	123
Side-15-5.5 Ft 106001-17 1/10	2,000	108
Method Blank 01-1294 MB	<5	94

Date of Report: 06/08/21
Date Received: 06/01/21
Project: Cl - Ellensburg, F&BI 106001
Date Extracted: 06/01/21
Date Analyzed: 06/01/21

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 56-165)
SP02-1 106001-11	<5	<25	70
SP02-2 106001-12	<5	<25	78
SP02-3 106001-15	24	<25	91
Method Blank 01-1355 MB	<5	<25	92

Date of Report: 06/08/21
Date Received: 06/01/21
Project: Cl - Ellensburg, F&BI 106001
Date Extracted: 06/02/21
Date Analyzed: 06/02/21

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 56-165)
Side-02R-5.5 Ft 106001-01	6,400	<250	87
Base-03R-9 Ft 106001-02	410	<250	87
DU1-052821 106001-03	4,300	<250	86
DU2-052821 106001-04	2,100	<250	92
DU3-052821 106001-05	3,300	<250	81
Side-03R-5.5 106001-06	8,900	<250	78
Side-05R-5.5 Ft 106001-07	2,700	<250	92
Side-09R-5.5 Ft 106001-08	2,600	<250	84
Base-09R-9.5 Ft 106001-09	230	<250	91
Side-12R-5.5 106001-10	5,400	<250	84

Date of Report: 06/08/21
Date Received: 06/01/21
Project: Cl - Ellensburg, F&BI 106001
Date Extracted: 06/02/21
Date Analyzed: 06/02/21

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 56-165)
Side-13-5.5 Ft 106001-13	<50	<250	95
Base-10-9 Ft 106001-14	<50	<250	88
Side-14-5.5 Ft 106001-16	11,000	<250	82
Side-15-5.5 Ft 106001-17	10,000	<250	82
Method Blank 01-1346 MB	<50	<250	81

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Side-02R-5.5 Ft	Client:	Floyd-Snider
Date Received:	06/01/21	Project:	Cl - Ellensburg, F&BI 106001
Date Extracted:	06/01/21	Lab ID:	106001-01
Date Analyzed:	06/01/21	Data File:	060116.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	90	109
Toluene-d8	97	89	112
4-Bromofluorobenzene	91	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	0.66
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.97

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Base-03R-9 Ft	Client:	Floyd-Snider
Date Received:	06/01/21	Project:	Cl - Ellensburg, F&BI 106001
Date Extracted:	06/01/21	Lab ID:	106001-02
Date Analyzed:	06/01/21	Data File:	060117.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	90	109
Toluene-d8	97	89	112
4-Bromofluorobenzene	103	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU1-052821	Client:	Floyd-Snider
Date Received:	06/01/21	Project:	Cl - Ellensburg, F&BI 106001
Date Extracted:	06/01/21	Lab ID:	106001-03 1/2
Date Analyzed:	06/01/21	Data File:	060118.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	90	109
Toluene-d8	96	89	112
4-Bromofluorobenzene	113	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03 j
Toluene	<0.05
Ethylbenzene	0.12
m,p-Xylene	0.12
o-Xylene	<0.05
Naphthalene	0.71

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU2-052821	Client:	Floyd-Snider
Date Received:	06/01/21	Project:	Cl - Ellensburg, F&BI 106001
Date Extracted:	06/01/21	Lab ID:	106001-04 1/2
Date Analyzed:	06/01/21	Data File:	060119.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	90	109
Toluene-d8	98	89	112
4-Bromofluorobenzene	110	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03 j
Toluene	<0.05
Ethylbenzene	0.12
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.93

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU3-052821	Client:	Floyd-Snider
Date Received:	06/01/21	Project:	Cl - Ellensburg, F&BI 106001
Date Extracted:	06/01/21	Lab ID:	106001-05 1/2
Date Analyzed:	06/01/21	Data File:	060120.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	90	109
Toluene-d8	98	89	112
4-Bromofluorobenzene	103	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03 j
Toluene	<0.05
Ethylbenzene	0.25
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	1.4

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Side-03R-5.5	Client:	Floyd-Snider
Date Received:	06/01/21	Project:	Cl - Ellensburg, F&BI 106001
Date Extracted:	06/01/21	Lab ID:	106001-06 1/2
Date Analyzed:	06/01/21	Data File:	060121.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	90	109
Toluene-d8	98	89	112
4-Bromofluorobenzene	97	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03 j
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	2.7

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Side-05R-5.5 Ft	Client:	Floyd-Snider
Date Received:	06/01/21	Project:	Cl - Ellensburg, F&BI 106001
Date Extracted:	06/01/21	Lab ID:	106001-07
Date Analyzed:	06/01/21	Data File:	060122.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	90	109
Toluene-d8	96	89	112
4-Bromofluorobenzene	99	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Side-09R-5.5 Ft	Client:	Floyd-Snider
Date Received:	06/01/21	Project:	Cl - Ellensburg, F&BI 106001
Date Extracted:	06/01/21	Lab ID:	106001-08 1/2
Date Analyzed:	06/01/21	Data File:	060128.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	90	109
Toluene-d8	99	89	112
4-Bromofluorobenzene	112	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	0.17
Toluene	<0.05
Ethylbenzene	0.20
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.66

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Base-09R-9.5 Ft	Client:	Floyd-Snider
Date Received:	06/01/21	Project:	Cl - Ellensburg, F&BI 106001
Date Extracted:	06/01/21	Lab ID:	106001-09 1/5
Date Analyzed:	06/01/21	Data File:	060129.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	90	109
Toluene-d8	99	89	112
4-Bromofluorobenzene	103	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03 j
Toluene	<0.05 j
Ethylbenzene	<0.05 j
m,p-Xylene	<0.1 j
o-Xylene	<0.05 j
Naphthalene	<0.05 j

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Side-12R-5.5	Client:	Floyd-Snider
Date Received:	06/01/21	Project:	Cl - Ellensburg, F&BI 106001
Date Extracted:	06/01/21	Lab ID:	106001-10 1/2
Date Analyzed:	06/01/21	Data File:	060130.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	90	109
Toluene-d8	96	89	112
4-Bromofluorobenzene	106	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03 j
Toluene	<0.05
Ethylbenzene	0.055
m,p-Xylene	0.11
o-Xylene	<0.05
Naphthalene	0.33

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SP02-1	Client:	Floyd-Snider
Date Received:	06/01/21	Project:	Cl - Ellensburg, F&BI 106001
Date Extracted:	06/01/21	Lab ID:	106001-11
Date Analyzed:	06/01/21	Data File:	060131.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	90	109
Toluene-d8	97	89	112
4-Bromofluorobenzene	101	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SP02-2	Client:	Floyd-Snider
Date Received:	06/01/21	Project:	Cl - Ellensburg, F&BI 106001
Date Extracted:	06/01/21	Lab ID:	106001-12
Date Analyzed:	06/01/21	Data File:	060132.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	90	109
Toluene-d8	96	89	112
4-Bromofluorobenzene	102	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Side-13-5.5 Ft	Client:	Floyd-Snider
Date Received:	06/01/21	Project:	Cl - Ellensburg, F&BI 106001
Date Extracted:	06/01/21	Lab ID:	106001-13
Date Analyzed:	06/01/21	Data File:	060133.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	90	109
Toluene-d8	96	89	112
4-Bromofluorobenzene	103	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Base-10-9 Ft	Client:	Floyd-Snider
Date Received:	06/01/21	Project:	Cl - Ellensburg, F&BI 106001
Date Extracted:	06/01/21	Lab ID:	106001-14
Date Analyzed:	06/01/21	Data File:	060134.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	94	90	109
Toluene-d8	100	89	112
4-Bromofluorobenzene	103	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	0.10
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.18

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SP02-3	Client:	Floyd-Snider
Date Received:	06/01/21	Project:	Cl - Ellensburg, F&BI 106001
Date Extracted:	06/01/21	Lab ID:	106001-15
Date Analyzed:	06/01/21	Data File:	060135.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	90	109
Toluene-d8	97	89	112
4-Bromofluorobenzene	102	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Side-14-5.5 Ft	Client:	Floyd-Snider
Date Received:	06/01/21	Project:	Cl - Ellensburg, F&BI 106001
Date Extracted:	06/01/21	Lab ID:	106001-16 1/2
Date Analyzed:	06/01/21	Data File:	060136.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	90	109
Toluene-d8	99	89	112
4-Bromofluorobenzene	98	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03 j
Toluene	<0.05
Ethylbenzene	0.43
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.32

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Side-15-5.5 Ft	Client:	Floyd-Snider
Date Received:	06/01/21	Project:	Cl - Ellensburg, F&BI 106001
Date Extracted:	06/01/21	Lab ID:	106001-17 1/2
Date Analyzed:	06/02/21	Data File:	060137.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	90	109
Toluene-d8	97	89	112
4-Bromofluorobenzene	102	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03 j
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Floyd-Snider
Date Received:	Not Applicable	Project:	Cl - Ellensburg, F&BI 106001
Date Extracted:	06/01/21	Lab ID:	01-1173 mb
Date Analyzed:	06/01/21	Data File:	060111.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	90	109
Toluene-d8	98	89	112
4-Bromofluorobenzene	102	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.006 j
Toluene	<0.01 j
Ethylbenzene	<0.01 j
m,p-Xylene	<0.02 j
o-Xylene	<0.01 j
Naphthalene	<0.01 j

Date of Report: 06/08/21
Date Received: 06/01/21
Project: Cl - Ellensburg, F&BI 106001

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

Laboratory Code: 106038-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	110	71-131

Date of Report: 06/08/21
Date Received: 06/01/21
Project: Cl - Ellensburg, F&BI 106001

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

Laboratory Code: 105571-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	500	99	89	81	73-135	9

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	500	91	74-139

Date of Report: 06/08/21
Date Received: 06/01/21
Project: Cl - Ellensburg, F&BI 106001

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

Laboratory Code: 105564-19 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	86	82	63-146	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	80	79-144

Date of Report: 06/08/21
Date Received: 06/01/21
Project: Cl - Ellensburg, F&BI 106001

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

Laboratory Code: 105566-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Benzene	mg/kg (ppm)	1	<0.03	64	62	29-129	3
Toluene	mg/kg (ppm)	1	<0.05	72	69	35-130	4
Ethylbenzene	mg/kg (ppm)	1	<0.05	74	73	32-137	1
m,p-Xylene	mg/kg (ppm)	2	<0.1	75	74	34-136	1
o-Xylene	mg/kg (ppm)	1	<0.05	75	74	33-134	1
Naphthalene	mg/kg (ppm)	1	<0.05	78	80	14-157	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	1	103	71-118
Toluene	mg/kg (ppm)	1	110	66-126
Ethylbenzene	mg/kg (ppm)	1	115	64-123
m,p-Xylene	mg/kg (ppm)	2	115	78-122
o-Xylene	mg/kg (ppm)	1	113	77-124
Naphthalene	mg/kg (ppm)	1	118	63-140

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

106001

SAMPLE CHAIN OF CUSTODY

06-01-21 ~~VW~~ VS-D1/CD2/CD3

Page # 1 of 1

Report To Gabe Cisneros

Company Floyd Snider

Address 601 Union St, Ste 600

City, State, ZIP Seattle, WA 98101

Phone 206-292-2078 Email gabe.cisneros@floydsnider.com

SAMPLERS (signature)

PROJECT NAME CL- Ellensburg

PO #

REMARKS cc kristin.anderson@floydsnider.com w/ results

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	~~BTEX~~ naph. VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082					Notes
SIDE-02R-5.5FT	01 A-D	5/28/21	0950	S	4	X	X			X							
BASE-03R-9FT	02		1010		4	X	X			X							
DU1-052821	03		1105		4	X	X			X							
DU2-052821	04		1110		4	X	X			X							
DU3-052821	05		1115		4	X	X			X							
SIDE-03R-5.5FT	06		1220		4	X	X			X							
SIDE-05R-5.5FT	07		1235		4	X	X			X							
SIDE-09R-5.5FT	08		1405		4	X	X			X							
BASE-09R-9.5FT	09		1435		4	X	X			X							
SIDE-12R-5.5FT	10	↓	1450	↓	4	X	X			X							

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Kristin Anderson	FS	6/1/21	0922
Received by:	Ann W Bruya	F&B	6/1/21	0922
Relinquished by:		Samples received at 4 °C		
Received by:				

106001

SAMPLE CHAIN OF CUSTODY

06-01-21 VS-D1 / CI2 / C03

Page # 2 of 2

Report To Gabe Cisneros

Company Floyd Snider

Address (see p. 1)

City, State, ZIP

Phone Email

SAMPLERS (signature)

PROJECT NAME CL-Ellensburg

PO #

REMARKS cc results to Kristin anderson

Project specific RLs? - [✓ Yes] / No

INVOICE TO

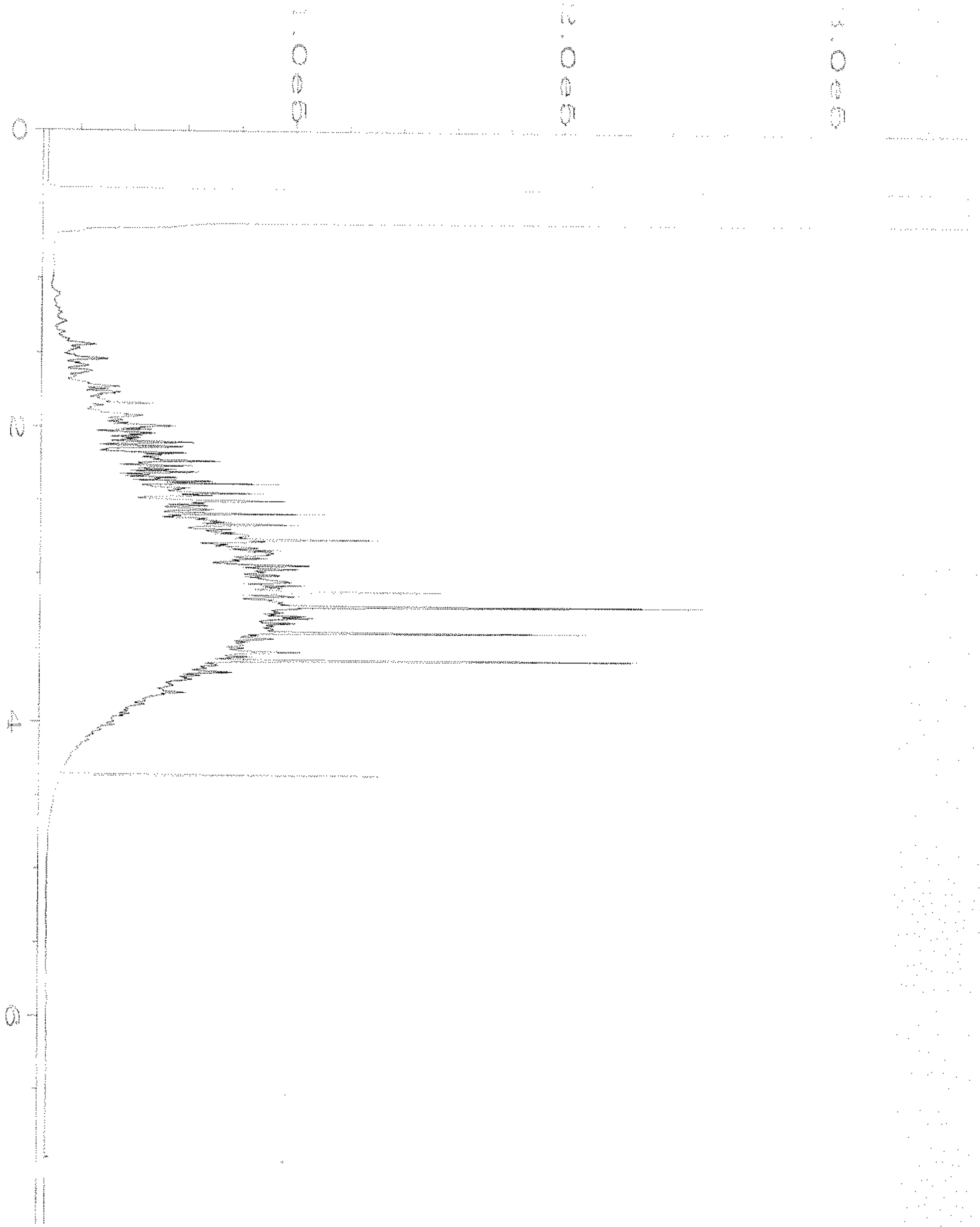
TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

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	BTEX + naph, VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	BTEX + naph ☆	GRO (5mg/kg)	DRO (25mg/kg) / ORO (100mg/kg)		Notes
SP02-1	11 A-D	5/28/21	1520	S	4								☆	X	X		VOAs frozen 5/28
SP02-2	12	↓	1550	↓	↓								☆	X	X		" "
SIDE-13-5.5FT	13	↓	1600	↓	↓	X	X			X							
BASE-10-9FT	14	↓	1620	↓	↓	X	X			X							
SP02-3	15	↓	1655	↓	↓								☆	X	X		VOAs frozen 5/28
SIDE-14-5.5FT	16	↓	1710	↓	↓	X	X			X							
SIDE-15-5.5FT	17	↓	1725	↓	↓	X	X			X							
														☆ only if GRO detected			

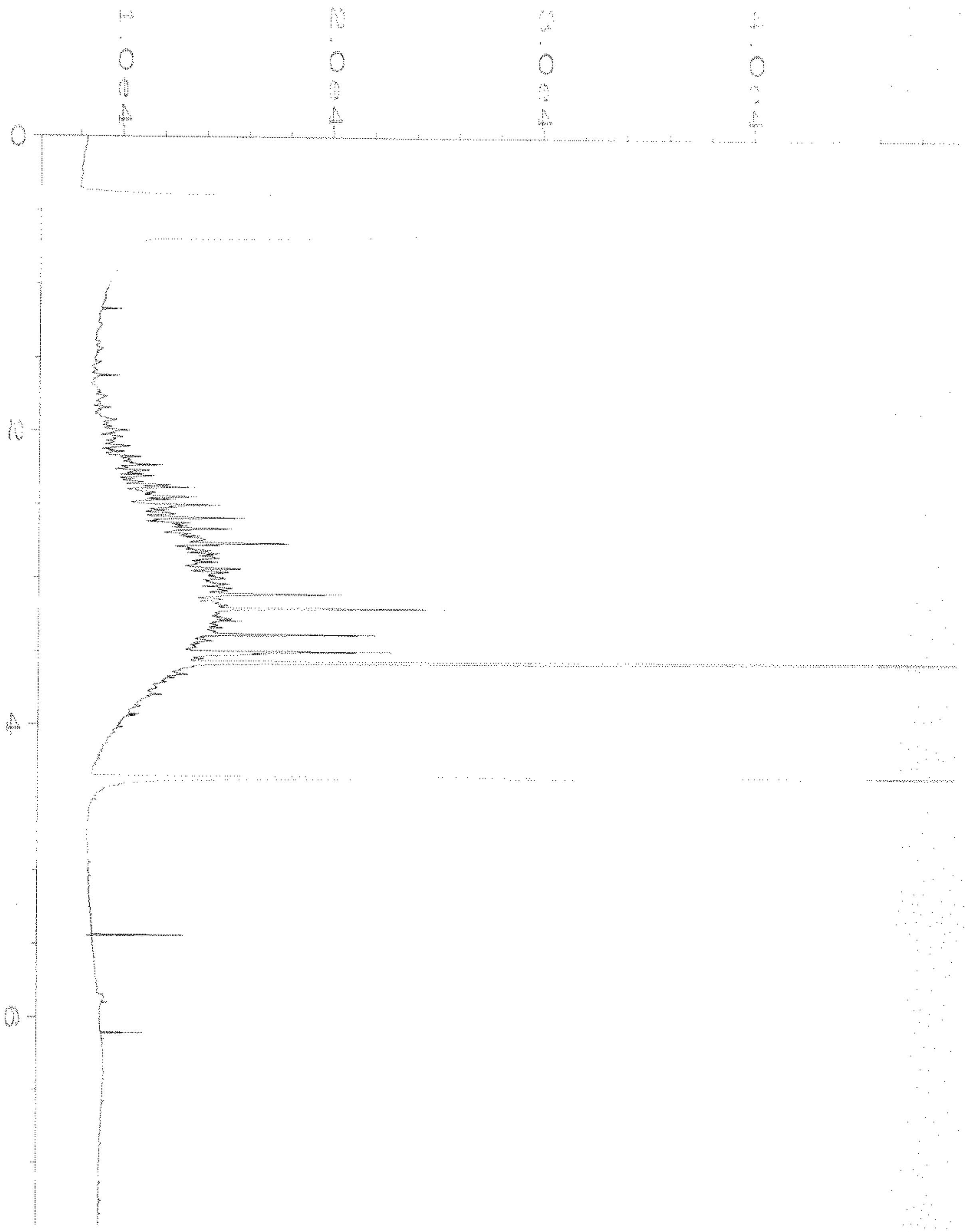
Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Kristin Anderson	FS	6/1/21	0922
Received by: Ann W Bruya	Ann W-Bruya	F&B	6/1/21	0922
Relinquished by:				
Received by:		Samples received at 4 °C		



Data File Name   : C:\HPCHEM\1\DATA\06-02-21\016F0301.D
Operator   : TL
Instrument   : GC1
Sample Name   : 106001-01
Run Time Bar Code:
Acquired on   : 02 Jun 21   11:25 AM
Report Created on: 03 Jun 21   09:27 AM

Page Number   : 1
Vial Number   : 16
Injection Number : 1
Sequence Line   : 3
Instrument Method: DX.MTH
Analysis Method   : DEFAULT.MTH



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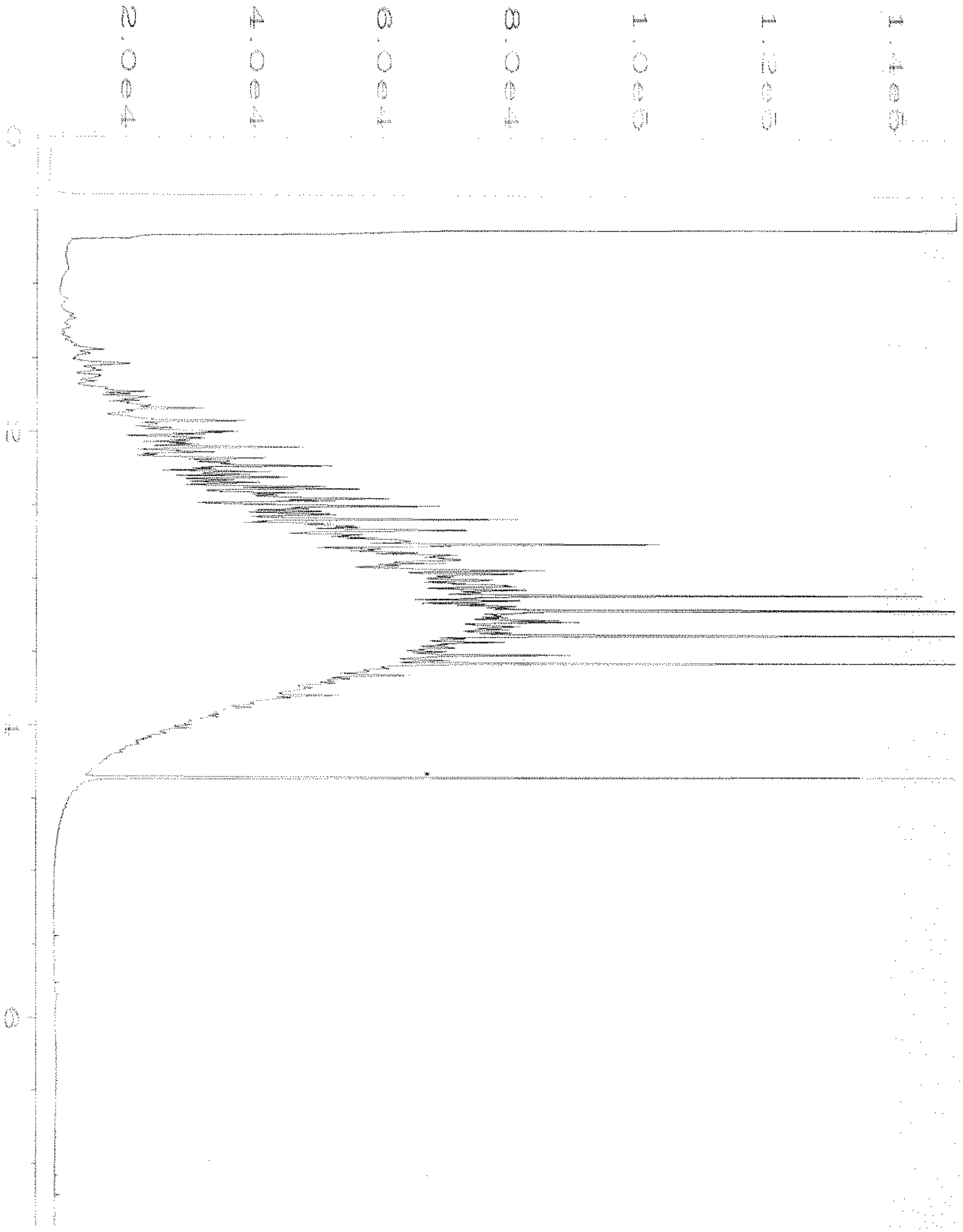
Operator   : TL
Instrument   : GC1
Sample Name   : 106001-02
Run Time Bar Code:
Acquired on   : 02 Jun 21   11:37 AM
Report Created on: 03 Jun 21   09:28 AM

Page Number   : 1
Vial Number   : 17
Injection Number : 1
Sequence Line   : 3
Instrument Method: DX.MTH
Analysis Method   : DEFAULT.MTH



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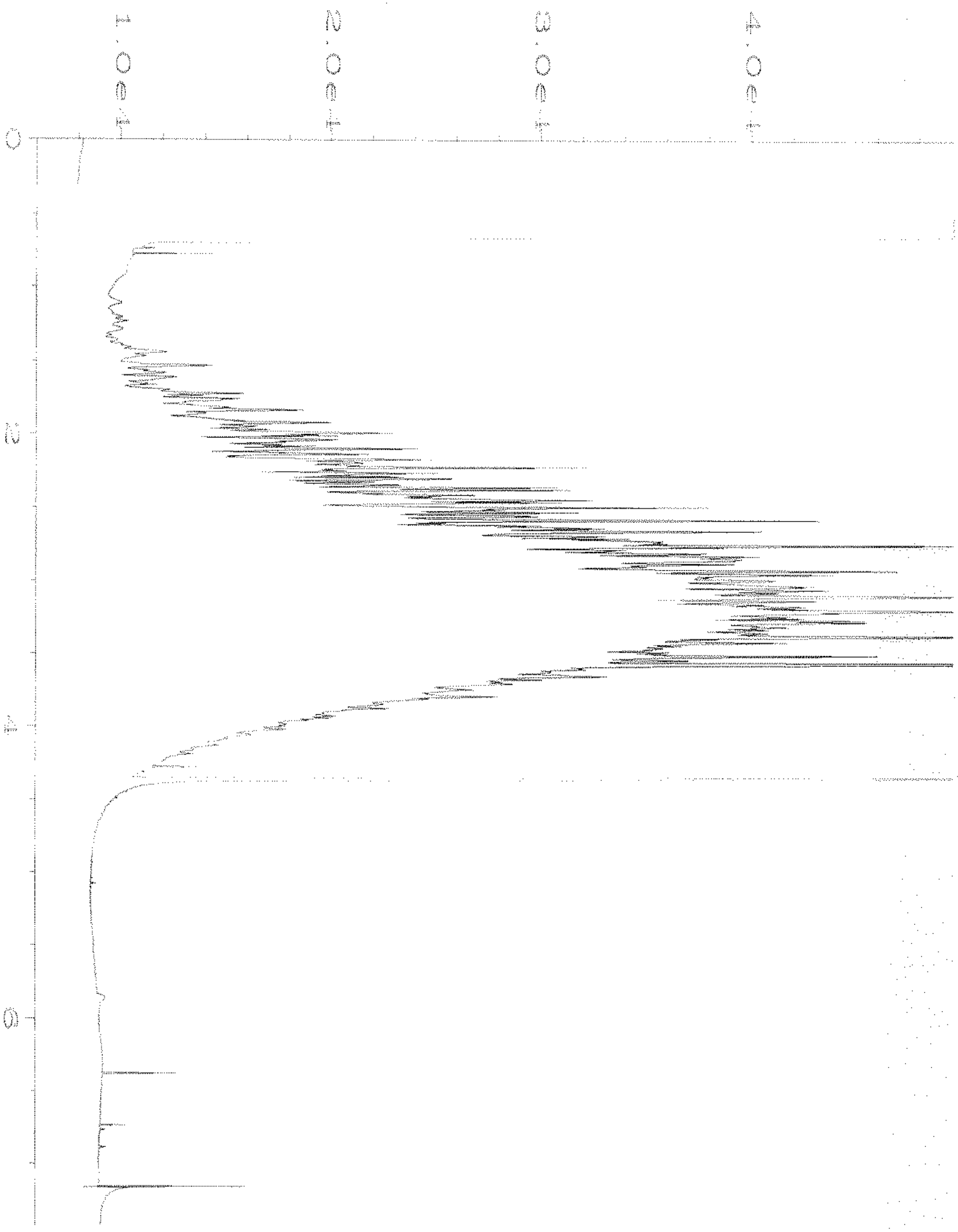
Operator   : TL
Instrument   : GC1
Sample Name   : 106001-03
Run Time Bar Code:
Acquired on   : 02 Jun 21   11:49 AM
Report Created on: 03 Jun 21   09:28 AM

Page Number   : 1
Vial Number   : 18
Injection Number : 1
Sequence Line   : 3
Instrument Method: DX.MTH
Analysis Method   : DEFAULT.MTH



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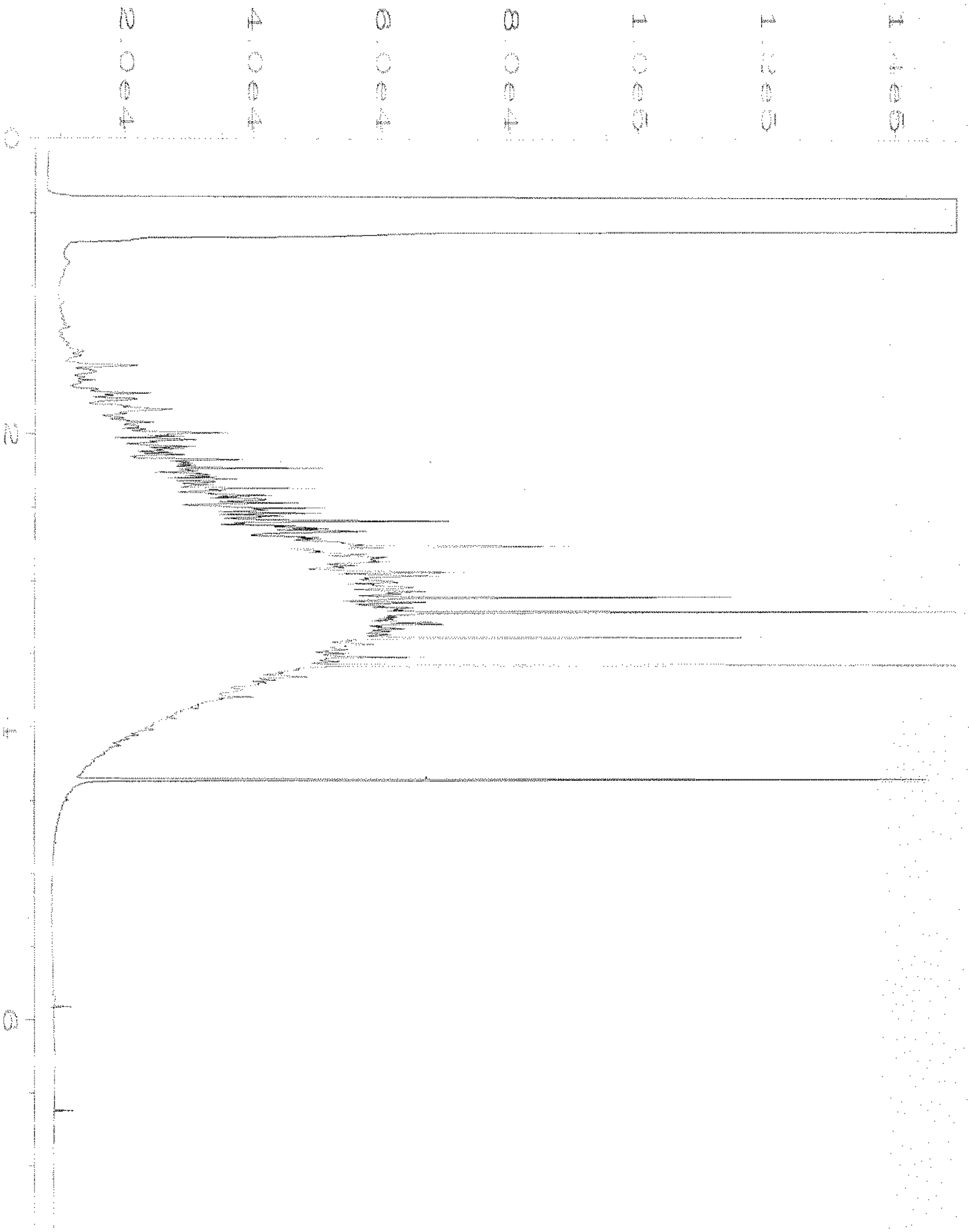
Operator : TL
Instrument : GC1
Sample Name : 106001-04
Run Time Bar Code:
Acquired on : 02 Jun 21 02:59 PM
Report Created on: 03 Jun 21 09:28 AM

Page Number : 1
Vial Number : 19
Injection Number : 1
Sequence Line : 8
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



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Operator          : TL                            Page Number       : 1
Instrument        : GC1                           Vial Number       : 20
Sample Name       : 106001-05                     Injection Number  : 1
Run Time Bar Code:                                Sequence Line     : 8
Acquired on       : 02 Jun 21   03:11 PM          Instrument Method: DX.MTH
Report Created on: 03 Jun 21   09:28 AM           Analysis Method   : DEFAULT.MTH
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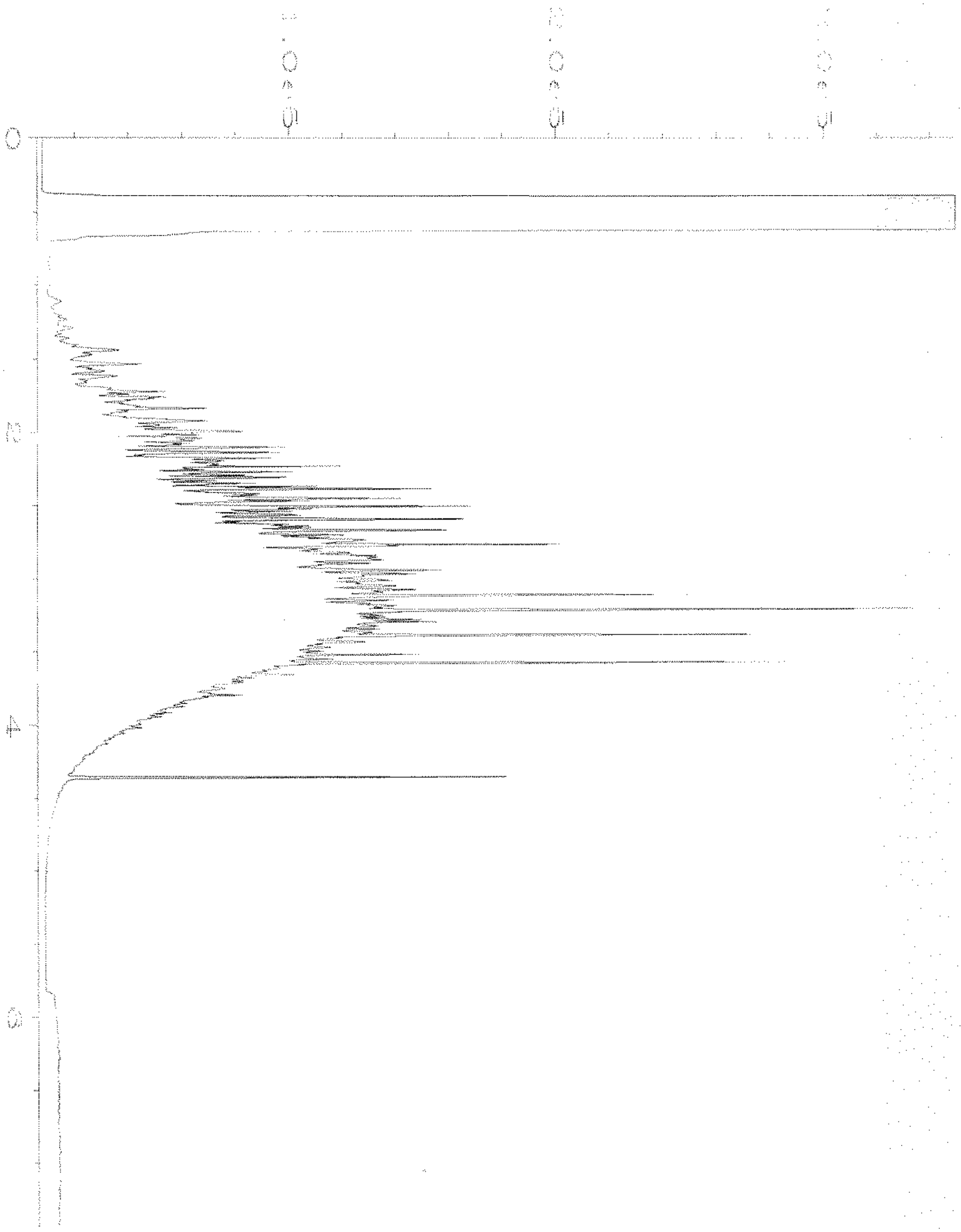

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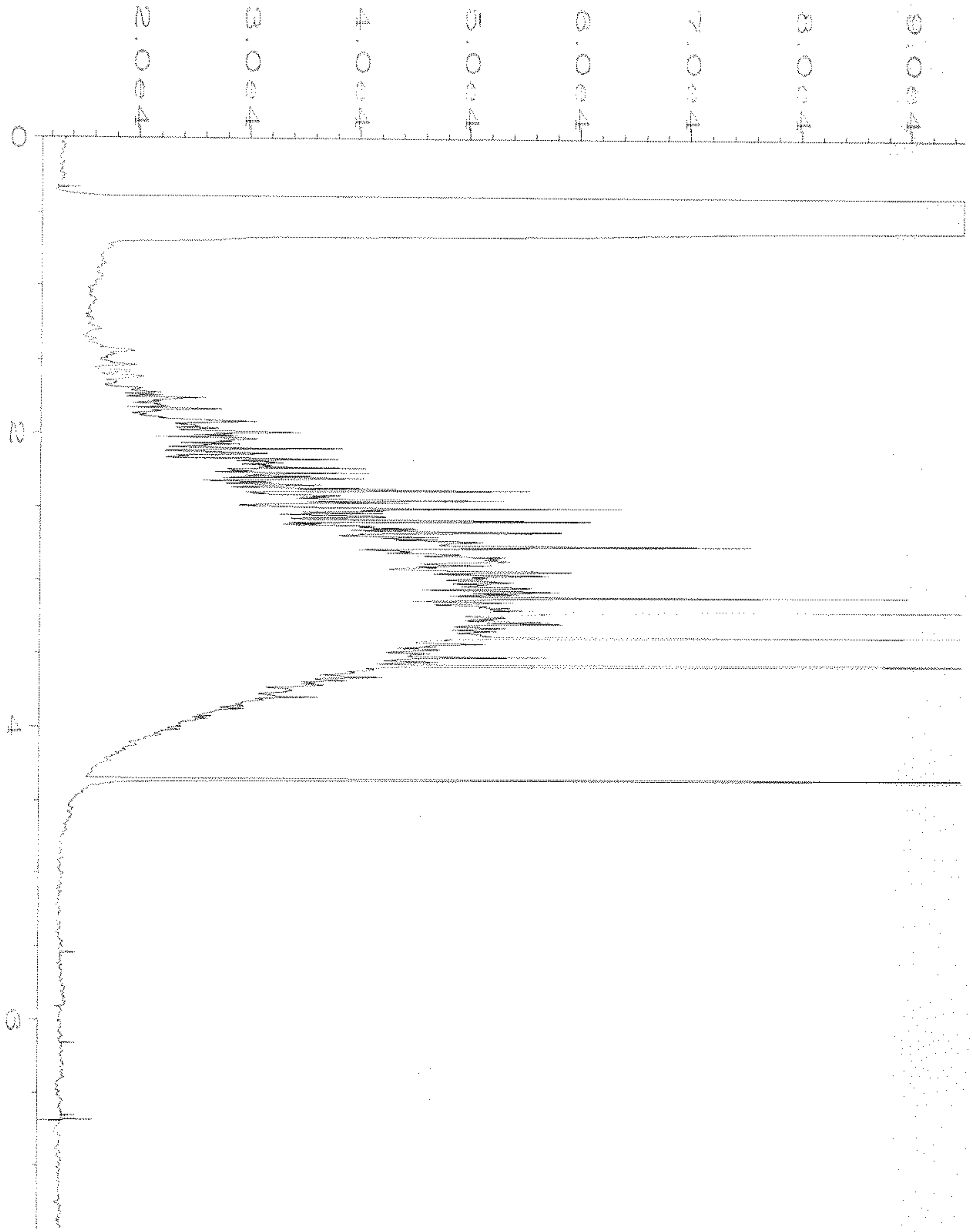
Operator   : TL
Instrument   : GC1
Sample Name   : 106001-06
Run Time Bar Code:
Acquired on   : 02 Jun 21   03:23 PM
Report Created on: 03 Jun 21   09:28 AM

Page Number   : 1
Vial Number   : 21
Injection Number : 1
Sequence Line   : 8
Instrument Method: DX.MTH
Analysis Method   : DEFAULT.MTH



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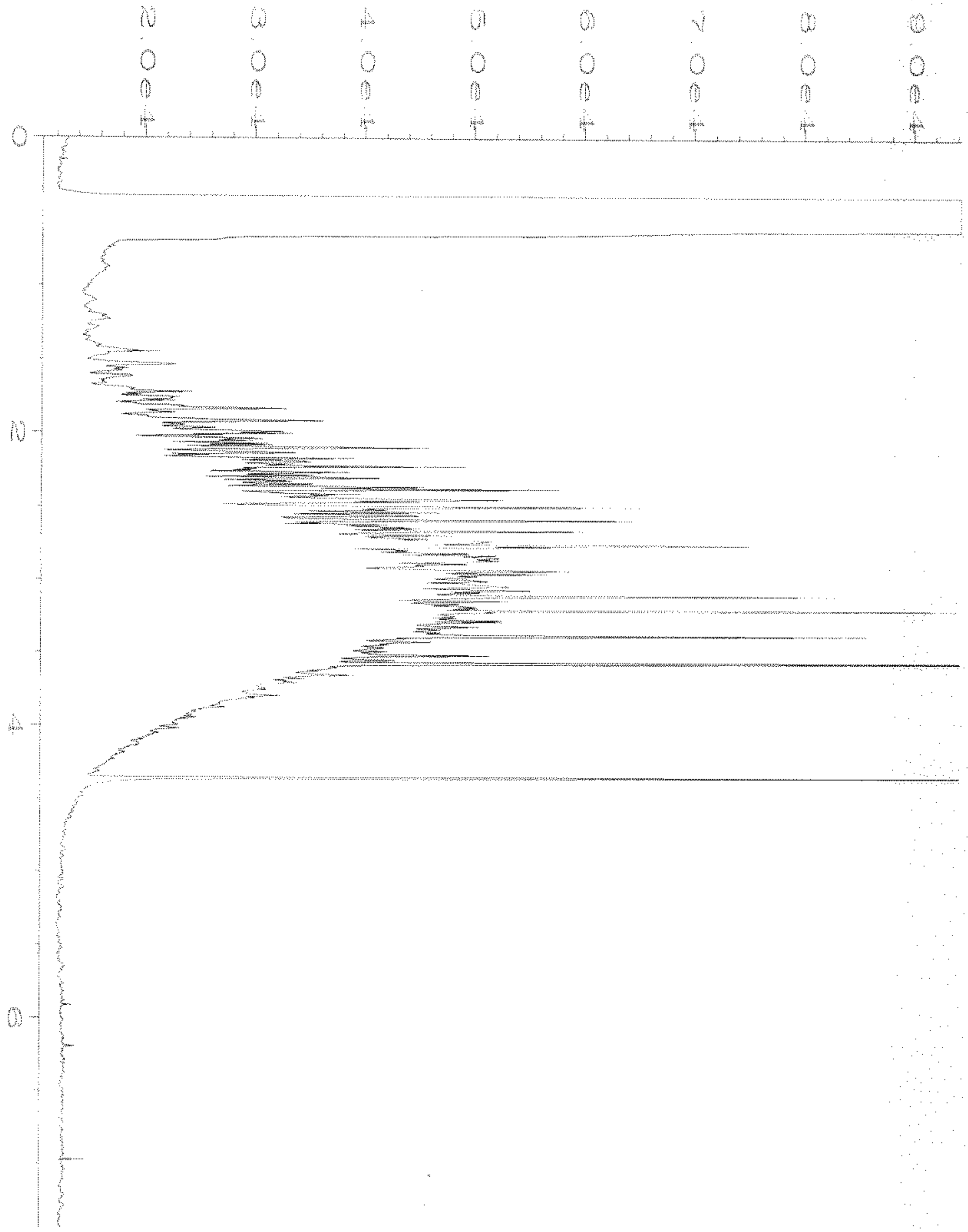
Operator   : TL
Instrument   : GC1
Sample Name   : 106001-07
Run Time Bar Code:
Acquired on   : 02 Jun 21 03:35 PM
Report Created on: 03 Jun 21 09:28 AM

Page Number   : 1
Vial Number   : 22
Injection Number : 1
Sequence Line   : 8
Instrument Method: DX.MTH
Analysis Method   : DEFAULT.MTH



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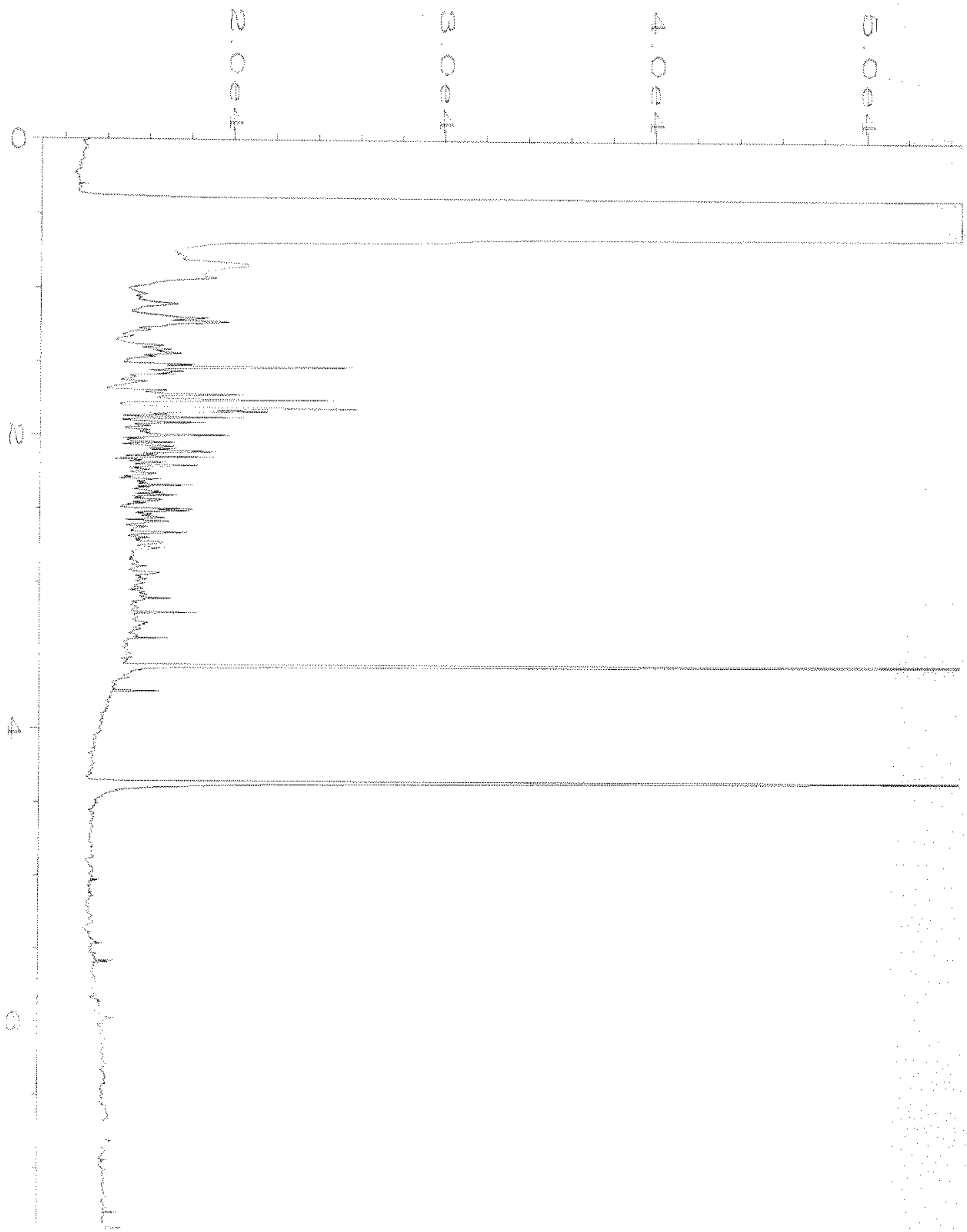
Operator   : TL
Instrument   : GC1
Sample Name   : 106001-08
Run Time Bar Code:
Acquired on   : 02 Jun 21   03:46 PM
Report Created on: 03 Jun 21   09:29 AM

Page Number   : 1
Vial Number   : 23
Injection Number : 1
Sequence Line   : 8
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



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Operator          : TL                           Page Number      : 1
Instrument        : GC1                          Vial Number      : 24
Sample Name       : 106001-09                    Injection Number : 1
Run Time Bar Code:                               Sequence Line    : 10
Acquired on       : 02 Jun 21  04:44 PM          Instrument Method: DX.MTH
Report Created on: 03 Jun 21  09:29 AM          Analysis Method  : DEFAULT.MTH
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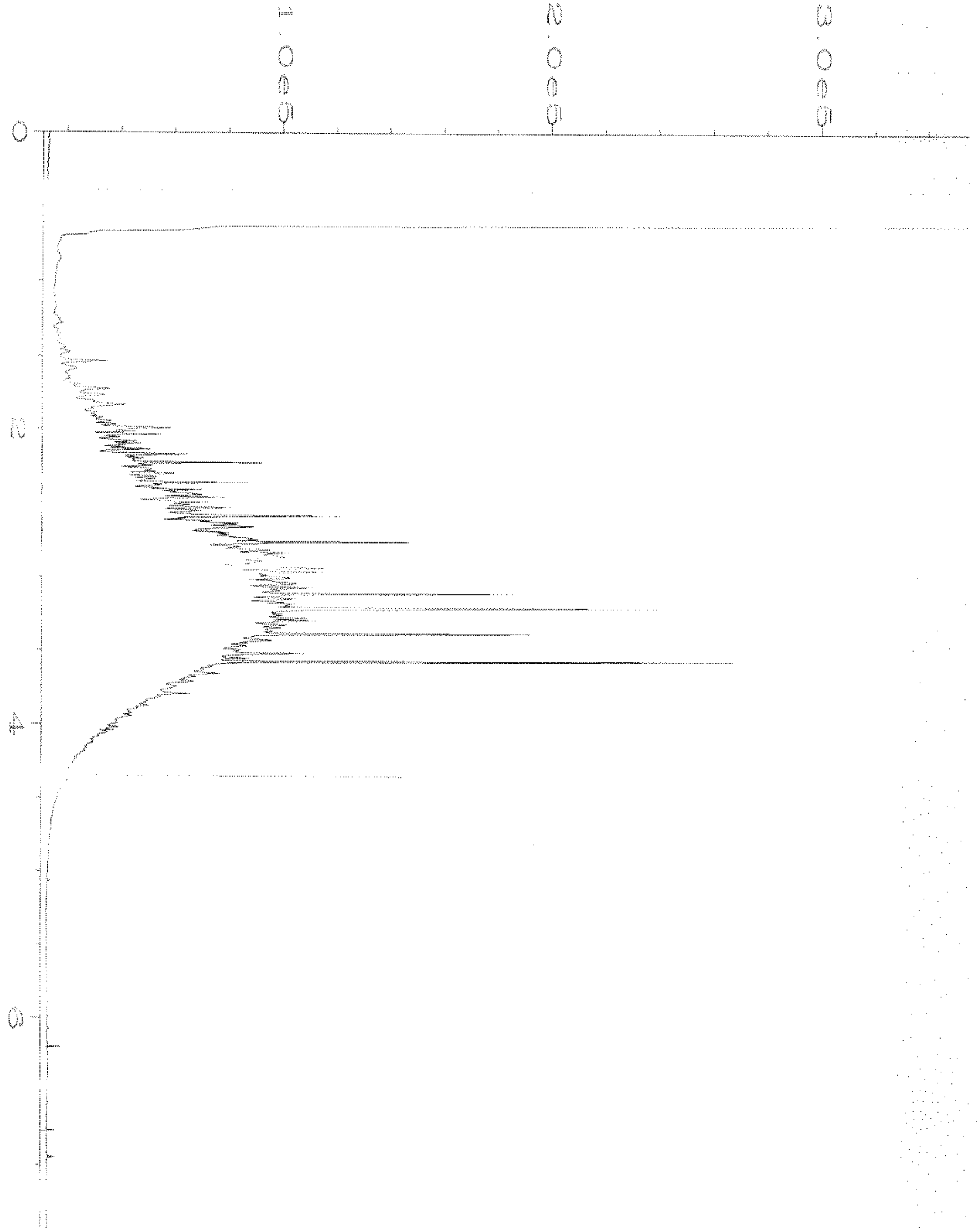
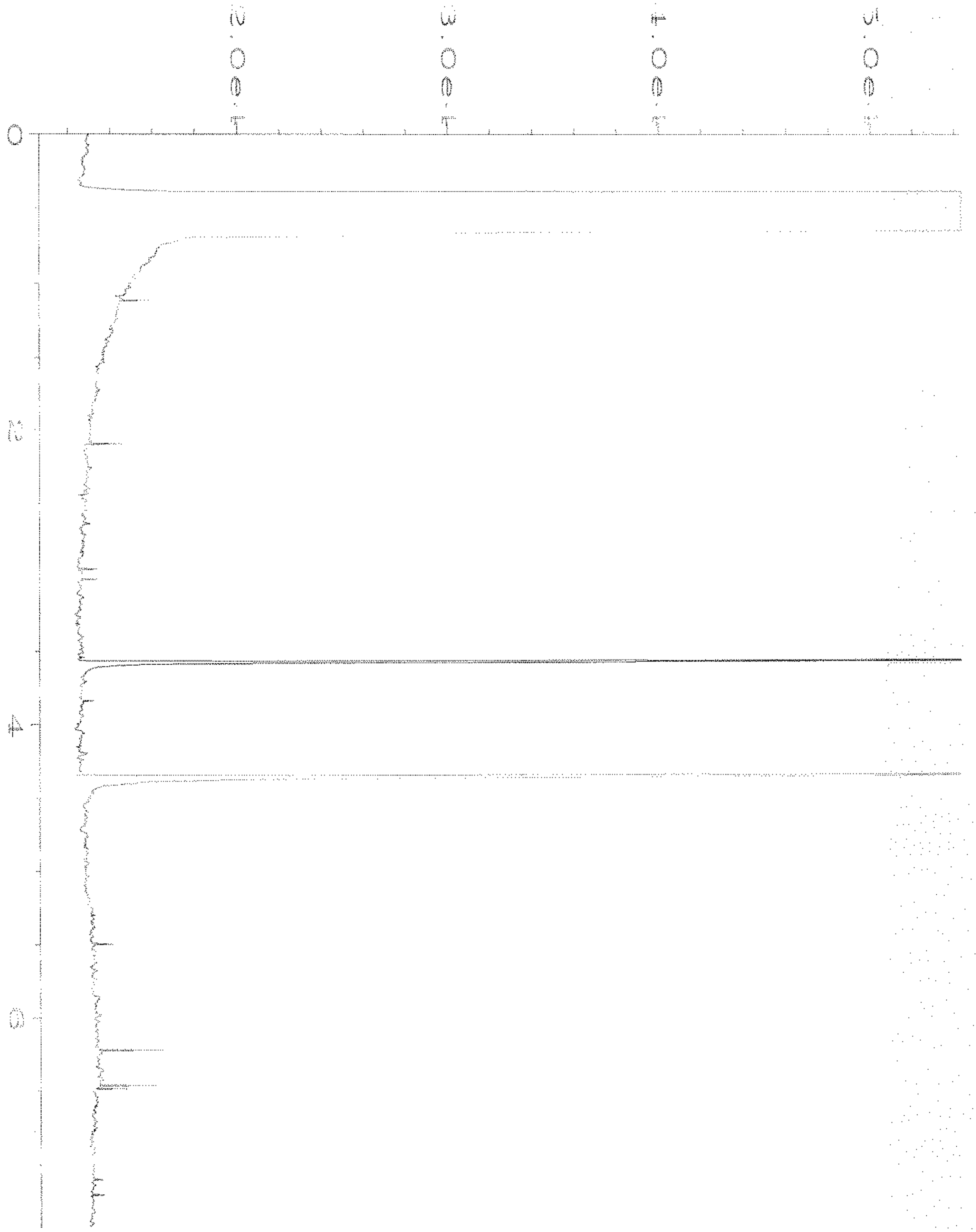
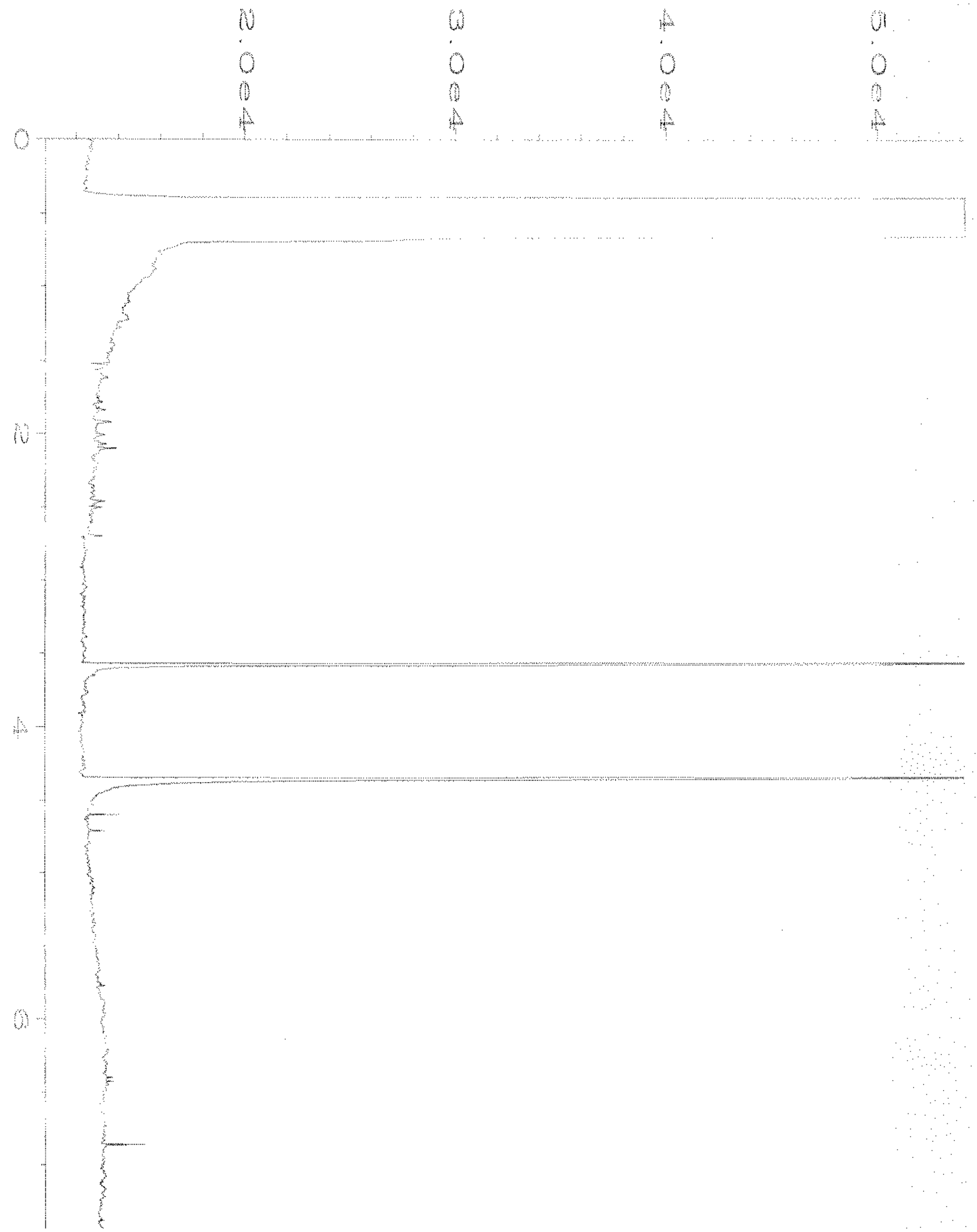


Data File Name : C:\HPCHEM\1\DATA\06-02-21\025F1001.D
Operator : TL
Instrument : GC1
Sample Name : 106001-10
Run Time Bar Code:
Acquired on : 02 Jun 21 04:53 PM
Report Created on: 03 Jun 21 09:29 AM

Page Number : 1
Vial Number : 25
Injection Number : 1
Sequence Line : 10
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH

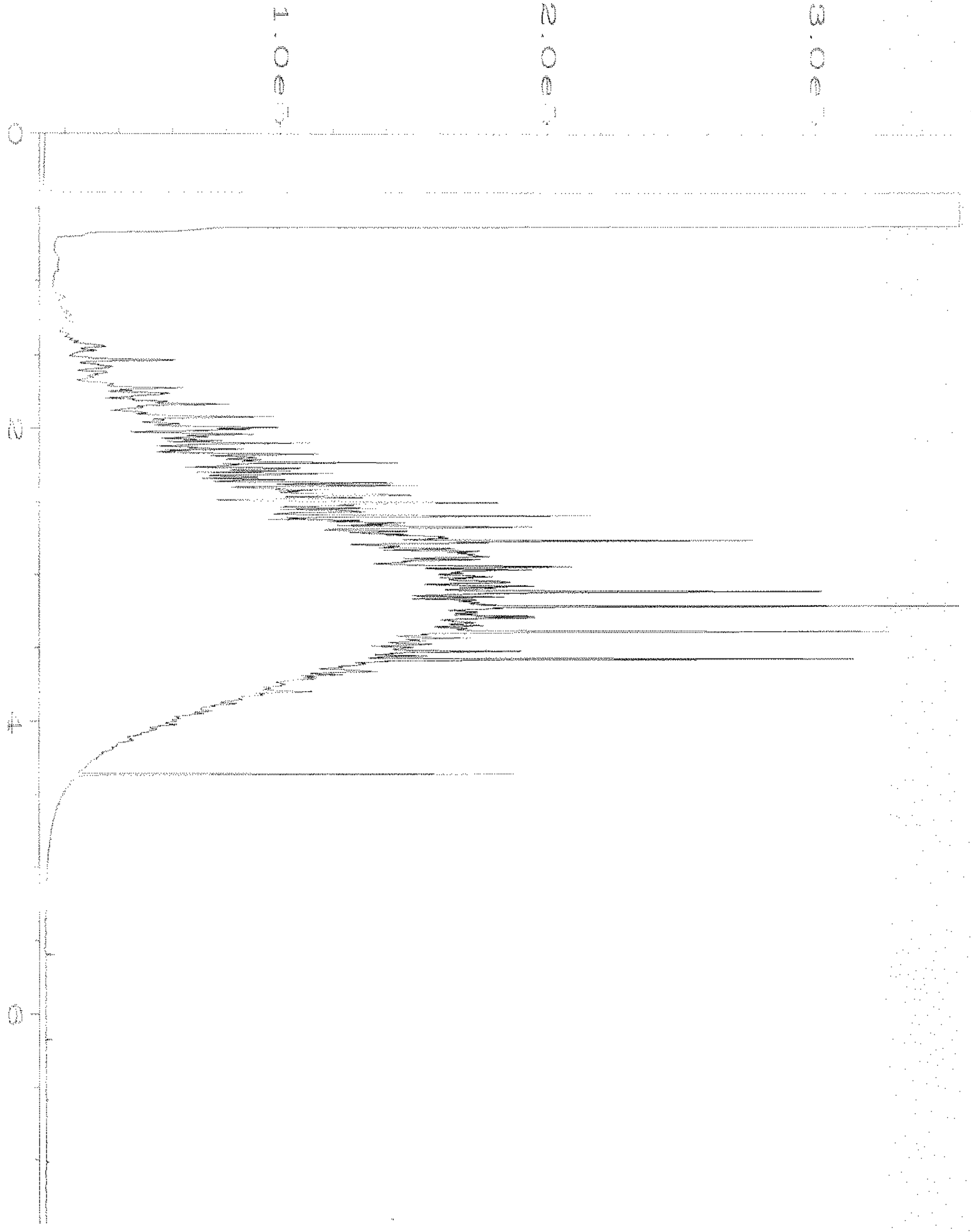


```
Data File Name    : C:\HPCHEM\1\DATA\06-02-21\026F1001.D
Operator          : TL                          Page Number       : 1
Instrument        : GC1                         Vial Number       : 26
Sample Name       : 106001-13                   Injection Number : 1
Run Time Bar Code:                              Sequence Line     : 10
Acquired on       : 02 Jun 21   05:05 PM        Instrument Method: DX.MTH
Report Created on: 03 Jun 21   09:29 AM         Analysis Method   : DEFAULT.MTH
```



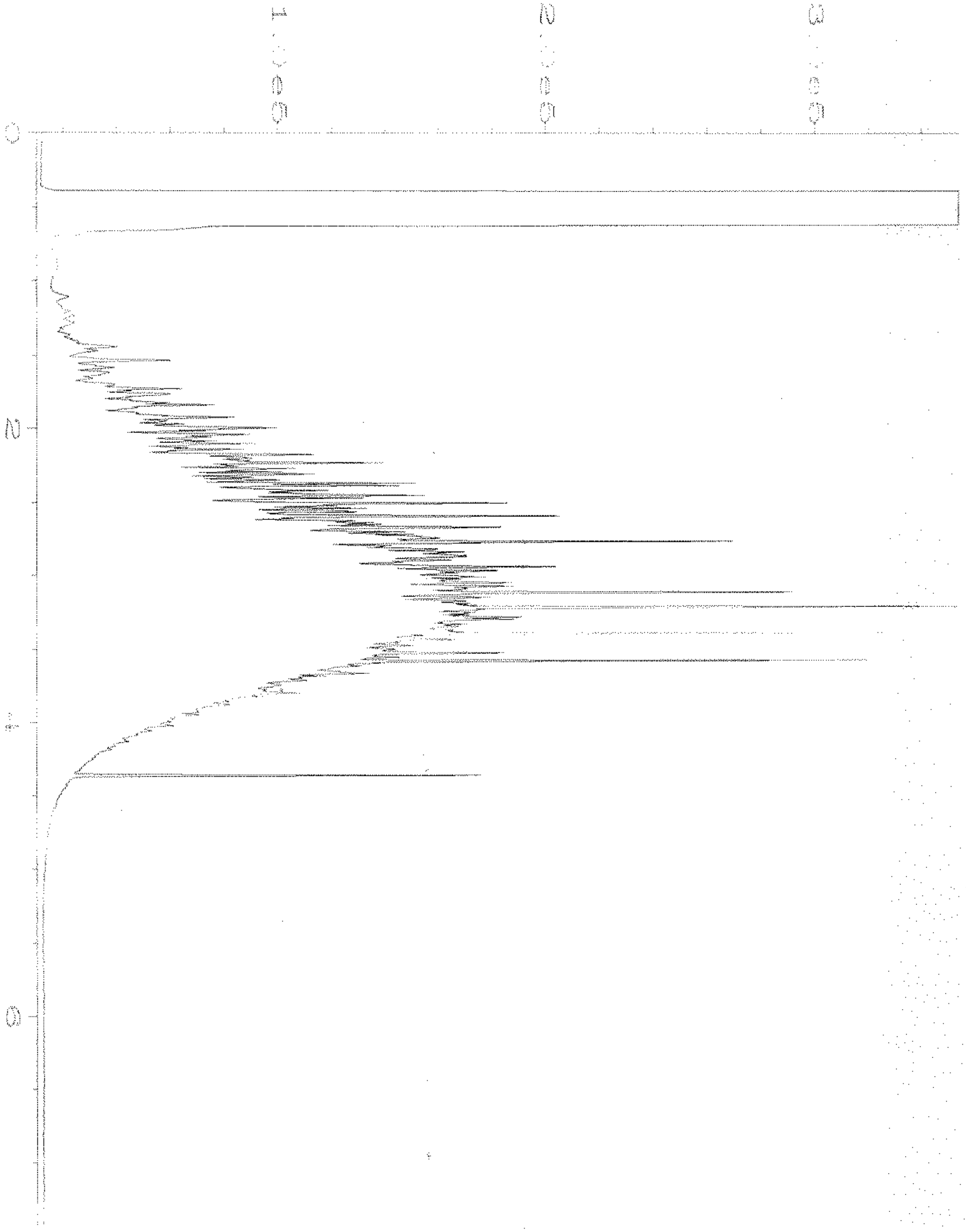
Data File Name : C:\HPCHEM\1\DATA\06-02-21\027F1001.D
Operator : TL
Instrument : GC1
Sample Name : 106001-14
Run Time Bar Code:
Acquired on : 02 Jun 21 05:17 PM
Report Created on: 03 Jun 21 09:29 AM

Page Number : 1
Vial Number : 27
Injection Number : 1
Sequence Line : 10
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH

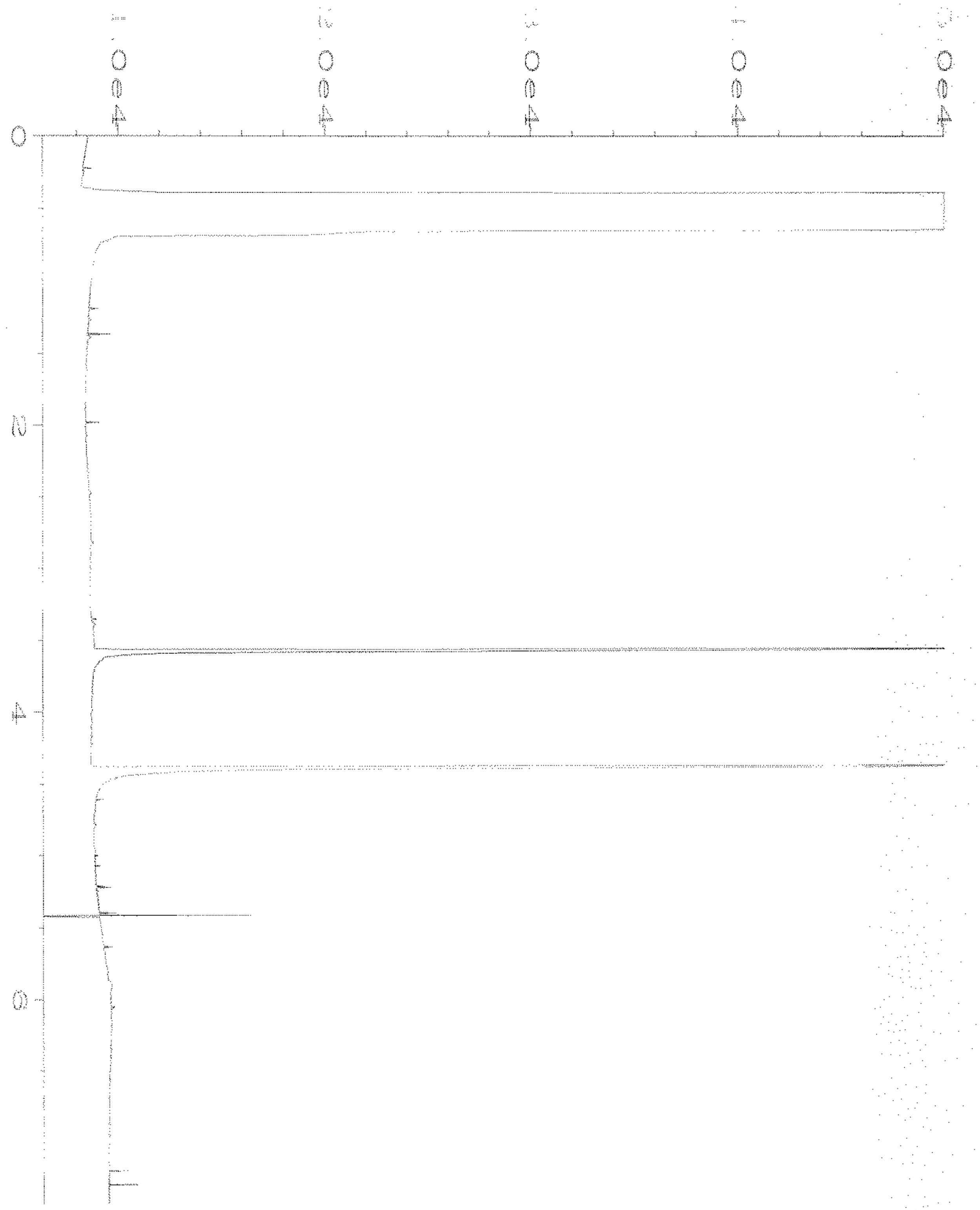


Data File Name : C:\HPCHEM\1\DATA\06-02-21\028F1001.D

Operator	: TL	Page Number	: 1
Instrument	: GC1	Vial Number	: 28
Sample Name	: 106001-16	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 10
Acquired on	: 02 Jun 21 05:29 PM	Instrument Method:	DX.MTH
Report Created on:	03 Jun 21 09:29 AM	Analysis Method	: DEFAULT.MTH

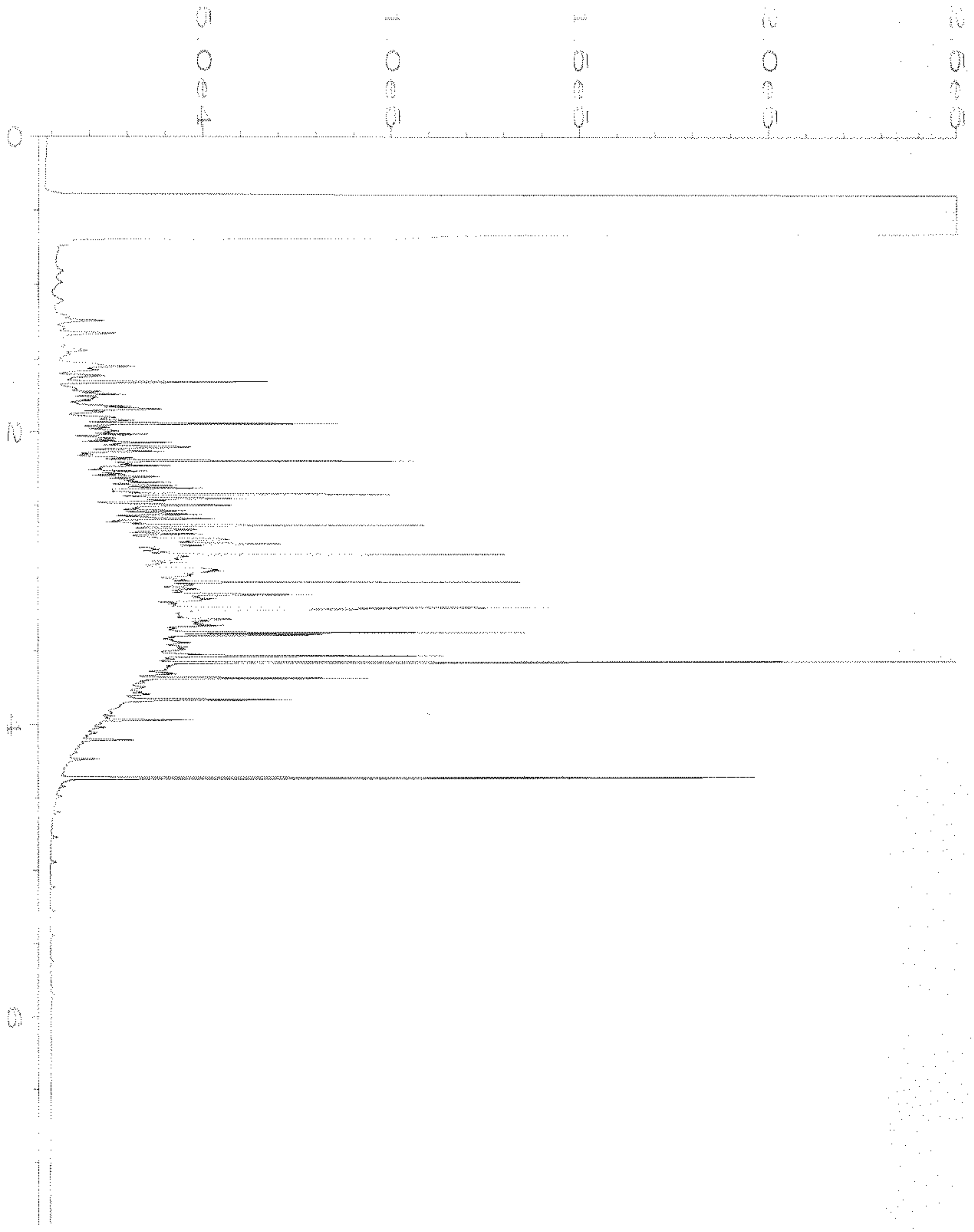


```
Data File Name    : C:\HPCHEM\1\DATA\06-02-21\029F1001.D
Operator          : TL                            Page Number       : 1
Instrument        : GC1                           Vial Number       : 29
Sample Name       : 106001-17                     Injection Number : 1
Run Time Bar Code:                                Sequence Line     : 10
Acquired on       : 02 Jun 21  05:41 PM           Instrument Method: DX.MTH
Report Created on: 03 Jun 21  09:30 AM            Analysis Method   : DEFAULT.MTH
```

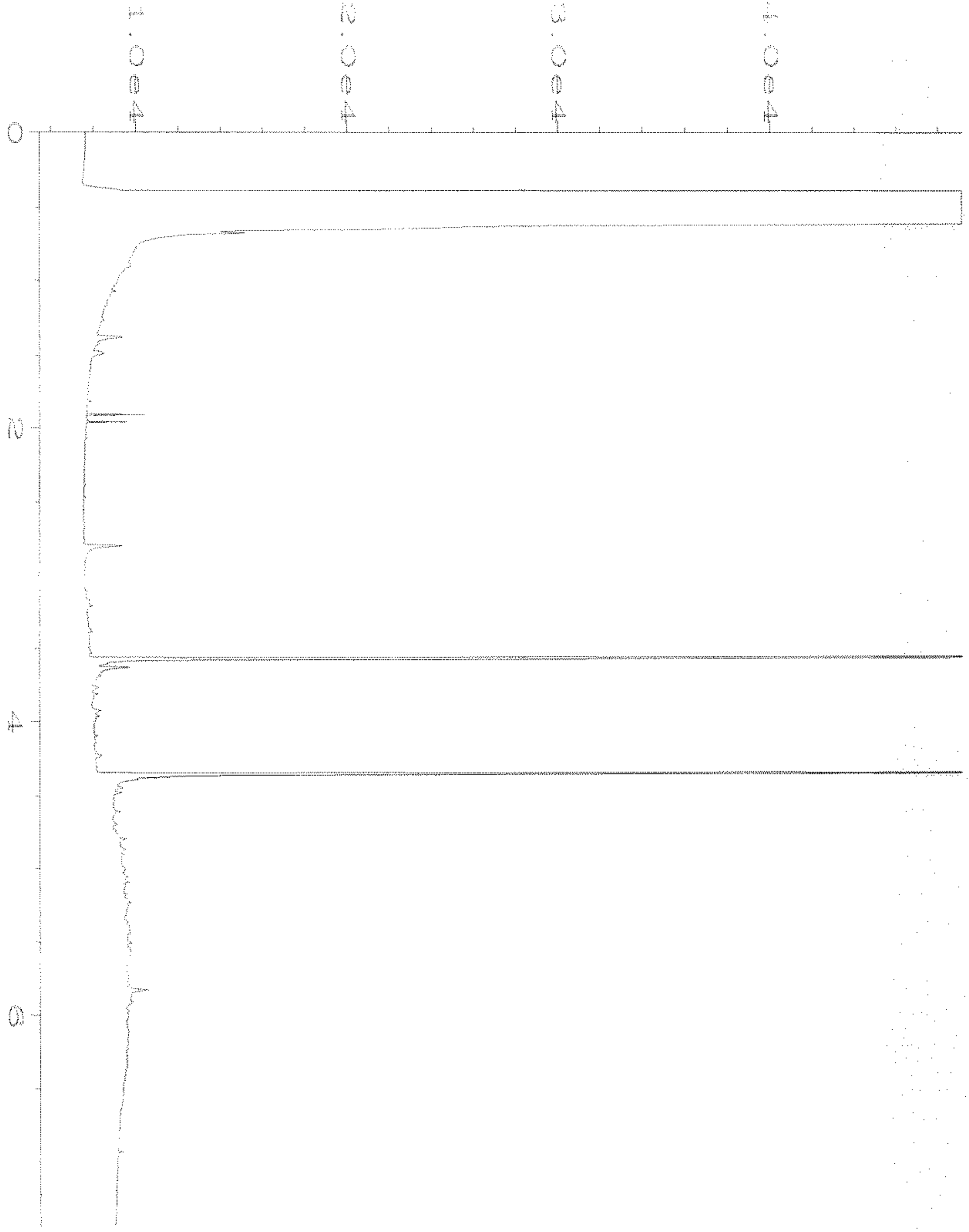


Data File Name   : C:\HPCHEM\1\DATA\06-02-21\006F0301.D
Operator   : TL
Instrument   : GC1
Sample Name   : 01-1346 mb
Run Time Bar Code:
Acquired on   : 02 Jun 21   09:30 AM
Report Created on: 03 Jun 21   09:26 AM

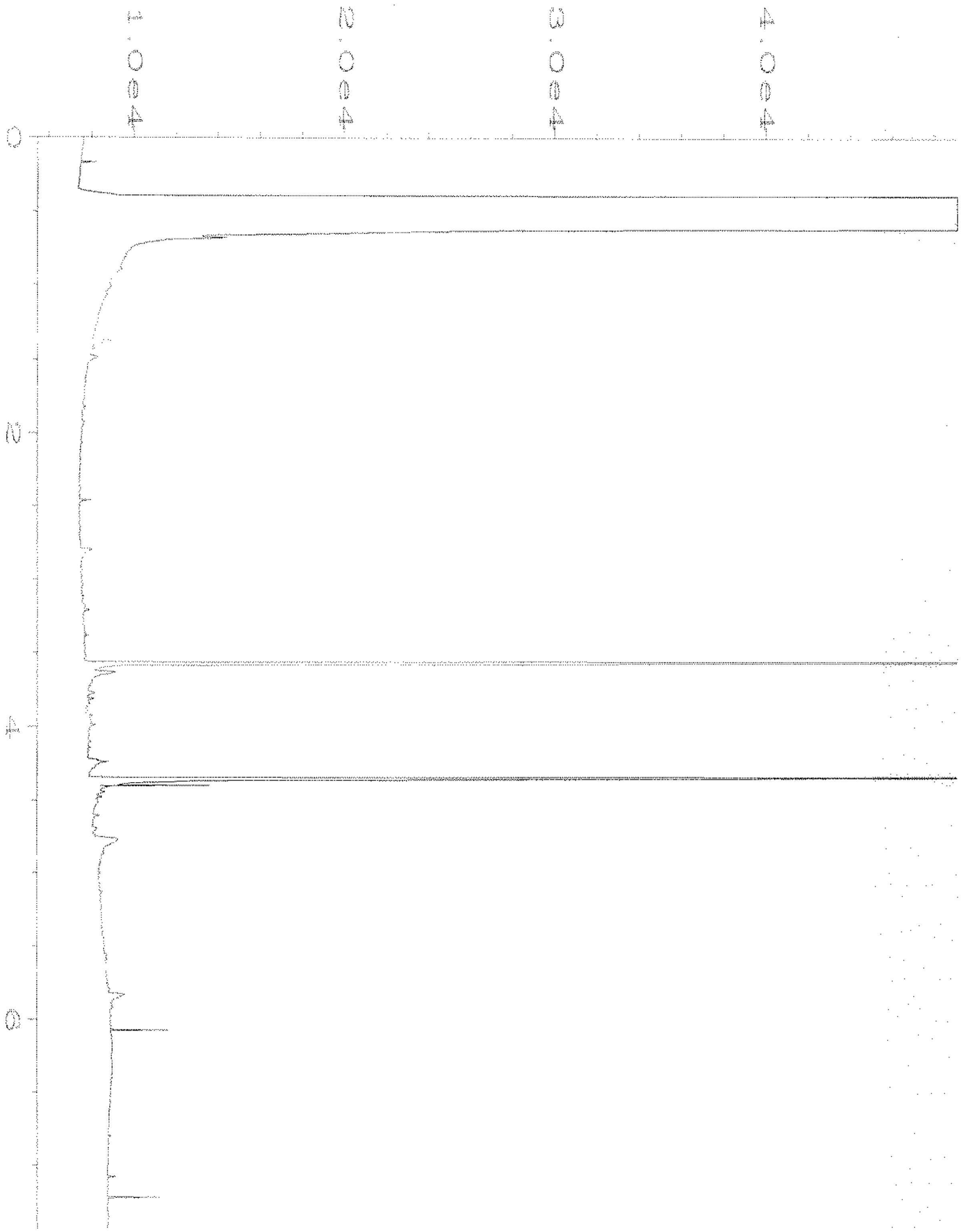
Page Number   : 1
Vial Number   : 6
Injection Number : 1
Sequence Line   : 3
Instrument Method: DX.MTH
Analysis Method   : DEFAULT.MTH



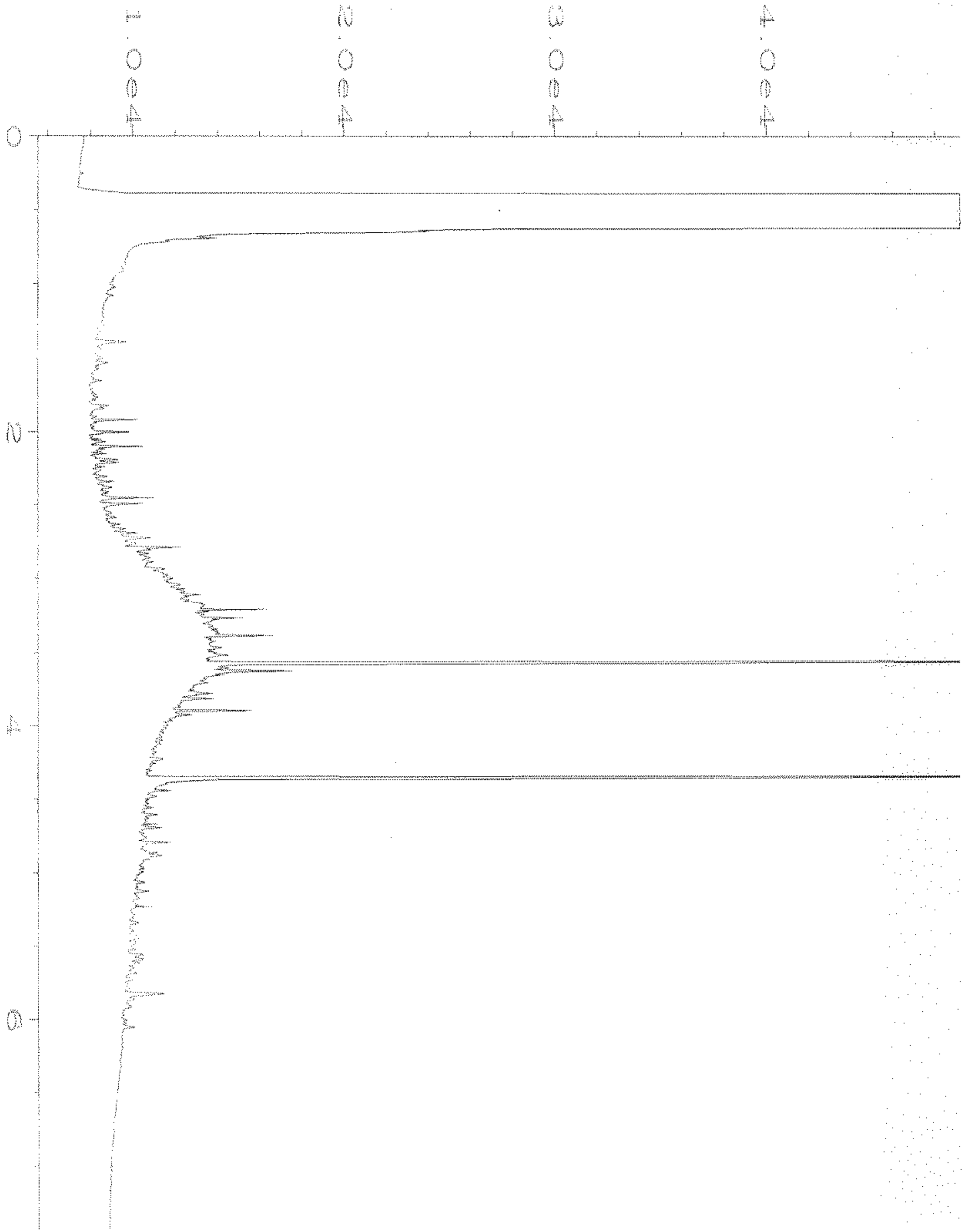
```
Data File Name    : C:\HPCHEM\1\DATA\06-02-21\003F0201.D
Operator          : TL                           Page Number      : 1
Instrument        : GC1                          Vial Number      : 3
Sample Name       : 500 Dx 62-142D               Injection Number : 1
Run Time Bar Code:                               Sequence Line    : 2
Acquired on       : 02 Jun 21  05:43 AM          Instrument Method: DX.MTH
Report Created on: 03 Jun 21  09:26 AM           Analysis Method  : DEFAULT.MTH
```



```
Data File Name    : C:\HPCHEM\1\DATA\06-01-21\025F1001.D
Operator          : TL                             Page Number        : 1
Instrument        : GC1                            Vial Number        : 25
Sample Name       : 106001-11                      Injection Number : 1
Run Time Bar Code:                                 Sequence Line      : 10
Acquired on       : 01 Jun 21   04:55 PM           Instrument Method: DX.MTH
Report Created on: 02 Jun 21   10:59 AM            Analysis Method   : DEFAULT.MTH
```

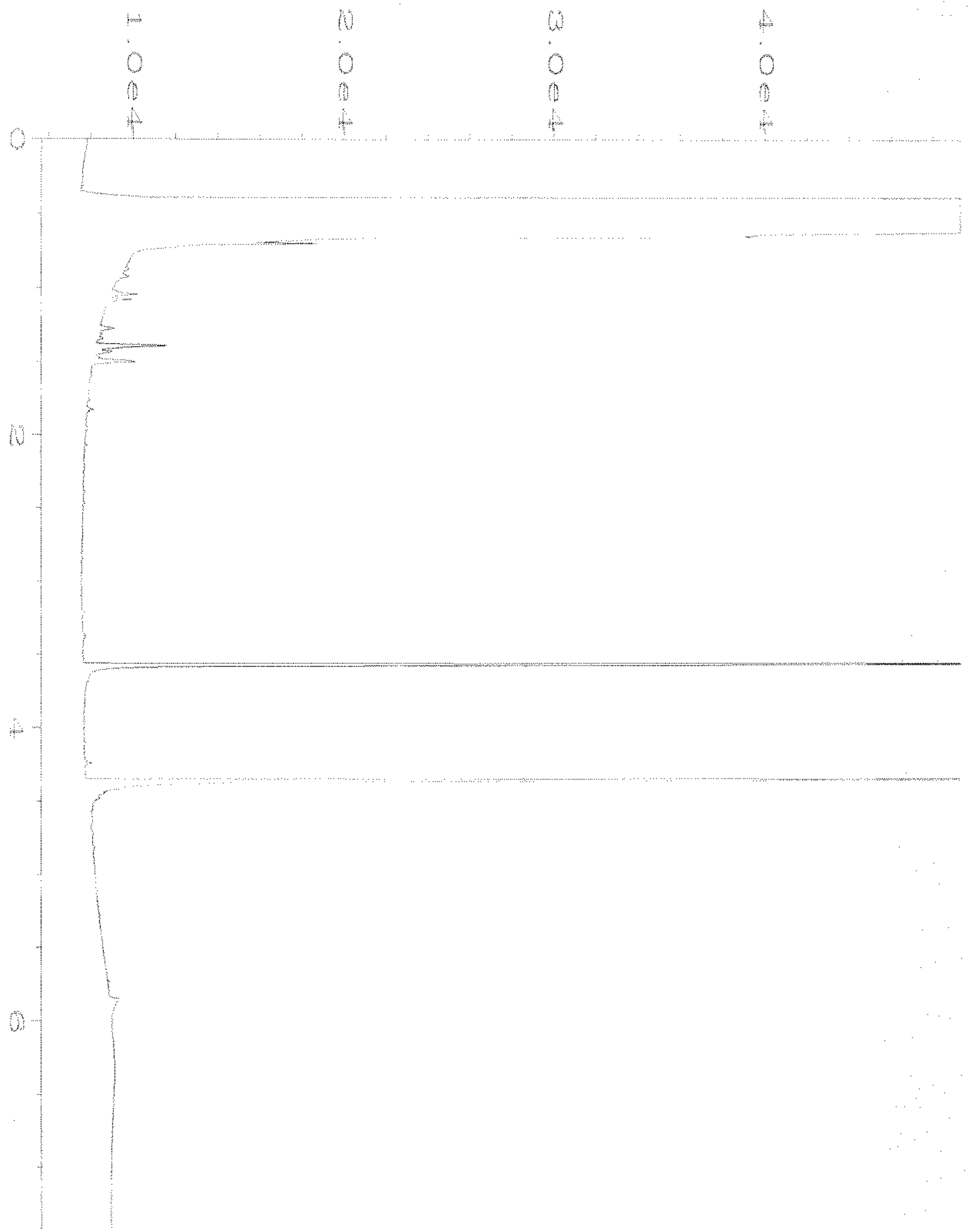


```
Data File Name    : C:\HPCHEM\1\DATA\06-01-21\026F1001.D
Operator          : TL                                Page Number       : 1
Instrument        : GC1                               Vial Number       : 26
Sample Name       : 106001-12                         Injection Number : 1
Run Time Bar Code:                                    Sequence Line     : 10
Acquired on       : 01 Jun 21  05:07 PM               Instrument Method: DX.MTH
Report Created on: 02 Jun 21  10:59 AM                Analysis Method   : DEFAULT.MTH
```

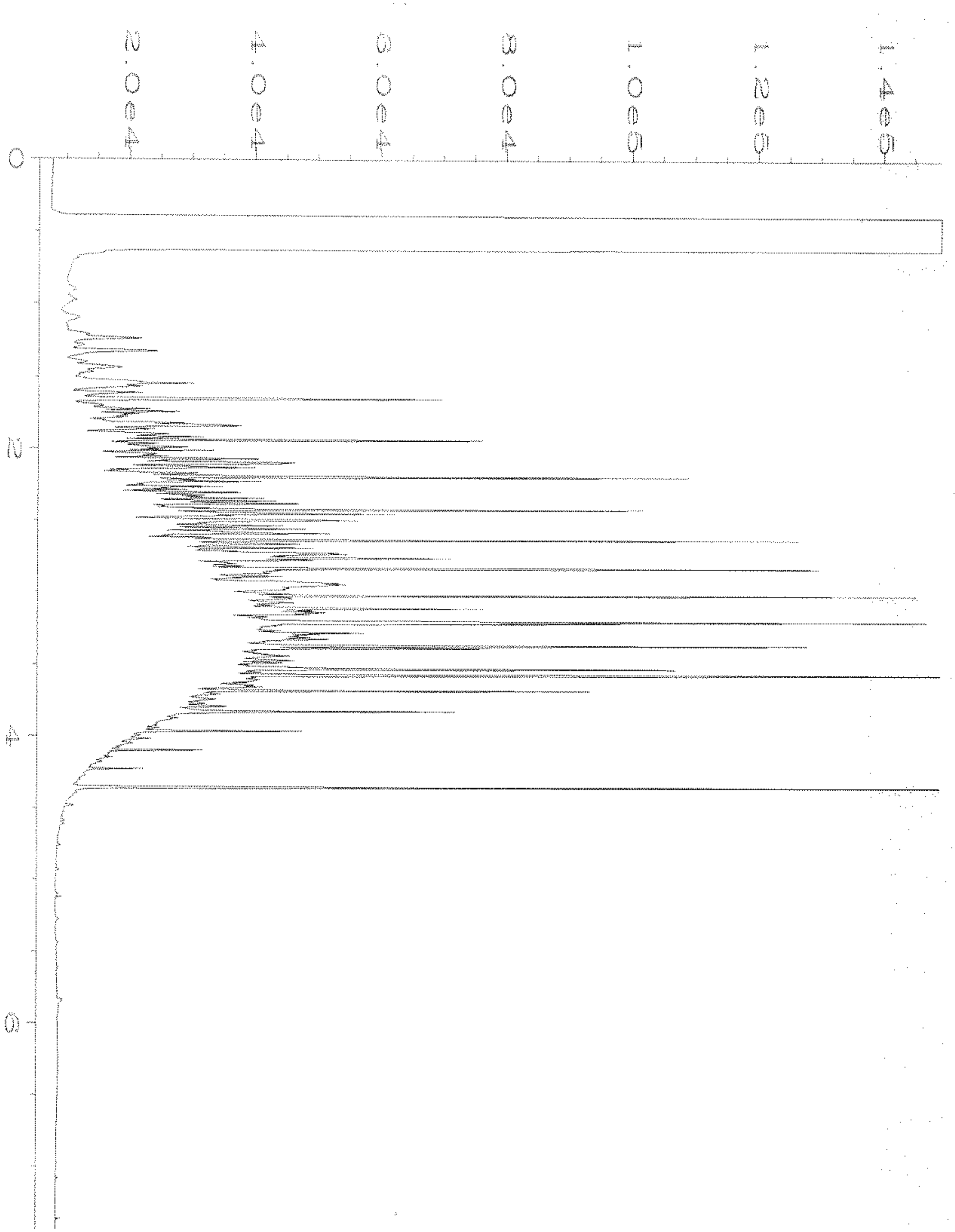


Data File Name : C:\HPCHEM\1\DATA\06-01-21\027F1001.D

Operator	: TL	Page Number	: 1
Instrument	: GC1	Vial Number	: 27
Sample Name	: 106001-15	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 10
Acquired on	: 01 Jun 21 05:19 PM	Instrument Method:	DX.MTH
Report Created on:	02 Jun 21 10:59 AM	Analysis Method	: DEFAULT.MTH



```
Data File Name    : C:\HPCHEM\1\DATA\06-01-21\019F1001.D
Operator          : TL                              Page Number       : 1
Instrument        : GC1                             Vial Number       : 19
Sample Name       : 01-1340 mb                      Injection Number  : 1
Run Time Bar Code:                                  Sequence Line     : 10
Acquired on       : 01 Jun 21   03:44 PM            Instrument Method: DX.MTH
Report Created on: 02 Jun 21   10:59 AM             Analysis Method   : DEFAULT.MTH
```



```
Data File Name   : C:\HPCHEM\1\DATA\06-01-21\003F1101.D
Operator         : TL                                    Page Number      : 1
Instrument       : GC1                                   Vial Number      : 3
Sample Name      : 500 Dx 62-142D                        Injection Number : 1
Run Time Bar Code:                                       Sequence Line    : 11
Acquired on      : 01 Jun 21  05:43 PM                   Instrument Method: DX.MTH
Report Created on: 02 Jun 21  10:57 AM                   Analysis Method  : DEFAULT.MTH
```

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
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fbi@isomedia.com
www.friedmanandbruya.com

June 22, 2021

Gabriel Cisneros, Project Manager
Floyd-Snider
Two Union Square, Suite 600
601 Union St
Seattle, WA 98101

Dear Mr Cisneros:

Included are the results from the testing of material submitted on June 11, 2021 from the CL-Ellensburg, F&BI 106171 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 should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Kristin Anderson
FDS0622R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on June 11, 2021 by Friedman & Bruya, Inc. from the Floyd-Snider CL-Ellensburg, F&BI 106171 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Floyd-Snider
106171 -01	BASE-08R-9FT
106171 -02	SIDE-03RR-5.5FT
106171 -03	DU4A-06102021
106171 -04	DU4B-06102021
106171 -05	SIDE-15R-5.5FT
106171 -06	SIDE-115-5FT
106171 -07	SP03-1
106171 -08	SP03-2
106171 -09	SP03-3
106171 -10	DU5A-06102021
106171 -11	DU5B-06102021
106171 -12	trip blanks

All quality control requirements were acceptable.

Date of Report: 06/22/21
Date Received: 06/11/21
Project: CL-Ellensburg, F&BI 106171
Date Extracted: 06/14/21
Date Analyzed: 06/15/21 and 06/16/21

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 58-139)
BASE-08R-9FT 106171-01	28	112
SIDE-03RR-5.5FT 106171-02 1/20	2,100	138
DU4A-06102021 106171-03	91	112
DU4B-06102021 106171-04	52	112
SIDE-15R-5.5FT 106171-05	350	ip
SIDE-115-5FT 106171-06	250	144
SP03-1 106171-07	<5	104
SP03-2 106171-08	6.3	117
SP03-3 106171-09	<5	111
DU5A-06102021 106171-10 1/50	1,600	114

Date of Report: 06/22/21
Date Received: 06/11/21
Project: CL-Ellensburg, F&BI 106171
Date Extracted: 06/14/21
Date Analyzed: 06/15/21 and 06/16/21

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 58-139)
DU5B-06102021 106171-11 1/5	550	121
Method Blank 01-1306 MB	<5	104

Date of Report: 06/22/21
Date Received: 06/11/21
Project: CL-Ellensburg, F&BI 106171
Date Extracted: 06/11/21
Date Analyzed: 06/11/21

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 48-168)
BASE-08R-9FT 106171-01	77	<250	112
SIDE-03RR-5.5FT 106171-02	20,000	380 x	97
DU4A-06102021 106171-03	3,100	<250	103
DU4B-06102021 106171-04	4,200	<250	108
SIDE-15R-5.5FT 106171-05	6,600	<250	100
SIDE-115-5FT 106171-06	8,200	<250	109
DU5A-06102021 106171-10	4,300	<250	111
DU5B-06102021 106171-11	4,900	<250	98
Method Blank 01-1379 MB2	<50	<250	102

Date of Report: 06/22/21
Date Received: 06/11/21
Project: CL-Ellensburg, F&BI 106171
Date Extracted: 06/11/21
Date Analyzed: 06/11/21

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 48-168)
SP03-1 106171-07	<5	<25	81
SP03-2 106171-08	15	41	71
SP03-3 106171-09	26	69	76
Method Blank 01-1385 MB	<5	<25	80

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	BASE-08R-9FT	Client:	Floyd-Snider
Date Received:	06/11/21	Project:	CL-Ellensburg, F&BI 106171
Date Extracted:	06/11/21	Lab ID:	106171-01
Date Analyzed:	06/11/21	Data File:	061134.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	90	109
Toluene-d8	94	89	112
4-Bromofluorobenzene	99	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SIDE-03RR-5.5FT	Client:	Floyd-Snider
Date Received:	06/11/21	Project:	CL-Ellensburg, F&BI 106171
Date Extracted:	06/11/21	Lab ID:	106171-02
Date Analyzed:	06/14/21	Data File:	061413.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	90	109
Toluene-d8	95	89	112
4-Bromofluorobenzene	99	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	2.9

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU4A-06102021	Client:	Floyd-Snider
Date Received:	06/11/21	Project:	CL-Ellensburg, F&BI 106171
Date Extracted:	06/11/21	Lab ID:	106171-03
Date Analyzed:	06/11/21	Data File:	061131.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	90	109
Toluene-d8	94	89	112
4-Bromofluorobenzene	97	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.053

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU4B-06102021	Client:	Floyd-Snider
Date Received:	06/11/21	Project:	CL-Ellensburg, F&BI 106171
Date Extracted:	06/11/21	Lab ID:	106171-04
Date Analyzed:	06/11/21	Data File:	061132.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	90	109
Toluene-d8	93	89	112
4-Bromofluorobenzene	100	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.66

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SIDE-15R-5.5FT	Client:	Floyd-Snider
Date Received:	06/11/21	Project:	CL-Ellensburg, F&BI 106171
Date Extracted:	06/11/21	Lab ID:	106171-05
Date Analyzed:	06/11/21	Data File:	061135.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	90	109
Toluene-d8	91	89	112
4-Bromofluorobenzene	98	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SIDE-115-5FT	Client:	Floyd-Snider
Date Received:	06/11/21	Project:	CL-Ellensburg, F&BI 106171
Date Extracted:	06/11/21	Lab ID:	106171-06
Date Analyzed:	06/11/21	Data File:	061133.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	90	109
Toluene-d8	92	89	112
4-Bromofluorobenzene	106	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SP03-2	Client:	Floyd-Snider
Date Received:	06/11/21	Project:	CL-Ellensburg, F&BI 106171
Date Extracted:	06/11/21	Lab ID:	106171-08
Date Analyzed:	06/17/21	Data File:	061720.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	90	109
Toluene-d8	95	89	112
4-Bromofluorobenzene	98	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU5A-06102021	Client:	Floyd-Snider
Date Received:	06/11/21	Project:	CL-Ellensburg, F&BI 106171
Date Extracted:	06/11/21	Lab ID:	106171-10
Date Analyzed:	06/14/21	Data File:	061414.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	90	109
Toluene-d8	95	89	112
4-Bromofluorobenzene	113	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	1.6
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	1.9

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU5B-06102021	Client:	Floyd-Snider
Date Received:	06/11/21	Project:	CL-Ellensburg, F&BI 106171
Date Extracted:	06/11/21	Lab ID:	106171-11
Date Analyzed:	06/11/21	Data File:	061136.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	90	109
Toluene-d8	93	89	112
4-Bromofluorobenzene	104	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	0.12
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.80

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Floyd-Snider
Date Received:	Not Applicable	Project:	CL-Ellensburg, F&BI 106171
Date Extracted:	06/11/21	Lab ID:	01-1206 mb
Date Analyzed:	06/11/21	Data File:	061109.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	90	109
Toluene-d8	92	89	112
4-Bromofluorobenzene	102	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Date of Report: 06/22/21
Date Received: 06/11/21
Project: CL-Ellensburg, F&BI 106171

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

Laboratory Code: 106181-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	100	61-153

Date of Report: 06/22/21
Date Received: 06/11/21
Project: CL-Ellensburg, F&BI 106171

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

Laboratory Code: 106154-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	730	118	103	63-146	14

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	102	79-144

Date of Report: 06/22/21
Date Received: 06/11/21
Project: CL-Ellensburg, F&BI 106171

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

Laboratory Code: 106171-07 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	500	<5	95	97	63-146	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	500	103	79-144

Date of Report: 06/22/21
Date Received: 06/11/21
Project: CL-Ellensburg, F&BI 106171

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

Laboratory Code: 106182-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Benzene	mg/kg (ppm)	1	<0.03	67	66	29-129	2
Toluene	mg/kg (ppm)	1	<0.05	78	76	35-130	3
Ethylbenzene	mg/kg (ppm)	1	<0.05	81	80	32-137	1
m,p-Xylene	mg/kg (ppm)	2	<0.1	82	82	34-136	0
o-Xylene	mg/kg (ppm)	1	<0.05	82	79	33-134	4
Naphthalene	mg/kg (ppm)	1	<0.05	85	83	14-157	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	1	97	71-118
Toluene	mg/kg (ppm)	1	110	66-126
Ethylbenzene	mg/kg (ppm)	1	114	64-123
m,p-Xylene	mg/kg (ppm)	2	115	78-122
o-Xylene	mg/kg (ppm)	1	114	77-124
Naphthalene	mg/kg (ppm)	1	117	63-140

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

106171

SAMPLE CHAIN OF CUSTODY

ME 06-11-21

VS2
VW1

Page # 1 of 2

Report To Gabe Cisneros

Company Floyd Snider

Address 601 Union St, Ste 600

City, State, ZIP Seattle, WA 98101

Phone 206-292-2078 Email gabe.cisneros@floydsnider.com

SAMPLERS (*signature*)

PROJECT NAME	PO #
CL - Ellensburg	

REMARKS cc results to kristin.anderson@floydsnider.com

Project specific RLs? - [✓ Yes] / No ← as noted

INVOICE TO

TURNAROUND TIME

☒ Standard turnaround

☐ RUSH

Rush charges authorized by:

CO3

SAMPLE DISPOSAL

☐ Archive samples

☐ Other

[✓ Default: Dispose after 30 days]

						ANALYSES REQUESTED											
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	BTEX + naphthalene ~~VOCs~~ EPA 8260	PAHs EPA 8270	PCBs EPA 8082	GRO (5ppm)	DRO (25ppm) + ORO (100ppm)			Notes
BASE-08R-9FT	01 A-D	6/10/2021	1040	soil	4	X	X			X							● - per COC
SIDE-03RR-5.5 FT	02 A-E		1320		5	X	X			X							MS 6/17/21 ME
DU4A-06102021	03 A-D		0935		4	X	X			X							
DU4B-06102021	04		0945		4	X	X			X							
SIDE-15R-5.5 FT	05		1430		4	X	X			X							
SIDE-11S-5 FT	06		1440		4	X	X			X							
SP03-1	07		1450		4								X	X			run BTEX + naphth if GRO detected
SP03-2	08		1455		4					●			X	X			" "
SP03-3	09 A-E		1500		5								X	X			" "
DU5A-06102021	10 A-D	↓	1610	↓	4	X	X			X							

Friedman & Bruya, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Kristin Anderson	Floyd Snider	6/11/21	0813
Received by:	James Bruya	F&B	6/11	0813
Relinquished by:		Samples received at 3 °C		
Received by:				

106171

SAMPLE CHAIN OF CUSTODY

ME 06-11-21

Page # 2 of 2

VS2
VW1

Report To Gabe Cisneros

Company Floyd | Snider

Address

City, State, ZIP (see p. 1)

Phone Email

SAMPLERS (*signature*)

PROJECT NAME
CL - Ellensburg

PO #

REMARKS
see p. 1

INVOICE TO

Project specific RLs? - Yes / No

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

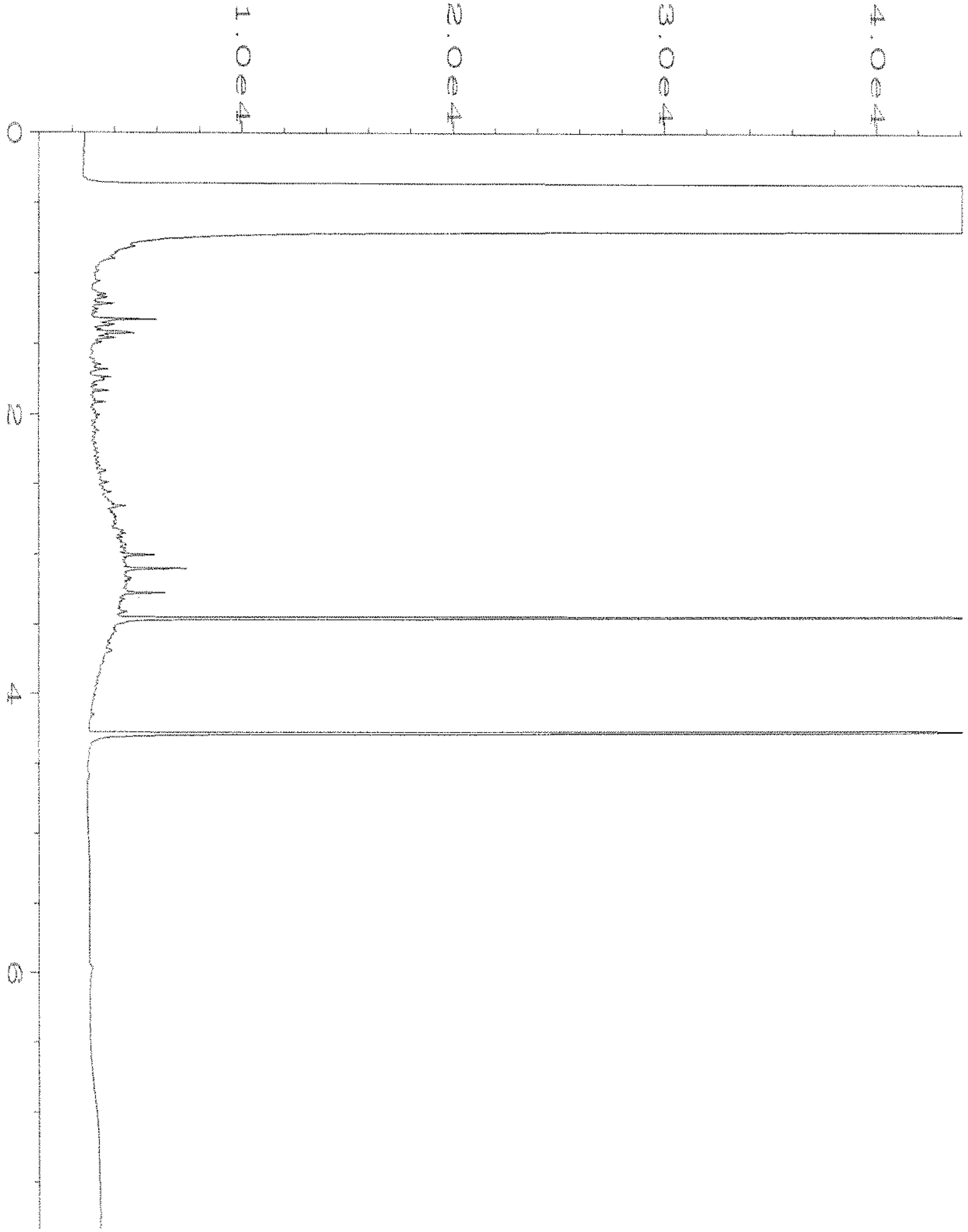
C03

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
[✓ Default:] Dispose after 30 days

						ANALYSES REQUESTED											
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	~~VOCs~~ BTEX + naph EPA 8260	PAHs EPA 8270	PCBs EPA 8082				HOLD	Notes
DU5B-06102021	11	6/10/21	1620	soil		X	X			X							
trip blanks	12 A-B			water	2											X	run only if no samples are ND

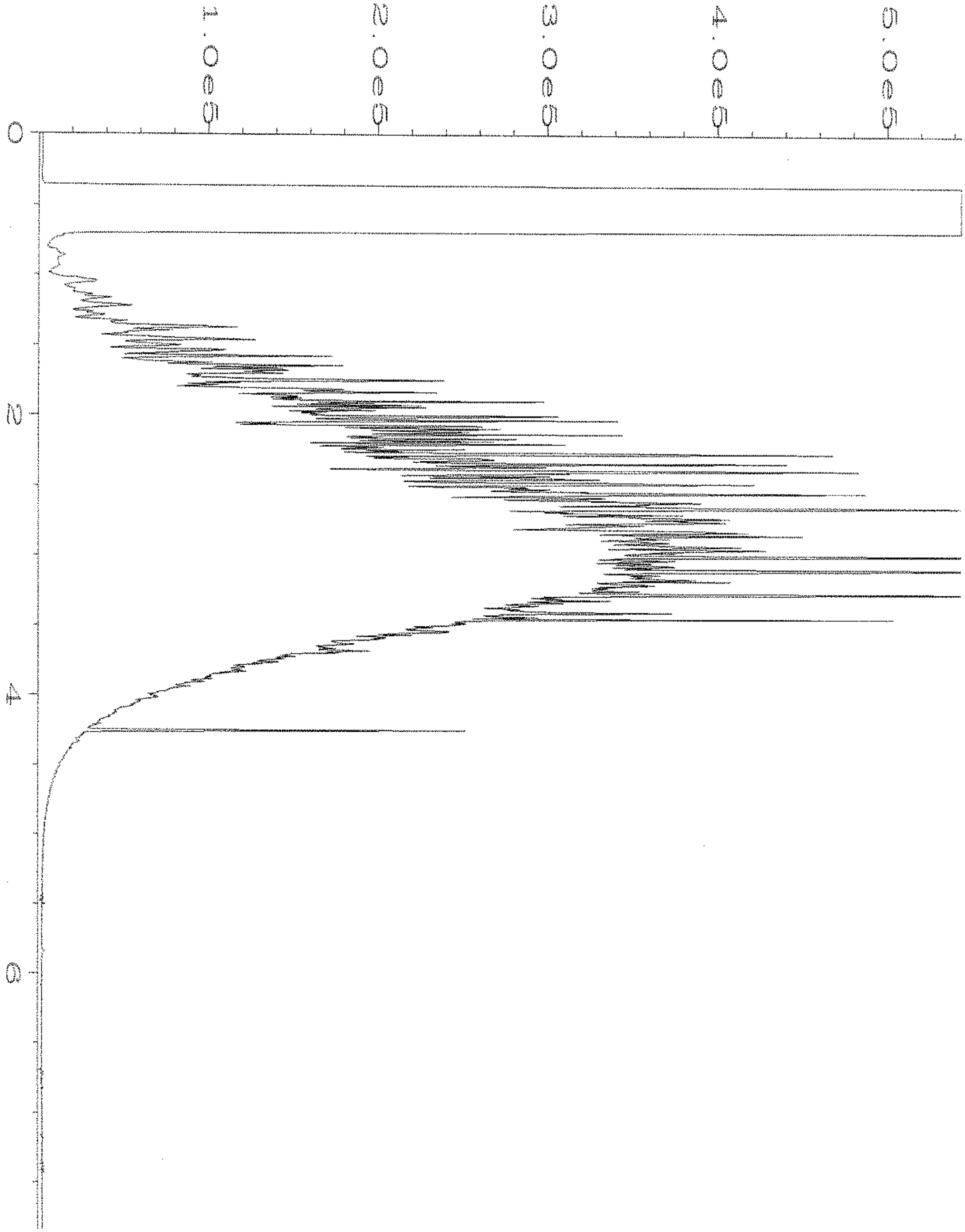
Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Kristin Anderson	Floyd Snider	6/11/21	0813
Received by:	James Bruya	F&B	6/11	0813
Relinquished by:				
Received by:				



Data File Name : C:\HPCHEM\4\DATA\06-11-21\010F0301.D
Operator : TL
Instrument : GC#4
Sample Name : 106171-01
Run Time Bar Code:
Acquired on : 11 Jun 21 10:11 AM
Report Created on: 14 Jun 21 09:10 AM

Page Number : 1
Vial Number : 10
Injection Number : 1
Sequence Line : 3
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



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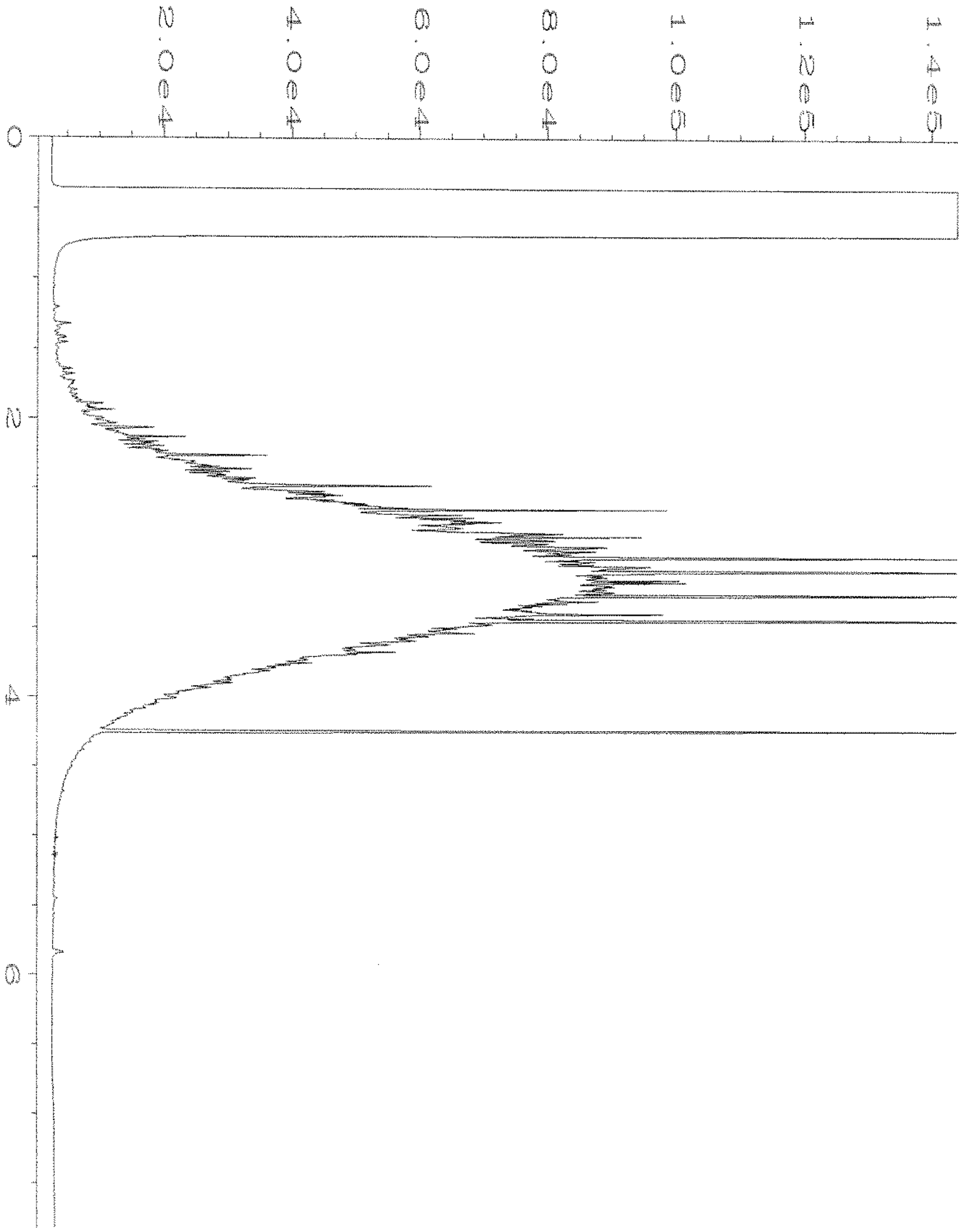
Operator          : TL                              Page Number      : 1
Instrument        : GC#4                            Vial Number      : 11
Sample Name       : 106171-02                       Injection Number : 1
Run Time Bar Code:                                  Sequence Line    : 3
Acquired on       : 11 Jun 21   10:21 AM            Instrument Method: DX.MTH
Report Created on: 14 Jun 21   09:10 AM             Analysis Method  : DEFAULT.MTH
```



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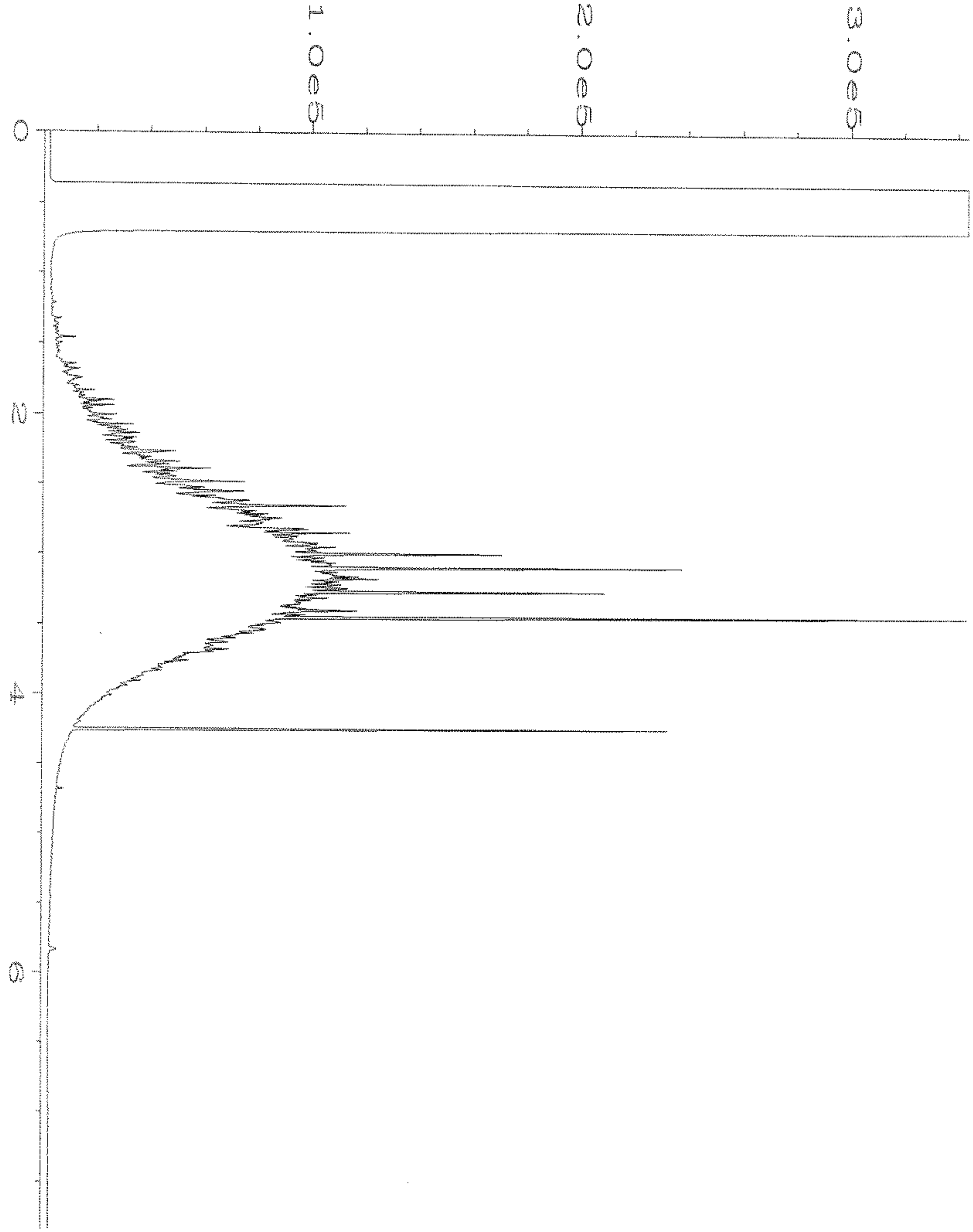
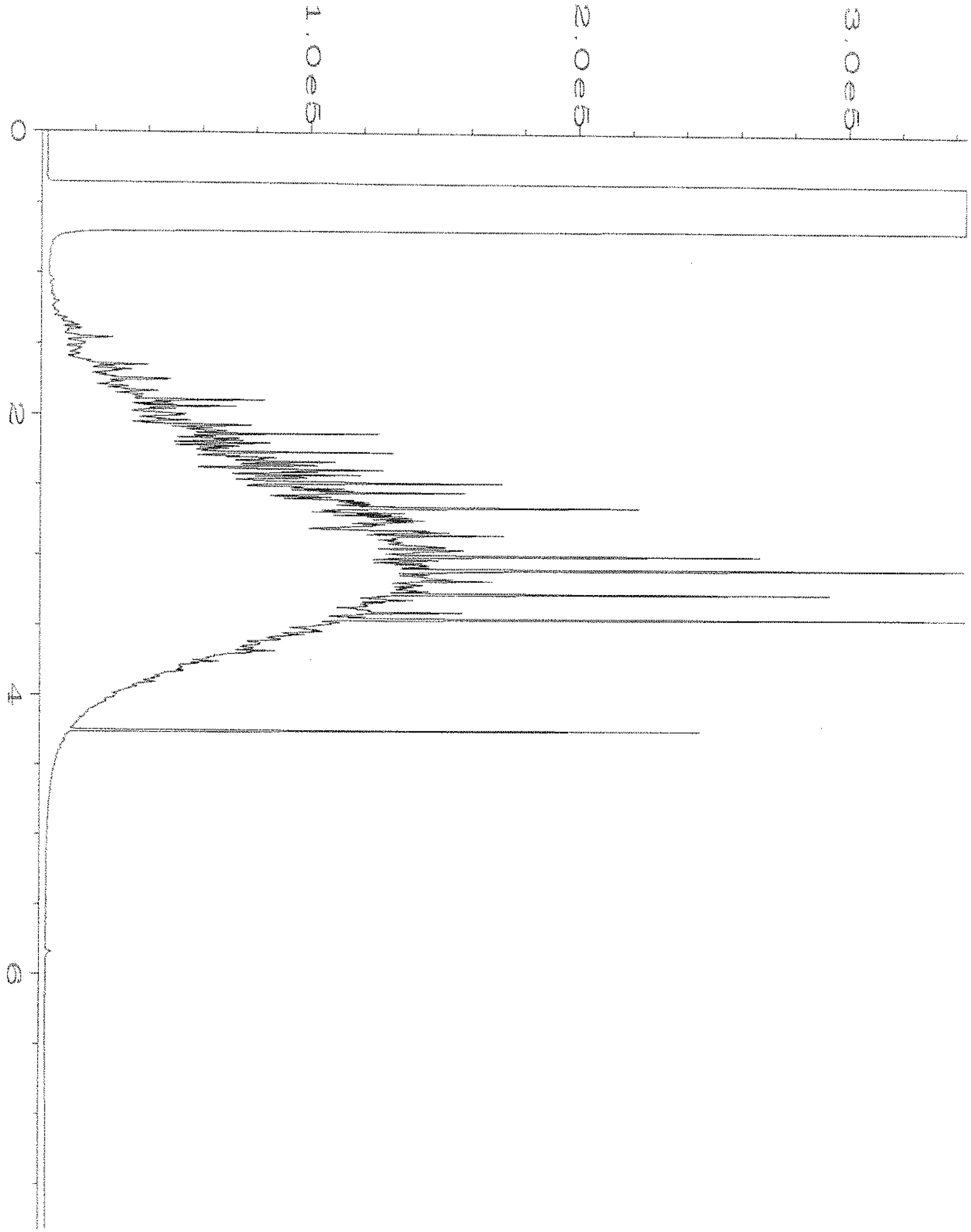
Data File Name    : C:\HPCHEM\4\DATA\06-11-21\012F0301.D
Operator          : TL                                Page Number       : 1
Instrument        : GC#4                              Vial Number       : 12
Sample Name       : 106171-03                         Injection Number  : 1
Run Time Bar Code:                                    Sequence Line     : 3
Acquired on       : 11 Jun 21   10:34 AM              Instrument Method: DX.MTH
Report Created on: 14 Jun 21   09:11 AM               Analysis Method   : DEFAULT.MTH
```



Data File Name : C:\HPCHEM\4\DATA\06-11-21\013F0301.D
Operator : TL
Instrument : GC#4
Sample Name : 106171-04
Run Time Bar Code:
Acquired on : 11 Jun 21 10:47 AM
Report Created on: 14 Jun 21 09:11 AM

Page Number : 1
Vial Number : 13
Injection Number : 1
Sequence Line : 3
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



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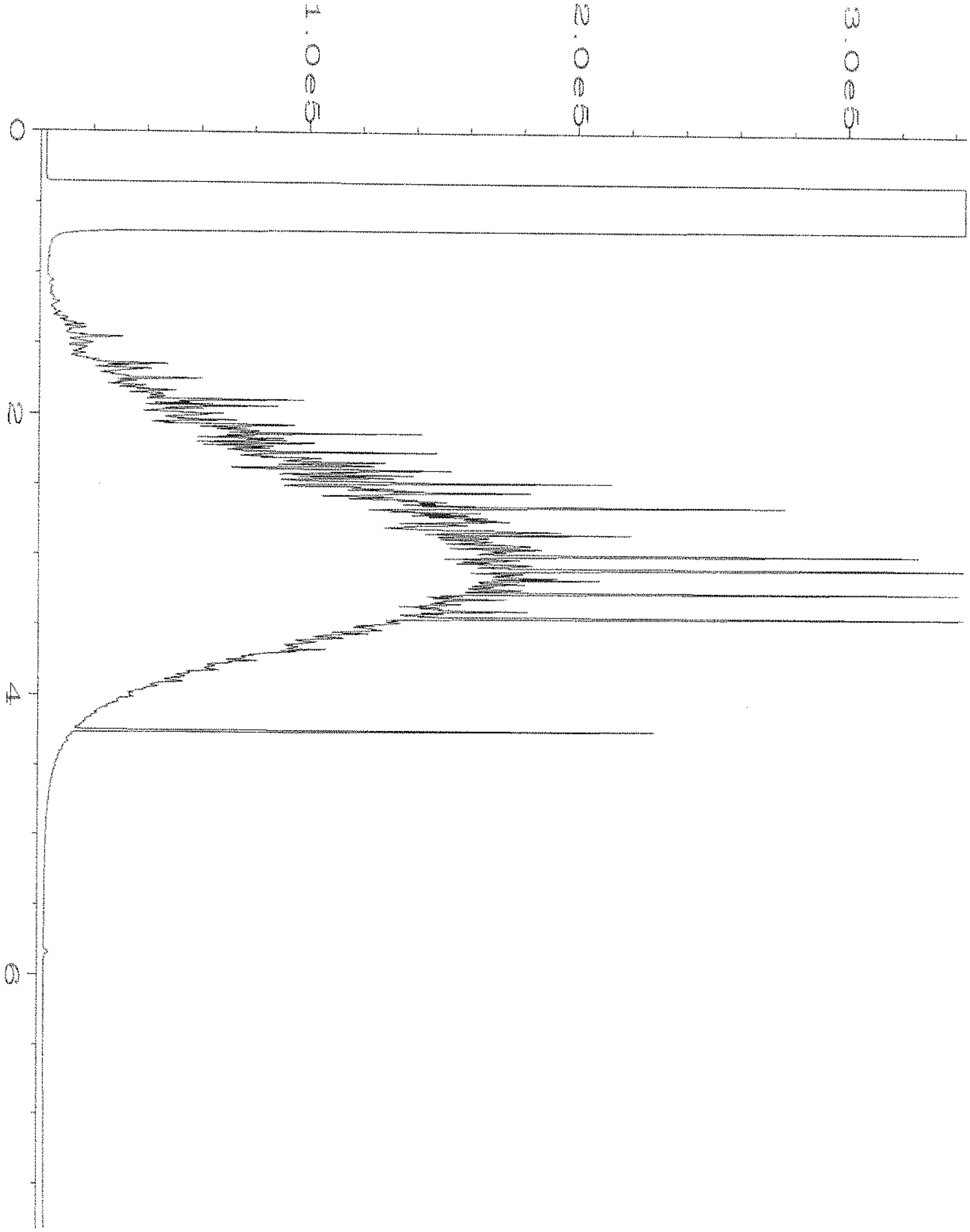
Data File Name    : C:\HPCHEM\4\DATA\06-11-21\014F0301.D
Operator          : TL                                 Page Number      : 1
Instrument        : GC#4                               Vial Number      : 14
Sample Name       : 106171-05                          Injection Number : 1
Run Time Bar Code:                                     Sequence Line    : 3
Acquired on       : 11 Jun 21   10:59 AM               Instrument Method: DX.MTH
Report Created on: 14 Jun 21   09:11 AM                Analysis Method  : DEFAULT.MTH
```



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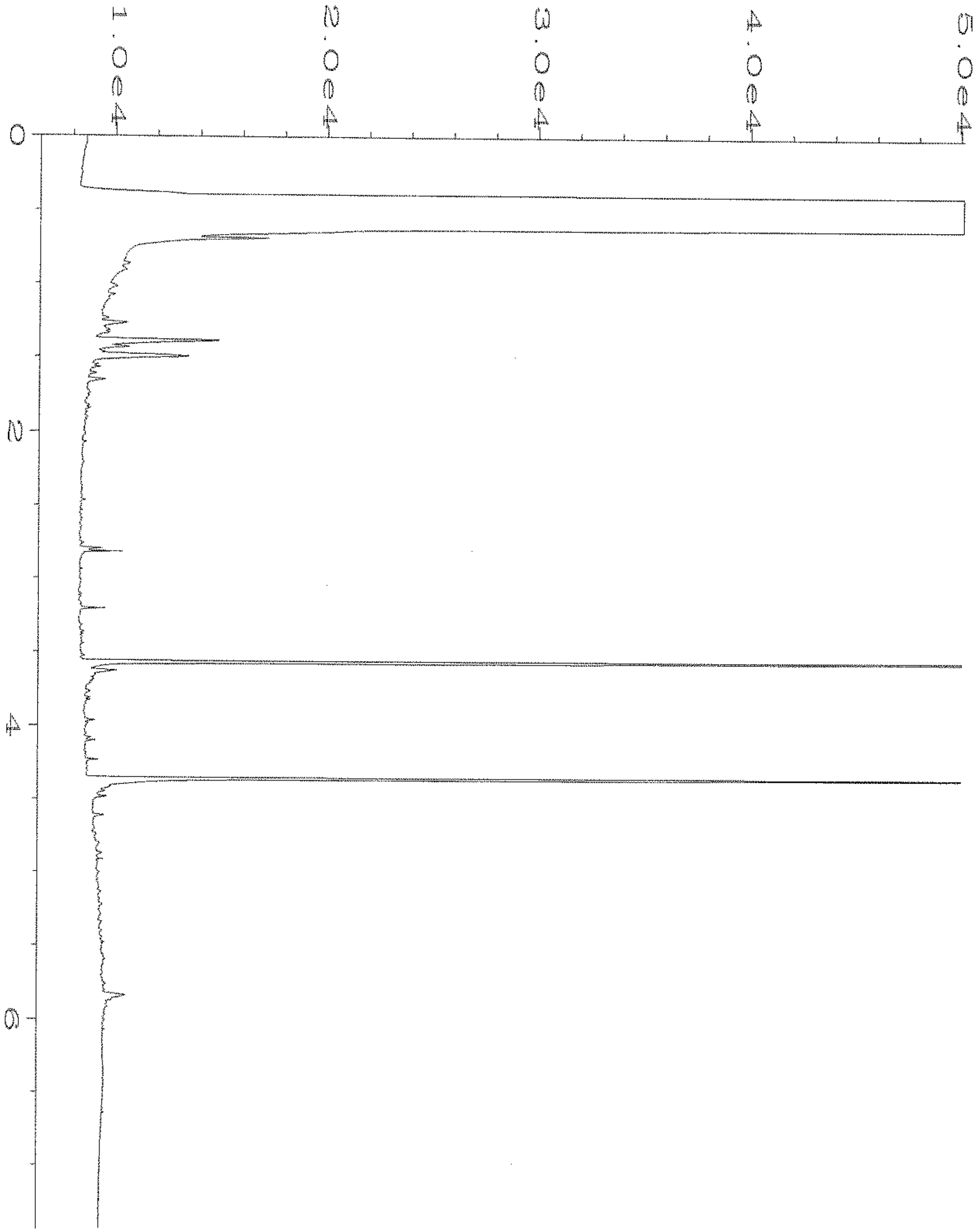
Data File Name    : C:\HPCHEM\4\DATA\06-11-21\015F0301.D
Operator          : TL                          Page Number      : 1
Instrument        : GC#4                        Vial Number      : 15
Sample Name       : 106171-06                   Injection Number : 1
Run Time Bar Code:                              Sequence Line    : 3
Acquired on       : 11 Jun 21   11:11 AM        Instrument Method: DX.MTH
Report Created on: 14 Jun 21   09:11 AM         Analysis Method  : DEFAULT.MTH
```



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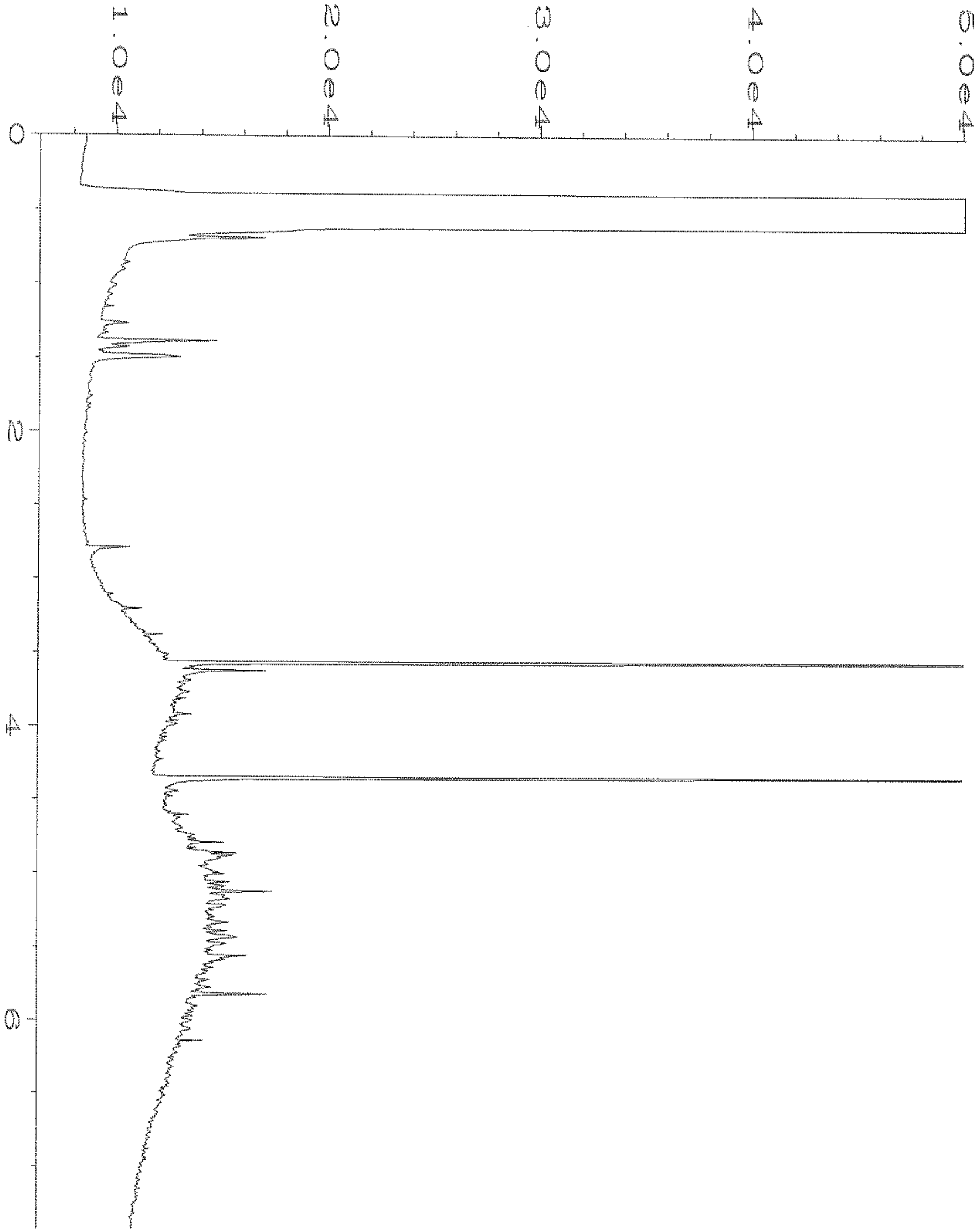
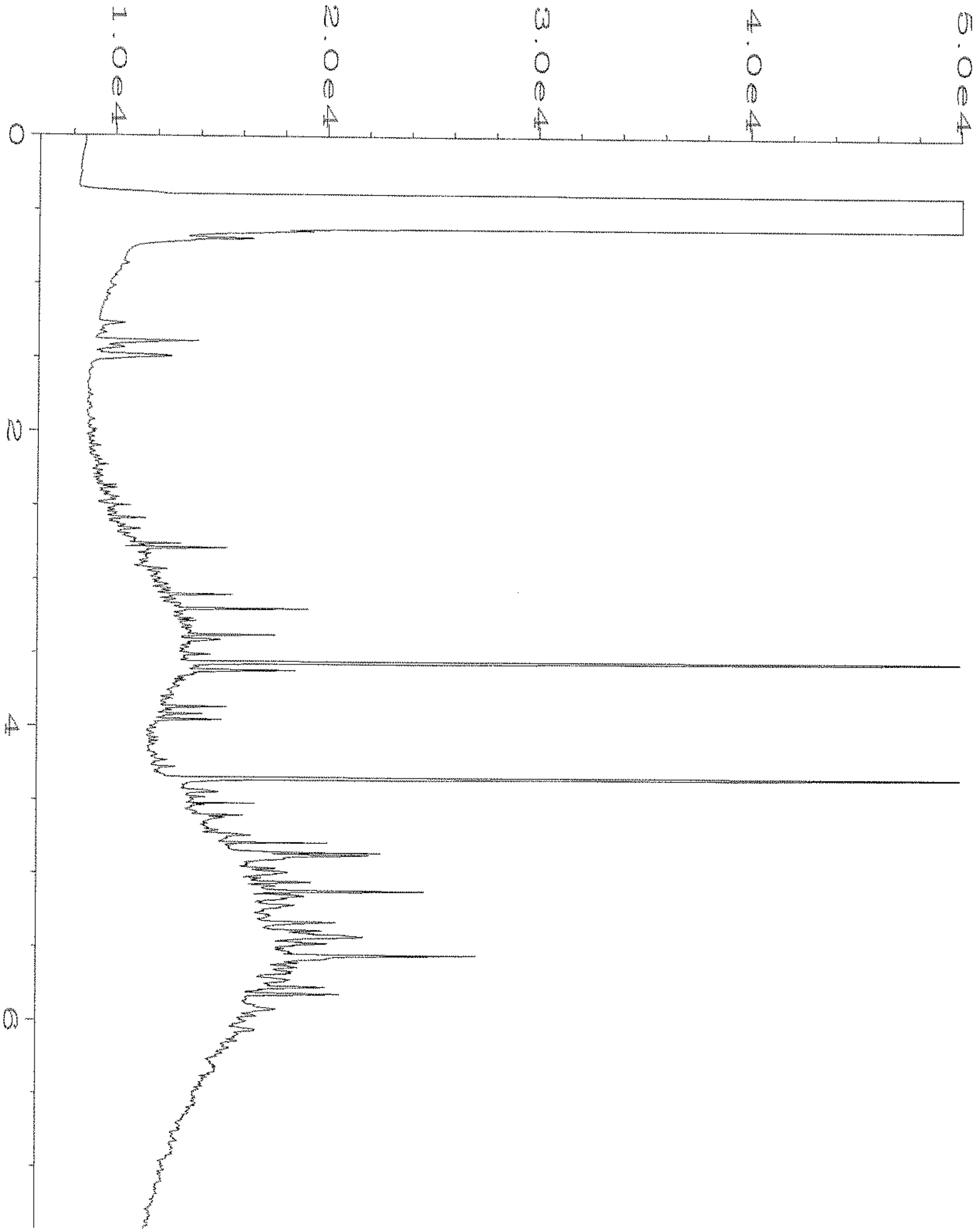
Data File Name    : C:\HPCHEM\1\DATA\06-11-21\025F0701.D
Operator          : TL                                  Page Number       : 1
Instrument        : GC1                                 Vial Number       : 25
Sample Name       : 106171-07                           Injection Number : 1
Run Time Bar Code:                                      Sequence Line     : 7
Acquired on       : 11 Jun 21   02:16 PM                Instrument Method: DX.MTH
Report Created on: 14 Jun 21   09:56 AM                 Analysis Method  : DEFAULT.MTH
```



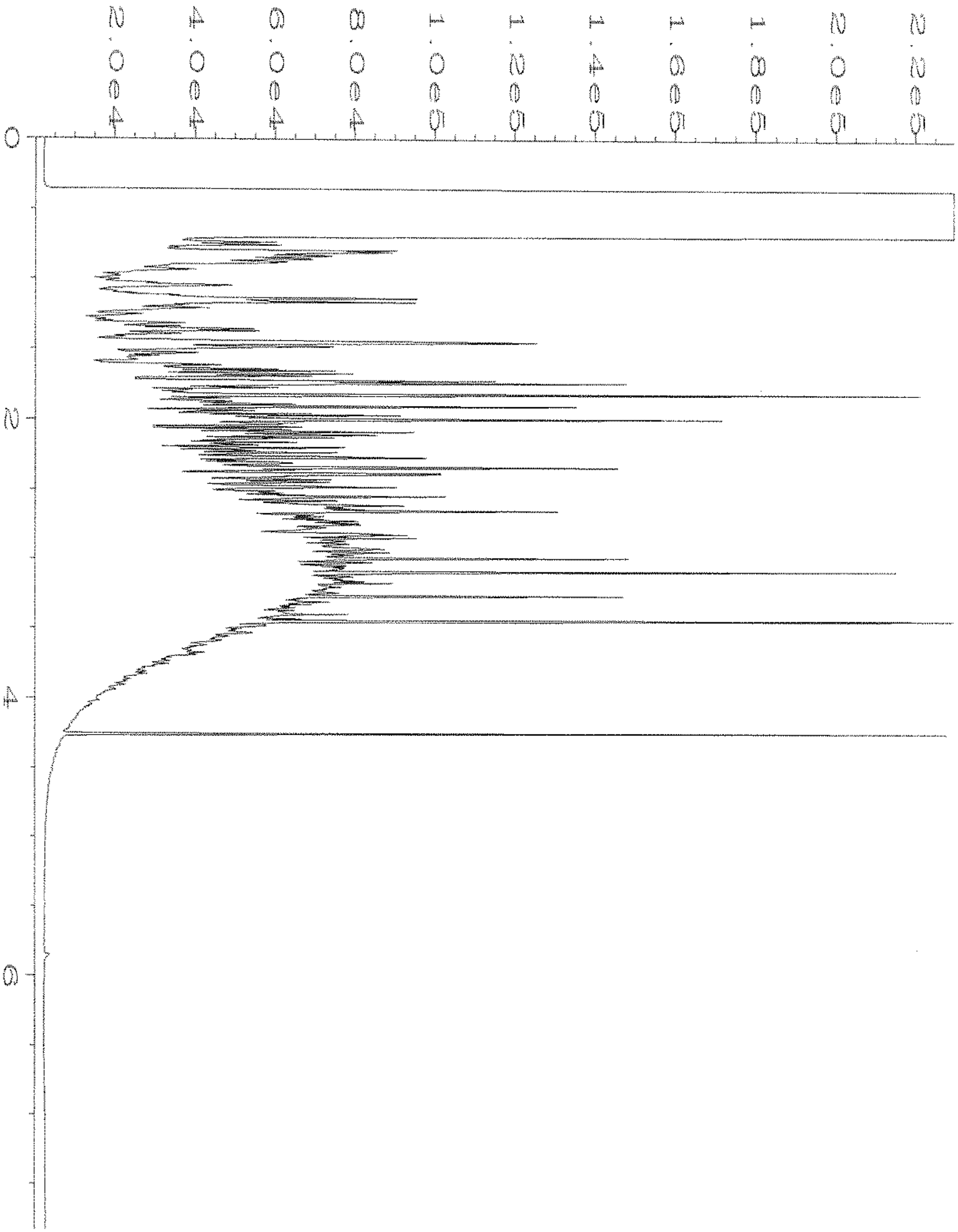
Data File Name : C:\HPCHEM\1\DATA\06-11-21\028F0701.D
Operator : TL
Instrument : GC1
Sample Name : 106171-08
Run Time Bar Code:
Acquired on : 11 Jun 21 02:51 PM
Report Created on: 14 Jun 21 09:56 AM

Page Number : 1
Vial Number : 28
Injection Number : 1
Sequence Line : 7
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



Data File Name : C:\HPCHEM\1\DATA\06-11-21\029F0701.D
Operator : TL
Instrument : GC1
Sample Name : 106171-09
Run Time Bar Code:
Acquired on : 11 Jun 21 03:02 PM
Report Created on: 14 Jun 21 09:56 AM

Page Number : 1
Vial Number : 29
Injection Number : 1
Sequence Line : 7
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



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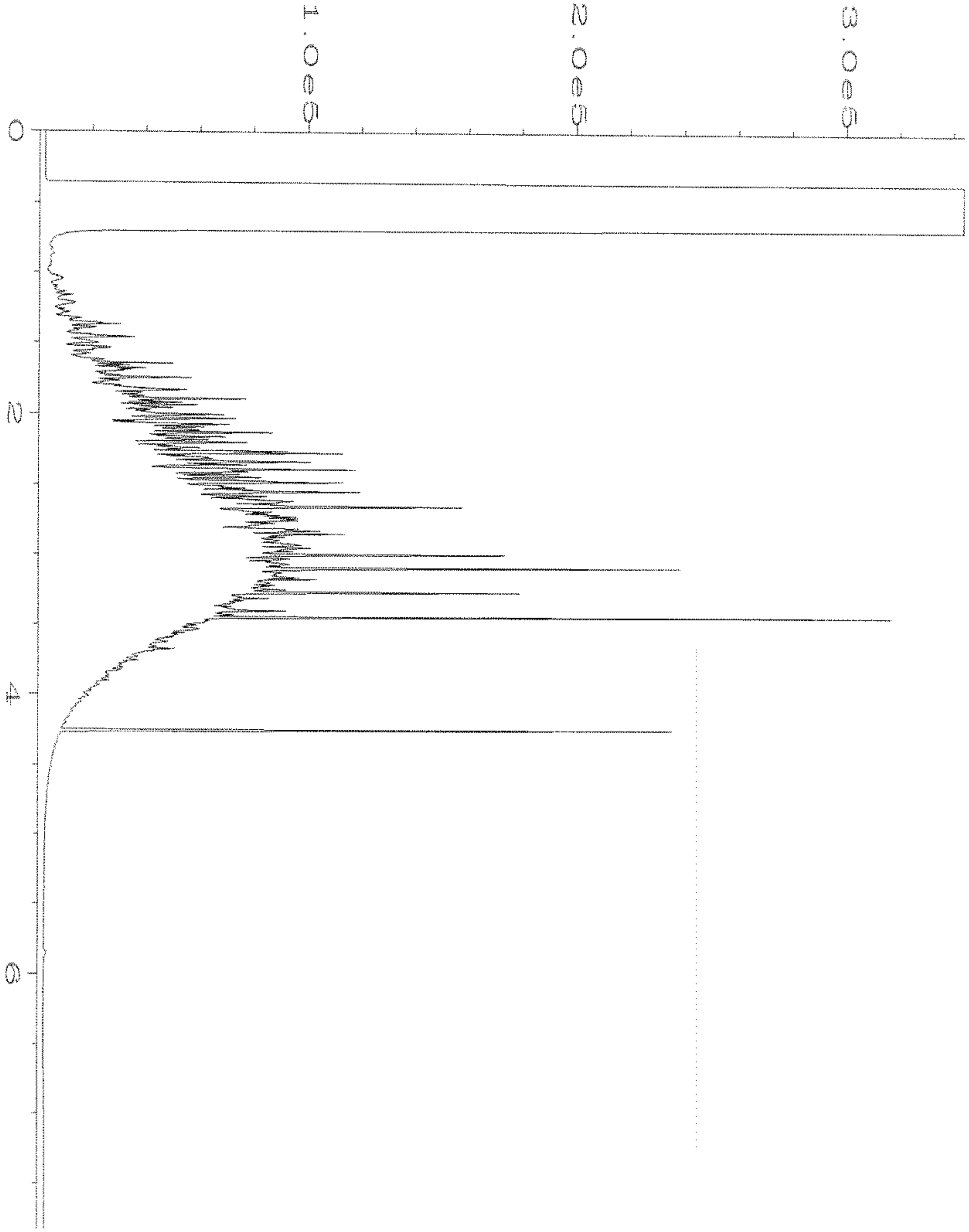
Data File Name    : C:\HPCHEM\4\DATA\06-11-21\016F0301.D
Operator          : TL                              Page Number      : 1
Instrument        : GC#4                            Vial Number      : 16
Sample Name       : 106171-10                       Injection Number : 1
Run Time Bar Code:                                  Sequence Line    : 3
Acquired on       : 11 Jun 21  11:24 AM             Instrument Method: DX.MTH
Report Created on: 14 Jun 21  09:12 AM              Analysis Method  : DEFAULT.MTH
```



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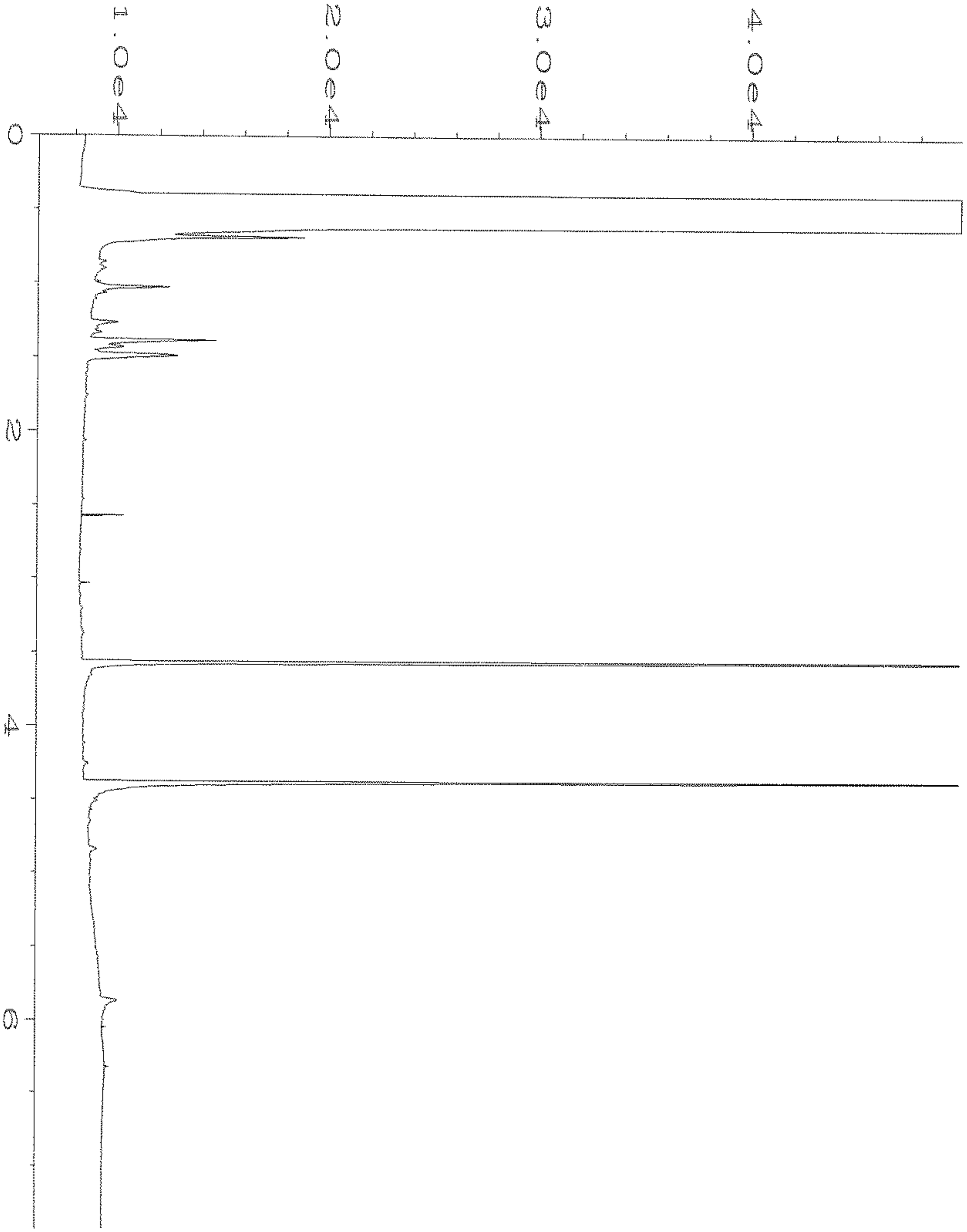
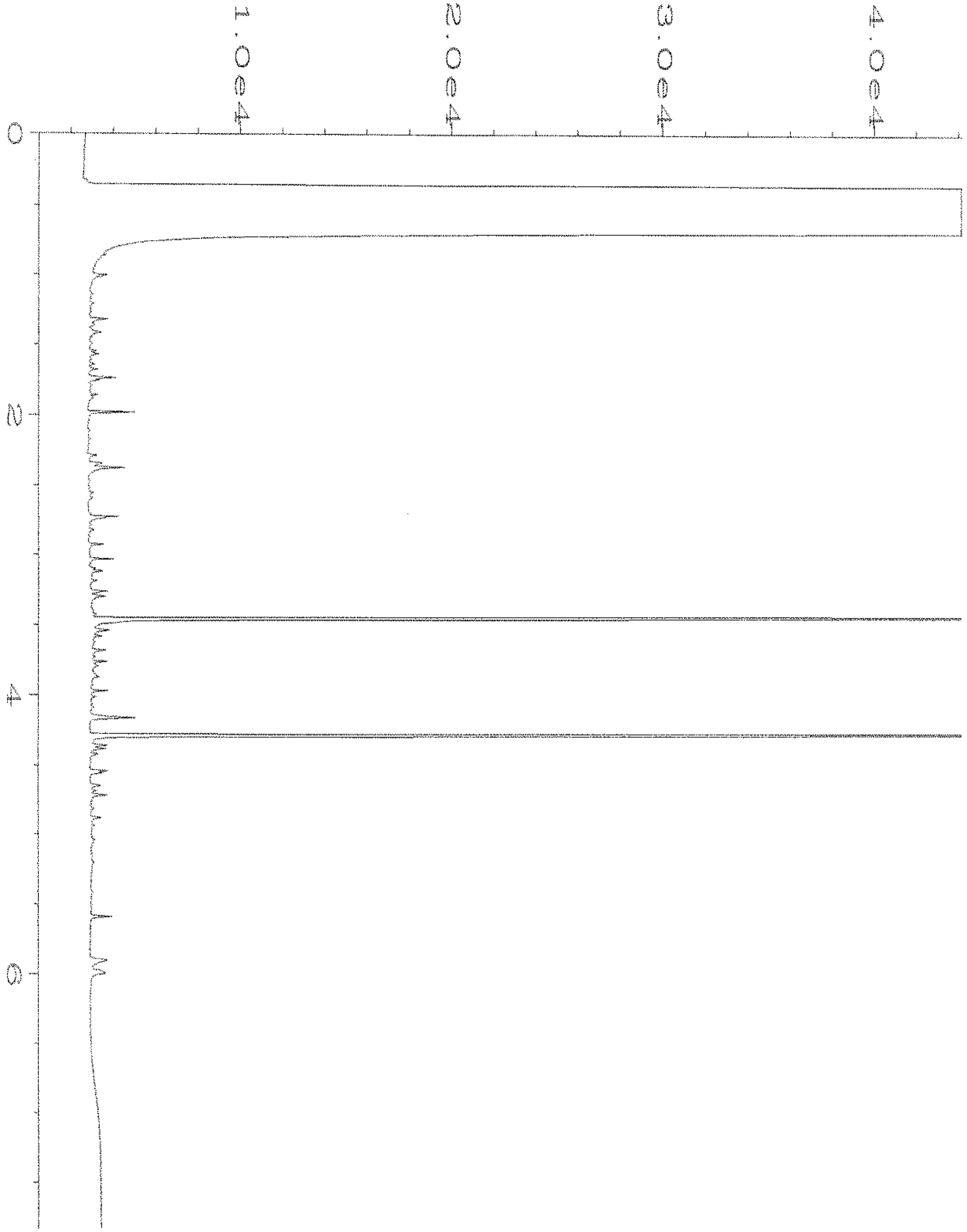
Data File Name    : C:\HPCHEM\4\DATA\06-11-21\017F0301.D
Operator          : TL                              Page Number      : 1
Instrument        : GC#4                            Vial Number      : 17
Sample Name       : 106171-11                       Injection Number : 1
Run Time Bar Code:                                  Sequence Line    : 3
Acquired on       : 11 Jun 21  11:36 AM             Instrument Method: DX.MTH
Report Created on: 14 Jun 21  09:12 AM              Analysis Method  : DEFAULT.MTH
```

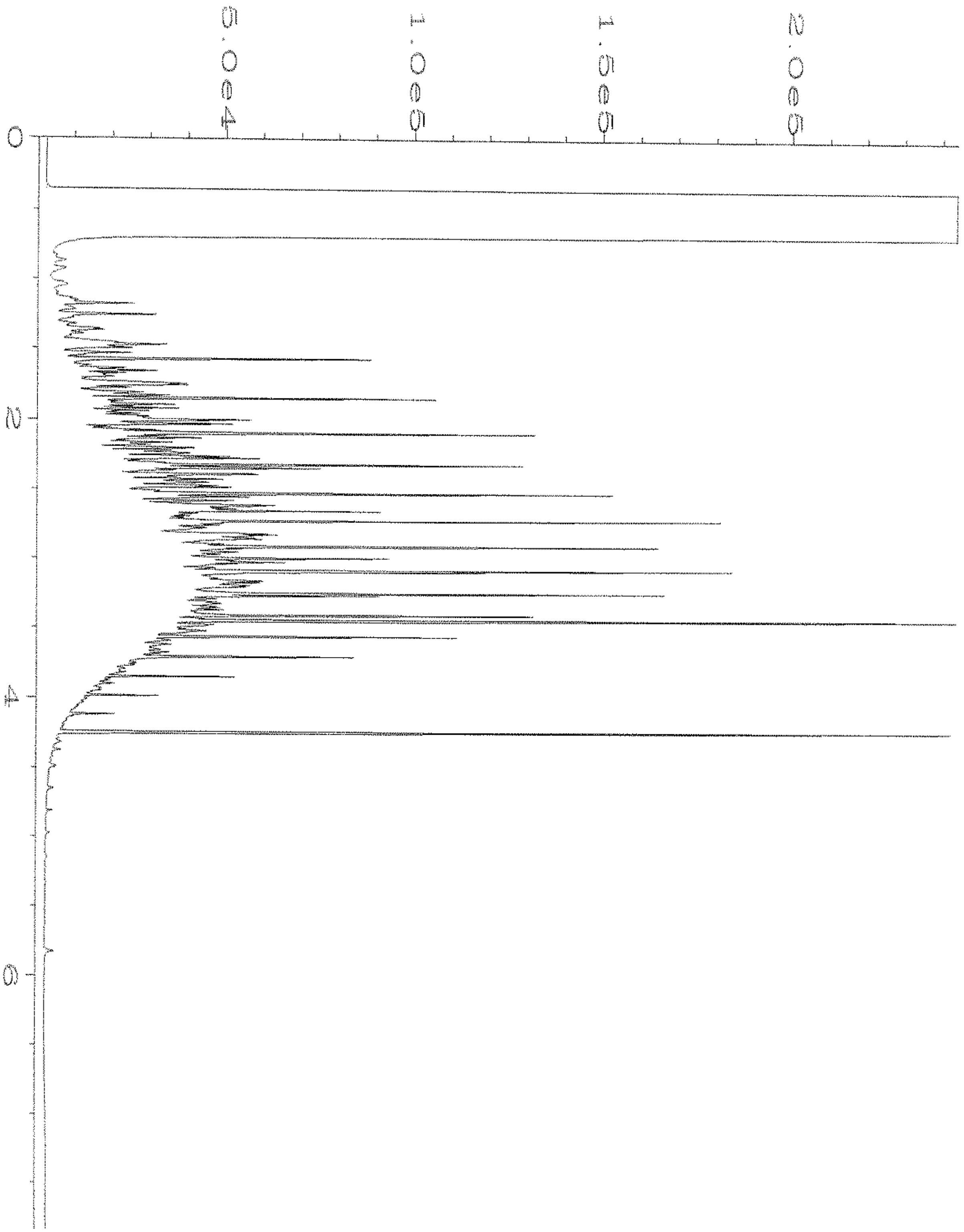


Data File Name : C:\HPCHEM\1\DATA\06-11-21\023F0701.D
Operator : TL
Instrument : GC1
Sample Name : 01-1385 mb
Run Time Bar Code:
Acquired on : 11 Jun 21 01:55 PM
Report Created on: 14 Jun 21 09:56 AM

Page Number : 1
Vial Number : 23
Injection Number : 1
Sequence Line : 7
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



```
Data File Name   : C:\HPCHEM\4\DATA\06-11-21\006F0301.D
Operator         : TL                                 Page Number      : 1
Instrument       : GC#4                               Vial Number      : 6
Sample Name      : 01-1369 mb2                        Injection Number : 1
Run Time Bar Code:                                    Sequence Line    : 3
Acquired on      : 11 Jun 21   07:21 AM               Instrument Method: DX.MTH
Report Created on: 14 Jun 21   09:12 AM               Analysis Method  : DEFAULT.MTH
```



Data File Name   : C:\HPCHEM\4\DATA\06-11-21\003F0201.D
Operator   : TL
Instrument   : GC#4
Sample Name   : 500 Dx 63-79C
Run Time Bar Code:
Acquired on   : 11 Jun 21   05:45 AM
Report Created on: 14 Jun 21   09:12 AM

Page Number   : 1
Vial Number   : 3
Injection Number : 1
Sequence Line   : 2
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

June 30, 2021

Gabriel Cisneros, Project Manager
Floyd-Snider
Two Union Square, Suite 600
601 Union St
Seattle, WA 98101

Dear Mr Cisneros:

Included is the amended report from the testing of material submitted on June 24, 2021 from the CL-Ellensburg, F&BI 106442 project. Per your request, the sample ID has been amended.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Kristin Anderson
FDS0629R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

June 29, 2021

Gabriel Cisneros, Project Manager
Floyd-Snider
Two Union Square, Suite 600
601 Union St
Seattle, WA 98101

Dear Mr Cisneros:

Included are the results from the testing of material submitted on June 24, 2021 from the CL-Ellensburg, F&BI 106442 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 should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Kristin Anderson
FDS0629R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on June 24, 2020 by Friedman & Bruya, Inc. from the Floyd-Snider CL-Ellensburg, F&BI 106442 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Floyd-Snider
106442 -01	SIDE-03RRR-5.5FT

All quality control requirements were acceptable.

Date of Report: 06/29/21
Date Received: 06/24/21
Project: CL-Ellensburg, F&BI 106442
Date Extracted: 06/25/21
Date Analyzed: 06/25/21

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SIDE-03RRR-5.5FT 106442-01	79	83
Method Blank 01-1418 MB	<5	80

Date of Report: 06/29/21
Date Received: 06/24/21
Project: CL-Ellensburg, F&BI 106442
Date Extracted: 06/24/21
Date Analyzed: 06/24/21

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 53-144)
SIDE-03RRR-5.5FT 106442-01	440	<250	87
Method Blank 01-1486 MB	<50	<250	89

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SIDE-03RRR-5.5FT	Client:	Floyd-Snider
Date Received:	06/24/21	Project:	CL-Ellensburg, F&BI 106442
Date Extracted:	06/24/21	Lab ID:	106442-01
Date Analyzed:	06/25/21	Data File:	062512.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	90	109
Toluene-d8	96	89	112
4-Bromofluorobenzene	98	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Floyd-Snider
Date Received:	Not Applicable	Project:	CL-Ellensburg, F&BI 106442
Date Extracted:	06/24/21	Lab ID:	01-1231 mb
Date Analyzed:	06/24/21	Data File:	062409.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	90	109
Toluene-d8	95	89	112
4-Bromofluorobenzene	98	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Date of Report: 06/29/21
Date Received: 06/24/21
Project: CL-Ellensburg, F&BI 106442

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

Laboratory Code: 106442-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	79	56	30 hr

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	85	71-131

Date of Report: 06/29/21
Date Received: 06/24/21
Project: CL-Ellensburg, F&BI 106442

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

Laboratory Code: 106394-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	106	98	64-133	8

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	94	58-147

Date of Report: 06/29/21
Date Received: 06/24/21
Project: CL-Ellensburg, F&BI 106442

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

Laboratory Code: 106400-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Benzene	mg/kg (ppm)	1	<0.03	62	64	29-129	3
Toluene	mg/kg (ppm)	1	<0.05	66	68	35-130	3
Ethylbenzene	mg/kg (ppm)	1	<0.05	67	69	32-137	3
m,p-Xylene	mg/kg (ppm)	2	<0.1	66	68	34-136	3
o-Xylene	mg/kg (ppm)	1	<0.05	66	68	33-134	3
Naphthalene	mg/kg (ppm)	1	<0.05	70	73	14-157	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	1	93	71-118
Toluene	mg/kg (ppm)	1	99	66-126
Ethylbenzene	mg/kg (ppm)	1	102	64-123
m,p-Xylene	mg/kg (ppm)	2	103	78-122
o-Xylene	mg/kg (ppm)	1	103	77-124
Naphthalene	mg/kg (ppm)	1	109	63-140

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

106442

SAMPLE CHAIN OF CUSTODY

ME 6/24/21

VS-D2/D01

Page # 1 of 1

Report To G. Cisneros

Company Floyd|Snider

Address ~~[illegible]~~ 601 Union St.

City, State, ZIP 98101

Phone 206 292-2078 Email gabe.cisneros@floydsnider.com

SAMPLERS (signature)

PROJECT NAME CL-Ellensburg

PO #

REMARKS Results to Kristin Anderson & Gabe

INVOICE TO

TURNAROUND TIME
☑ Standard Turnaround
☐ RUSH
Rush charges authorized by:

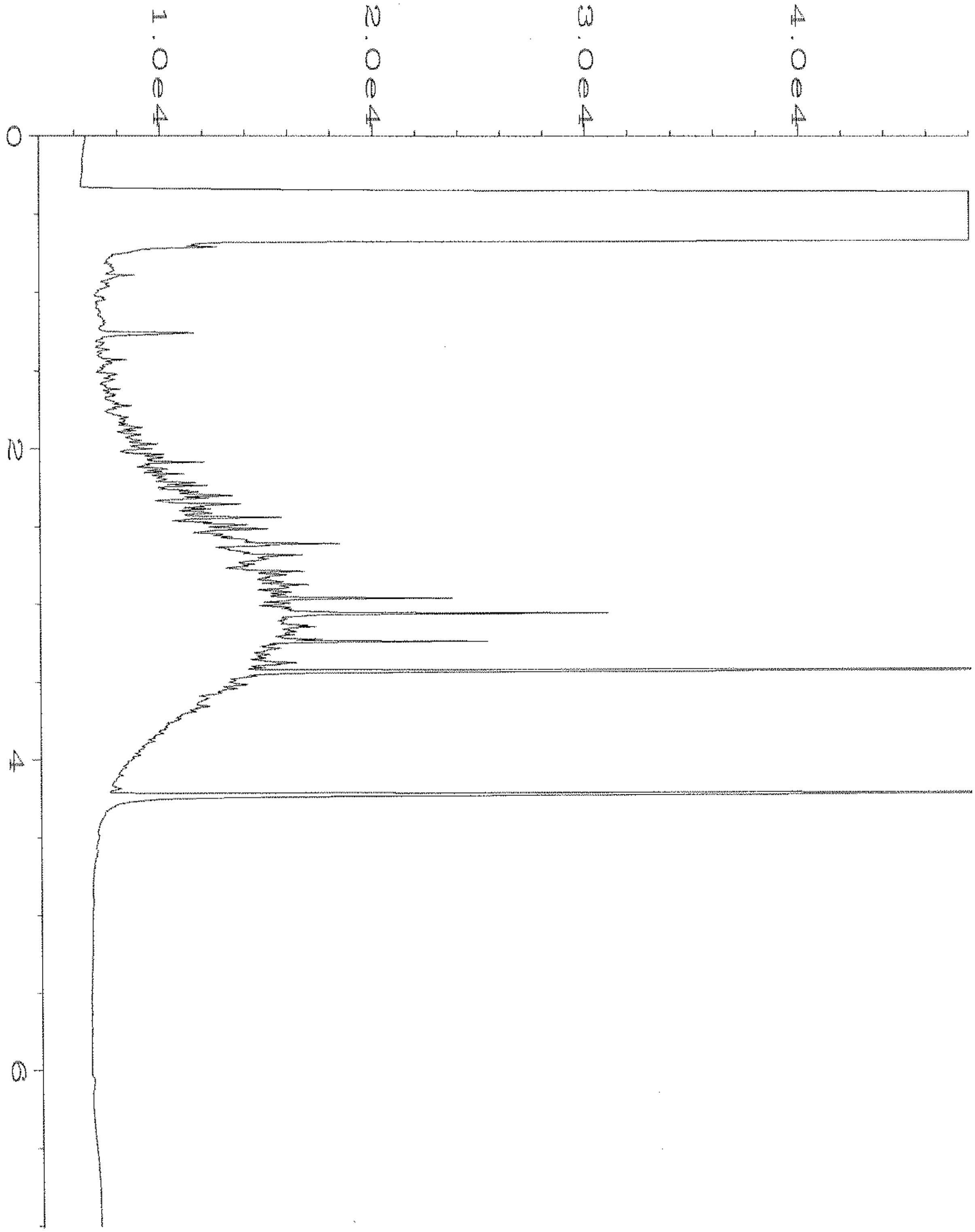
SAMPLE DISPOSAL
☐ Dispose after 30 days
☑ Archive Samples
☐ Other

						ANALYSES REQUESTED											
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	EDC w/ [illegible] VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM					Notes
~~SIDE-03RRR-062421~~		~~6/24~~	~~0910~~	~~Soil~~	~~6~~		~~X~~	~~X~~		~~✓~~							
SIDE-~~03RR~~-5.5FT	01 A-F	6/24	0910	Soil	6		X	X		✓							
-03RRR-																	
6/29/21																	
																	Samples received at 6 °C

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

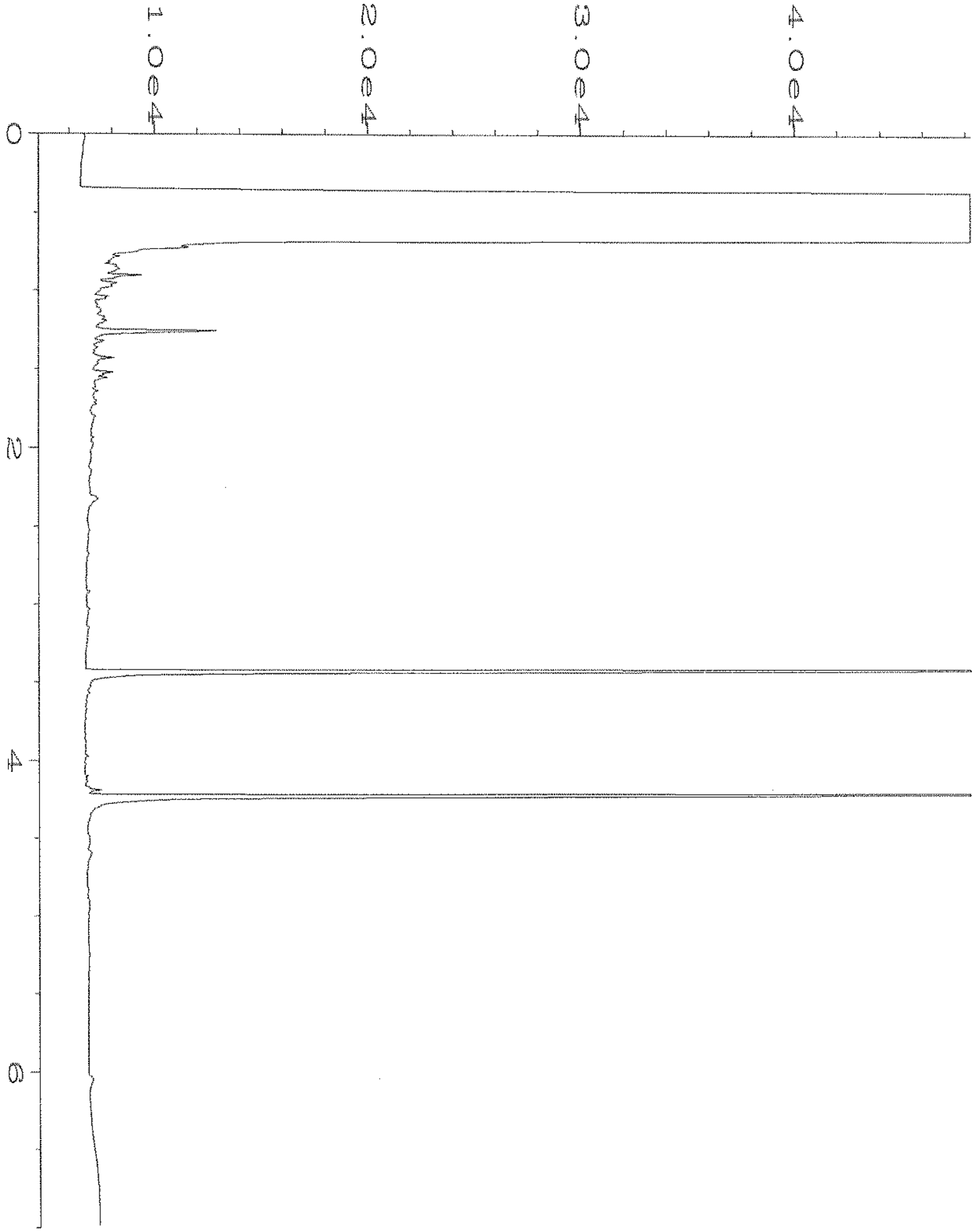
	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Gabe Cisneros	Floyd|Snider	6/24	1131
Received by:		Will Radford	F&BI	6/24	11:32
Relinquished by:					
Received by:					

Samples received at ______

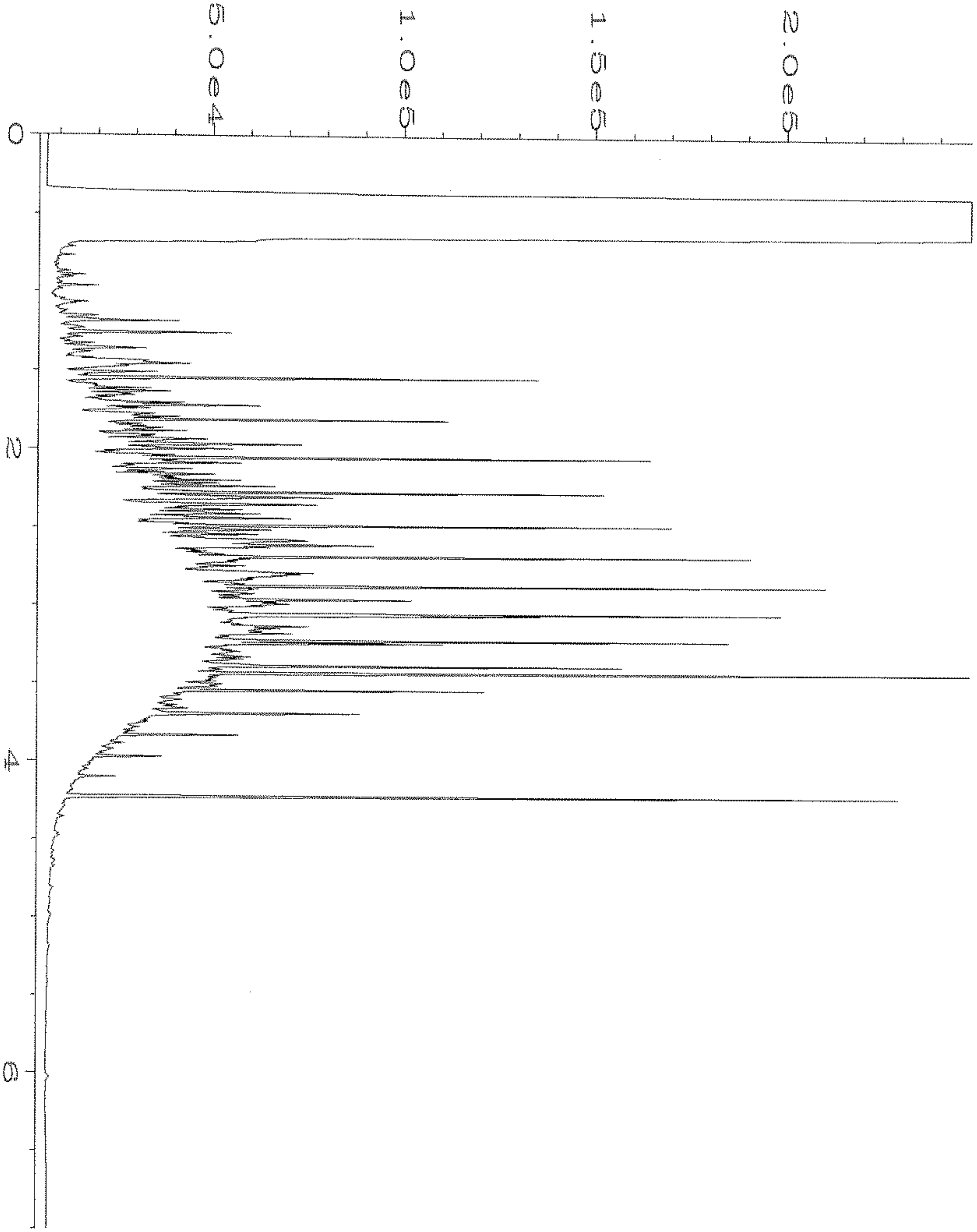


Data File Name : C:\HPCHEM\6\DATA\06-24-21\042F0901.D
Operator : TL
Instrument : GC6
Sample Name : 106442-01
Run Time Bar Code:
Acquired on : 24 Jun 21 04:32 PM
Report Created on: 25 Jun 21 09:24 AM

Page Number : 1
Vial Number : 42
Injection Number : 1
Sequence Line : 9
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



```
Data File Name   : C:\HPCHEM\6\DATA\06-24-21\013F0301.D
Operator         : TL                              Page Number      : 1
Instrument       : GC6                             Vial Number      : 13
Sample Name      : 01-1486 mb                      Injection Number : 1
Run Time Bar Code:                                 Sequence Line    : 3
Acquired on      : 24 Jun 21  09:00 AM             Instrument Method: DX.MTH
Report Created on: 25 Jun 21  09:25 AM             Analysis Method  : DEFAULT.MTH
```



Data File Name : C:\HPCHEM\6\DATA\06-24-21\003F0201.D
Operator : TL
Instrument : GC6
Sample Name : 500 Dx 63-79C
Run Time Bar Code:
Acquired on : 24 Jun 21 05:57 AM
Report Created on: 25 Jun 21 09:25 AM

Page Number : 1
Vial Number : 3
Injection Number : 1
Sequence Line : 2
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Floyd | Snider
Gabe Cisneros
601 Union St., Suite 600
Seattle, WA 98101

RE: CL- Ellensburg
Work Order Number: 2106194

June 18, 2021

Attention Gabe Cisneros:

Fremont Analytical, Inc. received 4 sample(s) on 6/11/2021 for the analyses presented in the following report.

Ion Chromatography by EPA Method 300.0
Sample Moisture (Percent Moisture)
Total Metals by EPA Method 6020B
Total Phosphorus by EPA Method 6020

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

CC:
Kristin Anderson

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Original

Date: *06/18/2021*

CLIENT: Floyd | Snider
Project: CL- Ellensburg
Work Order: 2106194

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2106194-001	DU4A-06102021	06/10/2021 9:35 AM	06/11/2021 8:36 AM
2106194-002	DU4B-06102021	06/10/2021 9:45 AM	06/11/2021 8:36 AM
2106194-003	DU5A-06102021	06/10/2021 4:10 PM	06/11/2021 8:36 AM
2106194-004	DU5B-06102021	06/10/2021 4:20 PM	06/11/2021 8:36 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **2106194**

Date: **6/18/2021**

CLIENT: Floyd | Snider

Project: CL- Ellensburg

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
DUP - Sample Duplicate
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MCL - Maximum Contaminant Level
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
REP - Sample Replicate
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

Work Order: **2106194**
Date Reported: **6/18/2021**

Client: Floyd | Snider
Project: CL- Ellensburg
Lab ID: 2106194-001
Client Sample ID: **DU4A-06102021**

Collection Date: 6/10/2021 9:35:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ion Chromatography by EPA Method 300.0				Batch ID: 32652		Analyst: TN
Nitrite (as N)	ND	1.29		mg/Kg-dry	1	6/14/2021 6:42:00 PM
Nitrate (as N)	ND	1.61		mg/Kg-dry	1	6/14/2021 6:42:00 PM
Total Phosphorus by EPA Method 6020				Batch ID: 32648		Analyst: EH
Phosphorus	624	15.8		mg/Kg-dry	1	6/16/2021 5:56:10 PM
Total Metals by EPA Method 6020B				Batch ID: 32648		Analyst: EH
Potassium	649	19.8		mg/Kg-dry	1	6/16/2021 5:56:10 PM
Sample Moisture (Percent Moisture)				Batch ID: R67897		Analyst: OK
Percent Moisture	7.14	0.500		wt%	1	6/14/2021 12:05:27 PM

Analytical Report

Work Order: **2106194**
Date Reported: **6/18/2021**

Client: Floyd | Snider
Project: CL- Ellensburg
Lab ID: 2106194-002
Client Sample ID: **DU4B-06102021**

Collection Date: 6/10/2021 9:45:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ion Chromatography by EPA Method 300.0				Batch ID: 32652		Analyst: TN
Nitrite (as N)	ND	1.29		mg/Kg-dry	1	6/14/2021 7:05:00 PM
Nitrate (as N)	ND	1.61		mg/Kg-dry	1	6/14/2021 7:05:00 PM
Total Phosphorus by EPA Method 6020				Batch ID: 32648		Analyst: EH
Phosphorus	713	18.0		mg/Kg-dry	1	6/16/2021 6:01:44 PM
Total Metals by EPA Method 6020B				Batch ID: 32648		Analyst: EH
Potassium	712	22.5		mg/Kg-dry	1	6/16/2021 6:01:44 PM
Sample Moisture (Percent Moisture)				Batch ID: R67897		Analyst: OK
Percent Moisture	7.49	0.500		wt%	1	6/14/2021 12:05:27 PM

Analytical Report

Work Order: **2106194**
Date Reported: **6/18/2021**

Client: Floyd | Snider
Project: CL- Ellensburg
Lab ID: 2106194-003
Client Sample ID: **DU5A-06102021**

Collection Date: 6/10/2021 4:10:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ion Chromatography by EPA Method 300.0				Batch ID: 32652		Analyst: TN
Nitrite (as N)	ND	1.29		mg/Kg-dry	1	6/14/2021 8:38:00 PM
Nitrate (as N)	ND	1.62		mg/Kg-dry	1	6/14/2021 8:38:00 PM
Total Phosphorus by EPA Method 6020				Batch ID: 32648		Analyst: EH
Phosphorus	646	15.9		mg/Kg-dry	1	6/16/2021 6:07:18 PM
Total Metals by EPA Method 6020B				Batch ID: 32648		Analyst: EH
Potassium	441	19.8		mg/Kg-dry	1	6/16/2021 6:07:18 PM
Sample Moisture (Percent Moisture)				Batch ID: R67897		Analyst: OK
Percent Moisture	8.69	0.500		wt%	1	6/14/2021 12:05:27 PM

Client: Floyd | Snider
Project: CL- Ellensburg
Lab ID: 2106194-004
Client Sample ID: **DU5B-06102021**

Collection Date: 6/10/2021 4:20:00 PM

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ion Chromatography by EPA Method 300.0				Batch ID: 32652		Analyst: TN
Nitrite (as N)	ND	1.45		mg/Kg-dry	1	6/14/2021 9:01:00 PM
Nitrate (as N)	ND	1.81		mg/Kg-dry	1	6/14/2021 9:01:00 PM
Total Phosphorus by EPA Method 6020				Batch ID: 32648		Analyst: EH
Phosphorus	611	19.2		mg/Kg-dry	1	6/16/2021 6:12:52 PM
Total Metals by EPA Method 6020B				Batch ID: 32648		Analyst: EH
Potassium	655	24.1		mg/Kg-dry	1	6/16/2021 6:12:52 PM
Sample Moisture (Percent Moisture)				Batch ID: R67897		Analyst: OK
Percent Moisture	18.2	0.500		wt%	1	6/14/2021 12:05:27 PM

Work Order: 2106194
CLIENT: Floyd | Snider
Project: CL- Ellensburg

QC SUMMARY REPORT

Ion Chromatography by EPA Method 300.0

Sample ID: **MB-32652** SampType: **MBLK** Units: **mg/Kg** Prep Date: **6/14/2021** RunNo: **67923**
Client ID: **MBLKS** Batch ID: **32652** Analysis Date: **6/14/2021** SeqNo: **1370747**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	ND	1.20									
Nitrate (as N)	ND	1.50									

Sample ID: **LCS-32652** SampType: **LCS** Units: **mg/Kg** Prep Date: **6/14/2021** RunNo: **67923**
Client ID: **LCSS** Batch ID: **32652** Analysis Date: **6/14/2021** SeqNo: **1370748**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	7.13	1.20	7.500	0	95.1	90	110				
Nitrate (as N)	7.07	1.50	7.500	0	94.3	90	110				

Sample ID: **2106194-002ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **6/14/2021** RunNo: **67923**
Client ID: **DU4B-06102021** Batch ID: **32652** Analysis Date: **6/14/2021** SeqNo: **1370752**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	ND	1.29						0		30	
Nitrate (as N)	ND	1.61						0		30	

Sample ID: **2106194-002AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **6/14/2021** RunNo: **67923**
Client ID: **DU4B-06102021** Batch ID: **32652** Analysis Date: **6/14/2021** SeqNo: **1370753**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	7.64	1.29	8.083	0	94.5	80	120				
Nitrate (as N)	8.52	1.62	8.083	1.257	89.9	80	120				

Work Order: 2106194
CLIENT: Floyd | Snider
Project: CL- Ellensburg

QC SUMMARY REPORT

Ion Chromatography by EPA Method 300.0

Sample ID: **2106194-002AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **6/14/2021** RunNo: **67923**
Client ID: **DU4B-06102021** Batch ID: **32652** Analysis Date: **6/14/2021** SeqNo: **1370754**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	7.76	1.29	8.069	0	96.1	80	120	7.641	1.51	30	
Nitrate (as N)	8.19	1.61	8.069	1.257	85.9	80	120	8.525	4.04	30	

Work Order: 2106194
CLIENT: Floyd | Snider
Project: CL- Ellensburg

QC SUMMARY REPORT

Total Phosphorus by EPA Method 6020

Sample ID: **MB-32648** SampType: **MBLK** Units: **mg/Kg** Prep Date: **6/14/2021** RunNo: **68021**
Client ID: **MBLKS** Batch ID: **32648** Analysis Date: **6/15/2021** SeqNo: **1372768**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	ND	16.4									

Sample ID: **LCS-32648** SampType: **LCS** Units: **mg/Kg** Prep Date: **6/14/2021** RunNo: **68021**
Client ID: **LCSS** Batch ID: **32648** Analysis Date: **6/15/2021** SeqNo: **1372769**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	393	16.3	406.5	0	96.8	80	120				

Sample ID: **2106127-006AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **6/14/2021** RunNo: **68021**
Client ID: **BATCH** Batch ID: **32648** Analysis Date: **6/15/2021** SeqNo: **1372772**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	748	18.2	454.9	359.9	85.3	75	125				

Sample ID: **2106127-006AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **6/14/2021** RunNo: **68021**
Client ID: **BATCH** Batch ID: **32648** Analysis Date: **6/15/2021** SeqNo: **1372773**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phosphorus	812	18.1	451.4	359.9	100	75	125	748.1	8.23	20	

Work Order: 2106194
CLIENT: Floyd | Snider
Project: CL- Ellensburg

QC SUMMARY REPORT

Total Metals by EPA Method 6020B

Sample ID: **MB-32648** SampType: **MBLK** Units: **mg/Kg** Prep Date: **6/14/2021** RunNo: **67948**
Client ID: **MBLKS** Batch ID: **32648** Analysis Date: **6/15/2021** SeqNo: **1371487**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	ND	20.5									

Sample ID: **LCS-32648** SampType: **LCS** Units: **mg/Kg** Prep Date: **6/14/2021** RunNo: **67948**
Client ID: **LCSS** Batch ID: **32648** Analysis Date: **6/15/2021** SeqNo: **1371488**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	401	20.3	406.5	0	98.6	80	120				

Sample ID: **2106127-006AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **6/14/2021** RunNo: **67948**
Client ID: **BATCH** Batch ID: **32648** Analysis Date: **6/15/2021** SeqNo: **1371491**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	719	22.7	454.9	344.8	82.2	75	125				

Sample ID: **2106127-006AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **6/14/2021** RunNo: **67948**
Client ID: **BATCH** Batch ID: **32648** Analysis Date: **6/15/2021** SeqNo: **1371492**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	792	22.6	451.4	344.8	99.1	75	125	718.6	9.71	20	

Sample Log-In Check List

Client Name: **FS**

Work Order Number: **2106194**

Logged by: **Gabrielle Coeuille**

Date Received: **6/11/2021 8:36:00 AM**

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes ☑ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☑ No ☐
5. Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact) Yes ☑ No ☐ Not Present ☐
6. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
7. Were all items received at a temperature of >2°C to 6°C * Yes ☑ No ☐ NA ☐
8. Sample(s) in proper container(s)? Yes ☑ No ☐
9. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
10. Are samples properly preserved? Yes ☑ No ☐
11. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
12. Is there headspace in the VOA vials? Yes ☐ No ☐ NA ☑
13. Did all samples containers arrive in good condition(unbroken)? Yes ☑ No ☐
14. Does paperwork match bottle labels? Yes ☑ No ☐
15. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
16. Is it clear what analyses were requested? Yes ☑ No ☐
17. Were all holding times able to be met? Yes ☑ No ☐

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

19. Additional remarks:

Item Information

Item #	Temp ºC
Sample 1	3.7

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Fremont Analytical

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 6/11/21 **Page:** 1 **of:** 1

Laboratory Project No (internal): 2106194

Special Remarks:

Project Name: CL - Ellensburg

Project No: " "

Client: Floyd Snider

Address: 601 Union St, Ste 600

City, State, Zip: Seattle, WA 98101

Telephone: 206-292-2078

~~**Fax:** gabe.cisneros@floydsnider.com~~

Collected by: K Anderson

Location: Ellensburg BigB

Report To (PM): Gabe Cisneros

PM Email: gabe.cisneros@floydsnider.com (cc kristin.anderson@floydsnider.com)

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	Nitrogen, Phosphorous Potassium				Comments
1 DU4A-06102021	6/10/21	0935	S	1													X				
2 DU4B-06102021	↓	0945	↓	1													X				
3 DU5A-06102021		1610		1													X				
4 DU5B-06102021		1620		1													X				
5																					
6																					
7																					
8																					
9																					
10																					

***Matrix:** A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

****Metals (Circle):** MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl V Zn

*****Anions (Circle):** Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Turn-around Time:

☒ Standard ☐ Next Day

☐ 3 Day ☐ Same Day

☐ 2 Day ______ (specify)

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x	Kristin Anderson	6/11/21 0831	x	O Overhou	6/11/21 0836

Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x			x		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 20, 2021

Gabriel Cisneros, Project Manager
Floyd-Snider
Two Union Square
601 Union St, Suite 600
Seattle, WA 98101

Dear Mr Cisneros:

Included are the results from the testing of material submitted on October 12, 2021 from the CL-Ellensburg, F&BI 110210 project. There are 39 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 should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: manique.talaia-murray@floydsnider.com
FDS1020R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 12, 2021 by Friedman & Bruya, Inc. from the Floyd-Snider CL-Ellensburg, F&BI 110210 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Floyd-Snider
110210 -01	DU-01-1-101121
110210 -02	DU-01-2-101121
110210 -03	DU-01-3-101121
110210 -04	DU-02-1-101121
110210 -05	DU-02-2-101121
110210 -06	DU-02-3-101121
110210 -07	DU-4A-1-101121
110210 -08	DU-4A-2-101121
110210 -09	DU-4A-3-101121
110210 -10	DU-4B-1-101121
110210 -11	DU-4B-2-101121
110210 -12	DU-4B-3-101121
110210 -13	DU-5A-1-101121
110210 -14	DU-5A-2-101121
110210 -15	DU-5A-3-101121
110210 -16	DU-5B-1-101121
110210 -17	DU-5B-2-101121
110210 -18	DU-5B-3-101121
110210 -19	DU-100-1-101121
110210 -20	DU-200-1-101121
110210 -21	DU-03-1-101121
110210 -22	DU-03-2-101121
110210 -23	DU-03-3-101121
110210 -24	Trip Blank

All quality control requirements were acceptable.

Date of Report: 10/20/21
Date Received: 10/12/21
Project: CL-Ellensburg, F&BI 110210
Date Extracted: 10/12/21
Date Analyzed: 10/12/21, 10/13/21 and 10/14/21

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 58-139)
DU-01-1-101121 110210-01	110	114
DU-01-2-101121 110210-02	140	121
DU-01-3-101121 110210-03	77	114
DU-02-1-101121 110210-04	110	124
DU-02-2-101121 110210-05	81	113
DU-02-3-101121 110210-06	59	109
DU-4A-1-101121 110210-07	65	115
DU-4A-2-101121 110210-08	69	115
DU-4A-3-101121 110210-09	24	102
DU-4B-1-101121 110210-10	99	110

Date of Report: 10/20/21
Date Received: 10/12/21
Project: CL-Ellensburg, F&BI 110210
Date Extracted: 10/12/21
Date Analyzed: 10/12/21, 10/13/21 and 10/14/21

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 58-139)
DU-4B-2-101121 110210-11	74	107
DU-4B-3-101121 110210-12	60	119
DU-5A-1-101121 110210-13	100	105
DU-5A-2-101121 110210-14	150	121
DU-5A-3-101121 110210-15	150	125
DU-5B-1-101121 110210-16	85	109
DU-5B-2-101121 110210-17	93	117
DU-5B-3-101121 110210-18	50	107
DU-100-1-101121 110210-19	150	129
DU-200-1-101121 110210-20	83	114

Date of Report: 10/20/21
Date Received: 10/12/21
Project: CL-Ellensburg, F&BI 110210
Date Extracted: 10/12/21
Date Analyzed: 10/12/21, 10/13/21 and 10/14/21

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 58-139)
DU-03-1-101121 110210-21	85	122
DU-03-2-101121 110210-22	110	126
DU-03-3-101121 110210-23	160	ip
Method Blank 01-2297 MB	<5	101
Method Blank 01-2299 MB	<5	103

Date of Report: 10/20/21
Date Received: 10/12/21
Project: CL-Ellensburg, F&BI 110210
Date Extracted: 10/15/21
Date Analyzed: 10/15/21

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 53-144)
DU-01-1-101121 110210-01	3,600	<250	115
DU-01-2-101121 110210-02	3,600	<250	115
DU-01-3-101121 110210-03	3,500	<250	115
DU-02-1-101121 110210-04	730	<250	100
DU-02-2-101121 110210-05	1,900	<250	103
DU-02-3-101121 110210-06	1,800	<250	106
DU-4A-1-101121 110210-07	2,000	<250	104
DU-4A-2-101121 110210-08	1,900	<250	103
DU-4A-3-101121 110210-09	1,400	<250	109
DU-4B-1-101121 110210-10	3,100	<250	111

Date of Report: 10/20/21
Date Received: 10/12/21
Project: CL-Ellensburg, F&BI 110210
Date Extracted: 10/15/21
Date Analyzed: 10/15/21

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 53-144)
DU-4B-2-101121 110210-11	2,900	<250	108
DU-4B-3-101121 110210-12	2,600	<250	117
DU-5A-1-101121 110210-13	2,400	<250	98
DU-5A-2-101121 110210-14	2,200	<250	102
DU-5A-3-101121 110210-15	1,800	<250	92
DU-5B-1-101121 110210-16	1,500	<250	103
DU-5B-2-101121 110210-17	1,100	<250	105
DU-5B-3-101121 110210-18	1,100	<250	101
DU-100-1-101121 110210-19	1,000	<250	97
DU-200-1-101121 110210-20	1,500	<250	108

Date of Report: 10/20/21
Date Received: 10/12/21
Project: CL-Ellensburg, F&BI 110210
Date Extracted: 10/15/21
Date Analyzed: 10/15/21

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 53-144)
DU-03-1-101121 110210-21	1,000	<250	98
DU-03-2-101121 110210-22	2,100	<250	106
DU-03-3-101121 110210-23	2,000	<250	105
Method Blank 01-2416 MB	<50	<250	100
Method Blank 01-2417 MB	<50	<250	100

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU-01-1-101121	Client:	Floyd-Snider
Date Received:	10/12/21	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/13/21	Lab ID:	110210-01
Date Analyzed:	10/13/21	Data File:	101307.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	90	109
Toluene-d8	107	89	112
4-Bromofluorobenzene	100	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.15

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU-01-2-101121	Client:	Floyd-Snider
Date Received:	10/12/21	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/13/21	Lab ID:	110210-02
Date Analyzed:	10/13/21	Data File:	101308.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	90	109
Toluene-d8	102	89	112
4-Bromofluorobenzene	95	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU-01-3-101121	Client:	Floyd-Snider
Date Received:	10/12/21	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/13/21	Lab ID:	110210-03
Date Analyzed:	10/13/21	Data File:	101311.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	90	109
Toluene-d8	101	89	112
4-Bromofluorobenzene	95	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.065

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU-02-1-101121	Client:	Floyd-Snider
Date Received:	10/12/21	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/13/21	Lab ID:	110210-04
Date Analyzed:	10/13/21	Data File:	101312.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	90	109
Toluene-d8	105	89	112
4-Bromofluorobenzene	99	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.077

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU-02-2-101121	Client:	Floyd-Snider
Date Received:	10/12/21	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/13/21	Lab ID:	110210-05
Date Analyzed:	10/13/21	Data File:	101313.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	110	90	109
Toluene-d8	109	89	112
4-Bromofluorobenzene	97	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.064

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU-02-3-101121	Client:	Floyd-Snider
Date Received:	10/12/21	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/13/21	Lab ID:	110210-06
Date Analyzed:	10/13/21	Data File:	101314.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	90	109
Toluene-d8	110	89	112
4-Bromofluorobenzene	99	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU-4A-1-101121	Client:	Floyd-Snider
Date Received:	10/12/21	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/13/21	Lab ID:	110210-07
Date Analyzed:	10/13/21	Data File:	101317.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	90	109
Toluene-d8	104	89	112
4-Bromofluorobenzene	97	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.12

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU-4A-2-101121	Client:	Floyd-Snider
Date Received:	10/12/21	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/13/21	Lab ID:	110210-08
Date Analyzed:	10/13/21	Data File:	101318.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	90	109
Toluene-d8	104	89	112
4-Bromofluorobenzene	95	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.10

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU-4A-3-101121	Client:	Floyd-Snider
Date Received:	10/12/21	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/13/21	Lab ID:	110210-09
Date Analyzed:	10/13/21	Data File:	101319.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	90	109
Toluene-d8	105	89	112
4-Bromofluorobenzene	98	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.099

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU-4B-1-101121	Client:	Floyd-Snider
Date Received:	10/12/21	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/13/21	Lab ID:	110210-10
Date Analyzed:	10/14/21	Data File:	101420.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	90	109
Toluene-d8	95	89	112
4-Bromofluorobenzene	96	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.069

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU-4B-2-101121	Client:	Floyd-Snider
Date Received:	10/12/21	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/13/21	Lab ID:	110210-11
Date Analyzed:	10/14/21	Data File:	101421.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	90	109
Toluene-d8	94	89	112
4-Bromofluorobenzene	98	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.069

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU-4B-3-101121	Client:	Floyd-Snider
Date Received:	10/12/21	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/13/21	Lab ID:	110210-12
Date Analyzed:	10/14/21	Data File:	101422.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	90	109
Toluene-d8	94	89	112
4-Bromofluorobenzene	96	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.071

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU-5A-1-101121	Client:	Floyd-Snider
Date Received:	10/12/21	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/13/21	Lab ID:	110210-13
Date Analyzed:	10/14/21	Data File:	101423.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	90	109
Toluene-d8	96	89	112
4-Bromofluorobenzene	98	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU-5A-2-101121	Client:	Floyd-Snider
Date Received:	10/12/21	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/13/21	Lab ID:	110210-14
Date Analyzed:	10/14/21	Data File:	101424.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	90	109
Toluene-d8	97	89	112
4-Bromofluorobenzene	98	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.11

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU-5A-3-101121	Client:	Floyd-Snider
Date Received:	10/12/21	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/13/21	Lab ID:	110210-15
Date Analyzed:	10/14/21	Data File:	101437.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	90	109
Toluene-d8	103	89	112
4-Bromofluorobenzene	101	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.13

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU-5B-1-101121	Client:	Floyd-Snider
Date Received:	10/12/21	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/13/21	Lab ID:	110210-16
Date Analyzed:	10/14/21	Data File:	101438.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	90	109
Toluene-d8	103	89	112
4-Bromofluorobenzene	103	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU-5B-2-101121	Client:	Floyd-Snider
Date Received:	10/12/21	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/13/21	Lab ID:	110210-17
Date Analyzed:	10/14/21	Data File:	101439.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	90	109
Toluene-d8	103	89	112
4-Bromofluorobenzene	100	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU-5B-3-101121	Client:	Floyd-Snider
Date Received:	10/12/21	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/13/21	Lab ID:	110210-18
Date Analyzed:	10/14/21	Data File:	101440.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	90	109
Toluene-d8	100	89	112
4-Bromofluorobenzene	99	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU-100-1-101121	Client:	Floyd-Snider
Date Received:	10/12/21	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/13/21	Lab ID:	110210-19
Date Analyzed:	10/14/21	Data File:	101441.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	90	109
Toluene-d8	101	89	112
4-Bromofluorobenzene	104	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.059

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU-200-1-101121	Client:	Floyd-Snider
Date Received:	10/12/21	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/13/21	Lab ID:	110210-20
Date Analyzed:	10/14/21	Data File:	101442.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	90	109
Toluene-d8	102	89	112
4-Bromofluorobenzene	102	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU-03-1-101121	Client:	Floyd-Snider
Date Received:	10/12/21	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/13/21	Lab ID:	110210-21
Date Analyzed:	10/14/21	Data File:	101443.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	90	109
Toluene-d8	98	89	112
4-Bromofluorobenzene	102	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.16

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU-03-2-101121	Client:	Floyd-Snider
Date Received:	10/12/21	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/13/21	Lab ID:	110210-22
Date Analyzed:	10/14/21	Data File:	101444.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	90	109
Toluene-d8	103	89	112
4-Bromofluorobenzene	101	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.28

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	DU-03-3-101121	Client:	Floyd-Snider
Date Received:	10/12/21	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/13/21	Lab ID:	110210-23
Date Analyzed:	10/14/21	Data File:	101445.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	93	90	109
Toluene-d8	102	89	112
4-Bromofluorobenzene	102	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	0.056
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.27

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Floyd-Snider
Date Received:	Not Applicable	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/13/21	Lab ID:	01-2238 mb
Date Analyzed:	10/13/21	Data File:	101305.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	90	109
Toluene-d8	108	89	112
4-Bromofluorobenzene	95	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Floyd-Snider
Date Received:	Not Applicable	Project:	CL-Ellensburg, F&BI 110210
Date Extracted:	10/14/21	Lab ID:	01-2243 mb
Date Analyzed:	10/14/21	Data File:	101410.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	90	109
Toluene-d8	97	89	112
4-Bromofluorobenzene	98	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Date of Report: 10/20/21
Date Received: 10/12/21
Project: CL-Ellensburg, F&BI 110210

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

Laboratory Code: 110202-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	95	61-153

Date of Report: 10/20/21
Date Received: 10/12/21
Project: CL-Ellensburg, F&BI 110210

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

Laboratory Code: 110210-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	56	81	36 hr

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	110	61-153

Date of Report: 10/20/21
Date Received: 10/12/21
Project: CL-Ellensburg, F&BI 110210

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

Laboratory Code: 110311-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	98	98	64-133	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	92	58-147

Date of Report: 10/20/21
Date Received: 10/12/21
Project: CL-Ellensburg, F&BI 110210

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

Laboratory Code: 110210-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	3,100	108	114	64-133	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	104	58-147

Date of Report: 10/20/21
Date Received: 10/12/21
Project: CL-Ellensburg, F&BI 110210

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

Laboratory Code: 110210-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Benzene	mg/kg (ppm)	1	<0.03	96	96	29-129	0
Toluene	mg/kg (ppm)	1	<0.05	82	76	35-130	8
Ethylbenzene	mg/kg (ppm)	1	<0.05	79	76	32-137	4
m,p-Xylene	mg/kg (ppm)	2	<0.1	81	77	34-136	5
o-Xylene	mg/kg (ppm)	1	<0.05	84	78	33-134	7
Naphthalene	mg/kg (ppm)	1	0.12	68	67	14-157	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	1	106	71-118
Toluene	mg/kg (ppm)	1	89	66-126
Ethylbenzene	mg/kg (ppm)	1	90	64-123
m,p-Xylene	mg/kg (ppm)	2	90	78-122
o-Xylene	mg/kg (ppm)	1	92	77-124
Naphthalene	mg/kg (ppm)	1	89	63-140

Date of Report: 10/20/21
Date Received: 10/12/21
Project: CL-Ellensburg, F&BI 110210

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

Laboratory Code: 110260-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Benzene	mg/kg (ppm)	1	<0.03	82	83	29-129	1
Toluene	mg/kg (ppm)	1	<0.05	85	87	35-130	2
Ethylbenzene	mg/kg (ppm)	1	<0.05	85	86	32-137	1
m,p-Xylene	mg/kg (ppm)	2	<0.1	86	88	34-136	2
o-Xylene	mg/kg (ppm)	1	<0.05	89	90	33-134	1
Naphthalene	mg/kg (ppm)	1	<0.05	88	87	14-157	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	1	112	71-118
Toluene	mg/kg (ppm)	1	111	66-126
Ethylbenzene	mg/kg (ppm)	1	110	64-123
m,p-Xylene	mg/kg (ppm)	2	110	78-122
o-Xylene	mg/kg (ppm)	1	114	77-124
Naphthalene	mg/kg (ppm)	1	112	63-140

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

110210

SAMPLE CHAIN OF CUSTODY ME 10/12/21 VS2/CD2/VW1/C04

Page # 1 of 3

Report To Gabe Cisneros

Company Floyd Snider

Address 601 Union Street, Ste 600

City, State, ZIP Seattle, WA 98101

Phone 206.292.2078 Email gabe.cisneros@floydsnider.com

SAMPLERS (*signature*) Manique T

PROJECT NAME CL-Ellensburg

PO #

REMARKS cc manique.talaia-murray@floydsnider.com w/ results

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

						ANALYSES REQUESTED											
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260 BTEX + naph	PAHs EPA 8270	PCBs EPA 8082					Notes
DU-01-1-101121	01 A-E	10/11/21	0930	Soil	5	X	X			X							
DU-01-2-101121	02	↓	0950	↓	↓	X	X			X							
DU-01-3-101121	03	↓	1005	↓	↓	X	X			X							
DU-02-1-101121	04	↓	1025	↓	↓	X	X			X							
DU-02-2-101121	05	↓	1045	↓	↓	X	X			X							
DU-02-3-101121	06	↓	1100	↓	↓	X	X			X							
DU-4A-1-101121	07	↓	1210	↓	↓	X	X			X							
DU-4A-2-101121	08	↓	1220	↓	↓	X	X			X							
DU-4A-3-101121	09	↓	1230	↓	↓	X	X			X							
DU-4B-1-101121	10	↓	1255			X	X			X							

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Manique Talaia-Murray	FS	10/12/21	0809
Received by:	Nhan Phan	FeBI	10/12/21	0809
Relinquished by:				
Received by:		Samples received at 4 °C		

110210

SAMPLE CHAIN OF CUSTODY

ME 10/12/21 VS2/CI2/VW1/CO4

Page # 2 of 3

Report To Gabe Cisneros

Company Floyd Snider

Address 601 Union Street, Ste 601

City, State, ZIP Seattle, WA 98101

Phone 206.292.2078 Email gabe.cisneros@floydsnider.com

SAMPLERS (*signature*)

PROJECT NAME CL-Ellensburg

PO #

REMARKS
cc ~~Manique~~ manique.talaia-murray@floydsnider.com w/ results

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

						ANALYSES REQUESTED											
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	BTEX + Naph VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082					Notes
DU-4B-2-101121	11 A-E	10/11/21	1305	Soil	5	X	X			X							
DU-4B-3-101121	12		1315			X	X			X							
DU-5A-1-101121	13		1415			X	X			X							
DU-5A-2-101121	14		1430			X	X			X							
DU-5A-3-101121	15		1450			X	X			X							
DU-5B-1-101121	16		1330			X	X			X							
DU-5B-2-101121	17		1350			X	X			X							
DU-5B-3-101121	18		1400			X	X			X							
DU-100-1-101121	19		1035			X	X			X							
DU-200-1-101121	20		1340			X	X			X							

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Manique Talaia-Murray	F/S	10/12/21	0809
Received by:	Nhan Phan	FeBI	10/12/21	0809
Relinquished by:				
Received by:		Samples received at 4 °C		

110210

SAMPLE CHAIN OF CUSTODY ME 10/12/21

VS2/CI2/VW1/C04

Page # 3 of 8

Report To Gabe Cisneros

Company Floyd Snider

Address 601 Union Street, Ste 600

City, State, ZIP Seattle, WA 98101

Phone 206.292.2078 Email gabe.cisneros@ floydsnider.com

SAMPLERS (signature)

PROJECT NAME	PO #
CL-Ellensburg	
REMARKS Project specific RLs? - [✓ Yes] / No	INVOICE TO

TURNAROUND TIME

☒ Standard turnaround

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Archive samples

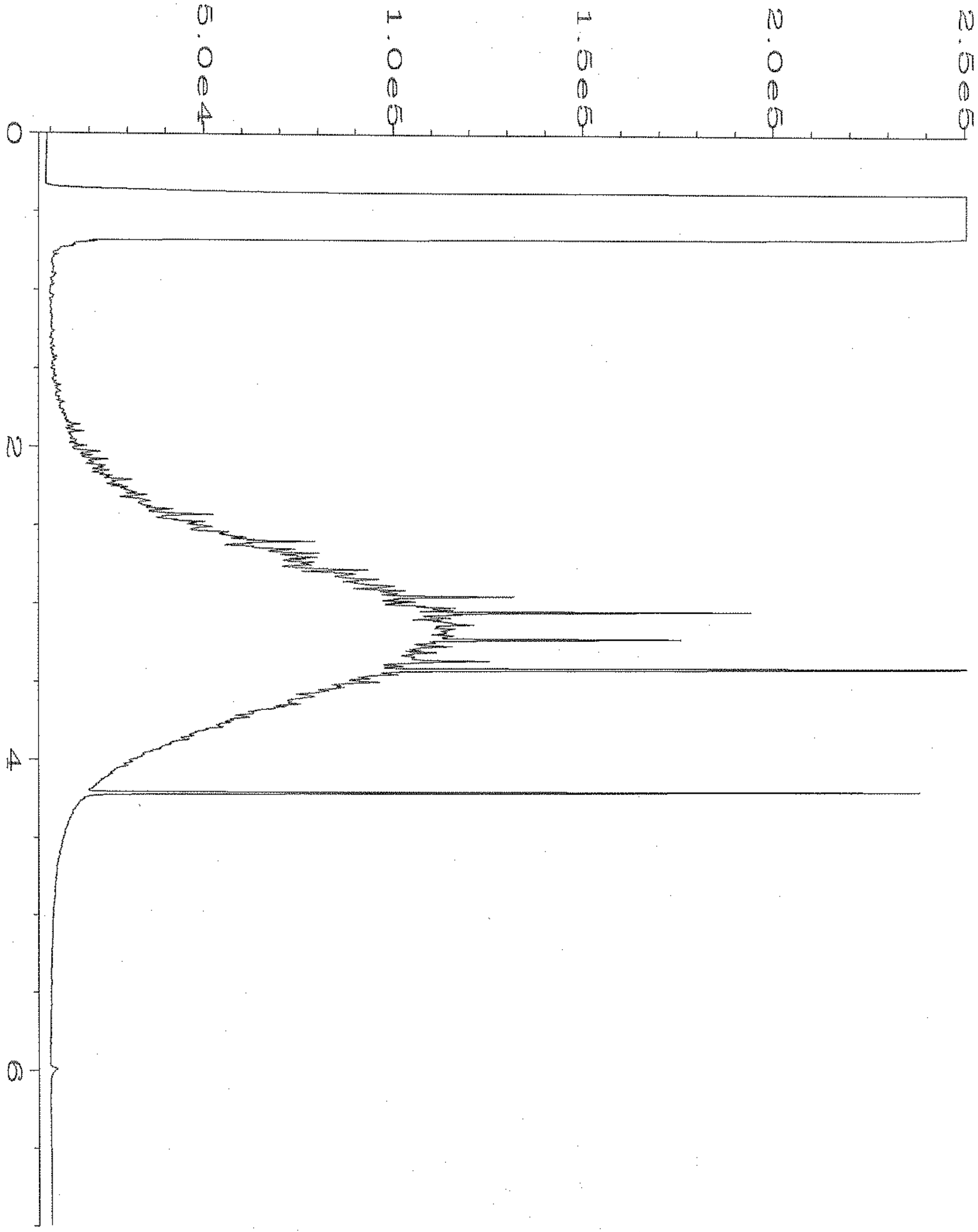
☐ Other

[✓ Default] Dispose after 30 days

						ANALYSES REQUESTED											
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	BTEX + Naph VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082					Notes
DU-03-1-101121	21 A-E	10/11/21	1125	soil	5	X	X			X							
DU-03-2-101121	22 ↓	↓	1135	↓	5	X	X			X							
DU-03-3-101121	23		1145		5	X	X			X							
Trip Blank	24 AB	—	—	water	2												Added at lab NP 10/12/21

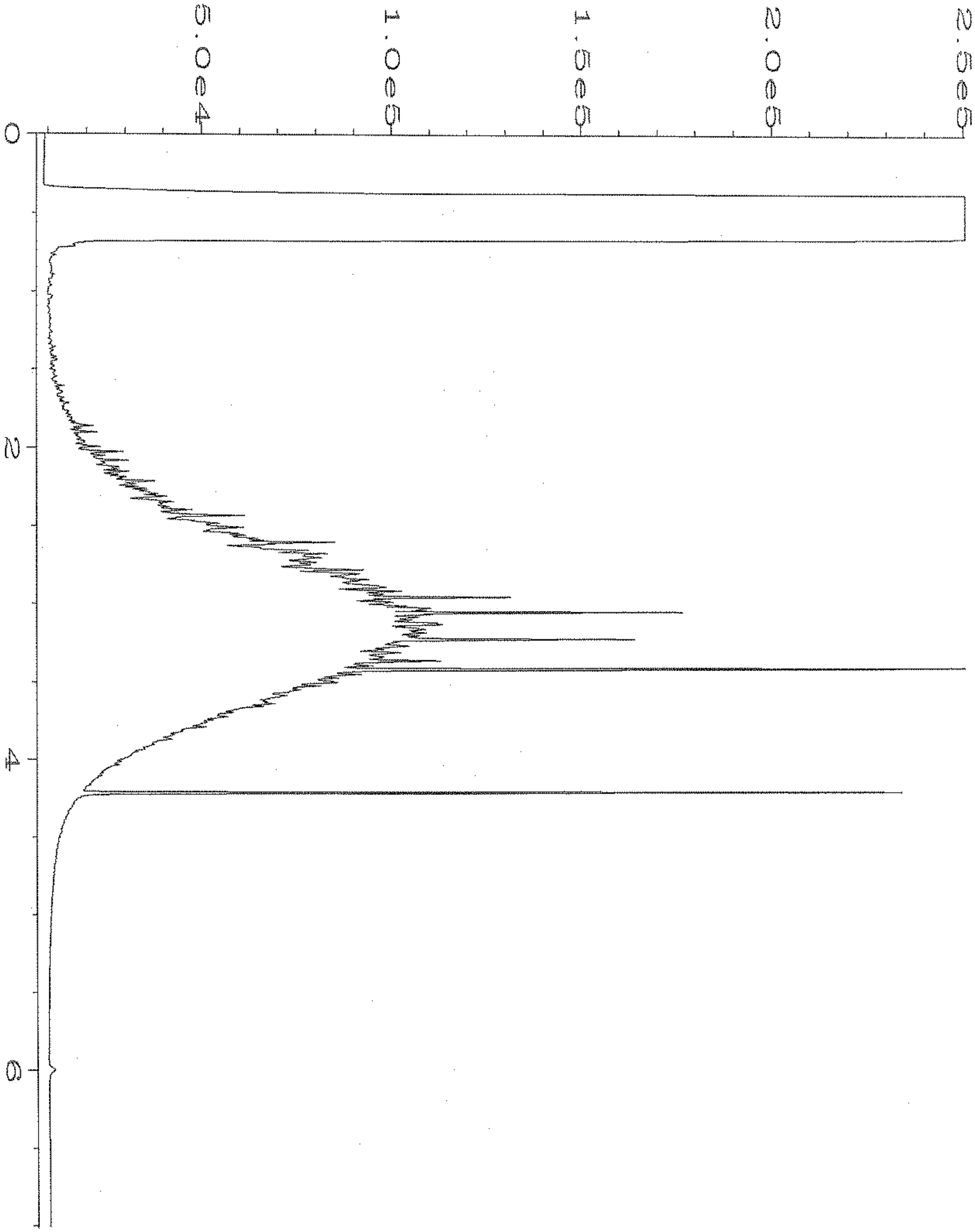
	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Monique Talaia-Murray	F/S	10/12/21	0809
Received by:		Nhan Phan	FeBI	10/12/21	0809
Relinquished by:					
Received by:			Samples received at 4 °C		

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



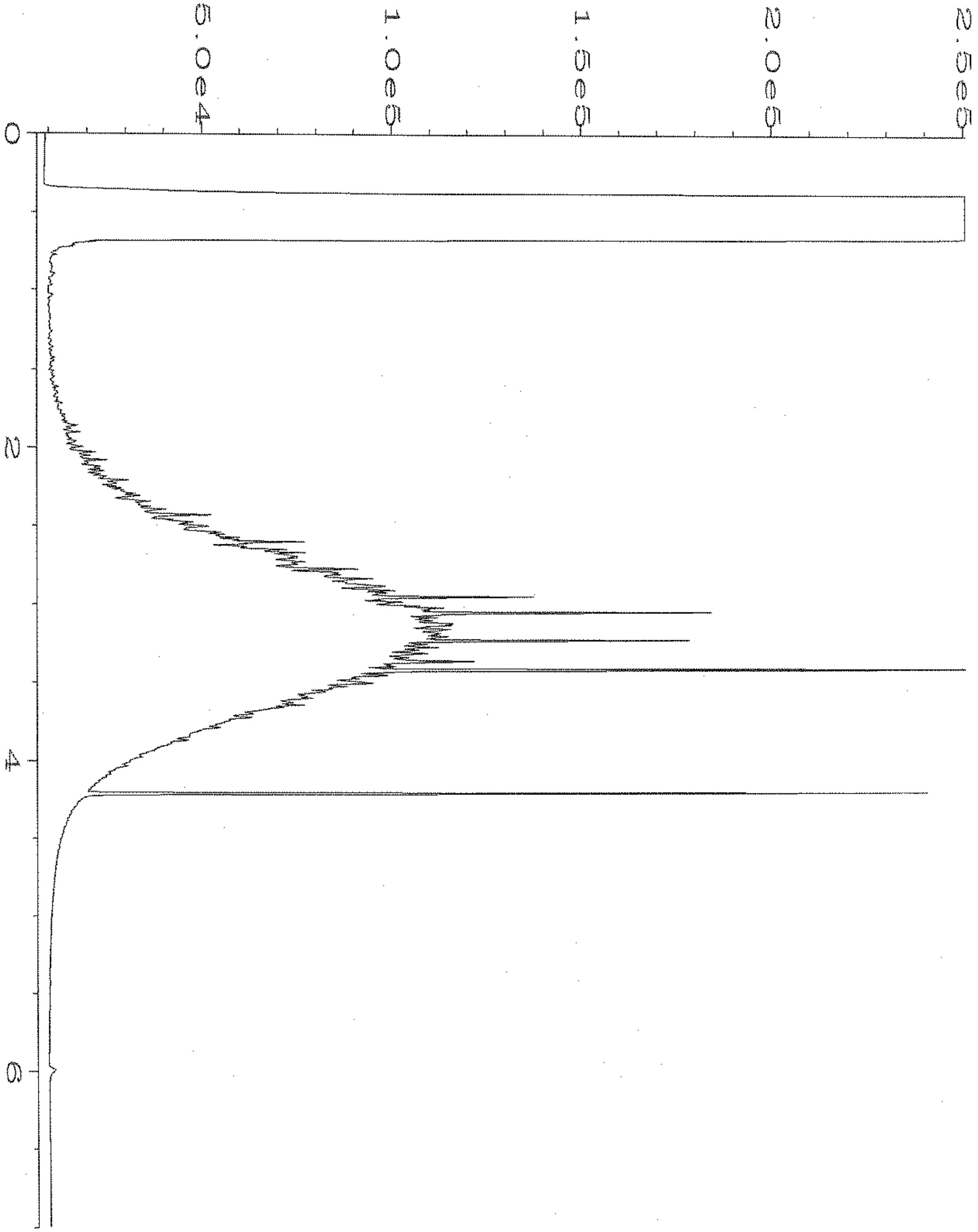
Data File Name   : C:\HPCHEM\6\DATA\10-15-21\037F1701.D
Operator   : TL
Instrument   : GC6
Sample Name   : 110210-01
Run Time Bar Code:
Acquired on   : 15 Oct 21   07:41 PM
Report Created on: 18 Oct 21   08:06 AM

Page Number   : 1
Vial Number   : 37
Injection Number : 1
Sequence Line   : 17
Instrument Method: DX.MTH
Analysis Method   : DEFAULT.MTH



Data File Name   : C:\HPCHEM\6\DATA\10-15-21\038F1701.D
Operator   : TL
Instrument   : GC6
Sample Name   : 110210-02
Run Time Bar Code:
Acquired on   : 15 Oct 21 07:52 PM
Report Created on: 18 Oct 21 08:06 AM

Page Number   : 1
Vial Number   : 38
Injection Number : 1
Sequence Line   : 17
Instrument Method: DX.MTH
Analysis Method   : DEFAULT.MTH



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Operator          : TL                         Page Number       : 1
Instrument        : GC6                        Vial Number       : 39
Sample Name       : 110210-03                  Injection Number  : 1
Run Time Bar Code:                             Sequence Line     : 17
Acquired on       : 15 Oct 21   08:03 PM       Instrument Method: DX.MTH
Report Created on: 18 Oct 21   08:06 AM        Analysis Method   : DEFAULT.MTH
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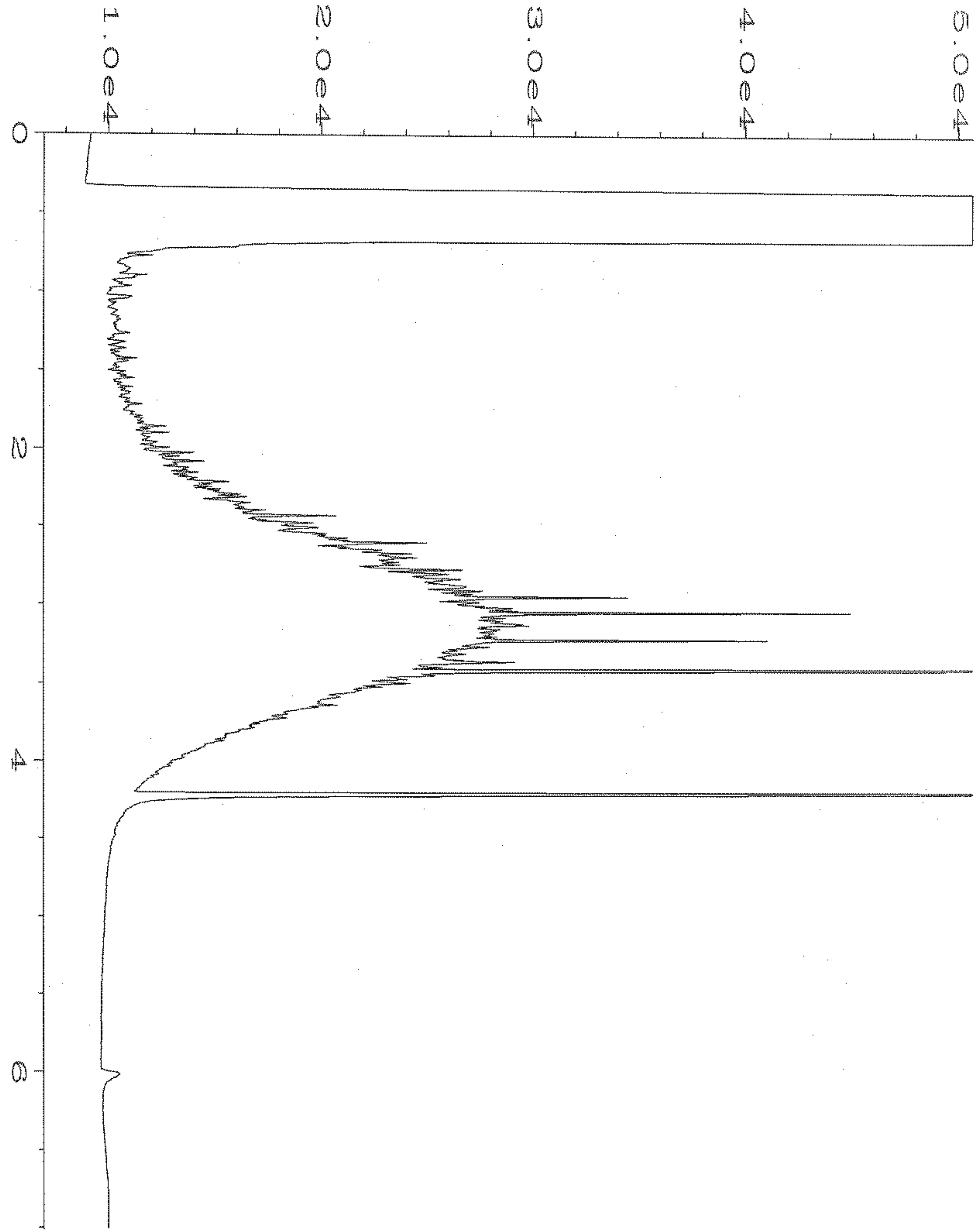
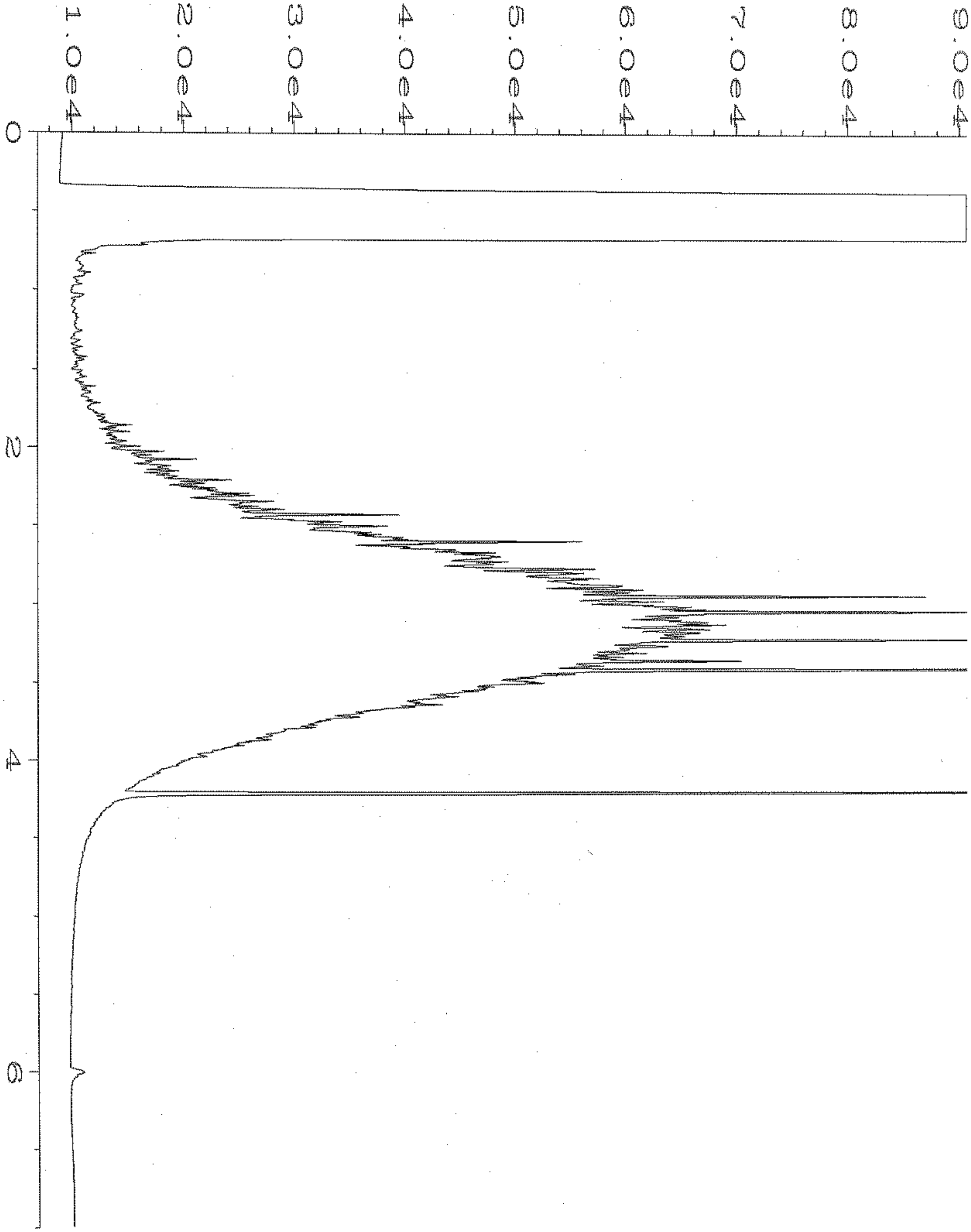
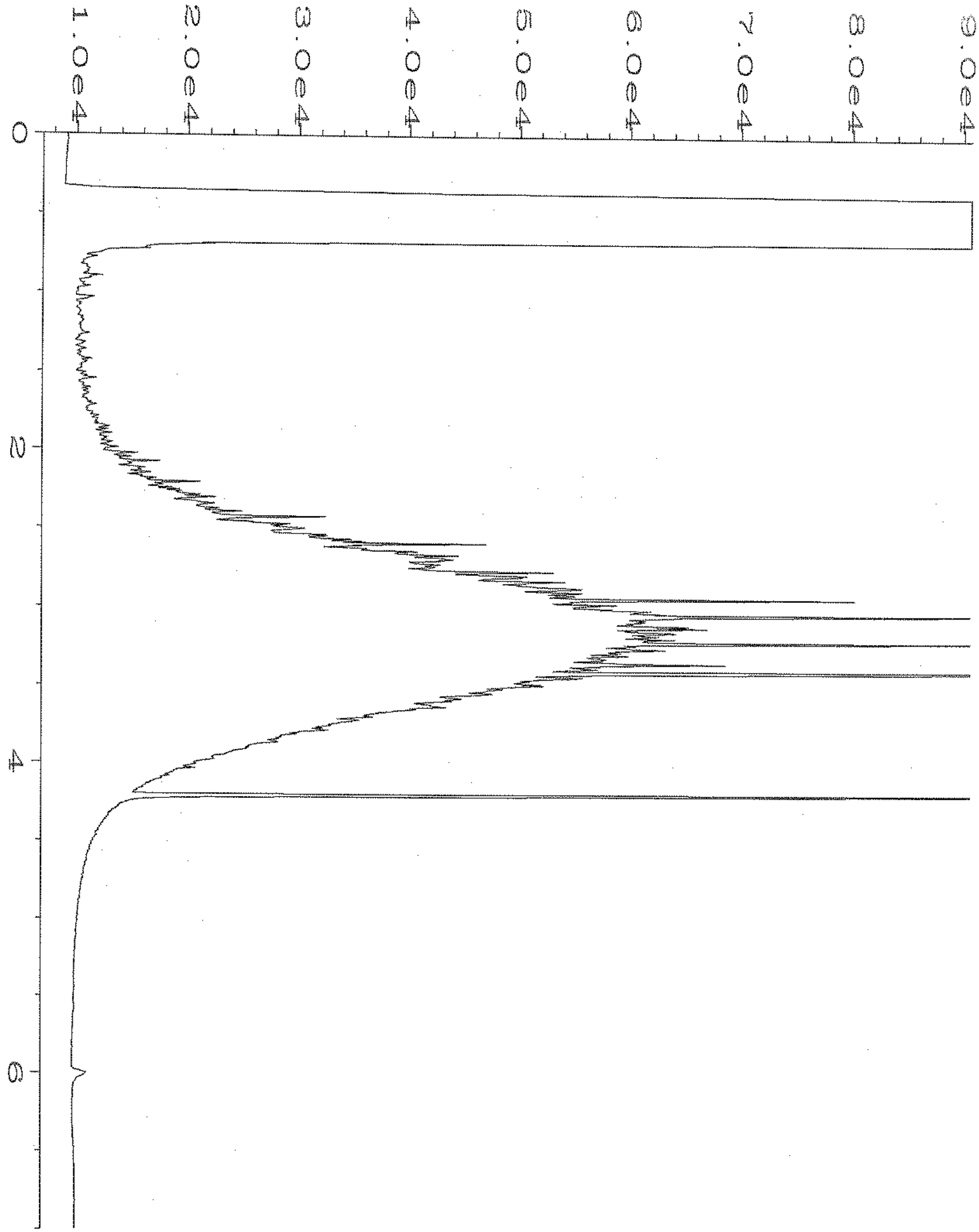


Data File Name : C:\HPCHEM\6\DATA\10-15-21\040F1701.D
Operator : TL
Page Number : 1
Instrument : GC6
Vial Number : 40
Sample Name : 110210-04
Injection Number : 1
Run Time Bar Code:
Sequence Line : 17
Acquired on : 15 Oct 21 08:14 PM
Instrument Method: DX.MTH
Report Created on: 18 Oct 21 08:06 AM
Analysis Method : DEFAULT.MTH



Data File Name : C:\HPCHEM\6\DATA\10-15-21\041F1701.D
Operator : TL
Instrument : GC6
Sample Name : 110210-05
Run Time Bar Code:
Acquired on : 15 Oct 21 08:26 PM
Report Created on: 18 Oct 21 08:07 AM

Page Number : 1
Vial Number : 41
Injection Number : 1
Sequence Line : 17
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



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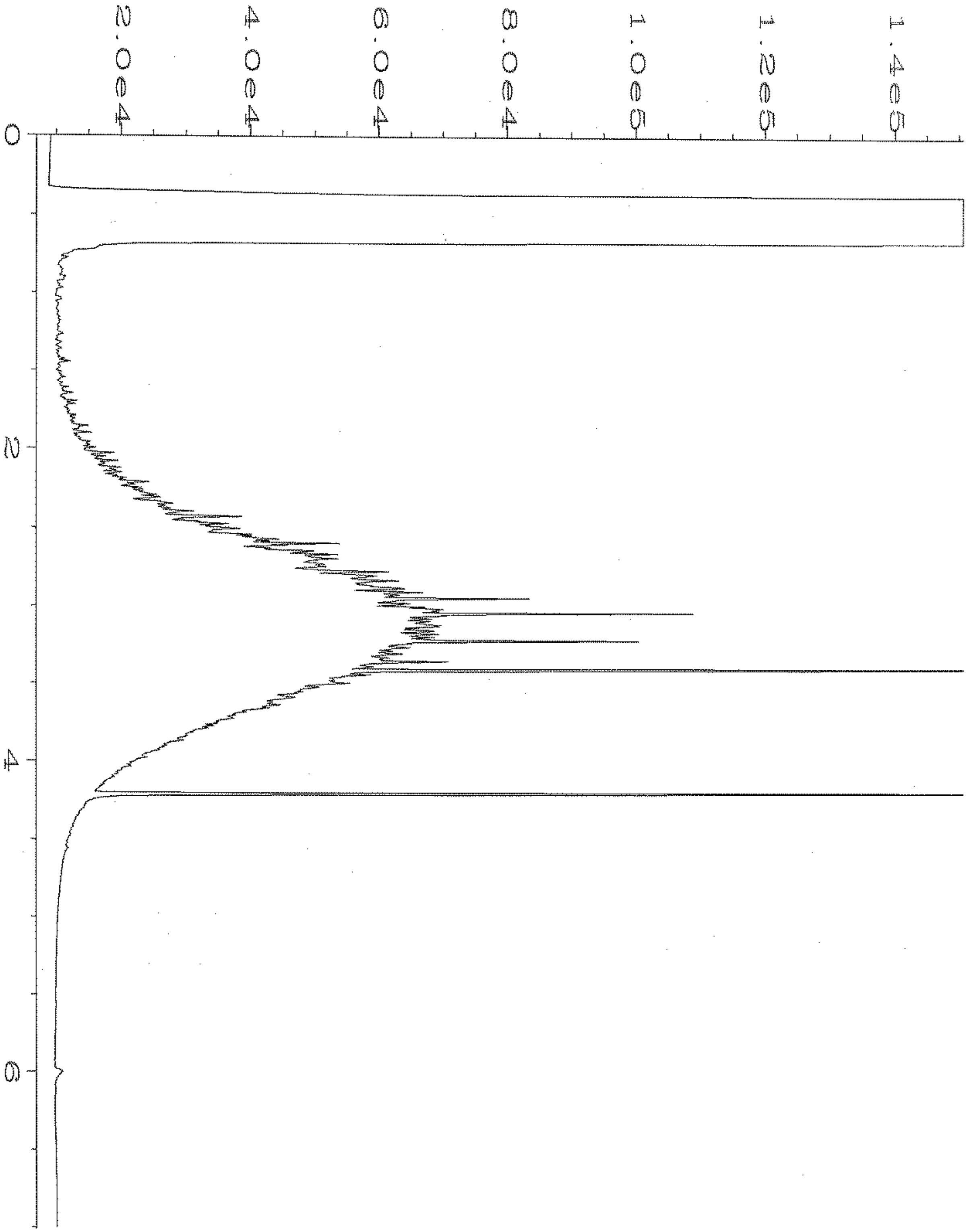
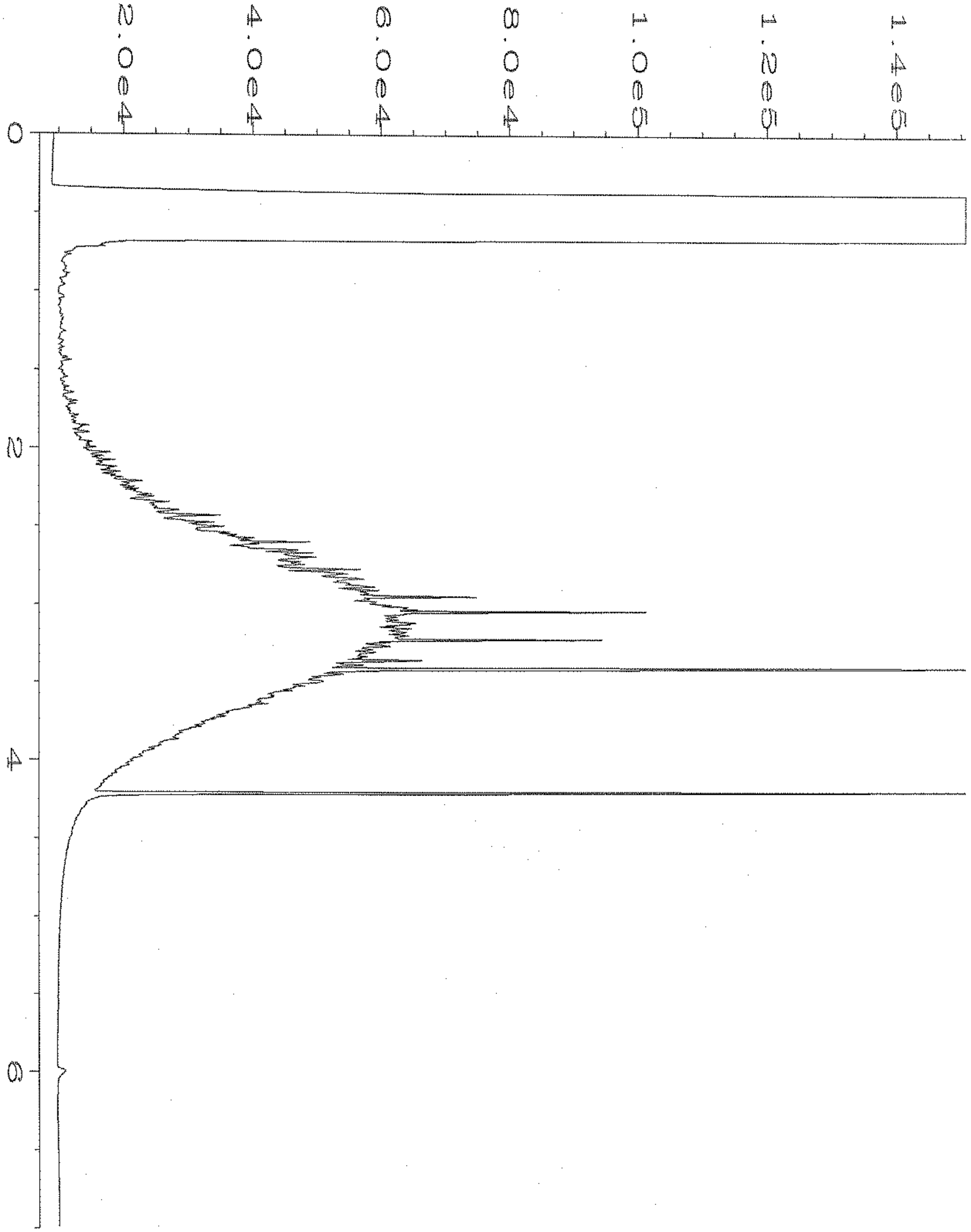
Operator   : TL
Instrument   : GC6
Sample Name   : 110210-06
Run Time Bar Code:
Acquired on   : 15 Oct 21   08:37 PM
Report Created on: 18 Oct 21   08:07 AM

Page Number   : 1
Vial Number   : 42
Injection Number : 1
Sequence Line   : 17
Instrument Method: DX.MTH
Analysis Method   : DEFAULT.MTH

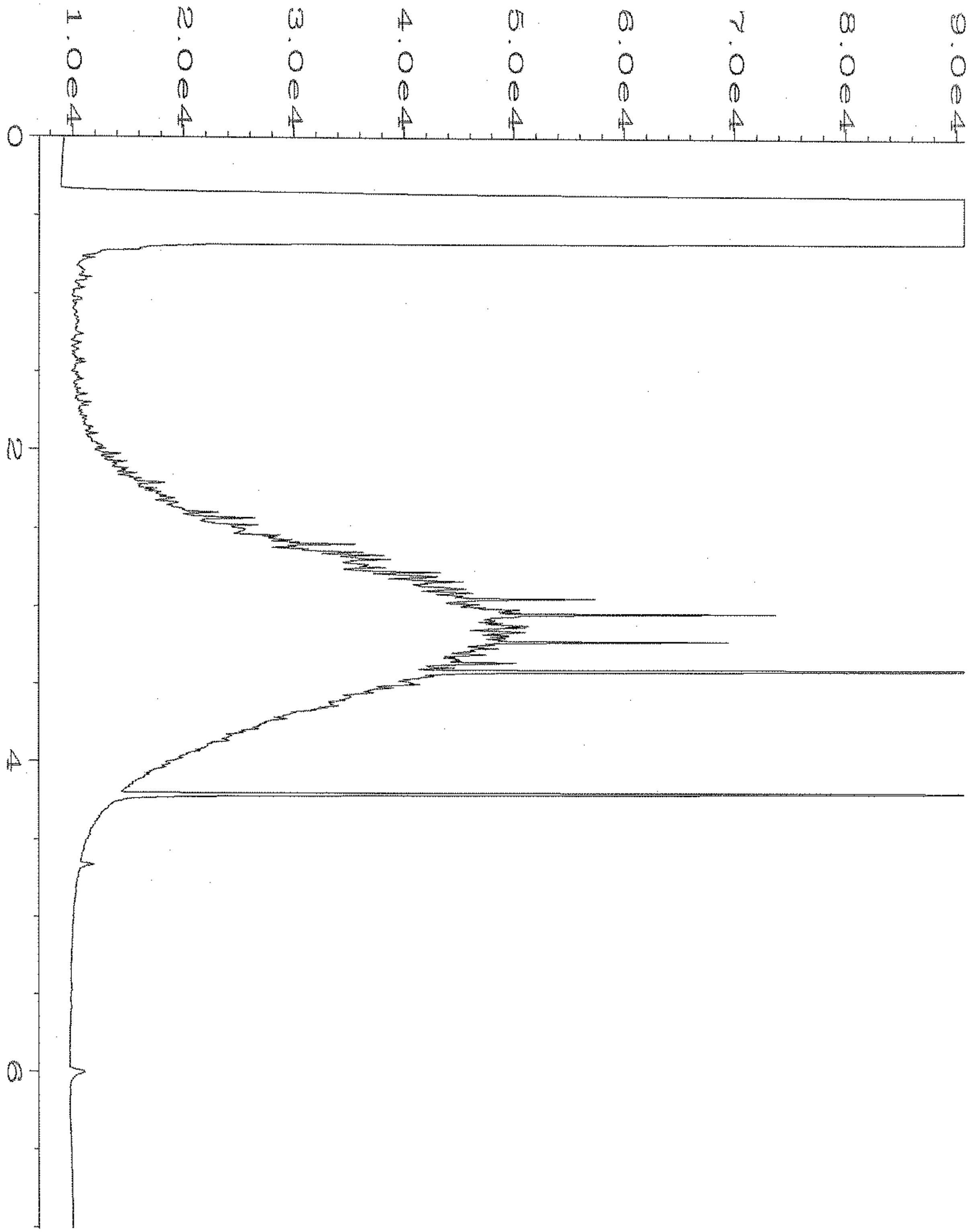


Data File Name : C:\HPCHEM\6\DATA\10-15-21\043F1701.D
Operator : TL
Instrument : GC6
Sample Name : 110210-07
Run Time Bar Code:
Acquired on : 15 Oct 21 08:48 PM
Report Created on: 18 Oct 21 08:07 AM

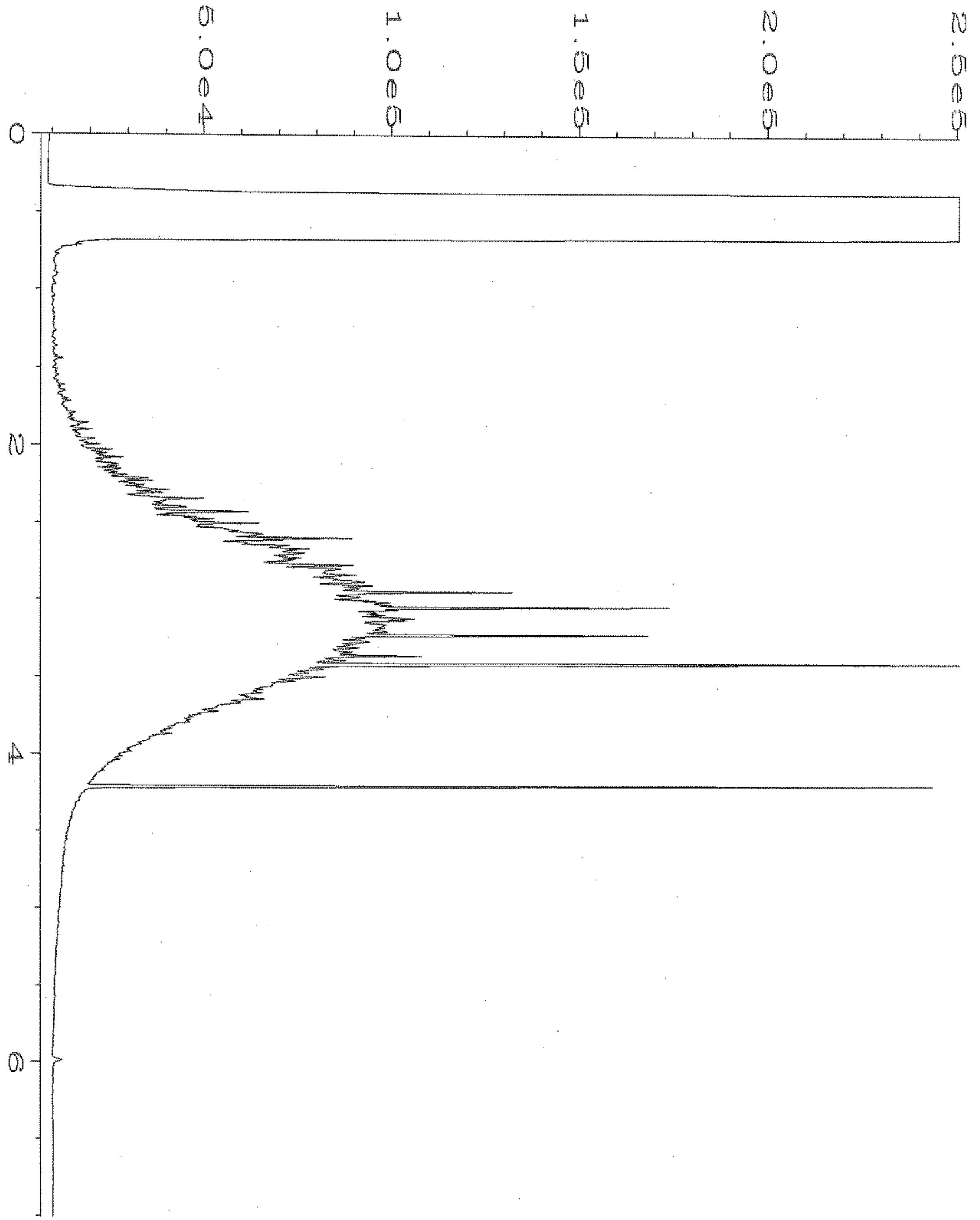
Page Number : 1
Vial Number : 43
Injection Number : 1
Sequence Line : 17
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



```
Data File Name    : C:\HPCHEM\6\DATA\10-15-21\044F1701.D
Operator          : TL                                  Page Number       : 1
Instrument        : GC6                                 Vial Number       : 44
Sample Name       : 110210-08                           Injection Number  : 1
Run Time Bar Code:                                      Sequence Line     : 17
Acquired on       : 15 Oct 21   08:59 PM                Instrument Method: DX.MTH
Report Created on: 18 Oct 21   08:07 AM                 Analysis Method   : DEFAULT.MTH
```

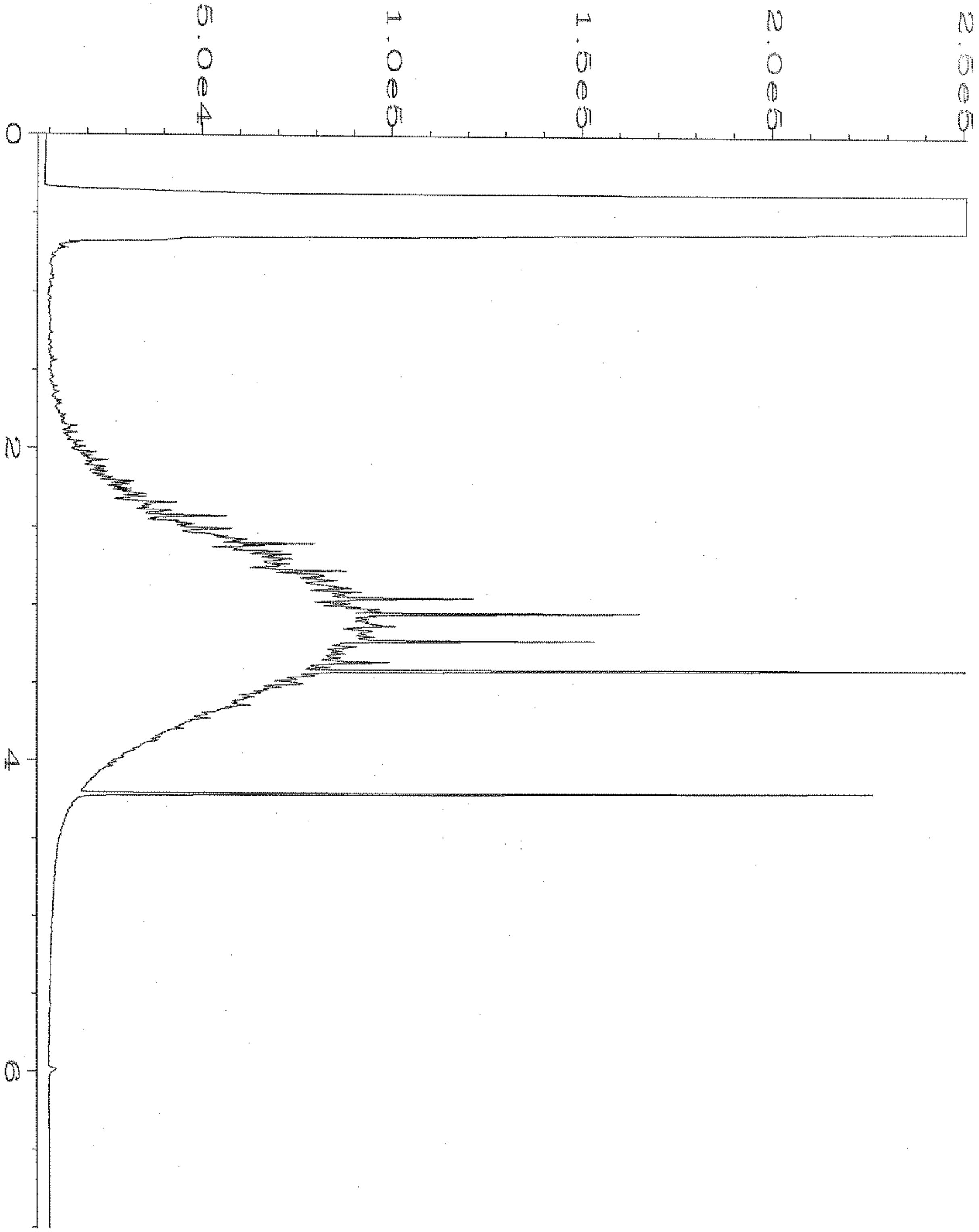


```
Data File Name    : C:\HPCHEM\6\DATA\10-15-21\045F1701.D
Operator          : TL                                   Page Number       : 1
Instrument        : GC6                                  Vial Number       : 45
Sample Name       : 110210-09                            Injection Number : 1
Run Time Bar Code:                                       Sequence Line     : 17
Acquired on       : 15 Oct 21  09:10 PM                  Instrument Method: DX.MTH
Report Created on: 18 Oct 21  08:08 AM                   Analysis Method   : DEFAULT.MTH
```

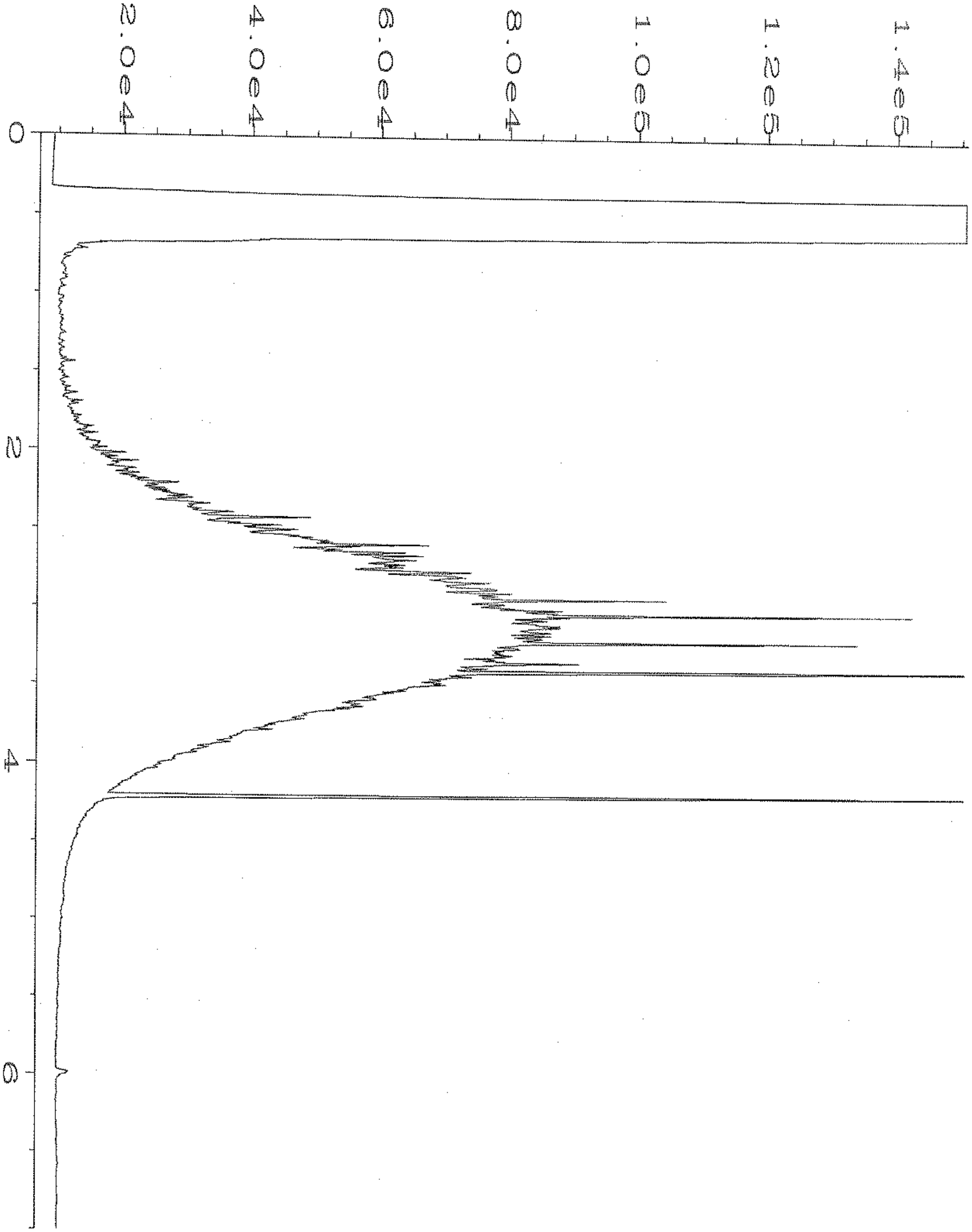


Data File Name : C:\HPCHEM\6\DATA\10-15-21\046F1701.D
Operator : TL
Instrument : GC6
Sample Name : 110210-10
Run Time Bar Code:
Acquired on : 15 Oct 21 09:21 PM
Report Created on: 18 Oct 21 08:08 AM

Page Number : 1
Vial Number : 46
Injection Number : 1
Sequence Line : 17
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH

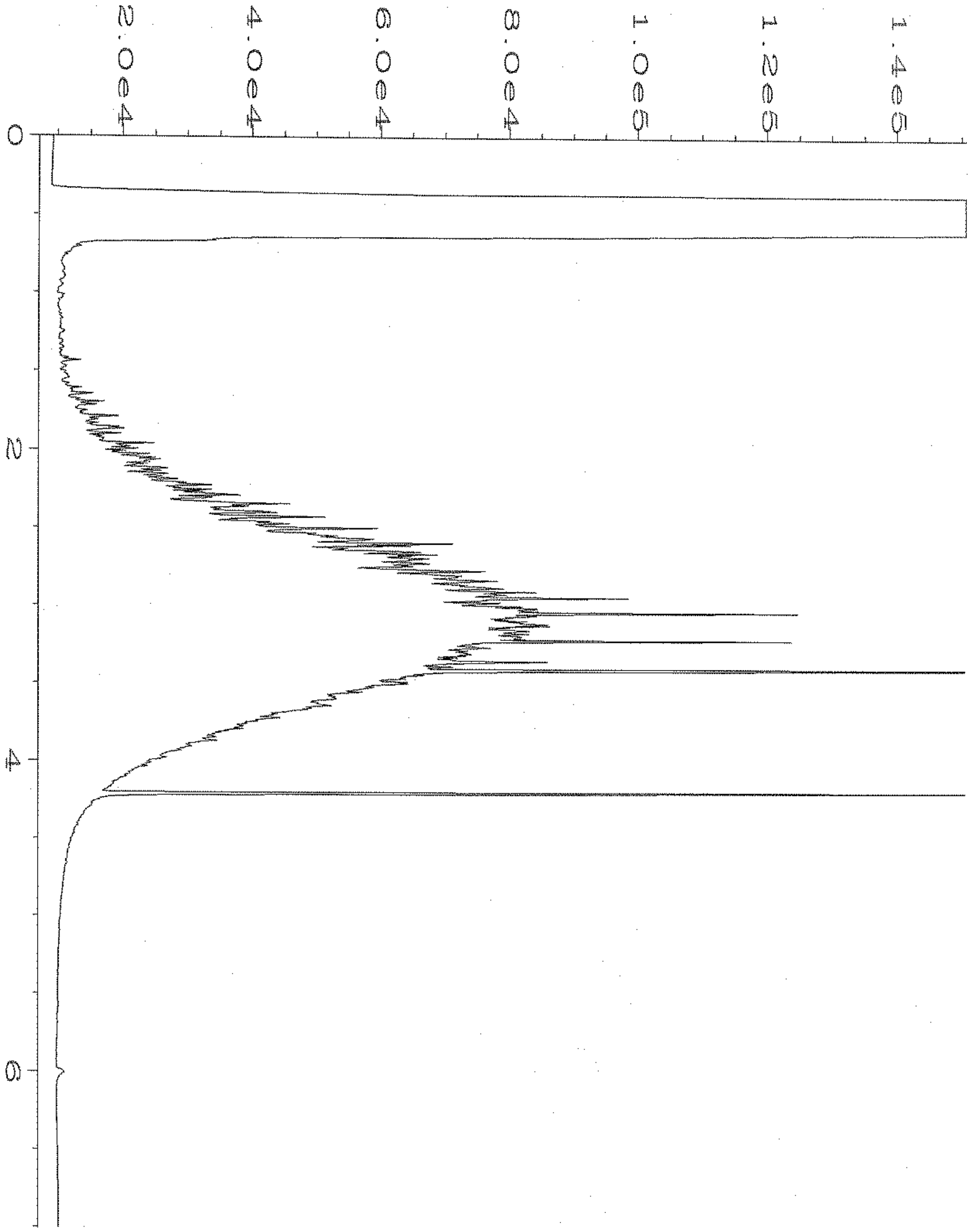


```
Data File Name    : C:\HPCHEM\6\DATA\10-15-21\047F1701.D
Operator          : TL                                 Page Number      : 1
Instrument        : GC6                                Vial Number      : 47
Sample Name       : 110210-11                          Injection Number : 1
Run Time Bar Code:                                     Sequence Line    : 17
Acquired on       : 15 Oct 21  09:32 PM                Instrument Method: DX.MTH
Report Created on: 18 Oct 21  08:08 AM                 Analysis Method  : DEFAULT.MTH
```



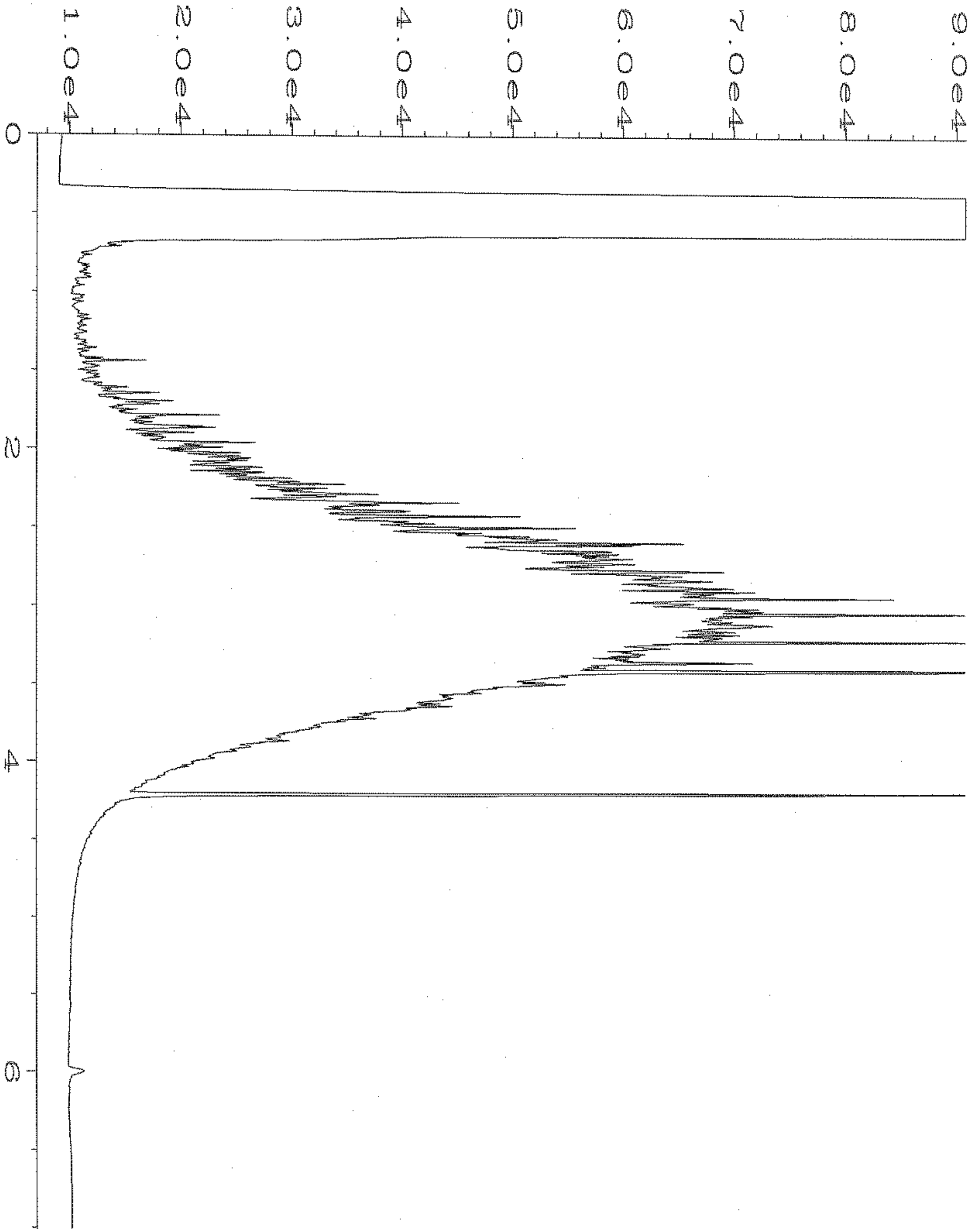
Data File Name   : C:\HPCHEM\6\DATA\10-15-21\048F1901.D
Operator   : TL
Instrument   : GC6
Sample Name   : 110210-12
Run Time Bar Code:
Acquired on   : 15 Oct 21   10:06 PM
Report Created on: 18 Oct 21   08:08 AM

Page Number   : 1
Vial Number   : 48
Injection Number : 1
Sequence Line   : 19
Instrument Method: DX.MTH
Analysis Method   : DEFAULT.MTH

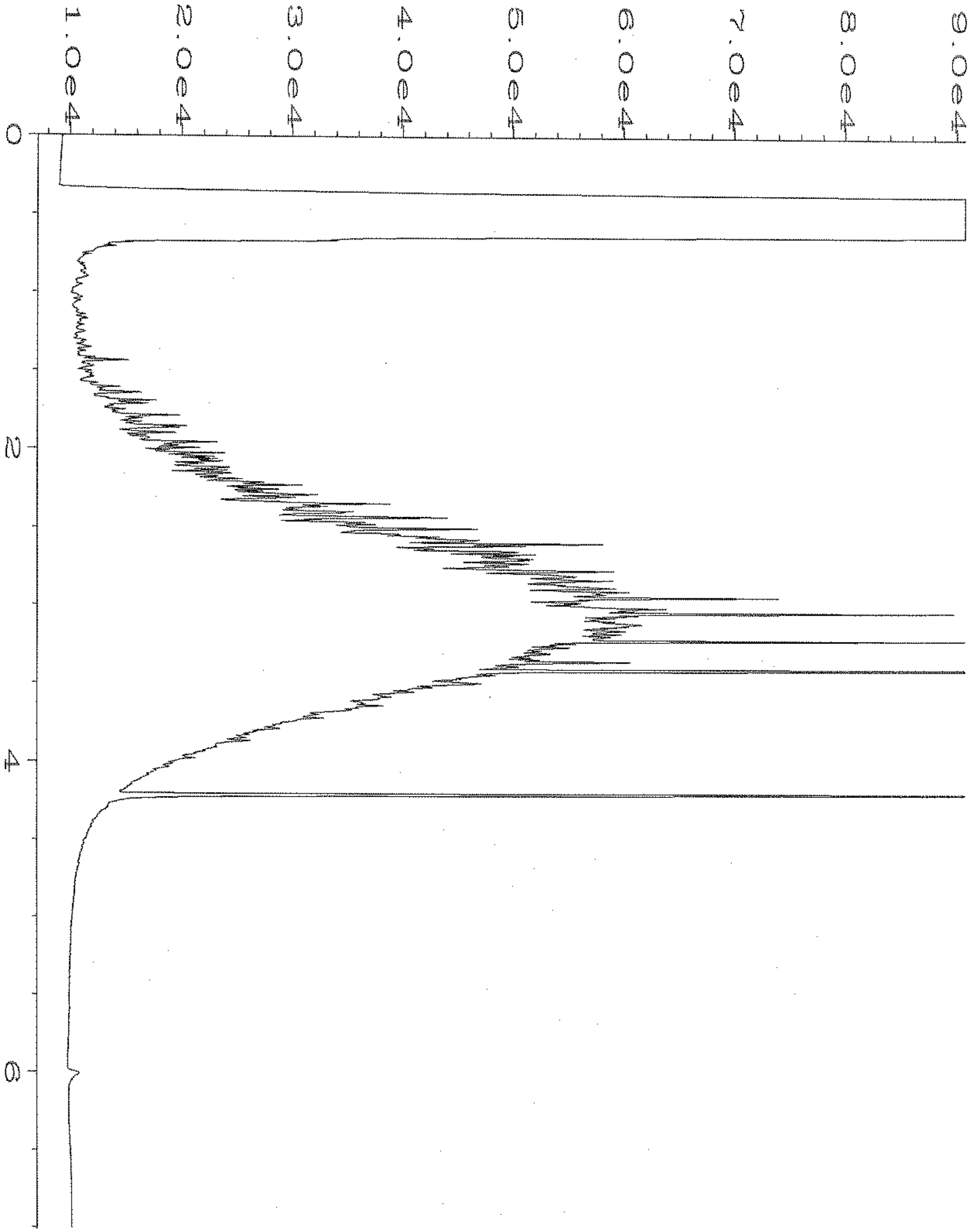


Data File Name : C:\HPCHEM\6\DATA\10-15-21\049F1901.D
Operator : TL
Instrument : GC6
Sample Name : 110210-13
Run Time Bar Code:
Acquired on : 15 Oct 21 10:17 PM
Report Created on: 18 Oct 21 08:09 AM

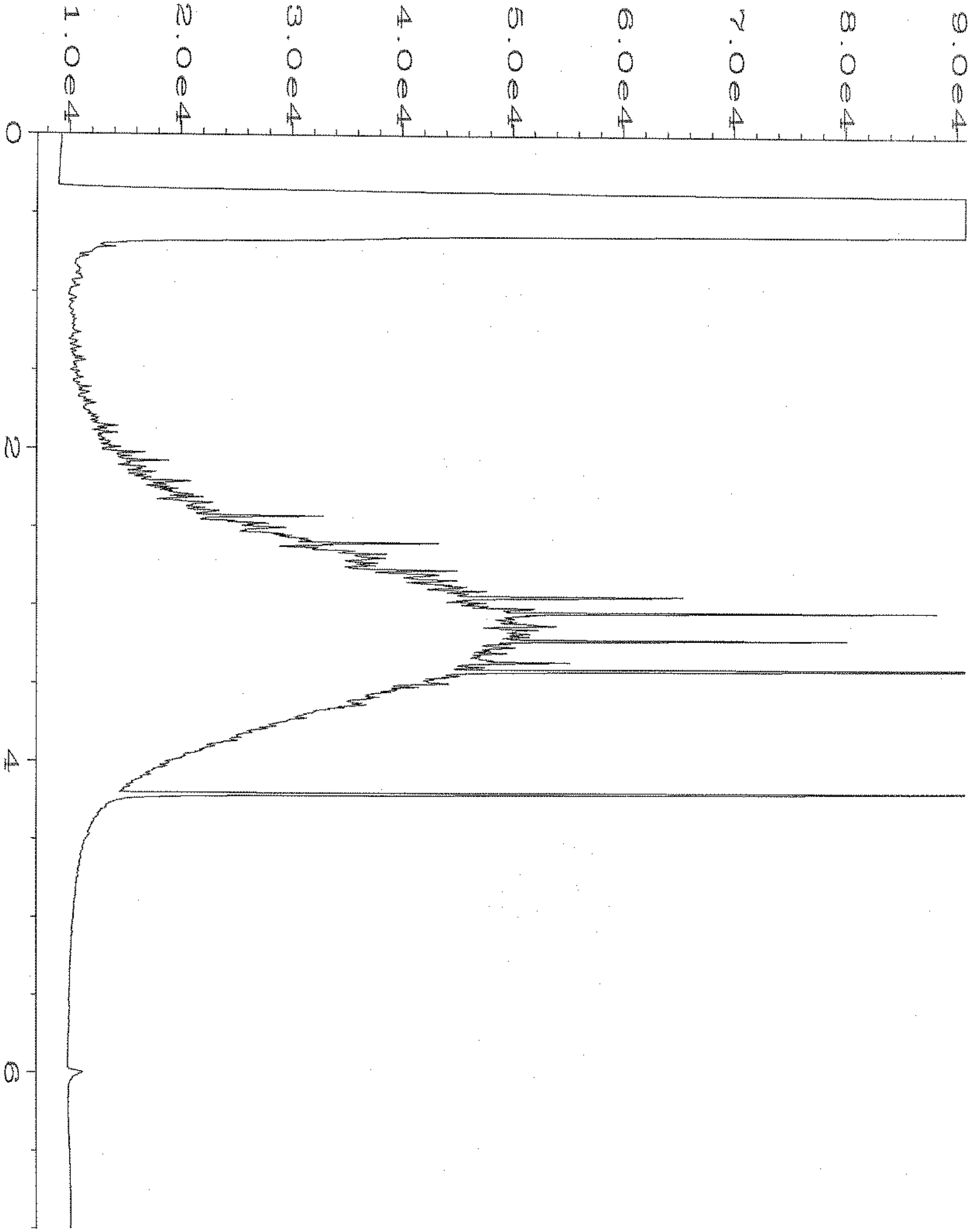
Page Number : 1
Vial Number : 49
Injection Number : 1
Sequence Line : 19
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



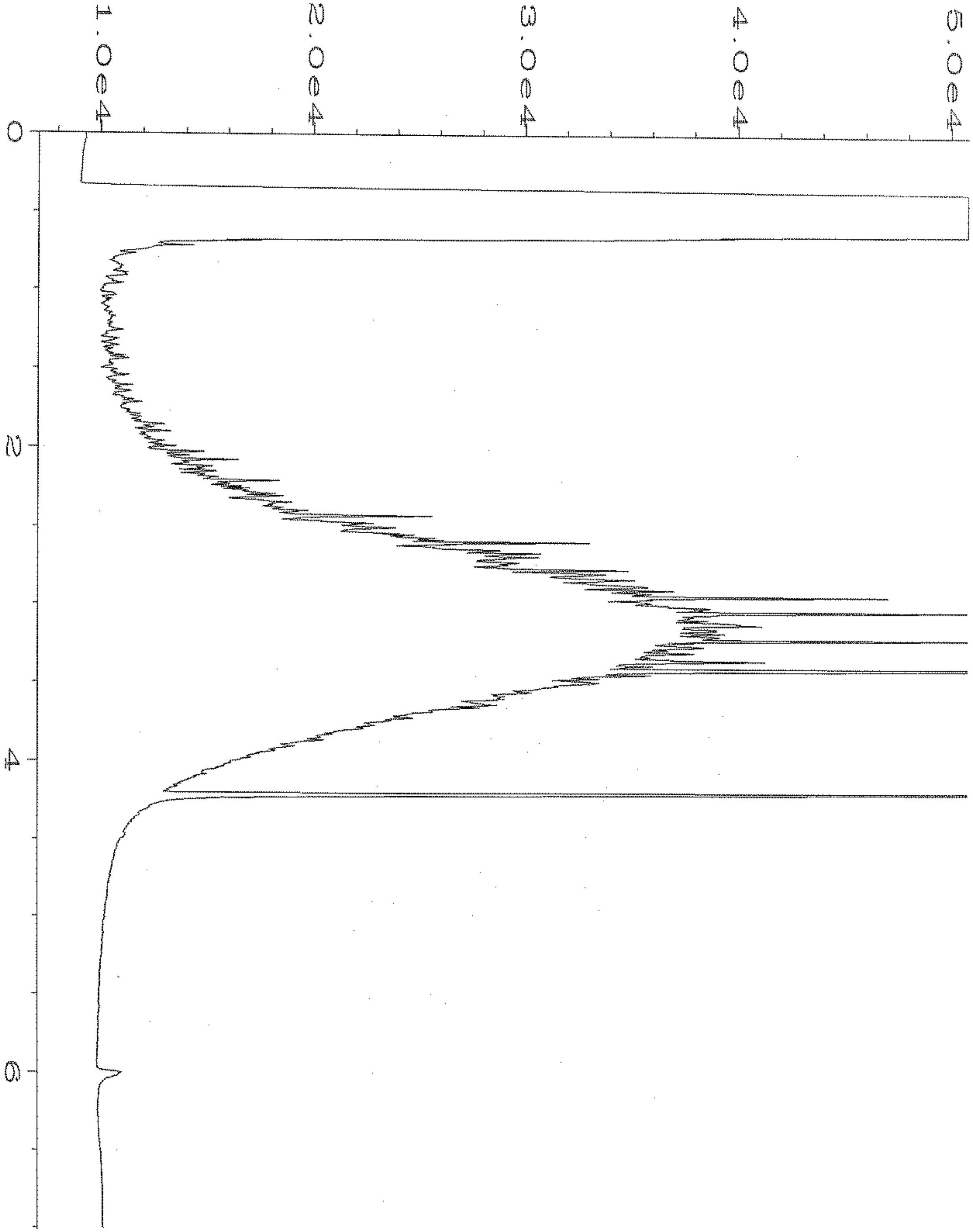
```
Data File Name    : C:\HPCHEM\6\DATA\10-15-21\050F1901.D
Operator          : TL                                 Page Number       : 1
Instrument        : GC6                                Vial Number       : 50
Sample Name       : 110210-14                          Injection Number  : 1
Run Time Bar Code:                                     Sequence Line     : 19
Acquired on       : 15 Oct 21  10:28 PM                Instrument Method: DX.MTH
Report Created on: 18 Oct 21  08:09 AM                 Analysis Method   : DEFAULT.MTH
```



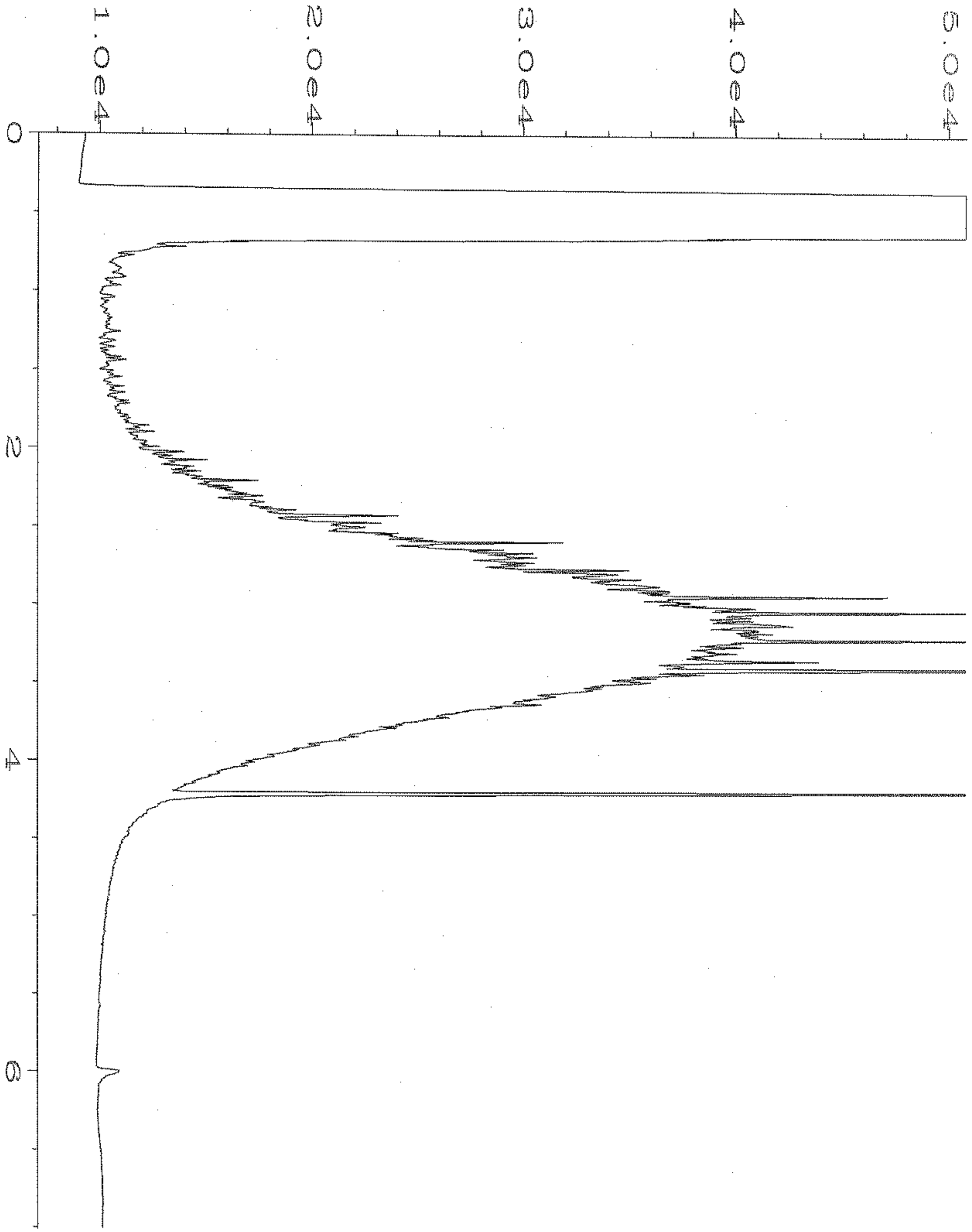
```
Data File Name    : C:\HPCHEM\6\DATA\10-15-21\051F1901.D
Operator          : TL                             Page Number       : 1
Instrument        : GC6                            Vial Number       : 51
Sample Name       : 110210-15                      Injection Number : 1
Run Time Bar Code:                                 Sequence Line     : 19
Acquired on       : 15 Oct 21  10:39 PM            Instrument Method: DX.MTH
Report Created on: 18 Oct 21  08:09 AM             Analysis Method   : DEFAULT.MTH
```



```
Data File Name    : C:\HPCHEM\6\DATA\10-15-21\052F1901.D
Operator          : TL                                 Page Number      : 1
Instrument        : GC6                                Vial Number      : 52
Sample Name       : 110210-16                          Injection Number : 1
Run Time Bar Code:                                     Sequence Line    : 19
Acquired on       : 15 Oct 21  10:51 PM                Instrument Method: DX.MTH
Report Created on: 18 Oct 21  08:09 AM                 Analysis Method  : DEFAULT.MTH
```

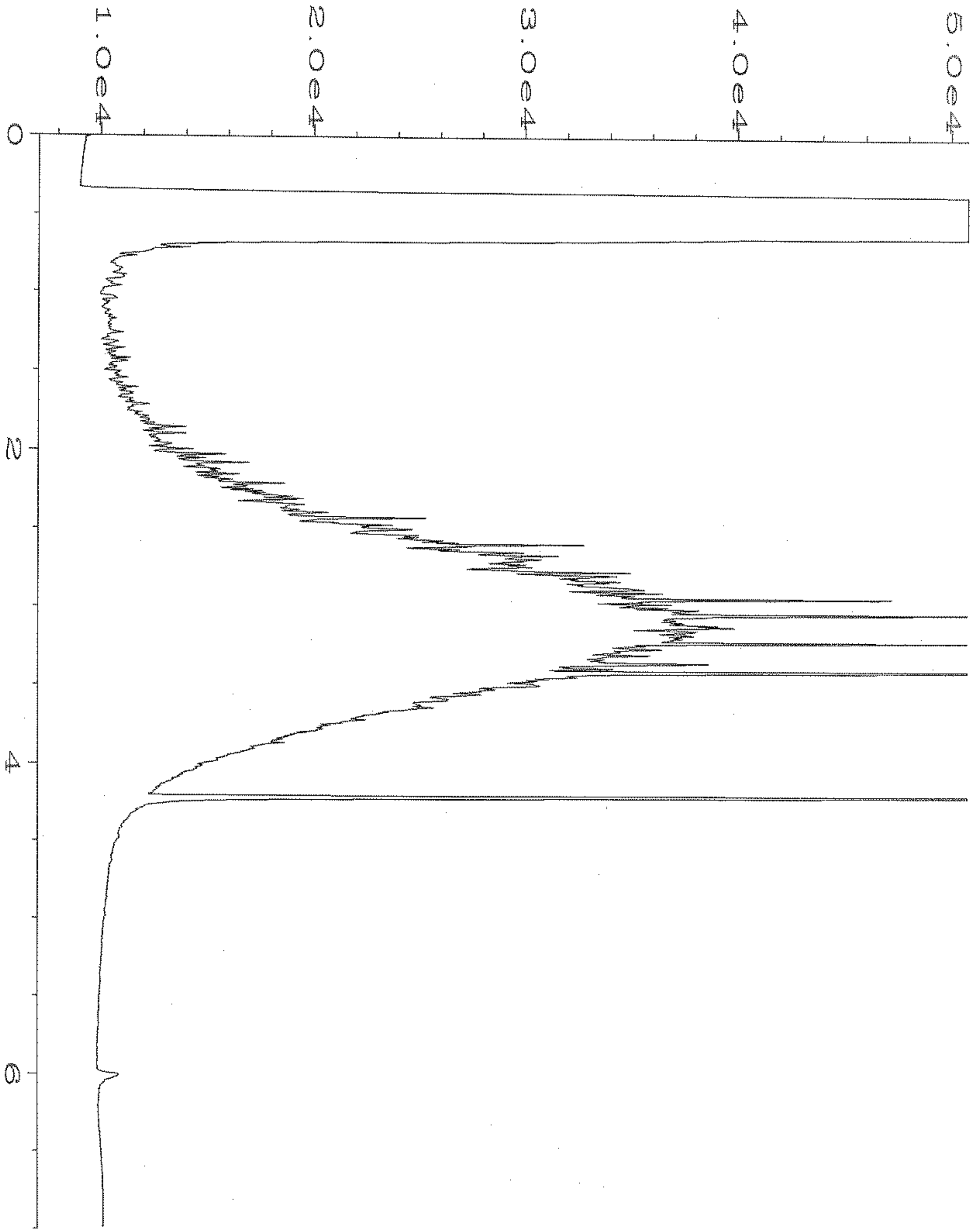


```
Data File Name    : C:\HPCHEM\6\DATA\10-15-21\053F1901.D
Operator          : TL                              Page Number       : 1
Instrument        : GC6                             Vial Number       : 53
Sample Name       : 110210-17                       Injection Number : 1
Run Time Bar Code:                                  Sequence Line     : 19
Acquired on       : 15 Oct 21   11:02 PM            Instrument Method: DX.MTH
Report Created on: 18 Oct 21   08:09 AM             Analysis Method   : DEFAULT.MTH
```

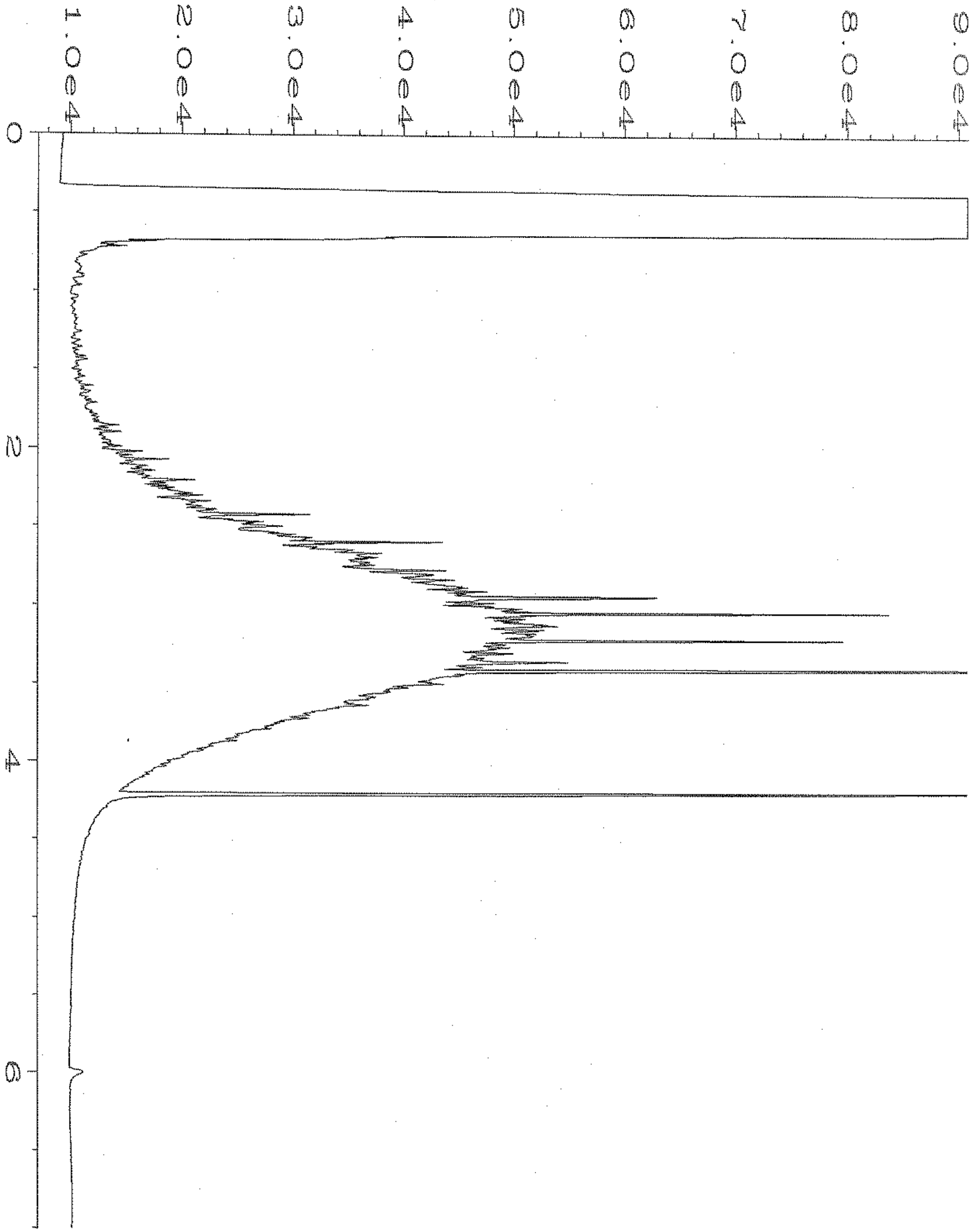


Data File Name : C:\HPCHEM\6\DATA\10-15-21\054F1901.D
Operator : TL
Instrument : GC6
Sample Name : 110210-18
Run Time Bar Code:
Acquired on : 15 Oct 21 11:13 PM
Report Created on: 18 Oct 21 08:10 AM

Page Number : 1
Vial Number : 54
Injection Number : 1
Sequence Line : 19
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH

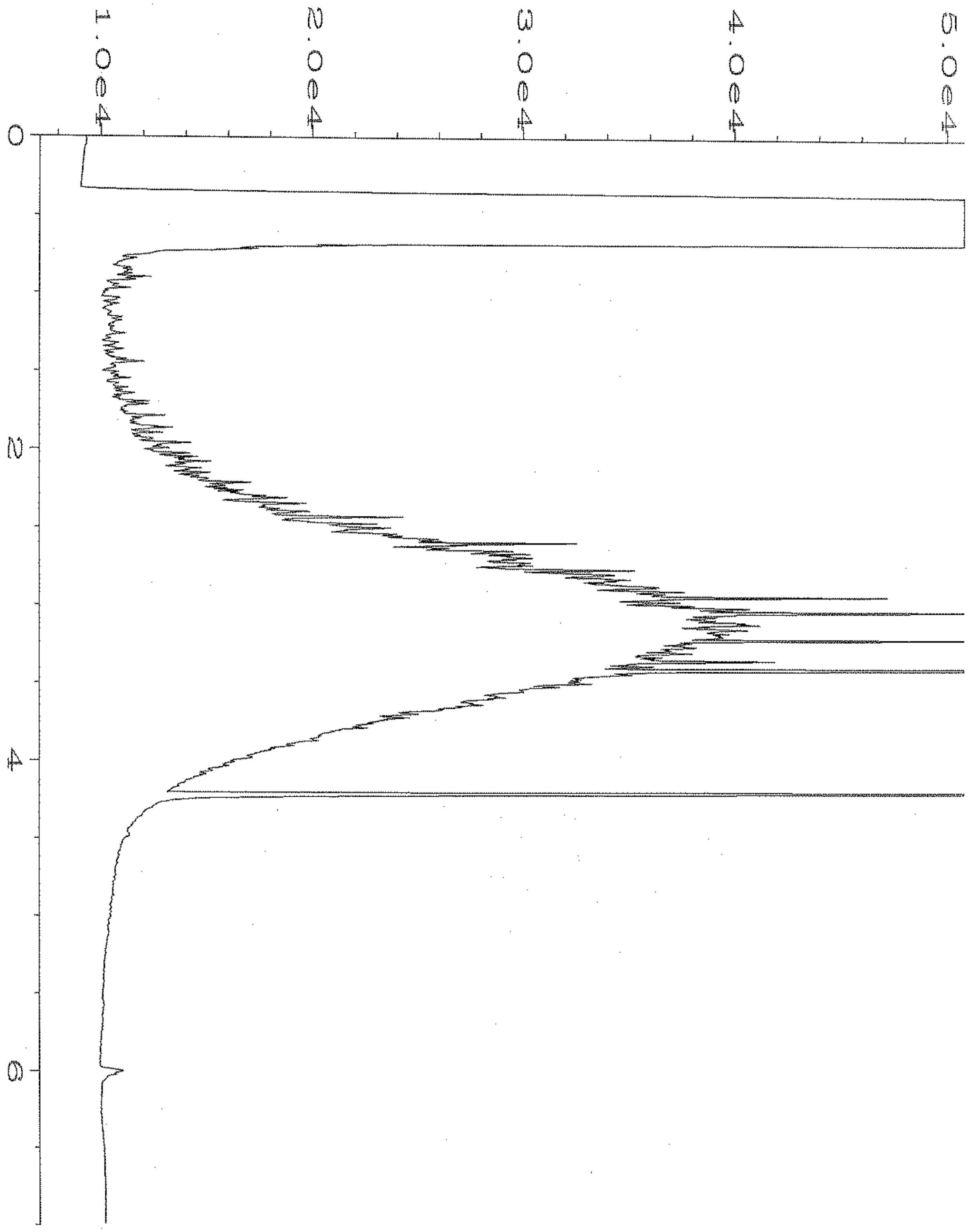


```
Data File Name    : C:\HPCHEM\6\DATA\10-15-21\055F1901.D
Operator          : TL                                  Page Number       : 1
Instrument        : GC6                                 Vial Number       : 55
Sample Name       : 110210-19                           Injection Number  : 1
Run Time Bar Code:                                      Sequence Line     : 19
Acquired on       : 15 Oct 21   11:24 PM                Instrument Method: DX.MTH
Report Created on: 18 Oct 21   08:10 AM                 Analysis Method   : DEFAULT.MTH
```



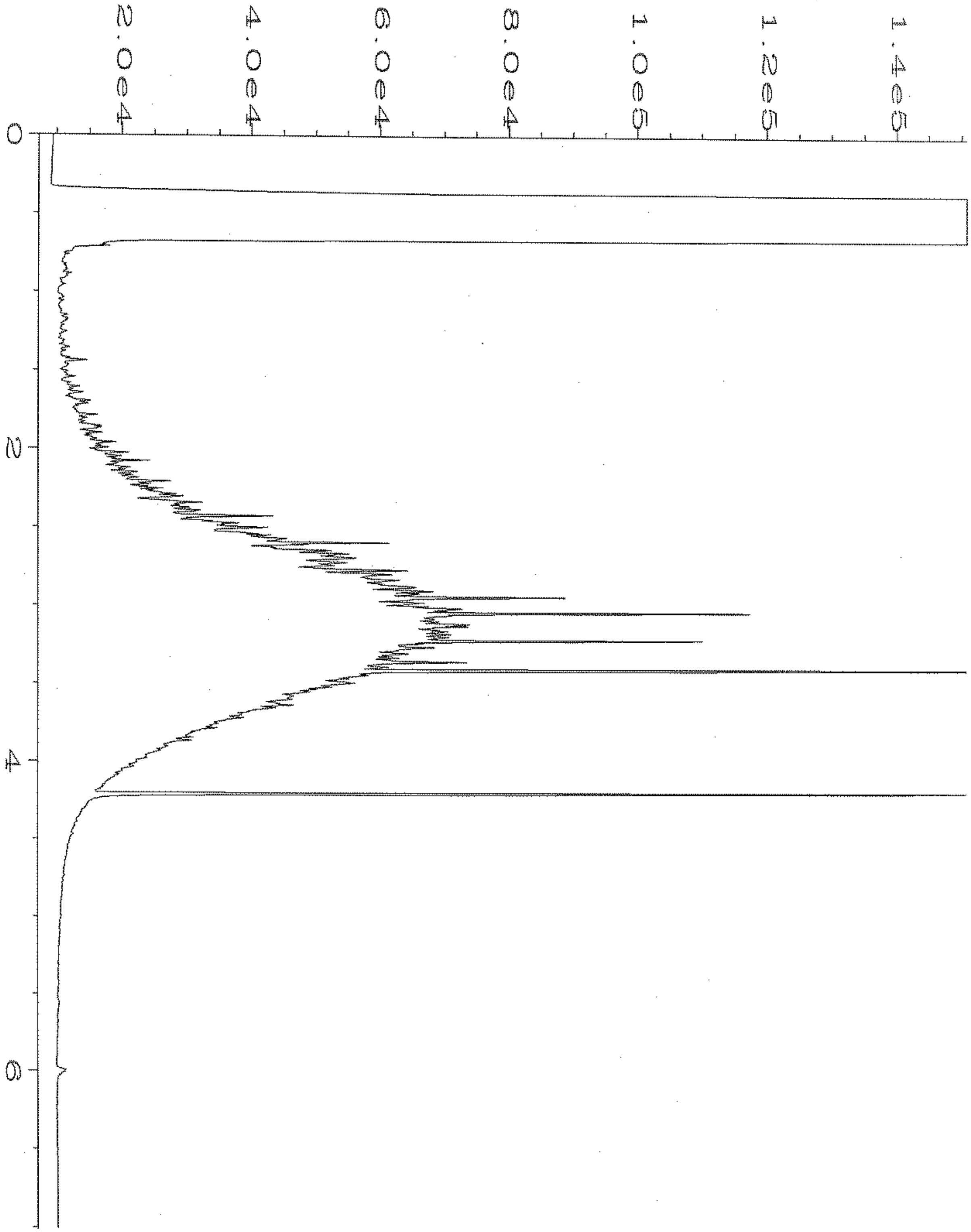
Data File Name : C:\HPCHEM\6\DATA\10-15-21\056F1901.D
Operator : TL
Instrument : GC6
Sample Name : 110210-20
Run Time Bar Code:
Acquired on : 15 Oct 21 11:35 PM
Report Created on: 18 Oct 21 08:10 AM

Page Number : 1
Vial Number : 56
Injection Number : 1
Sequence Line : 19
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



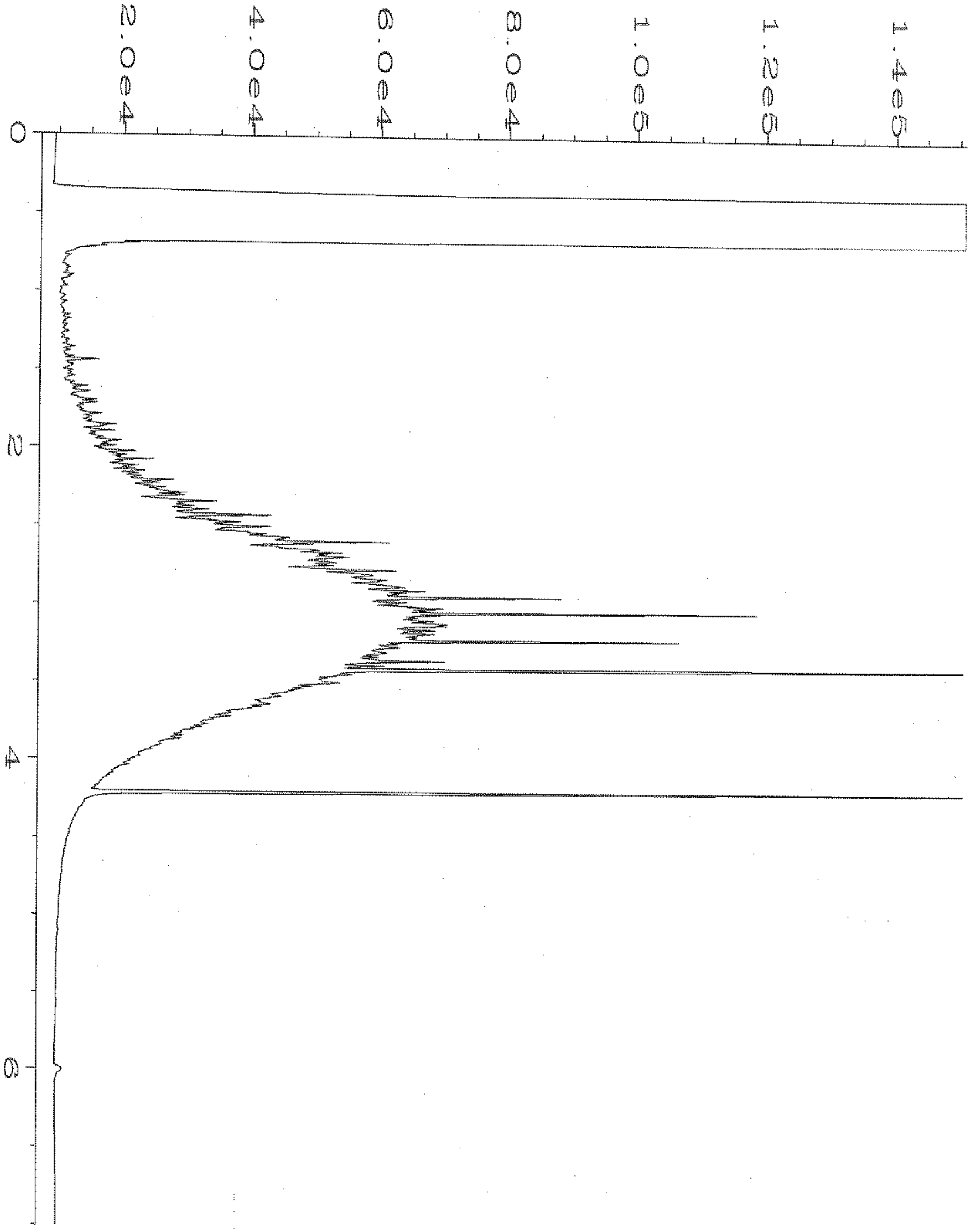
Data File Name   : C:\HPCHEM\6\DATA\10-15-21\057F1901.D
Operator   : TL
Instrument   : GC6
Sample Name   : 110210-21
Run Time Bar Code:
Acquired on   : 15 Oct 21   11:46 PM
Report Created on: 18 Oct 21   08:10 AM

Page Number   : 1
Vial Number   : 57
Injection Number : 1
Sequence Line   : 19
Instrument Method: DX.MTH
Analysis Method   : DEFAULT.MTH



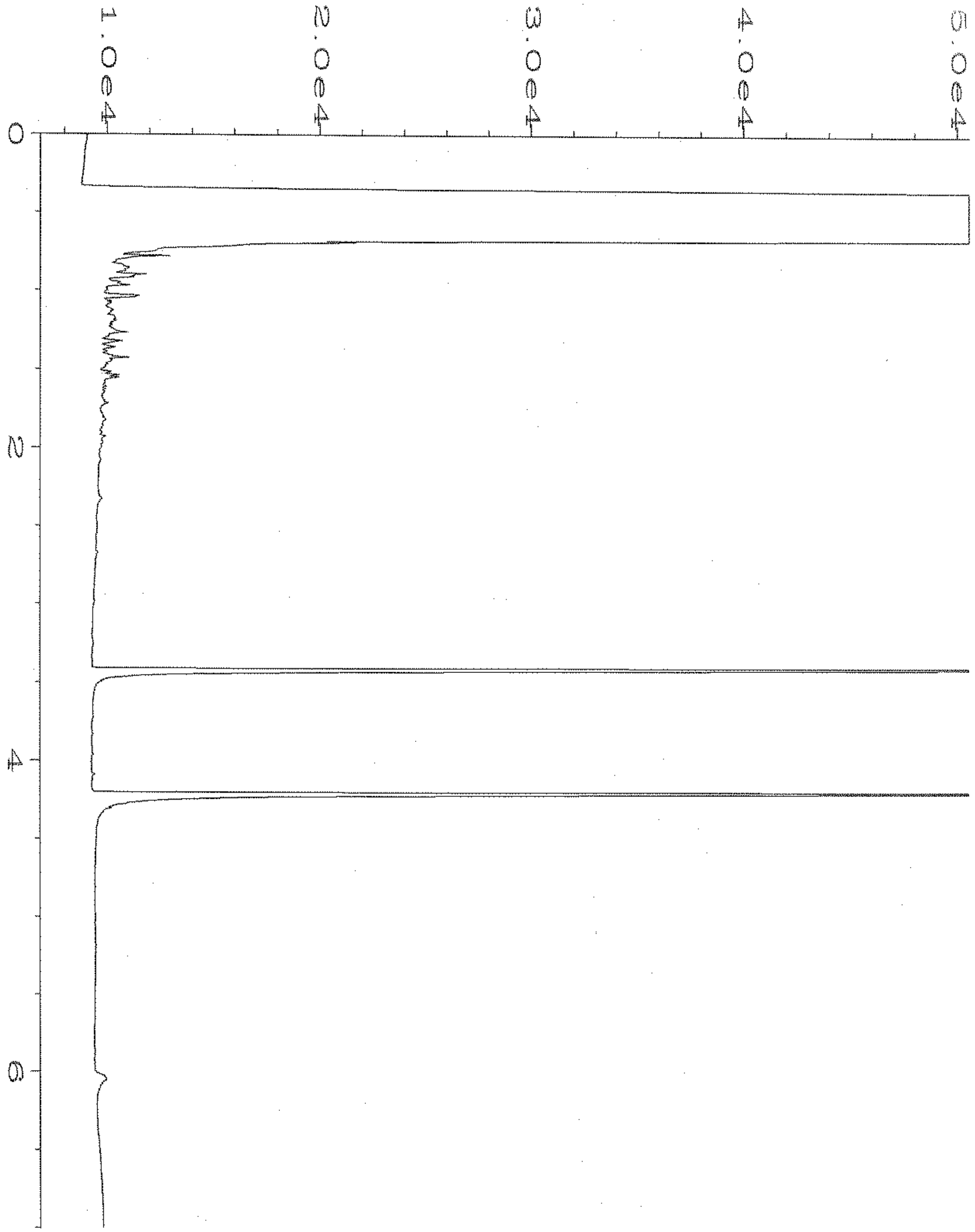
Data File Name : C:\HPCHEM\6\DATA\10-15-21\058F1901.D
Operator : TL
Instrument : GC6
Sample Name : 110210-22
Run Time Bar Code:
Acquired on : 15 Oct 21 11:58 PM
Report Created on: 18 Oct 21 08:10 AM

Page Number : 1
Vial Number : 58
Injection Number : 1
Sequence Line : 19
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



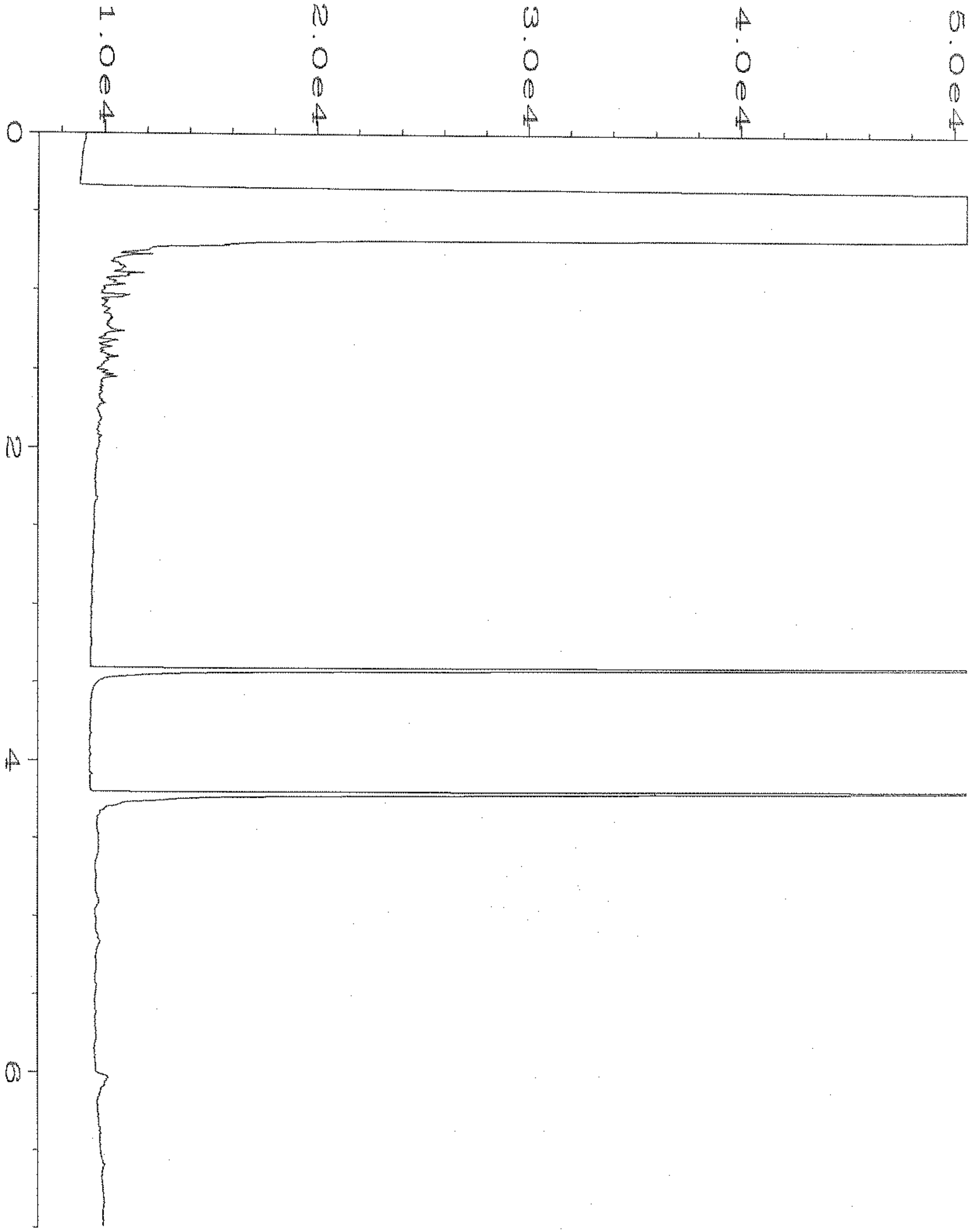
Data File Name   : C:\HPCHEM\6\DATA\10-15-21\059F1901.D
Operator   : TL
Instrument   : GC6
Sample Name   : 110210-23
Run Time Bar Code:
Acquired on   : 16 Oct 21   00:09 AM
Report Created on: 18 Oct 21   08:10 AM

Page Number   : 1
Vial Number   : 59
Injection Number : 1
Sequence Line   : 19
Instrument Method: DX.MTH
Analysis Method   : DEFAULT.MTH

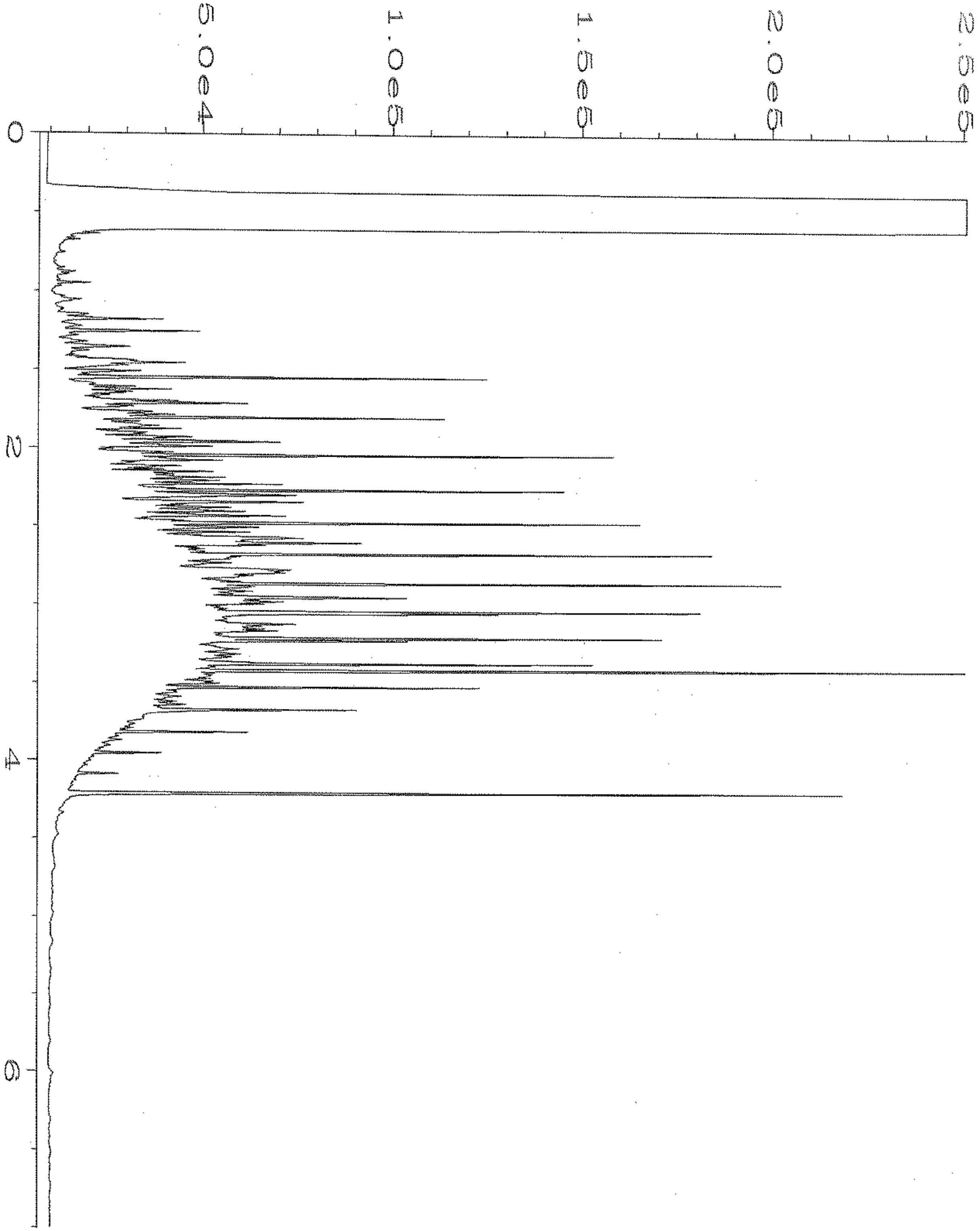


Data File Name   : C:\HPCHEM\6\DATA\10-15-21\024F1101.D
Operator   : TL
Instrument   : GC6
Sample Name   : 01-2416 mb
Run Time Bar Code:
Acquired on   : 15 Oct 21   04:09 PM
Report Created on: 18 Oct 21   08:11 AM

Page Number   : 1
Vial Number   : 24
Injection Number : 1
Sequence Line   : 11
Instrument Method: DX.MTH
Analysis Method   : DEFAULT.MTH



```
Data File Name    : C:\HPCHEM\6\DATA\10-15-21\033F1501.D
Operator          : TL                              Page Number       : 1
Instrument        : GC6                             Vial Number       : 33
Sample Name       : 01-2417 mb                      Injection Number  : 1
Run Time Bar Code:                                  Sequence Line     : 15
Acquired on       : 15 Oct 21   06:34 PM            Instrument Method: DX.MTH
Report Created on: 18 Oct 21   08:11 AM             Analysis Method   : DEFAULT.MTH
```



Data File Name   : C:\HPCHEM\6\DATA\10-15-21\003F2001.D
Operator   : TL
Instrument   : GC6
Sample Name   : 500 Dx 63-79C
Run Time Bar Code:
Acquired on   : 16 Oct 21   00:31 AM
Report Created on: 18 Oct 21   08:05 AM

Page Number   : 1
Vial Number   : 3
Injection Number : 1
Sequence Line   : 20
Instrument Method: DX.MTH
Analysis Method   : DEFAULT.MTH

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.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

June 23, 2022

Gabriel Cisneros, Project Manager
Floyd-Snider
Two Union Square
601 Union St, Suite 600
Seattle, WA 98101

Dear Mr Cisneros:

Included are the results from the testing of material submitted on June 17, 2022 from the CL-Ellensburg, F&BI 206320 project. There are 26 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 should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: monique.talaiamurray@floydsnider.com
FDS0623R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on June 17, 2022 by Friedman & Bruya, Inc. from the Floyd-Snider CL-Ellensburg, F&BI 206320 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Floyd-Snider
206320 -01	SIDE-16-6.0 FT
206320 -02	SIDE-17-6.0 FT
206320 -03	BASE-12-9.0 FT
206320 -04	BASE-11-9.0 FT
206320 -05	SIDE-18-6.0 FT
206320 -06	SIDE-19-6.0 FT
206320 -07	SIDE-119-6.0 FT
206320 -08	SIDE-20-6.0 FT
206320 -09	SIDE-21-6.0 FT
206320 -10	SP-04-1
206320 -11	SP-04-2
206320 -12	SP-04-3
206320 -13	SP-04-4
206320 -14	SP-04-5

All quality control requirements were acceptable.

Date of Report: 06/23/22
Date Received: 06/17/22
Project: CL-Ellensburg, F&BI 206320
Date Extracted: 06/20/22
Date Analyzed: 06/20/22 and 06/21/22

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SIDE-16-6.0 FT 206320-01	56	84
SIDE-17-6.0 FT 206320-02 1/10	1,000	107
BASE-12-9.0 FT 206320-03 1/5	560	87
BASE-11-9.0 FT 206320-04 1/5	400	94
SIDE-18-6.0 FT 206320-05 1/10	1,700	96
SIDE-19-6.0 FT 206320-06 1/20	1,600	102
SIDE-119-6.0 FT 206320-07 1/5	2,000	ip
SIDE-20-6.0 FT 206320-08 1/5	3,100	ip
SIDE-21-6.0 FT 206320-09 1/5	680	112
SP-04-1 206320-10	15	85
SP-04-2 206320-11	<5	79

Date of Report: 06/23/22
Date Received: 06/17/22
Project: CL-Ellensburg, F&BI 206320
Date Extracted: 06/20/22
Date Analyzed: 06/20/22 and 06/21/22

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SP-04-3 206320-12	<5	83
SP-04-4 206320-13	<5	86
SP-04-5 206320-14	32	61
Method Blank 02-1166 MB	<5	72

Date of Report: 06/23/22
Date Received: 06/17/22
Project: CL-Ellensburg, F&BI 206320
Date Extracted: 06/17/22
Date Analyzed: 06/17/22

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 56-165)
SIDE-16-6.0 FT 206320-01	160	<250	106
SIDE-17-6.0 FT 206320-02	3,900	<250	100
BASE-12-9.0 FT 206320-03	1,600	<250	97
BASE-11-9.0 FT 206320-04	1,800	<250	109
SIDE-18-6.0 FT 206320-05	16,000	<250	118
SIDE-19-6.0 FT 206320-06	12,000	<250	119
SIDE-119-6.0 FT 206320-07	12,000	<250	131
SIDE-20-6.0 FT 206320-08	13,000	<250	100
SIDE-21-6.0 FT 206320-09	4,300	<250	96
SP-04-1 206320-10	520	<250	99
SP-04-2 206320-11	100	<250	108
SP-04-3 206320-12	240	<250	96

Date of Report: 06/23/22
Date Received: 06/17/22
Project: CL-Ellensburg, F&BI 206320
Date Extracted: 06/17/22
Date Analyzed: 06/17/22

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 56-165)
SP-04-4 206320-13	<50	<250	95
SP-04-5 206320-14	<50	<250	96
Method Blank 02-1444 MB	<50	<250	107

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	SIDE-16-6.0 FT	Client:	Floyd-Snider
Date Received:	06/17/22	Project:	CL-Ellensburg, F&BI 206320
Date Extracted:	06/17/22	Lab ID:	206320-01
Date Analyzed:	06/17/22	Data File:	061728.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	79	128
Toluene-d8	92	84	121
4-Bromofluorobenzene	97	84	116

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.068

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	SIDE-17-6.0 FT	Client:	Floyd-Snider
Date Received:	06/17/22	Project:	CL-Ellensburg, F&BI 206320
Date Extracted:	06/17/22	Lab ID:	206320-02
Date Analyzed:	06/17/22	Data File:	061729.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	79	128
Toluene-d8	101	84	121
4-Bromofluorobenzene	86	84	116

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	BASE-12-9.0 FT	Client:	Floyd-Snider
Date Received:	06/17/22	Project:	CL-Ellensburg, F&BI 206320
Date Extracted:	06/17/22	Lab ID:	206320-03
Date Analyzed:	06/17/22	Data File:	061730.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	79	128
Toluene-d8	101	84	121
4-Bromofluorobenzene	95	84	116

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	BASE-11-9.0 FT	Client:	Floyd-Snider
Date Received:	06/17/22	Project:	CL-Ellensburg, F&BI 206320
Date Extracted:	06/17/22	Lab ID:	206320-04
Date Analyzed:	06/17/22	Data File:	061731.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	92	79	128
Toluene-d8	99	84	121
4-Bromofluorobenzene	88	84	116

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	SIDE-18-6.0 FT	Client:	Floyd-Snider
Date Received:	06/17/22	Project:	CL-Ellensburg, F&BI 206320
Date Extracted:	06/17/22	Lab ID:	206320-05
Date Analyzed:	06/17/22	Data File:	061732.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	79	128
Toluene-d8	96	84	121
4-Bromofluorobenzene	87	84	116

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	3.5

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	SIDE-19-6.0 FT	Client:	Floyd-Snider
Date Received:	06/17/22	Project:	CL-Ellensburg, F&BI 206320
Date Extracted:	06/17/22	Lab ID:	206320-06
Date Analyzed:	06/17/22	Data File:	061733.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	79	128
Toluene-d8	100	84	121
4-Bromofluorobenzene	88	84	116

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	2.4

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	SIDE-119-6.0 FT	Client:	Floyd-Snider
Date Received:	06/17/22	Project:	CL-Ellensburg, F&BI 206320
Date Extracted:	06/17/22	Lab ID:	206320-07 1/10
Date Analyzed:	06/17/22	Data File:	061734.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	79	128
Toluene-d8	107	84	121
4-Bromofluorobenzene	95	84	116

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.3
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylene	<1
o-Xylene	<0.5
Naphthalene	3.0

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	SIDE-20-6.0 FT	Client:	Floyd-Snider
Date Received:	06/17/22	Project:	CL-Ellensburg, F&BI 206320
Date Extracted:	06/17/22	Lab ID:	206320-08
Date Analyzed:	06/17/22	Data File:	061735.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	92	79	128
Toluene-d8	93	84	121
4-Bromofluorobenzene	90	84	116

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	0.15
m,p-Xylene	0.21
o-Xylene	<0.05
Naphthalene	1.1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	SIDE-21-6.0 FT	Client:	Floyd-Snider
Date Received:	06/17/22	Project:	CL-Ellensburg, F&BI 206320
Date Extracted:	06/17/22	Lab ID:	206320-09
Date Analyzed:	06/17/22	Data File:	061736.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	94	79	128
Toluene-d8	103	84	121
4-Bromofluorobenzene	86	84	116

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	SP-04-1	Client:	Floyd-Snider
Date Received:	06/17/22	Project:	CL-Ellensburg, F&BI 206320
Date Extracted:	06/17/22	Lab ID:	206320-10
Date Analyzed:	06/17/22	Data File:	061737.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	79	128
Toluene-d8	102	84	121
4-Bromofluorobenzene	96	84	116

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	SP-04-2	Client:	Floyd-Snider
Date Received:	06/17/22	Project:	CL-Ellensburg, F&BI 206320
Date Extracted:	06/17/22	Lab ID:	206320-11
Date Analyzed:	06/17/22	Data File:	061738.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	79	128
Toluene-d8	105	84	121
4-Bromofluorobenzene	99	84	116

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	SP-04-3	Client:	Floyd-Snider
Date Received:	06/17/22	Project:	CL-Ellensburg, F&BI 206320
Date Extracted:	06/17/22	Lab ID:	206320-12
Date Analyzed:	06/17/22	Data File:	061739.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	94	79	128
Toluene-d8	92	84	121
4-Bromofluorobenzene	97	84	116

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	SP-04-4	Client:	Floyd-Snider
Date Received:	06/17/22	Project:	CL-Ellensburg, F&BI 206320
Date Extracted:	06/17/22	Lab ID:	206320-13
Date Analyzed:	06/17/22	Data File:	061740.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	79	128
Toluene-d8	106	84	121
4-Bromofluorobenzene	99	84	116

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	SP-04-5	Client:	Floyd-Snider
Date Received:	06/17/22	Project:	CL-Ellensburg, F&BI 206320
Date Extracted:	06/17/22	Lab ID:	206320-14
Date Analyzed:	06/17/22	Data File:	061741.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	90	79	128
Toluene-d8	94	84	121
4-Bromofluorobenzene	97	84	116

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Floyd-Snider
Date Received:	Not Applicable	Project:	CL-Ellensburg, F&BI 206320
Date Extracted:	06/17/22	Lab ID:	02-1393 mb
Date Analyzed:	06/17/22	Data File:	061705.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	90	109
Toluene-d8	99	89	112
4-Bromofluorobenzene	99	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Floyd-Snider
Date Received:	Not Applicable	Project:	CL-Ellensburg, F&BI 206320
Date Extracted:	06/17/22	Lab ID:	02-1425 mb
Date Analyzed:	06/17/22	Data File:	061727.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	90	109
Toluene-d8	99	89	112
4-Bromofluorobenzene	98	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Date of Report: 06/23/22
Date Received: 06/17/22
Project: CL-Ellensburg, F&BI 206320

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

Laboratory Code: 206329-02 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	52	17	101 a

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	115	71-131

Date of Report: 06/23/22
Date Received: 06/17/22
Project: CL-Ellensburg, F&BI 206320

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

Laboratory Code: 206307-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	106	118	63-146	11

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	110	79-144

Date of Report: 06/23/22
Date Received: 06/17/22
Project: CL-Ellensburg, F&BI 206320

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

Laboratory Code: 206293-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Benzene	mg/kg (ppm)	1	<0.03	80	85	29-129	6
Toluene	mg/kg (ppm)	1	<0.05	80	86	35-130	7
Ethylbenzene	mg/kg (ppm)	1	<0.05	80	85	32-137	6
m,p-Xylene	mg/kg (ppm)	2	<0.1	84	88	34-136	5
o-Xylene	mg/kg (ppm)	1	<0.05	82	84	33-134	2
Naphthalene	mg/kg (ppm)	1	<0.05	83	86	14-157	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	1	100	71-118
Toluene	mg/kg (ppm)	1	101	66-126
Ethylbenzene	mg/kg (ppm)	1	100	64-123
m,p-Xylene	mg/kg (ppm)	2	103	78-122
o-Xylene	mg/kg (ppm)	1	101	77-124
Naphthalene	mg/kg (ppm)	1	104	63-140

Date of Report: 06/23/22
Date Received: 06/17/22
Project: CL-Ellensburg, F&BI 206320

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

Laboratory Code: 206292-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Benzene	mg/kg (ppm)	1	<0.03	80	84	29-129	5
Toluene	mg/kg (ppm)	1	<0.05	82	86	35-130	5
Ethylbenzene	mg/kg (ppm)	1	<0.05	81	85	32-137	5
m,p-Xylene	mg/kg (ppm)	2	<0.1	85	89	34-136	5
o-Xylene	mg/kg (ppm)	1	<0.05	83	86	33-134	4
Naphthalene	mg/kg (ppm)	1	<0.05	80	85	14-157	6

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	1	93	71-118
Toluene	mg/kg (ppm)	1	94	66-126
Ethylbenzene	mg/kg (ppm)	1	92	64-123
m,p-Xylene	mg/kg (ppm)	2	94	78-122
o-Xylene	mg/kg (ppm)	1	95	77-124
Naphthalene	mg/kg (ppm)	1	92	63-140

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SAMPLE CHAIN OF CUSTODY

206320

[redacted] To Gabe Cisneros

Company Floyd Snider

Address 601 Union Street, Ste 600

City, State, ZIP Seattle, WA 98108

Phone 206-292-2078 Email gabe.cisneros@floydsnider.com

SAMPLERS (*signature*) 6/17/22 [redacted]

PROJECT NAME CL-Ellensburg

PO #

REMARKS cc: manique.talaia-murray@floydsnider.com

Project specific RLs? - [✓ Yes] / No

INVOICE TO

Page # 1 of 2 CI3

TURNAROUND TIME

☐ Standard turnaround

☒ RUSH ~~24 hr~~ (prelim)

Rush charges authorized by: 48 hr acheived ME

SAMPLE DISPOSAL 6/22/22

☐ Archive samples

☐ Other

[✓ Default] Dispose after 30 days

						ANALYSES REQUESTED											
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260 BTEX + naph.	PAHs EPA 8270	PCBs EPA 8082					Notes
✓ SIDE-16-6.0FT	01 A-E	6/14/22	1439	soil	5	X	X			X							
✓ SIDE-17-6.0FT	02	6/15/22	1300	soil	5	X	X			X							
✓ BASE-12-9.0FT	03	6/15/22	1430	soil	5	X	X			X							
✓ BASE-11-9.0FT	04	6/16/22	1200	soil	5	X	X			X							
SIDE-18-6.0FT	05	6/16/22	1315	soil	5	X	X			X							
✓ SIDE-19-6.0FT	06	6/16/22	1330	soil	5	X	X			X							
✓ SIDE-119-6.0FT	07	6/16/22	1400	soil	5	X	X			X							
✓ SIDE-20-6.0FT	08	6/16/22	1415	soil	5	X	X			X							
✓ SIDE-21-6.0FT	09	6/17/22	0845	soil	5	X	X			X							
✓ SP-04-1	10	6/15/22	1200	soil	5	X	X			X							

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

NP

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Manique Talaia-Murray	Floyd Snider/cooler	6/17/22	1340
Received by: Windy Madden	Windy Madden	F+BI	6/17/22	1339
Relinquished by:		Samples received at 4 °C		
Received by:				

206320

[redacted] To Gabe Cisneros

Company Floyd Snider

Address 601 Union St, Ste 600

City, State, ZIP Seattle, WA 98101

Phone 206-292-2078 Email gabe.cisneros@floydsnider.com

SAMPLE CHAIN OF COUSTODY

6/17/22

SAMPLERS (*signature*) [redacted]

PROJECT NAME

CL-Ellensburg

PO #

REMARKS cc: manique.talaia-murray@floydsnider.com

Project specific RLs? [✓ Yes] / No

INVOICE TO

Page # 2 of 2 CI3

TURNAROUND TIME

☐ Standard turnaround

☒ RUSH 24-hr (prelim)

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Archive samples

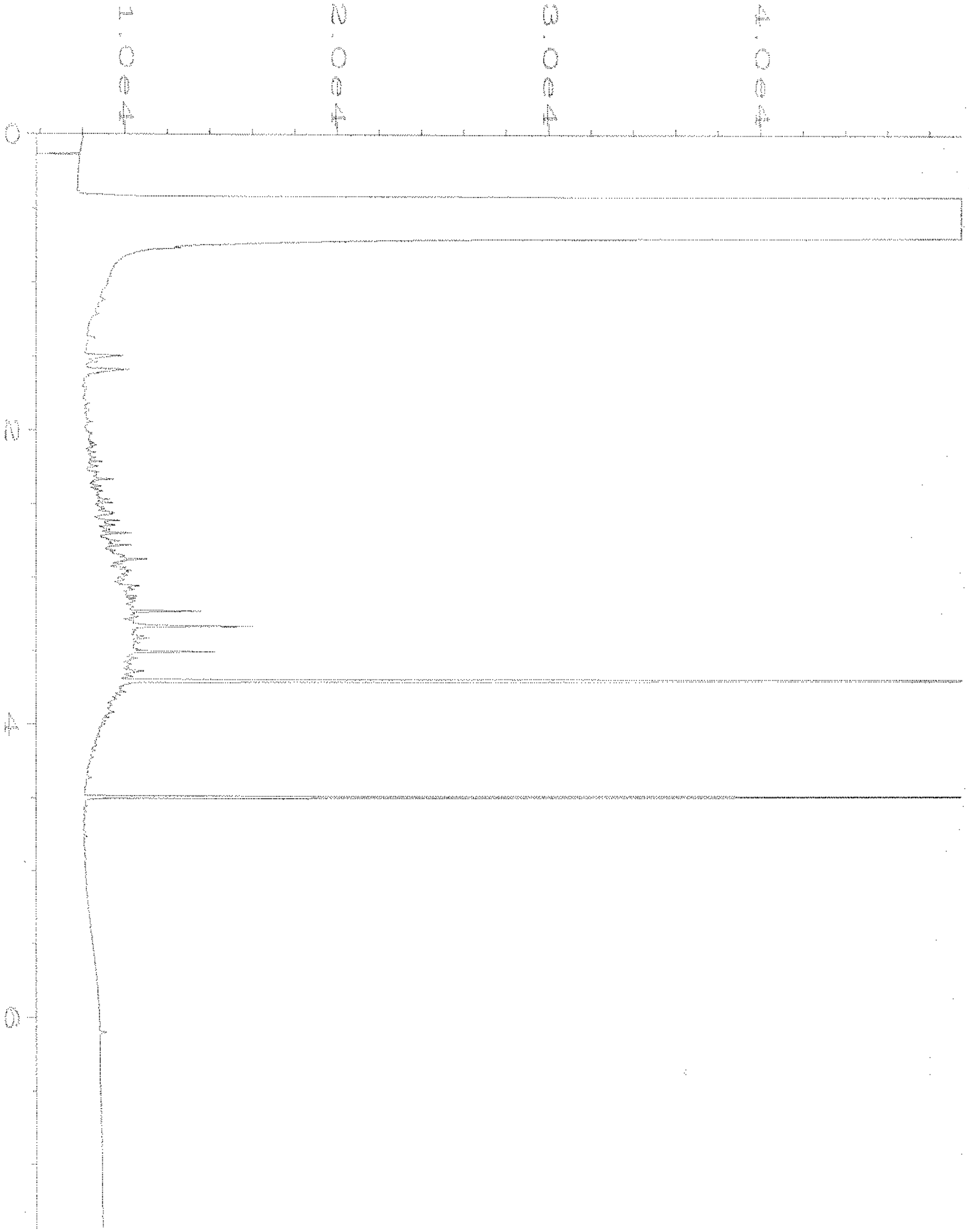
☐ Other

[✓ Default:] Dispose after 30 days

						ANALYSES REQUESTED										
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	BTEX + naph VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082				Notes
✓ SP-04-2	11 A-E	6/15/22	1205	Soil	5	X	X			X						
✓ SP-04-3	12	6/15/22	1210	Soil	5	X	X			X						
✓ SP-04-4	13	6/15/22	1215	Soil	5	X	X			X						
✓ SP-04-5	14	6/15/22	1220	Soil	5	X	X			X						
MTM																

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Manique Talaia-Murray	Floyd Snider / 1 cooler	6/17/22	1340
Received by: Windy Madden	Windy Madden	F+BI	6/17/22	1339
Relinquished by:		Samples received at 4 °C		
Received by:				



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Data File Name    : C:\HPCHEM\1\DATA\06-17-22\029F0701.D
Operator          : TL                               Page Number      : 1
Instrument        : GC1                              Vial Number      : 29
Sample Name       : 206320-01                        Injection Number : 1
Run Time Bar Code:                                   Sequence Line    : 7
Acquired on       : 17 Jun 22   05:43 PM             Instrument Method: DX.MTH
Report Created on: 20 Jun 22   11:09 AM              Analysis Method  : DEFAULT.MTH
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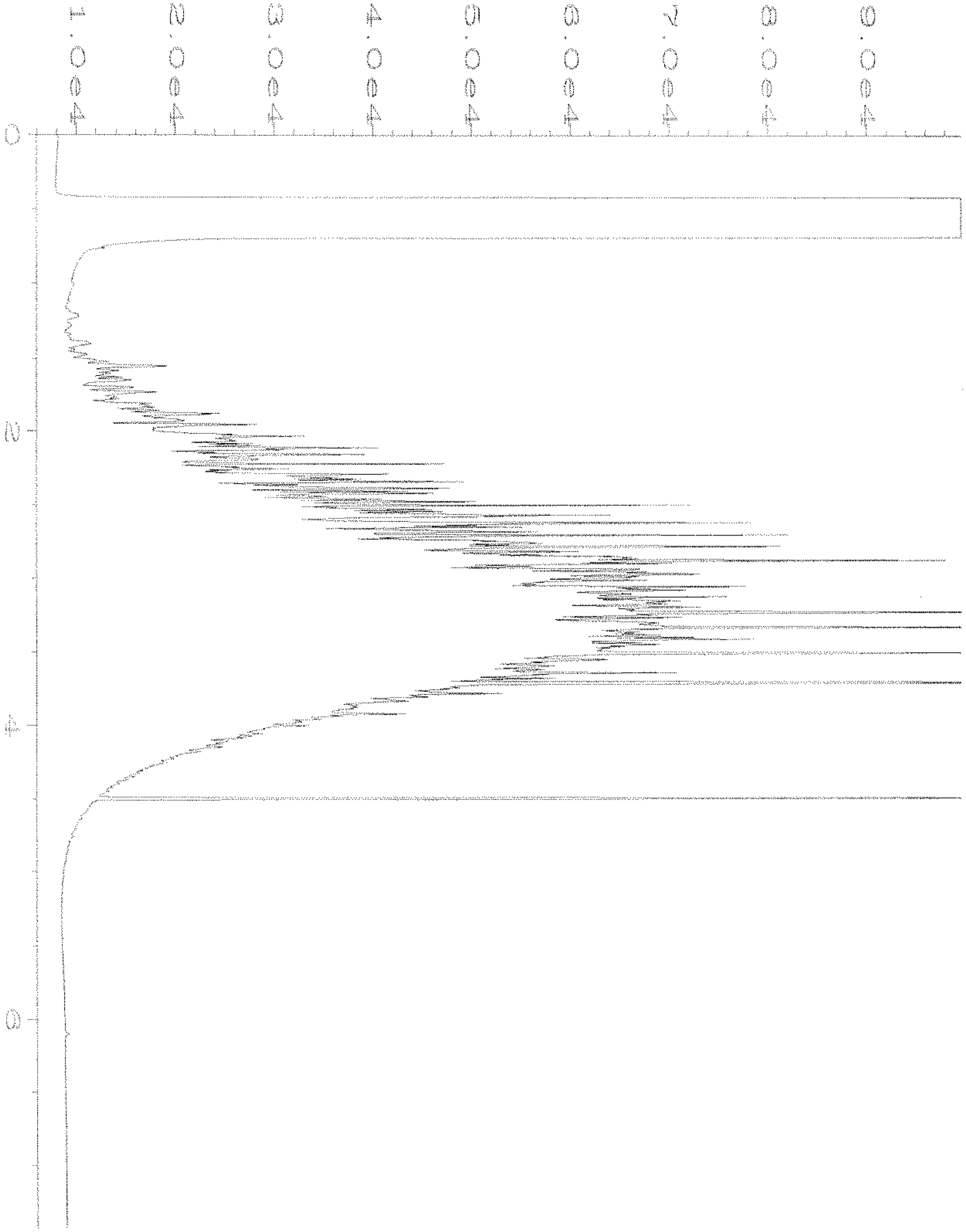

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Operator          : TL                           Page Number       : 1
Instrument        : GC1                          Vial Number       : 30
Sample Name       : 206320-02                    Injection Number  : 1
Run Time Bar Code:                               Sequence Line     : 7
Acquired on       : 17 Jun 22  05:52 PM          Instrument Method: DX.MTH
Report Created on: 20 Jun 22  11:09 AM           Analysis Method   : DEFAULT.MTH
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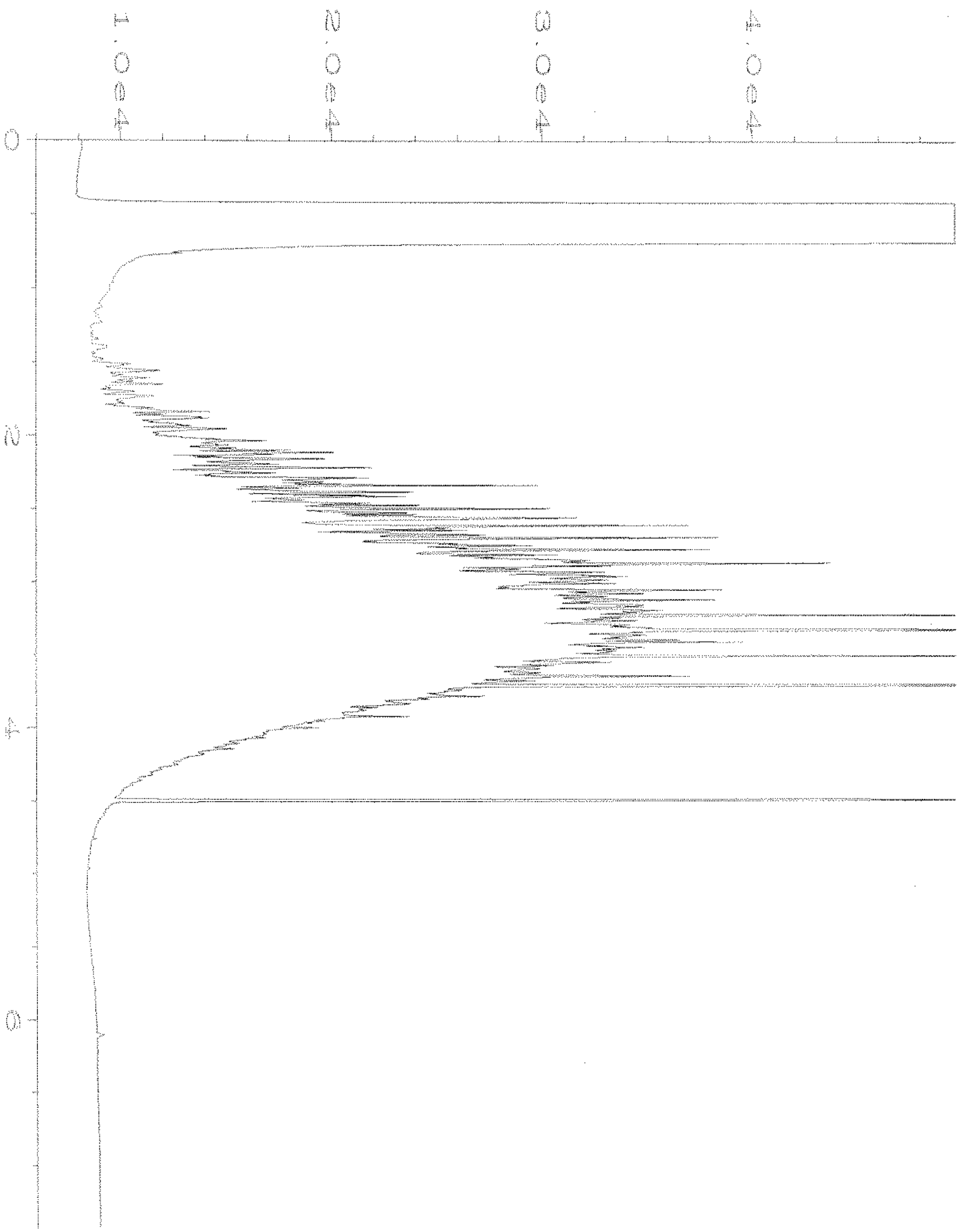

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Data File Name    : C:\HPCHEM\1\DATA\06-17-22\031F0701.D
Operator          : TL                              Page Number      : 1
Instrument        : GC1                             Vial Number      : 31
Sample Name       : 206320-03                       Injection Number : 1
Run Time Bar Code:                                  Sequence Line    : 7
Acquired on       : 17 Jun 22  06:07 PM             Instrument Method: DX.MTH
Report Created on: 20 Jun 22  11:09 AM              Analysis Method  : DEFAULT.MTH
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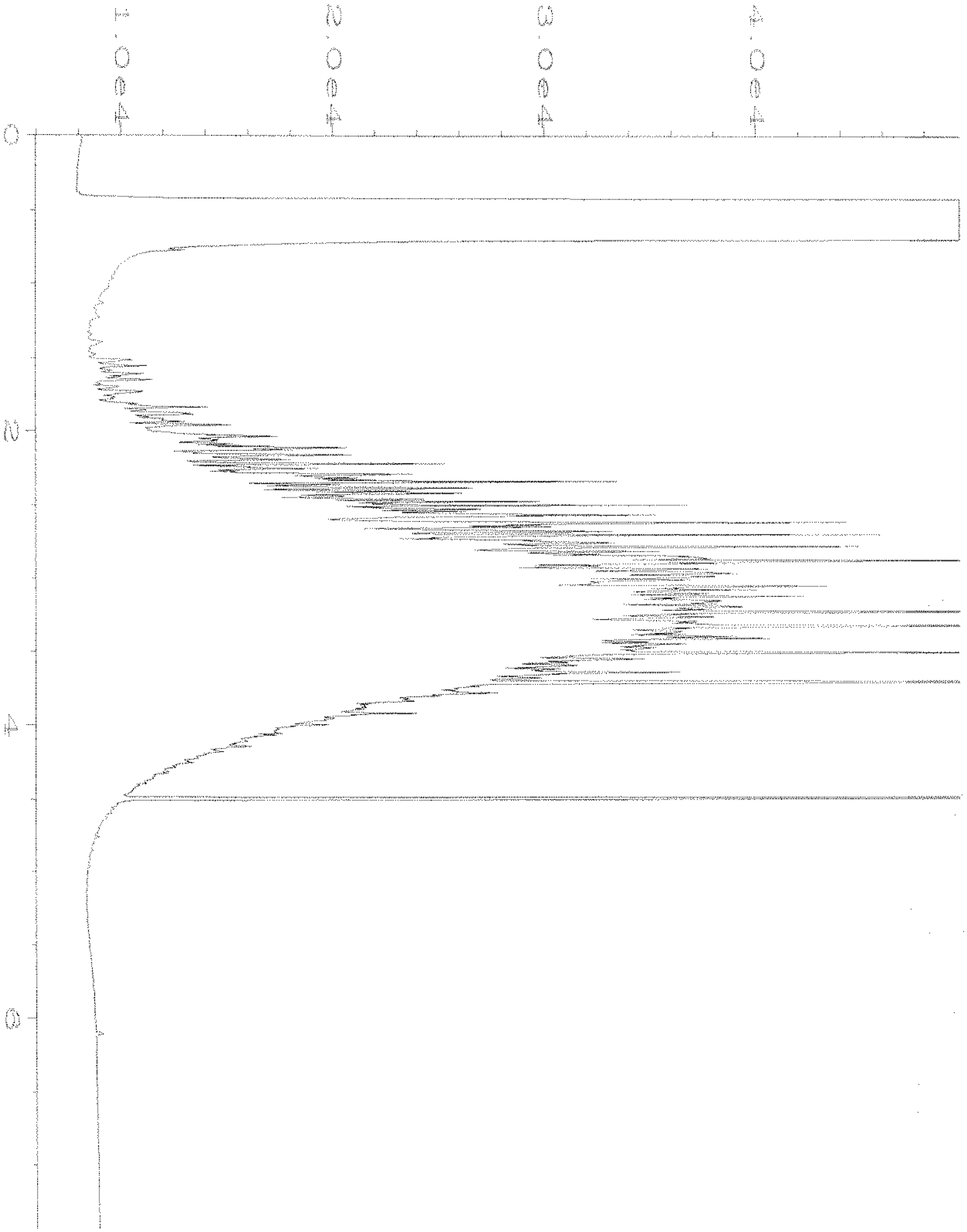

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Data File Name    : C:\HPCHEM\1\DATA\06-17-22\032F0701.D
Operator          : TL                             Page Number      : 1
Instrument        : GC1                            Vial Number      : 32
Sample Name       : 206320-04                      Injection Number : 1
Run Time Bar Code:                                 Sequence Line    : 7
Acquired on       : 17 Jun 22  06:21 PM            Instrument Method: DX.MTH
Report Created on: 20 Jun 22  11:09 AM             Analysis Method  : DEFAULT.MTH
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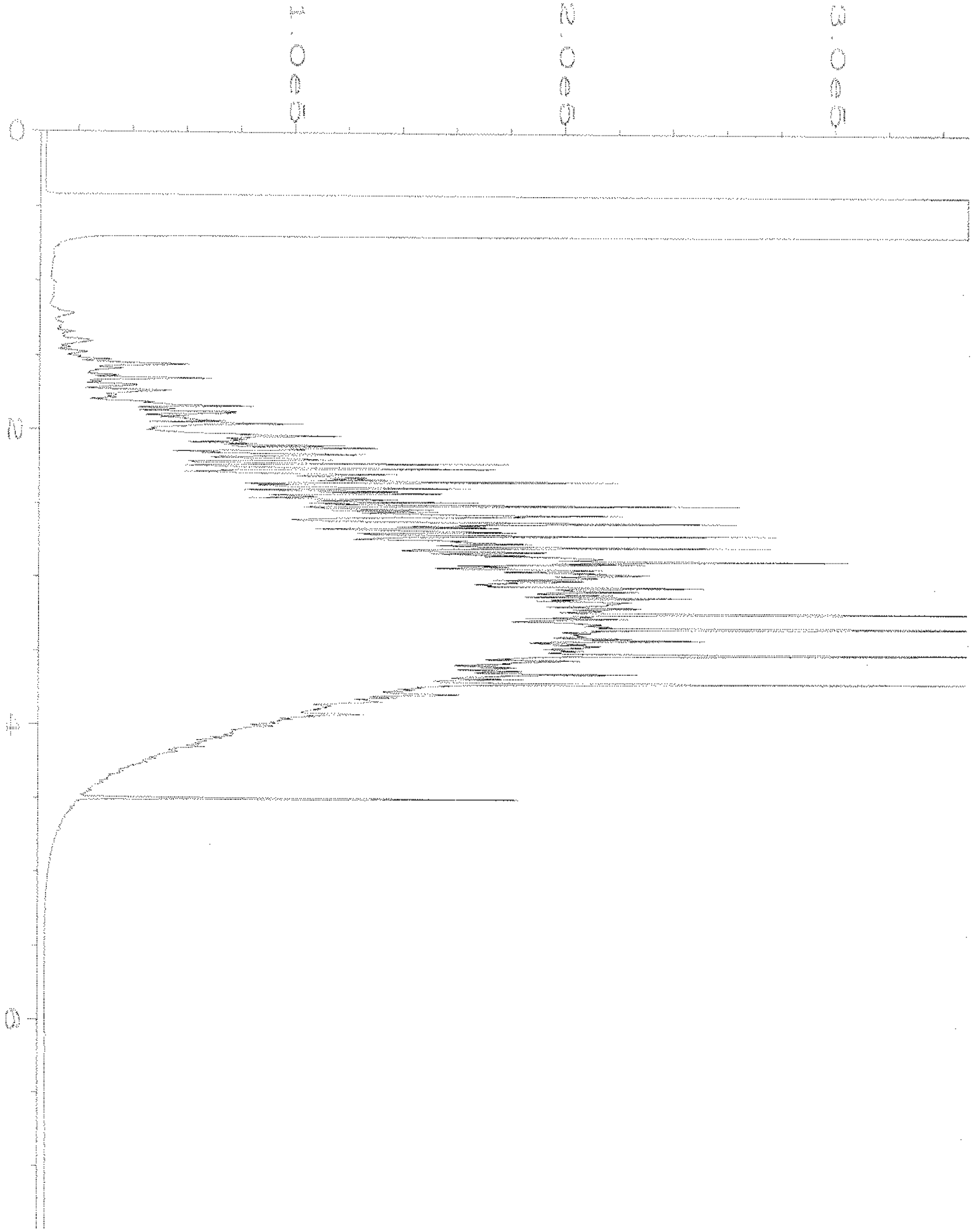
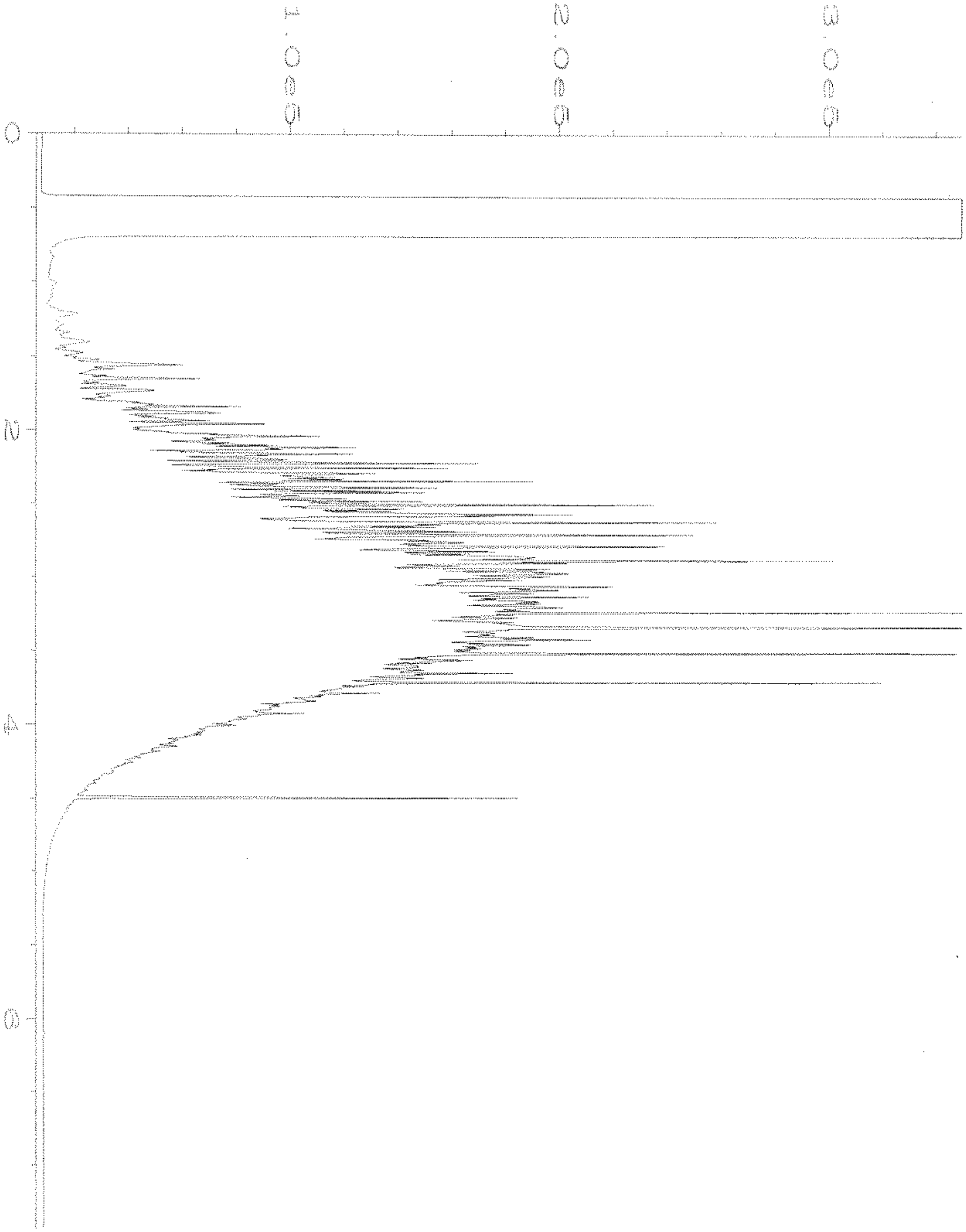


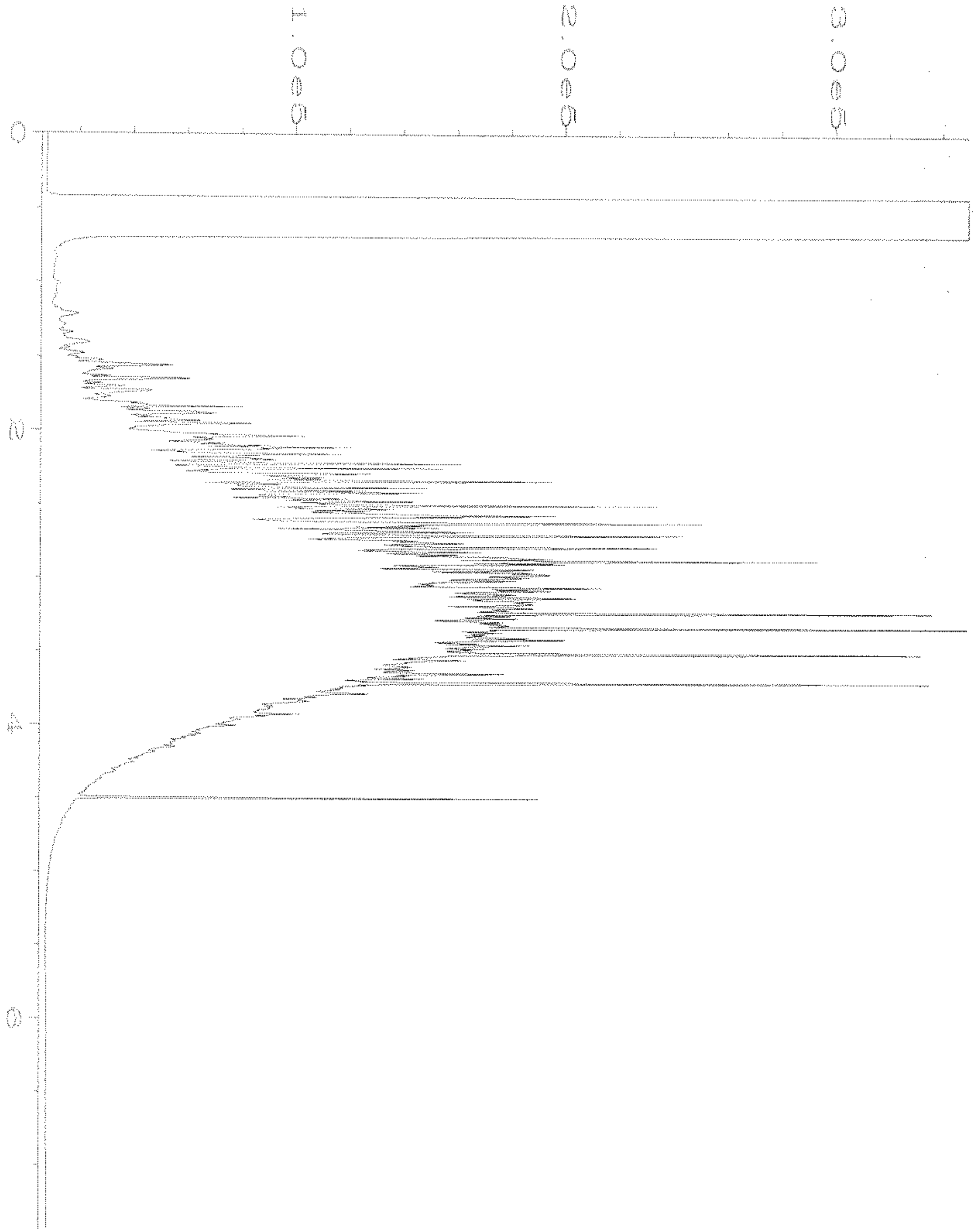
Data File Name : C:\HPCHEM\1\DATA\06-17-22\033F0701.D
Operator : TL
Instrument : GC1
Sample Name : 206320-05
Run Time Bar Code:
Acquired on : 17 Jun 22 06:36 PM
Report Created on: 20 Jun 22 11:09 AM

Page Number : 1
Vial Number : 33
Injection Number : 1
Sequence Line : 7
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



Data File Name   : C:\HPCHEM\1\DATA\06-17-22\034F0701.D
Operator   : TL
Instrument   : GC1
Sample Name   : 206320-06
Run Time Bar Code:
Acquired on   : 17 Jun 22 06:51 PM
Report Created on: 20 Jun 22 11:09 AM

Page Number   : 1
Vial Number   : 34
Injection Number : 1
Sequence Line   : 7
Instrument Method: DX.MTH
Analysis Method   : DEFAULT.MTH



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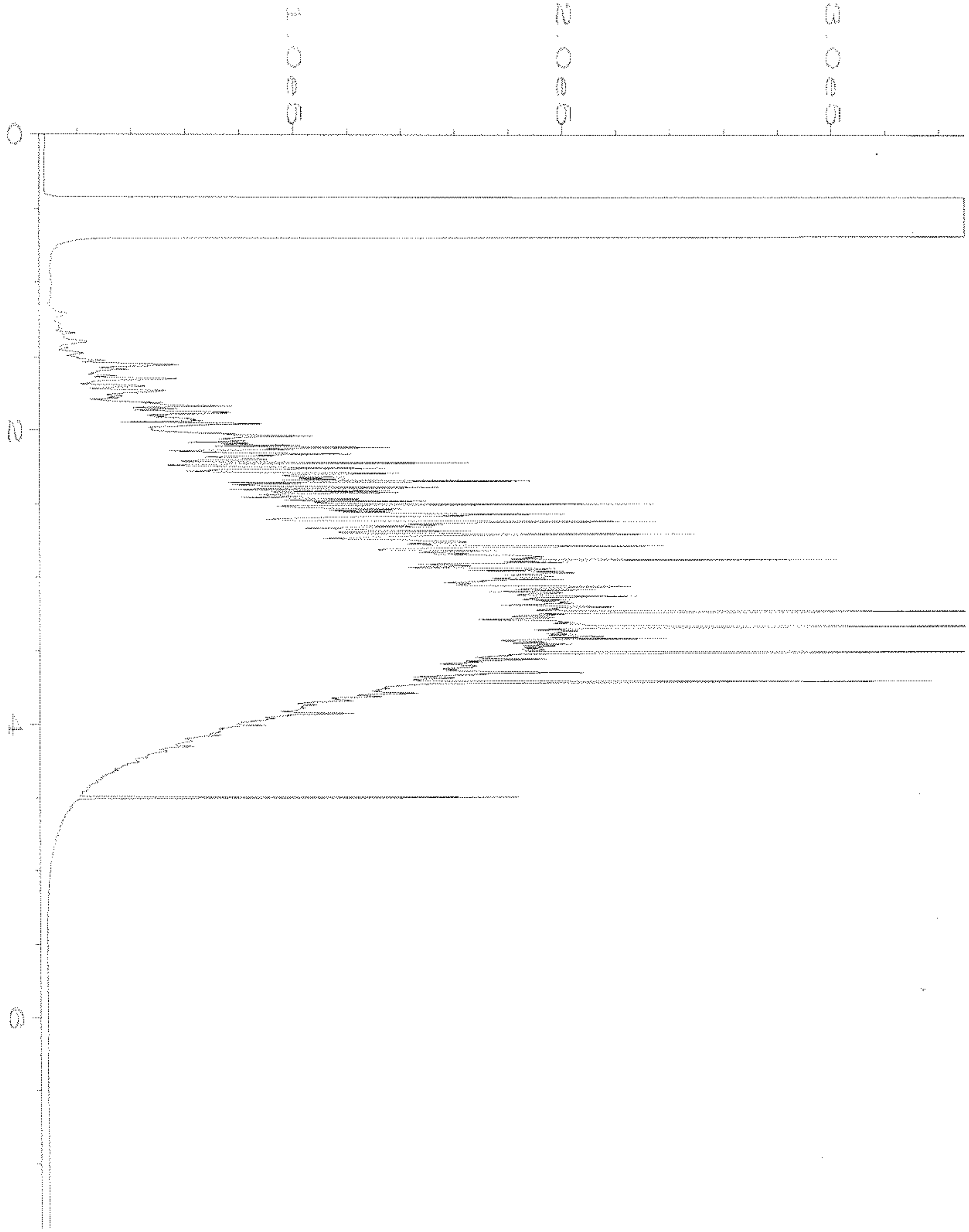
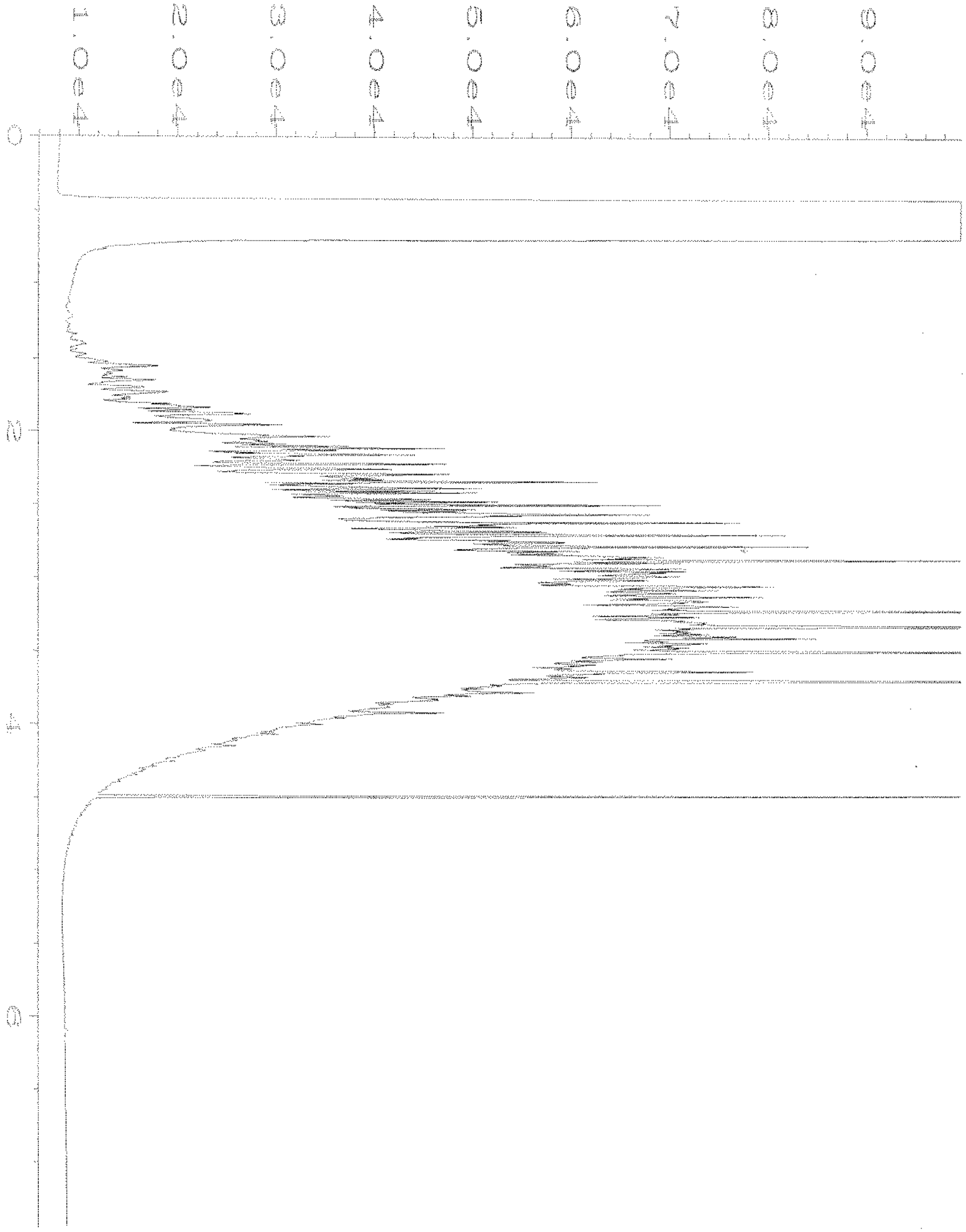
Data File Name    : C:\HPCHEM\1\DATA\06-17-22\035F0701.D
Operator          : TL                              Page Number       : 1
Instrument        : GC1                             Vial Number       : 35
Sample Name       : 206320-07                       Injection Number : 1
Run Time Bar Code:                                  Sequence Line     : 7
Acquired on       : 17 Jun 22   07:06 PM            Instrument Method: DX.MTH
Report Created on: 20 Jun 22   11:10 AM             Analysis Method   : DEFAULT.MTH
```



Data File Name : C:\HPCHEM\1\DATA\06-17-22\036F0701.D
Operator : TL
Instrument : GC1
Sample Name : 206320-08
Run Time Bar Code:
Acquired on : 17 Jun 22 07:21 PM
Report Created on: 20 Jun 22 11:10 AM

Page Number : 1
Vial Number : 36
Injection Number : 1
Sequence Line : 7
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



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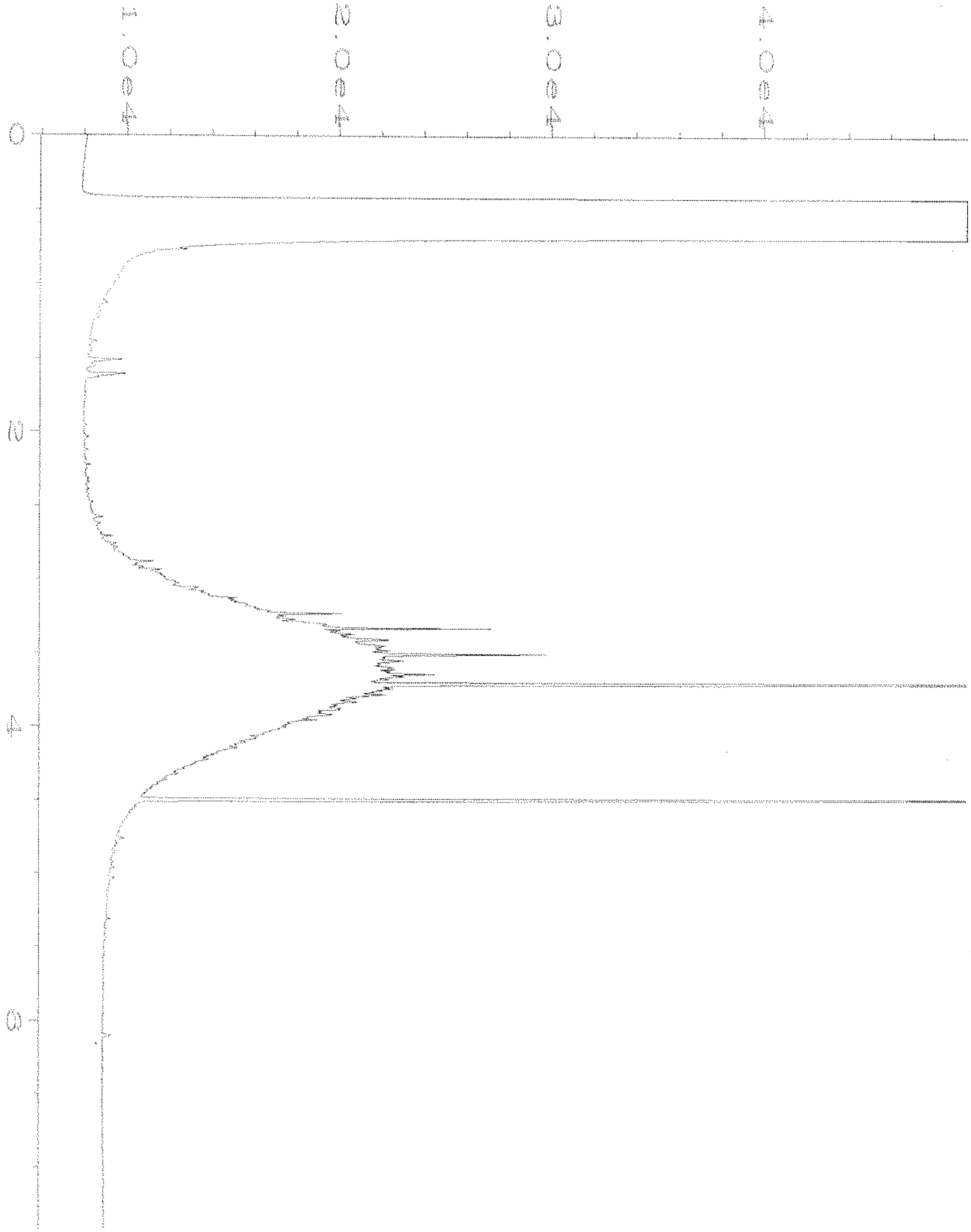
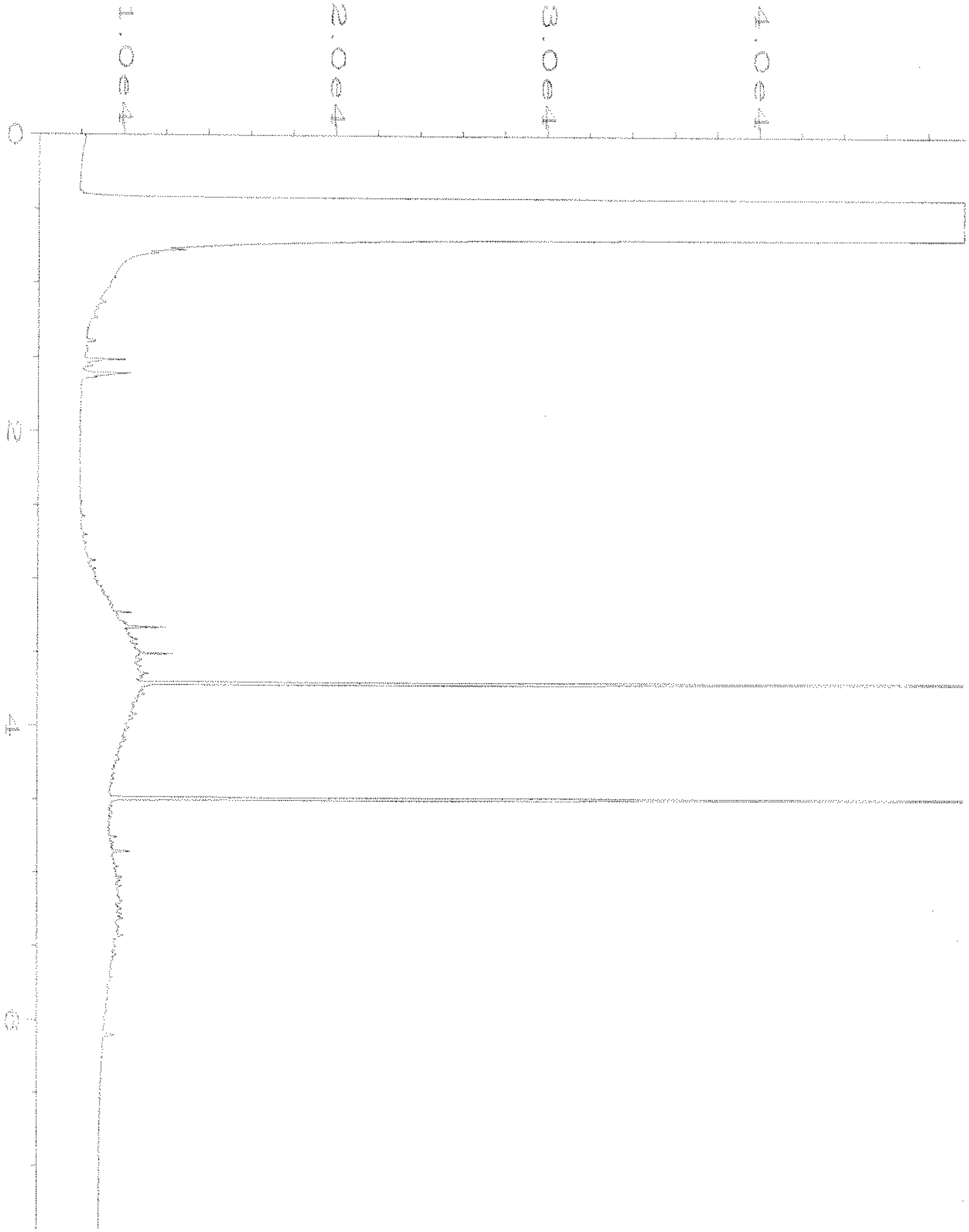
Data File Name    : C:\HPCHEM\1\DATA\06-17-22\037F0701.D
Operator          : TL                               Page Number      : 1
Instrument        : GC1                              Vial Number      : 37
Sample Name       : 206320-09                        Injection Number : 1
Run Time Bar Code:                                   Sequence Line    : 7
Acquired on       : 17 Jun 22  07:36 PM              Instrument Method: DX.MTH
Report Created on: 20 Jun 22  11:10 AM               Analysis Method  : DEFAULT.MTH
```

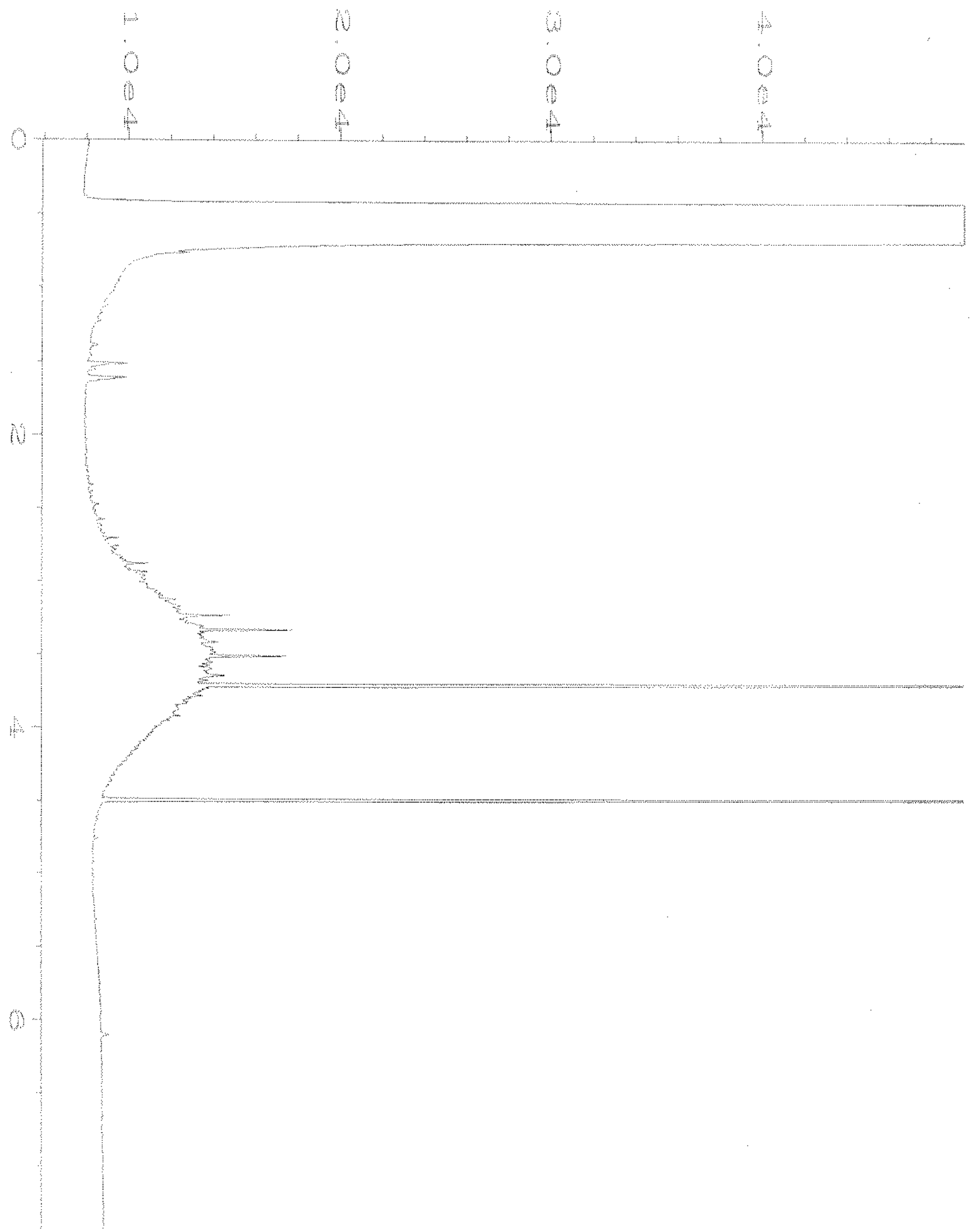


```
Data File Name    : C:\HPCHEM\1\DATA\06-17-22\038F0701.D
Operator          : TL                              Page Number      : 1
Instrument        : GC1                             Vial Number      : 38
Sample Name       : 206320-10                       Injection Number : 1
Run Time Bar Code:                                  Sequence Line    : 7
Acquired on       : 17 Jun 22   07:51 PM            Instrument Method: DX.MTH
Report Created on: 20 Jun 22   11:10 AM             Analysis Method  : DEFAULT.MTH
```



Data File Name   : C:\HPCHEM\1\DATA\06-17-22\039F0701.D
Operator   : TL
Instrument   : GC1
Sample Name   : 206320-11
Run Time Bar Code:
Acquired on   : 17 Jun 22 08:05 PM
Report Created on: 20 Jun 22 11:10 AM

Page Number   : 1
Vial Number   : 39
Injection Number : 1
Sequence Line   : 7
Instrument Method: DX.MTH
Analysis Method   : DEFAULT.MTH



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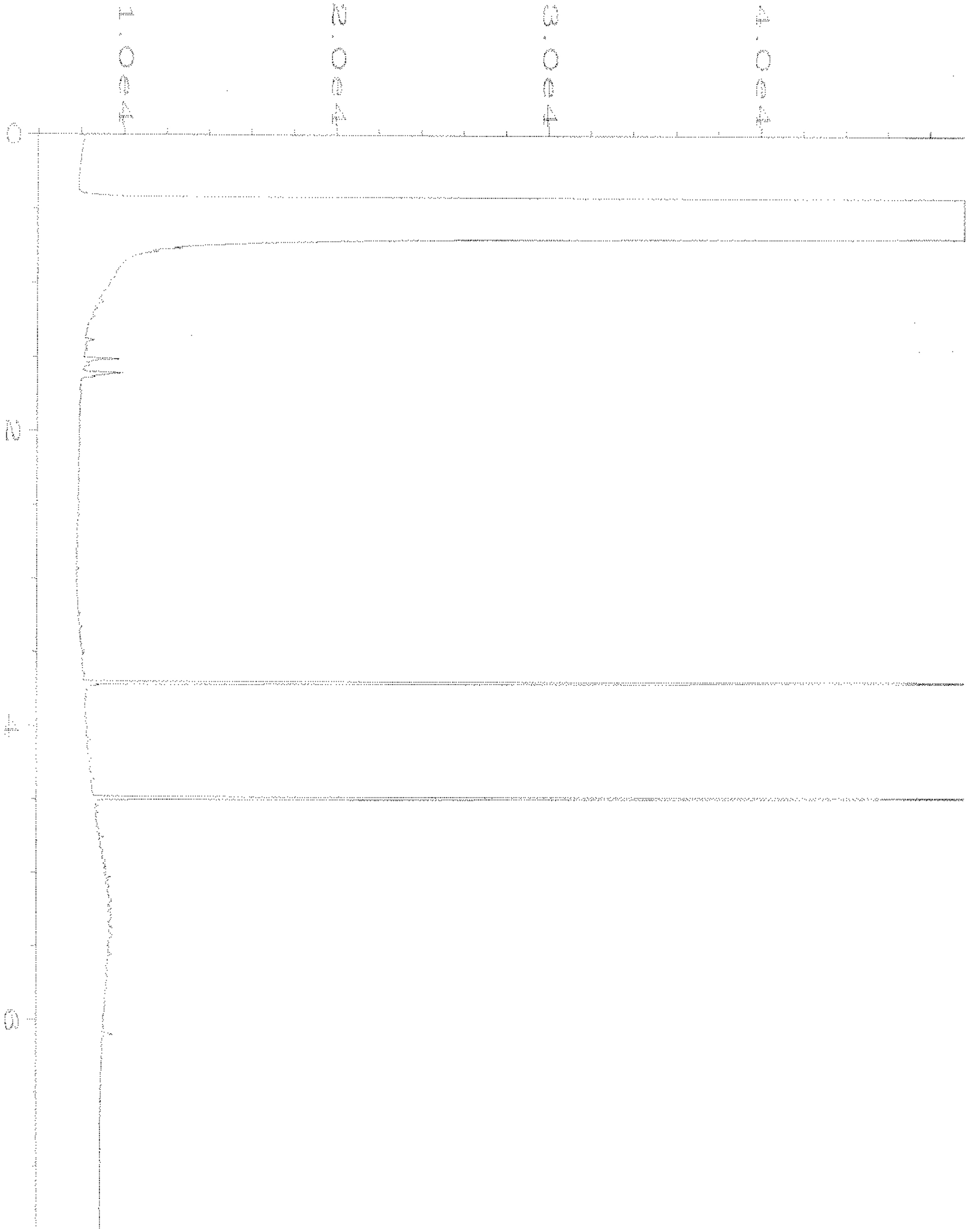
Data File Name    : C:\HPCHEM\1\DATA\06-17-22\040F0701.D
Operator          : TL                                   Page Number      : 1
Instrument        : GC1                                  Vial Number      : 40
Sample Name       : 206320-12                            Injection Number : 1
Run Time Bar Code:                                       Sequence Line    : 7
Acquired on       : 17 Jun 22  08:20 PM                  Instrument Method: DX.MTH
Report Created on: 20 Jun 22  11:10 AM                   Analysis Method  : DEFAULT.MTH
```



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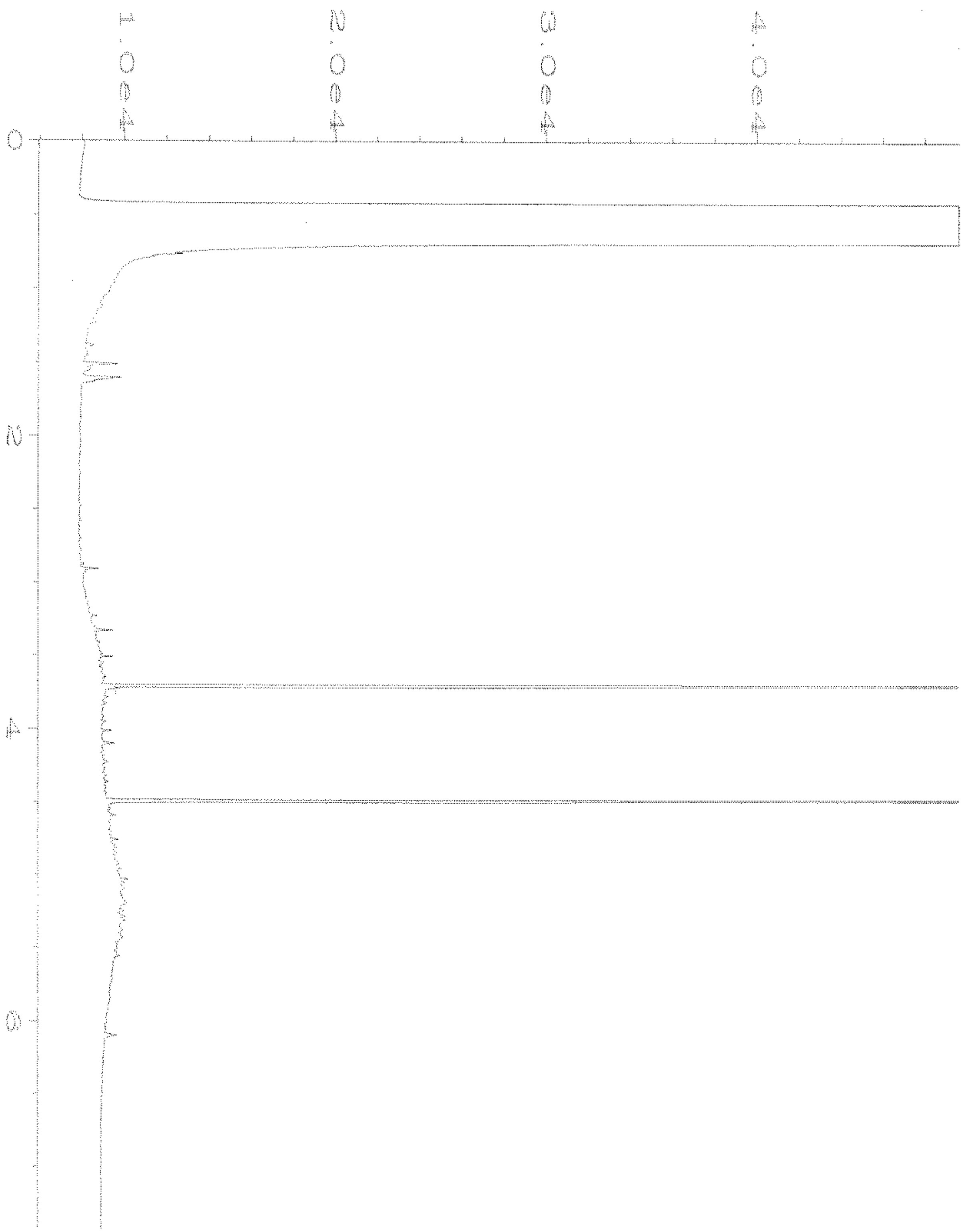
Data File Name    : C:\HPCHEM\1\DATA\06-17-22\041F0701.D
Operator          : TL                              Page Number      : 1
Instrument        : GC1                             Vial Number      : 41
Sample Name       : 206320-13                       Injection Number : 1
Run Time Bar Code:                                  Sequence Line    : 7
Acquired on       : 17 Jun 22  08:35 PM             Instrument Method: DX.MTH
Report Created on: 20 Jun 22  11:10 AM              Analysis Method  : DEFAULT.MTH
```



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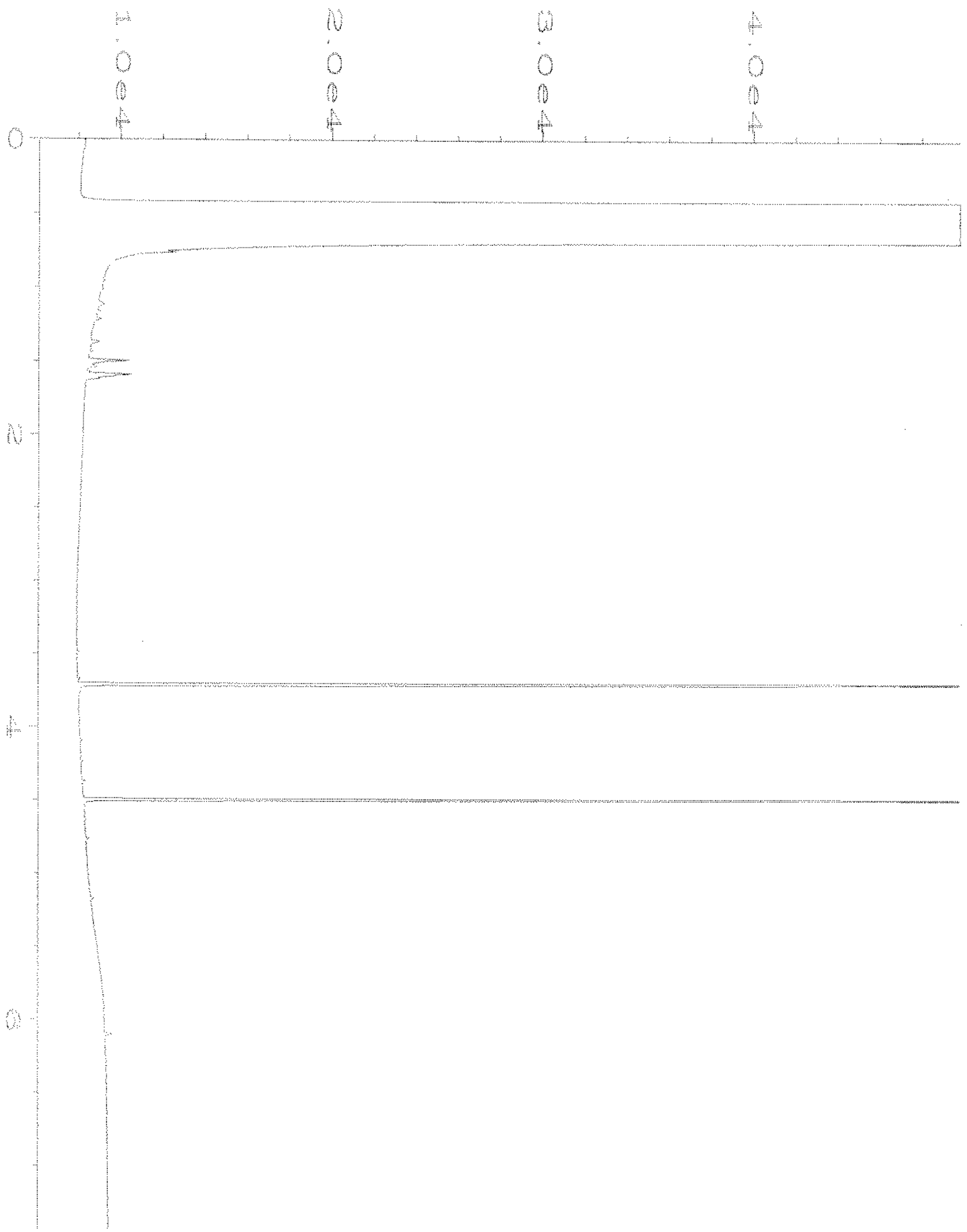
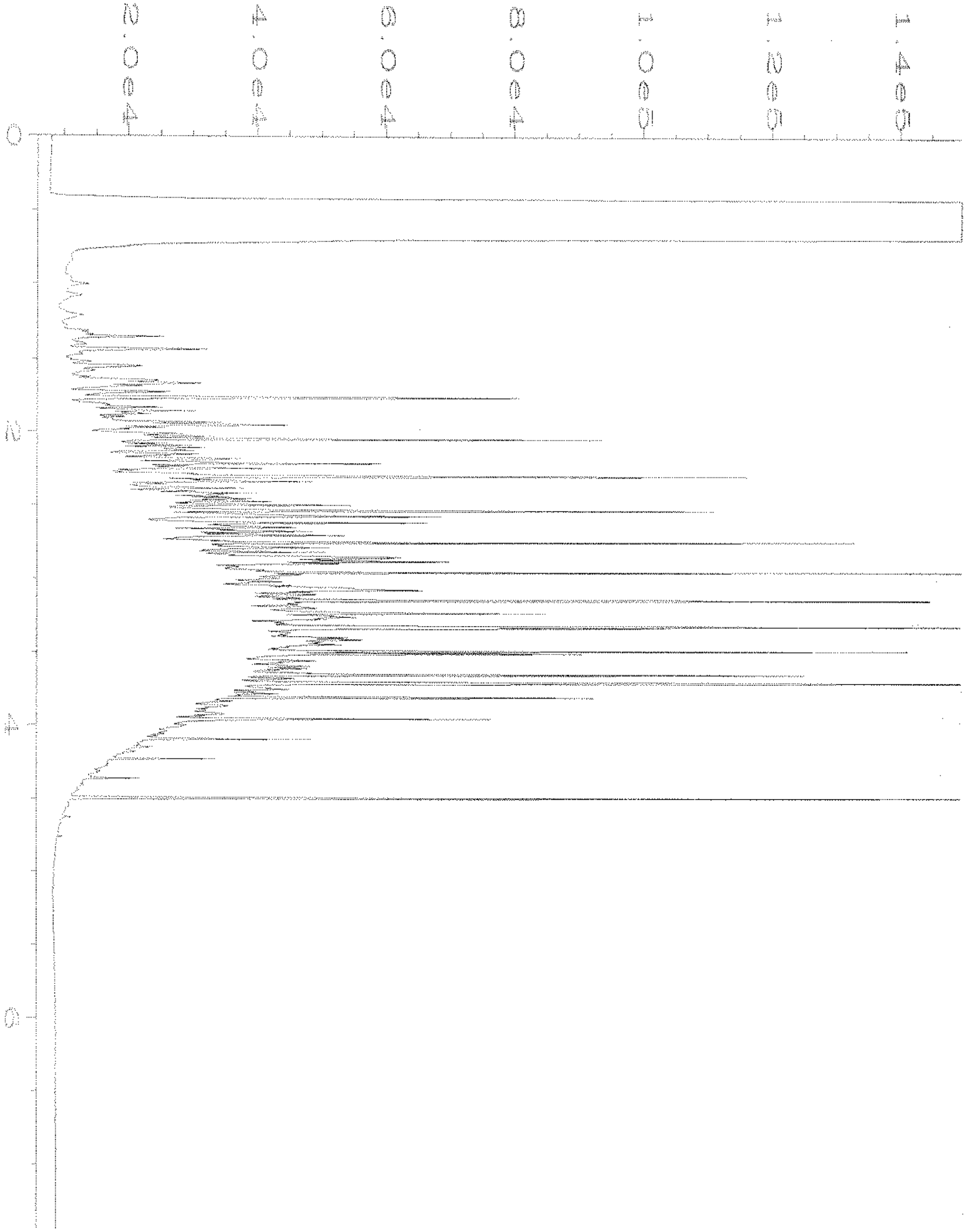
Data File Name    : C:\HPCHEM\1\DATA\06-17-22\042F0701.D
Operator          : TL                            Page Number      : 1
Instrument        : GC1                           Vial Number      : 42
Sample Name       : 206320-14                     Injection Number : 1
Run Time Bar Code:                                Sequence Line    : 7
Acquired on       : 17 Jun 22  08:50 PM           Instrument Method: DX.MTH
Report Created on: 20 Jun 22  11:11 AM            Analysis Method  : DEFAULT.MTH
```



Data File Name : C:\HPCHEM\1\DATA\06-17-22\008F0301.D
Operator : TL
Instrument : GC1
Sample Name : 02-1444 mb
Run Time Bar Code:
Acquired on : 17 Jun 22 09:06 AM
Report Created on: 20 Jun 22 11:11 AM

Page Number : 1
Vial Number : 8
Injection Number : 1
Sequence Line : 3
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



```
Data File Name    : C:\HPCHEM\1\DATA\06-17-22\003F0601.D
Operator          : TL                              Page Number       : 1
Instrument        : GC1                             Vial Number       : 3
Sample Name       : 500 Dx 65-122F                  Injection Number  : 1
Run Time Bar Code:                                  Sequence Line     : 6
Acquired on       : 17 Jun 22  05:14 PM             Instrument Method: DX.MTH
Report Created on: 20 Jun 22  11:08 AM             Analysis Method   : DEFAULT.MTH
```

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.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

June 27, 2022

Gabriel Cisneros, Project Manager
Floyd-Snider
Two Union Square
601 Union St, Suite 600
Seattle, WA 98101

Dear Mr Cisneros:

Included are the results from the testing of material submitted on June 22, 2022 from the CL-Ellensburg, F&BI 206397 project. There are 11 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 should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: manique.talia-murray@floydsnider.com
FDS0627R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on June 22, 2022 by Friedman & Bruya, Inc. from the Floyd-Snider CL-Ellensburg, F&BI 206397 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Floyd-Snider
206397 -01	SIDE-22-6.0FT
206397 -02	SIDE-18R-6.0FT
206397 -03	SIDE-19R-6.0FT

All quality control requirements were acceptable.

Date of Report: 06/27/22
Date Received: 06/22/22
Project: CL-Ellensburg, F&BI 206397
Date Extracted: 06/23/22
Date Analyzed: 06/23/22

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SIDE-22-6.0FT 206397-01	230	123
SIDE-18R-6.0FT 206397-02 1/5	1,200	117
SIDE-19R-6.0FT 206397-03 1/5	1,100	116
Method Blank 02-1169 MB	<5	62

Date of Report: 06/27/22
Date Received: 06/22/22
Project: CL-Ellensburg, F&BI 206397
Date Extracted: 06/23/22
Date Analyzed: 06/23/22

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 48-168)
SIDE-22-6.0FT 206397-01	570	<250	91
SIDE-18R-6.0FT 206397-02	10,000	<250	86
SIDE-19R-6.0FT 206397-03	12,000	<250	96
Method Blank 02-1469 MB2	<50	<250	87

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SIDE-22-6.0FT	Client:	Floyd-Snider
Date Received:	06/22/22	Project:	CL-Ellensburg, F&BI 206397
Date Extracted:	06/23/22	Lab ID:	206397-01
Date Analyzed:	06/23/22	Data File:	062314.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	90	109
Toluene-d8	100	89	112
4-Bromofluorobenzene	96	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	0.051
Ethylbenzene	0.096
m,p-Xylene	0.25
o-Xylene	0.059
Naphthalene	0.056

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SIDE-18R-6.0FT	Client:	Floyd-Snider
Date Received:	06/22/22	Project:	CL-Ellensburg, F&BI 206397
Date Extracted:	06/23/22	Lab ID:	206397-02
Date Analyzed:	06/23/22	Data File:	062323.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	90	109
Toluene-d8	106	89	112
4-Bromofluorobenzene	95	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	0.45

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	SIDE-19R-6.0FT	Client:	Floyd-Snider
Date Received:	06/22/22	Project:	CL-Ellensburg, F&BI 206397
Date Extracted:	06/23/22	Lab ID:	206397-03
Date Analyzed:	06/23/22	Data File:	062324.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	90	109
Toluene-d8	106	89	112
4-Bromofluorobenzene	97	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	1.1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Floyd-Snider
Date Received:	Not Applicable	Project:	CL-Ellensburg, F&BI 206397
Date Extracted:	06/23/22	Lab ID:	02-1437 mb
Date Analyzed:	06/23/22	Data File:	062305.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	90	109
Toluene-d8	96	89	112
4-Bromofluorobenzene	93	84	115

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Date of Report: 06/27/22
Date Received: 06/22/22
Project: CL-Ellensburg, F&BI 206397

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

Laboratory Code: 206302-02 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	112	71-131

Date of Report: 06/27/22
Date Received: 06/22/22
Project: CL-Ellensburg, F&BI 206397

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

Laboratory Code: 206373-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	104	106	73-135	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	118	74-139

Date of Report: 06/27/22
Date Received: 06/22/22
Project: CL-Ellensburg, F&BI 206397

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

Laboratory Code: 206374-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Benzene	mg/kg (ppm)	1	<0.03	61	69	29-129	12
Toluene	mg/kg (ppm)	1	<0.05	62	68	35-130	9
Ethylbenzene	mg/kg (ppm)	1	<0.05	62	69	32-137	11
m,p-Xylene	mg/kg (ppm)	2	<0.1	65	72	34-136	10
o-Xylene	mg/kg (ppm)	1	<0.05	63	71	33-134	12
Naphthalene	mg/kg (ppm)	1	<0.05	61	68	14-157	11

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	1	98	71-118
Toluene	mg/kg (ppm)	1	97	66-126
Ethylbenzene	mg/kg (ppm)	1	96	64-123
m,p-Xylene	mg/kg (ppm)	2	97	78-122
o-Xylene	mg/kg (ppm)	1	99	77-124
Naphthalene	mg/kg (ppm)	1	96	63-140

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

206397

SAMPLE CHAIN OF CUSTODY

06/22/22 ~~VS B3 Door~~ / C01

[redacted]

Page # 1 of 1

[redacted] Report To Gabe Cisneros & Manique Murray

Company Floyd|Snider

Address 601 Union St.

City, State, ZIP Seattle, WA 98125

Phone 206 292-2078 Email gabe.cisneros@floydsnider.com

SAMPLERS (*signature*)

PROJECT NAME CL-Ellensburg

PO #

REMARKS cc: manique.talon-murray

TAT by Friday AM 6/24

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME CI

☐ Standard turnaround

☑ RUSH By AM Friday June 24

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Archive samples

☐ Other

Default: Dispose after 30 days

						ANALYSES REQUESTED											
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	BTEX only VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082					Notes
SIDE-22-6.0FT	01 A-E	6/22/22	0930	Soil	5	X	X			X							
SIDE-18R-6.0FT	02	↓	1145	↓	5	X	X			X							
SIDE-19R-6.0FT	03		1155		5	X	X			X							

Samples received at 4 °C

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Gabriel Cisneros	Floyd|Snider	6/22	1738
Received by:	Mac Goldman	FeBI	6/22/22	1738
Relinquished by:				
Received by:				

Remedial Action Completion Report

Big B Mini Mart Site

Appendix D
Engineering Design Report Addendum—Bioventing Pilot Test Results Summary

FLOYD | SNIDER
strategy ▪ science ▪ engineering

Two Union Square
601 Union Street, Suite 600
Seattle, WA 98101
tel: 206.292.2078 fax: 206.682.7867

Memorandum

To: Mr. John Mefford, Washington State Department of Ecology

Copies: Mr. Surjit Singh, Big B LLC
Louis Russell, Cascadia Law Group PLLC
Scott MacDonald, BNSF Railway Company

From: Gabe Cisneros and Manique Talaia-Murray, Floyd|Snider

Date: November 30, 2022

Project No: CL-Ellensburg, Big B (Cleanup Site ID: 4901)

Re: **EDR Addendum—Bioventing Pilot Test Results Summary**

PURPOSE

Floyd|Snider has prepared this Bioventing Pilot Test Results Summary as an addendum to the Engineering Design Report (EDR) approved by the Washington State Department of Ecology (Ecology) in November 2020 (Floyd Snider 2020) at the Big B Mini Mart Site (Site; Facility Site ID [FSID] #386, Cleanup Site ID [CSID] #4901) located at 1611 Canyon Road in Ellensburg, Washington (referred to as the Big B property; Figure 1). The design and methodology of the bioventing pilot test were presented in the Bioventing Pilot Test Work Plan (Work Plan; Floyd|Snider 2022a), which was approved by Ecology in April 2022.

In accordance with the Cleanup Action Plan (CAP; Ecology 2020) and EDR for the Site, Phase I remedial excavation activities were conducted between May and October 2021, and Phase II remedial excavation activities were conducted in June 2022. During excavation, a total of 625.55 tons of petroleum-impacted soil were removed from the Site, including from areas on the south-adjacent Toad’s (Astro) Station (herein referred to as Toad’s) property and the west- adjacent BNSF property. Impacted soil was excavated to Site-specific remediation levels (RELs) based on residual saturation levels for diesel range organics and gasoline range organics defined in the CAP, which are greater than the Site cleanup levels (CULs). Therefore, soil impacted with contaminants of concern (COCs) at concentrations greater than CULs and less than RELs was left in place. The remaining petroleum-impacted soil in the vadose zone will be treated using a bioventing system beneath the properties to prevent leaching of contamination to groundwater. Excavation activities are summarized in the Remedial Action Completion Report (RACR; Floyd|Snider 2022b).

Bioventing will be used to remediate impacted soil remaining in the vadose/smear zone after excavation activities are complete to ensure protection of groundwater. The results of the bioventing pilot test were used to determine the Site-specific radius of influence (ROI), which in turn informs the final system layout. The results of the pilot test were also used to determine the optimal air injection pressure.

Several field deviations from the Work Plan were necessary during implementation of the pilot test. These deviations and the resulting impacts on the pilot test results are discussed in this memorandum.

PILOT TEST SETUP

During pilot test design, Floyd|Snider determined that a single-phase 0.7 horsepower (HP) regenerative blower with a maximum discharge capacity of approximately 50 cubic feet per minute (cfm) would likely be sufficient for the Site. A KPHRC-101 regenerative pressure system blower, manufactured by Republic Manufacturing, was selected for both the pilot test and the Site-wide system. The blower was fitted with a 115-volt plug adaptor so that it could be connected to a generator during the pilot test and to on-site power during the final system operation. Attachment 1 contains the pressure curves and specifications for the KPHRC-101 blower.

The blower was placed into a trailer (manifold shed) at the location shown on Figure 2. The blower outlet was fitted with 1 foot of 1.25-inch-diameter metal pipe and a rubber adaptor to connect with 2 feet of 2-inch-diameter Schedule 80 polyvinyl chloride (PVC) pipe to allow for adequate temperature diffusion during blower operation. The Schedule 80 PVC was then glued to approximately 10 feet of 2-inch Schedule 40 PVC pipe. A 2-inch-diameter check valve was inserted in-line with the 10-foot length of Schedule 40 PVC, which was then glued to the injection point. The injection point included a vertical 5-foot length of Schedule 40 PVC attached to a 5-foot horizontal piece of 2-inch-diameter, 0.010-inch (10-slot) opening PVC screen buried approximately 3 feet below ground surface (bgs). During its installation, the 5-foot horizontal screen was buried with pea gravel to mitigate possible siltation of the screen.

Five temporary vapor monitoring points were installed on June 13, 2022, at the initiation of Phase II remedial activities. The monitoring points were spaced at increasing distances from the injection point (MP-1 through MP-5). One monitoring point (MP-5) was installed in an area without hydrocarbon impacts, and the remainder were installed in the area of known hydrocarbon impacts. Vapor monitoring points were installed by digging to a depth of 3 feet bgs. A 5-foot length of tubing was attached to a 3-inch stainless steel vapor screen and inserted through a 5-foot length of 0.75-inch-diameter PVC. The PVC was placed within the 3-foot hole and gradually lifted as the hole was backfilled. Field personnel pushed the vapor screen and tubing down as the PVC was retracted so that the screen would remain in place at 3 feet bgs. To prevent short-circuiting in the annular space of the PVC, alternating layers of sand and bentonite flakes were poured through the PVC as it was lifted, beginning approximately 3 inches above the top of the vapor screen.

Groundwater wells MW-8 and MW-10 on the Big B property were used as additional monitoring points. At the time of the pilot test in July 2022, the depths to water in both wells was 5.75 feet bgs. The screened intervals in both wells are approximately 3.5 to 13.5 feet bgs. Therefore, there was at least 1 foot of exposed screen in both wells, meeting the criteria specified in the Work Plan for use of these wells as monitoring points (Floyd|Snider 2022a).

Pressure gauges were affixed to MP-1 and MW-10 to measure the pressure response at these monitoring points, located 5 feet and 20 feet, respectively, from the injection point, during the pilot test.

BASELINE MEASUREMENTS

The pilot test measurements were collected between July 5 and July 7, 2022, and consisted of measurements collected pre-, during, and post-air injection. Before injecting fresh air to the injection point, baseline measurements of oxygen, hydrogen sulfide, lower explosive limit (LEL) for methane, and volatile organic compounds (VOCs) were measured using a 4-gas meter (MultiRAE Lite) and photoionization detector (PID). Three tubing volumes were purged from each monitoring point using a peristaltic pump. Field personnel observed baseline parameters for 15 minutes per monitoring point until they were approximately stable (within 10%) and recorded final baseline measurements on the field forms (Attachment 2).

AIR INJECTION TESTS PROCEDURES AND RESULTS

Step Test

The step test was performed to determine the appropriate air injection flow rate for the bioventing system. Fresh air was supplied from the blower at 10, 30, and 50 cfm for 1 hour per injection rate. Field personnel recorded soil vapor measurements every half hour at each of the monitoring points.

The appropriate injection flow rate was determined to be 30 cfm, which is the approximate mid-point of the blower performance curve in Attachment 1. The maximum discharge for the KPHRC-101 blower is 58 cfm. According to U.S. Environmental Protection Agency bioventing guidance, a blower operating near its maximum pressure is inefficient and running under stressed conditions; therefore, 30 cfm was selected for the 24-hour test (USEPA 1995, p. 31).

24-Hour Injection Test

Upon completion of the step test, field personnel set blower discharge to 30 cfm and initiated the 24-hour injection test to determine the ROI of the bioventing system. The 24-hour injection began at 3:45 PM on July 5, 2022, and concluded at 4:45 PM on July 6, 2022. The purpose of the

24-hour injection test was to determine the ROI of the bioventing system using pressure ROI per EPA bioventing guidance; however, there were no pressure responses observed in MP-01 or MW-10 during the 24-hour injection test. Therefore, the oxygen ROI was determined instead (USEPA 1995, p. 18) and was used to help determine the final layout of the system piping. Field measurements recorded during the ROI test are presented in Attachment 2.

ROI data plots are presented in Figures 3a and 3b. During the ROI test, oxygen concentrations decreased at MP-3, MW-10, and MP-4 at various stages during air injection. Decreasing soil oxygen levels are evidence that biodegradation occurred. Oxygen concentrations were significantly lower overall at MW-8 and MW-10. This is likely due to the influence of a partially submerged screen and a significantly better seal from the atmosphere in the monitoring wells compared to the shallower soil gas monitoring points. Lastly, concentrations of VOCs generally increased at MP-2, MP-3, MW-10, and MP-4.

There was some evidence of short circuiting at several of the monitoring points. The concentration of oxygen at MP-1 did not change significantly from atmospheric levels, indicating that this monitoring point was not fully sealed. Additionally, oxygen concentrations decreased dramatically at MP-2 and MP-3 during the step test and increased slowly in the first 10 hours of the 24-hour injection. The trends observed at these monitoring points indicate that they were not fully sealed from the atmosphere. However, changes in oxygen concentrations at MP-2 and MP-3 indicate that there was at least a partial seal because the oxygen concentrations decreased as expected during the step test, despite slowly increasing over time during the 24-hour injection test. Furthermore, the concentration of VOCs increased at MP-2 and MP-3 and immediately dropped upon blower shutdown, indicating that these points were still responsive to changes in the air injection rate, despite some evidence of short circuiting. Overall, the soil gas monitoring points are susceptible to short-circuiting because of the shallow depth and loose fill into which they were installed.

However, because changes in oxygen and VOC concentrations at the other monitoring points aligned with trends that would be expected during biodegradation of light non-aqueous phase liquid (LNAPL), the oxygen ROI at a discharge of 30 cfm was determined to be 30 feet based on consistent soil gas trends observed at MP-4.

Post-Injection Measurements

The blower was shut down at 4:45 PM on July 6, 2022. Field personnel monitored soil vapor parameters immediately before and after shutdown. Oxygen concentrations at MP-2, MP-3, MW-10, and MP-4 increased and returned to approximate baseline concentrations.

Concentrations of VOCs decreased within 30 minutes of shutdown at monitoring points within the ROI (MP-2, MP-3, MW-10, and MP-4). No change in VOC concentrations was noted at MP-1, further indicating that the monitoring point was not fully sealed.

Work Plan Deviations

The following Work Plan deviations and the associated impacts were identified during the bioventing pilot test:

- **Insufficient seal on MP-1 and partial short-circuiting at MP-2 and MP-3**. The tubing and vapor point screen likely became dislodged during installation of MP-1. During air injection, no other obvious signs of short-circuiting were observed at these locations, such as air escaping from the outside or within the annular space of the PVC casing. The lack of seal at MP-1 resulted in atmospheric or near-atmospheric conditions for the entire duration of the pilot test. The partial lack of seal at MP-2 and MP-3 resulted in gradually increasing oxygen concentrations during the 24-hour injection test (despite an initial decrease both locations during the step test). The impact on the overall test was negligible because the ROI was discernable by changes in oxygen and VOC concentrations at other monitoring points up to 30 feet from the injection point.
- **Incorrect CO_2 monitoring device**. The MultiRAE 4-gas meter specified in the Work Plan successfully measured oxygen percent; however, the CO_2 sensors on the device could only measure CO_2 in the parts per million range, rather than the percent range required to measure soil gas concentrations. Thus, the field team was not able to measure CO_2 during the pilot test or receive a replacement device within the duration of the injection or recovery period. Measuring CO_2 percent relative to oxygen percent during bioventing is one way to confirm that biodegradation of LNAPL is occurring. However, CO_2 concentration is not required to calculate oxygen utilization rate, which is the key marker of bioventing efficacy at a site, and biodegradation was observed within the ROI based on changing concentrations of oxygen and VOCs.
- **Pressure ROI not measured**. The Work Plan specified that the pressure ROI would be estimated based on plotting the wellhead pressure measurements versus distance from the test well. Although pressure gauges were affixed to MP-1 and MW-10, no pressure changes were observed during the step test. Because pressure ROI was not able to be determined, the oxygen ROI was determined instead because changes in oxygen concentration were observed during the step test and the 24-hour injection test.

CONCLUSIONS AND PROPOSED DESIGN

Oxygen utilization was calculated using data from MW-10 and MP-4 (Figure 4). Over the course of the 24-hour injection period, a steady, linear decrease in oxygen concentrations was observed at these monitoring points. Oxygen utilization was 6% O_2 per day at MW-10 and 11% O_2 per day at MP-4, indicating that bioventing is feasible at the Site (USEPA 1995). The ROI of 30 feet is greater than the length of the injection point screen (5 feet), also indicating that bioventing is feasible at the Site (USEPA 1995).

The trends observed in the other monitoring points within the oxygen ROI (MP-1, MP-2, and MP-3) did not display the expected linear trends during the 24-hour injection. As discussed in the previous section, MP-1 was not fully sealed. The concentrations of oxygen at MP-2 and MP-3 decreased immediately during step-testing but increased slowly during the 24-hour injection. The concentrations of VOCs at these monitoring points increased during the 24-hour injection period and decreased immediately upon blower shut-down. These trends indicate that the monitoring points may have been short-circuiting during the 24-hour test, but that they were still within the ROI. Thus, the changing concentrations of oxygen and VOCs at these monitoring points are more reflective of issues with monitoring point installation, rather than the overall viability of bioventing at the Site.

The proposed design for the full-scale bioventing system is displayed on Figure 2. All the bioventing lines and screens south of the Toad’s and Big B property boundary were installed on June 22 and 23, 2022 during the Phase II excavation activities, prior to the pilot test activities. This was conducted with approval from Ecology to avoid having to access the Toad’s and BNSF properties and cause subsurface disruption again. Because the pilot test had not been completed yet, the screens were placed in locations shown on Figure 2 using a 10-foot ROI. The 2-inch-diameter Schedule 40 PVC lines and screens were placed directly on remaining impacted soil at approximately 3 feet bgs, above the water table, and approximately 6 inches of pea gravel was placed over the screens to prevent the screens from being clogged with finer-grained soil. The screens at the end of the piping were placed at a slightly lower elevation than the lines running back toward the blower to allow the lines to drain, in the event of higher than typical groundwater elevations. Imported backfill was placed above the pea gravel.

The system will consist of three separate legs (vent well lines) that run from the blower to various areas of the Site, which are shown as Bioventing Lines 1, 2, and 3 on Figure 2. The lines will be constructed using 2-inch-diameter Schedule 40 PVC, with a 5-foot length of 10-slot PVC screen installed at the end of each vent well line. Additional screened intervals will be created along the vent well lines by drilling multiple 1/8-inch diameter holes in the PVC pipe, as per the blower manufacturer’s instructions. The screened intervals will be placed at locations based on a 30-foot ROI, as shown on Figure 2. The screens will be placed directly on remaining impacted soil, just above the water table at the time of installation. A 6-inch layer of pea gravel will be placed over the screens to prevent siltation, and the rest of the trench will be backfilled to grade with the clean overburden removed during trenching activities. Similar to bioventing installation activities that were conducted during the Phase II excavation, the ends of the screens will be placed at a slightly lower elevation than the rest of the PVC lines to allow the lines to drain if they become submerged when groundwater levels rise.

In the blower shed, the lines will be connected to a manifold using 2-inch-diameter Schedule 40 PVC as a conduit that will deliver the air supply. A check valve will be placed on each vent well line to regulate the air flow to each area across the Site. The piping from the manifold to the blower will be connected to the single-phase 0.7 HP regenerative blower that will supply air to the three vent well lines. The blower will be equipped with an air filter to remove particulates that are entrained in the inlet air stream. An as-built schematic of the blower, manifold, and vent lines are included in the Bioventing System Operations and Maintenance (O&M) Manual (Attachment 3).

The system as described is designed to be able to selectively treat different parts of the Site over time, if needed, by using the check valves on a manifold. Further details on the system description and design are included in the Bioventing System O&M Manual.

OPERATIONS AND MAINTENANCE

The bioventing system is expected to reduce COC concentrations in the vadose zone relatively quickly; most likely within 5 to 10 years after excavation. As specified in the CAP, semiannual groundwater monitoring will be used to monitor concentrations of COCs in the vadose zone.

Floyd|Snider will monitor the performance of the blower during semiannual groundwater monitoring. Blower O&M will follow the specifications in the KPHRC-101 manual (Attachment 4). Specifically, the intake air filter, electrical connections, and outlet connections will be inspected for wear and tear and replaced if necessary. The discharge rate will also be periodically measured to ensure that it is staying relatively constant over time. Attachment 3 includes the Bioventing System O&M Manual for monitoring and maintaining the performance of the bioventing blower. A copy of the Bioventing System O&M Manual will be stored in the blower shed and will include data collection sheets that will be used to record maintenance activities.

The bioventing system will remain in operation until groundwater analytical data indicate that CULs have been achieved. When CULs in groundwater are first achieved at all monitoring locations, the bioventing system will be shut down, and compliance sampling will begin after 3 months following shutdown to allow subsurface conditions to reach equilibrium.

SCHEDULE

Preparations to install the bioventing system will be begin 90 days after receiving Ecology approval of this EDR addendum. It is anticipated that the system will be installed in the spring of 2023, pending approval.

REFERENCES

Floyd|Snider. 2020. *Big B Mini Mart Site Engineering Design Report.* July.

_____. 2022a. *Bioventing Pilot Test Work Plan.* Letter from Gabe Cisneros, Floyd|Snider, to John Mefford, Washington State Department of Ecology. 25 March.

_____. 2022b. *Big B Mini Mart Site Remedial Action Completion Report.* In development.

U.S. Environmental Protection Agency (USEPA). 1995. *Bioventing Principles and Practice, Volume II: Bioventing Design.* EPA/625/XXX/001. September.

LIST OF ATTACHMENTS

Figures

Note:
· Orthoimagery obtained from Esri, accessed 2022.

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Engineering Design Report Addendum
Big B Mini Mart Site
Ellensburg, Washington

Figure 1
Vicinity Map

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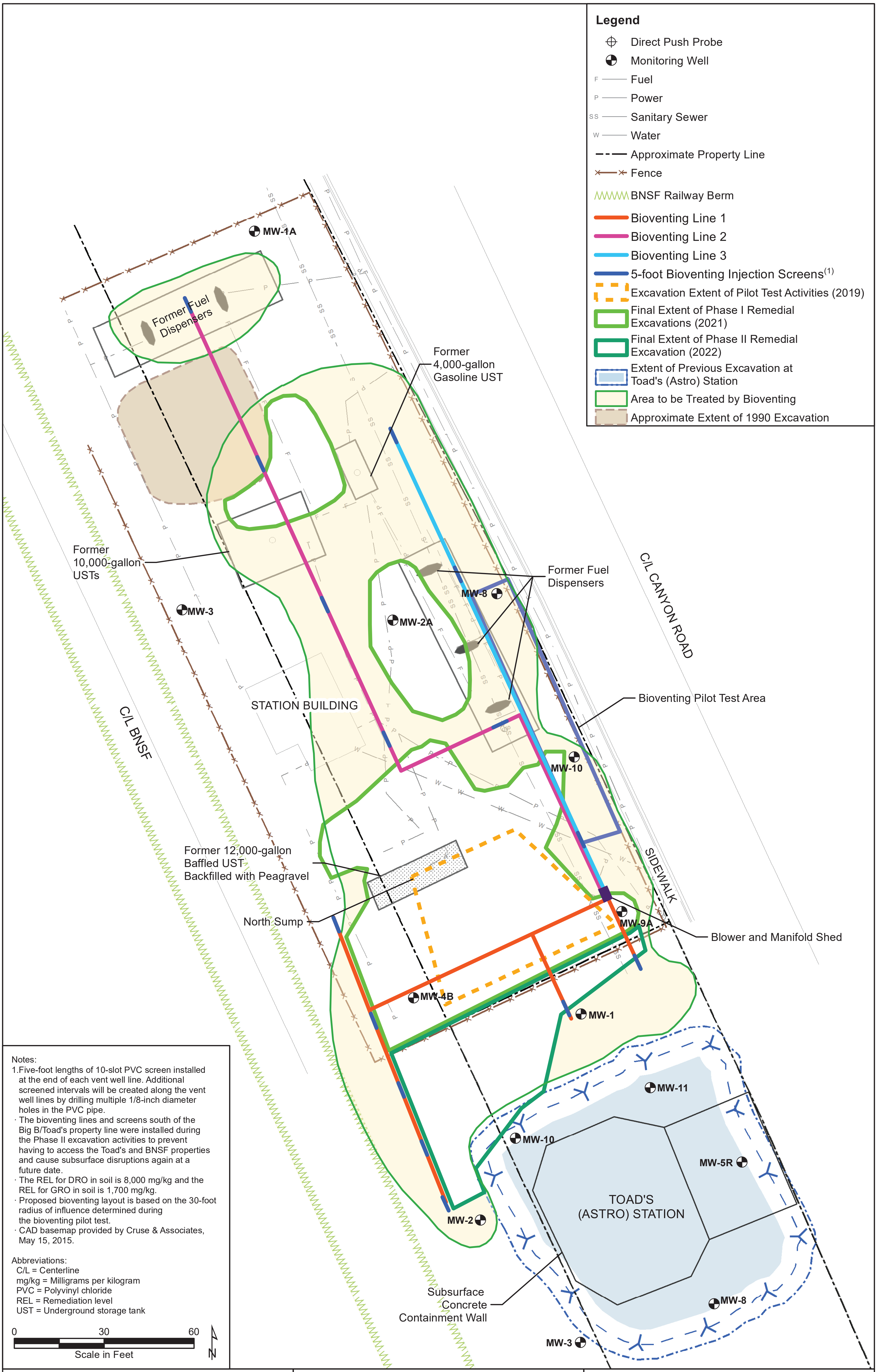
9/7/2022



Notes:

1. Five-foot lengths of 10-slot PVC screen installed at the end of each vent well line. Additional screened intervals will be created along the vent well lines by drilling multiple 1/8-inch diameter holes in the PVC pipe.
- The bioventing lines and screens south of the Big B/Toad's property line were installed during the Phase II excavation activities to prevent having to access the Toad's and BNSF properties and cause subsurface disruptions again at a future date.
- The REL for DRO in soil is 8,000 mg/kg and the REL for GRO in soil is 1,700 mg/kg.
- Proposed bioventing layout is based on the 30-foot radius of influence determined during the bioventing pilot test.
- CAD basemap provided by Cruse & Associates, May 15, 2015.

Abbreviations:
C/L = Centerline
mg/kg = Milligrams per kilogram
PVC = Polyvinyl chloride
REL = Remediation level
UST = Underground storage tank

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Ellensburg, Washington

Figure 2
Bioventing System Layout

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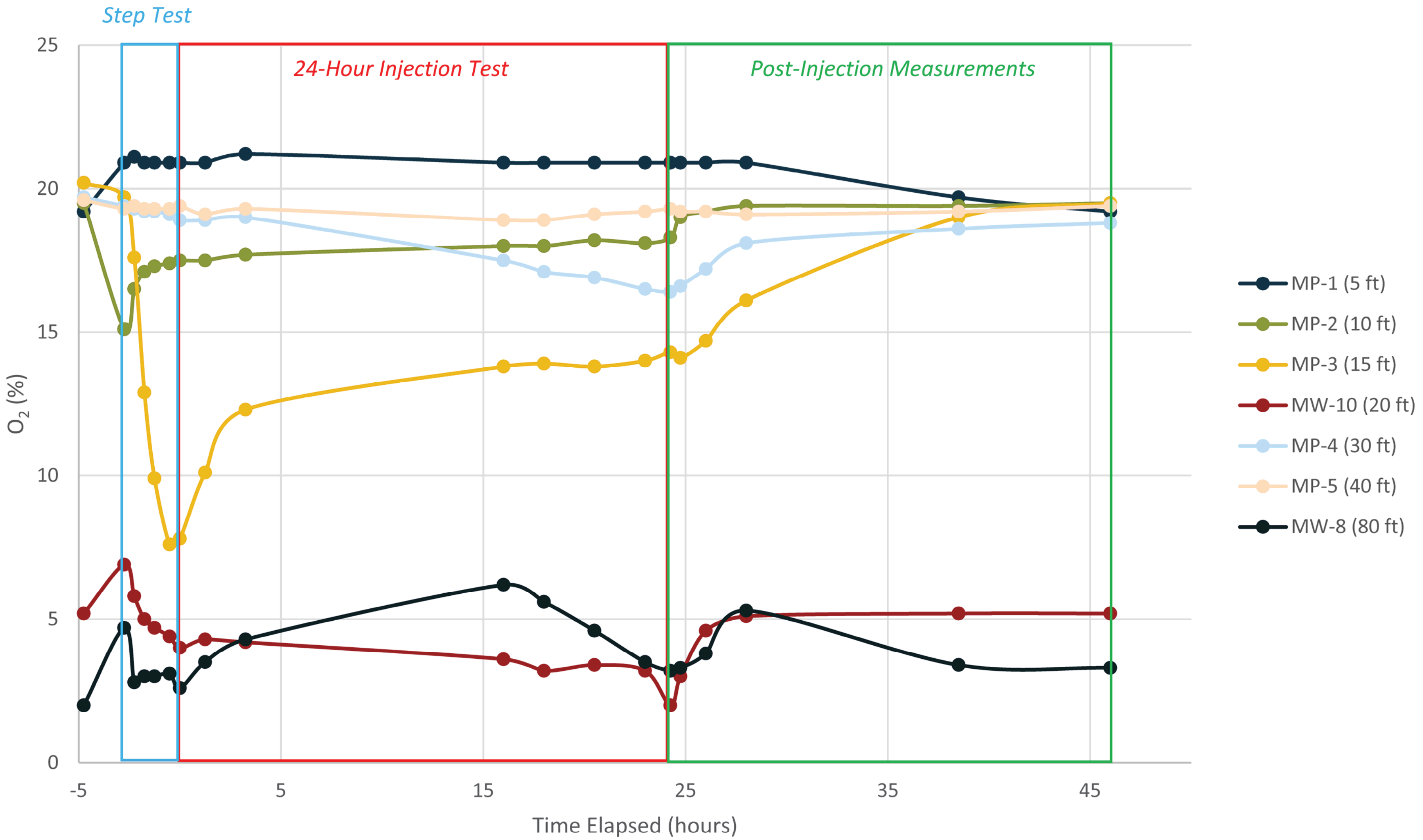
9/7/2022



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Addendum
Big B Mini Mart Site
Ellensburg, Washington

Figure 3a
Change in Soil Oxygen Concentration Over Time

9/9/2022

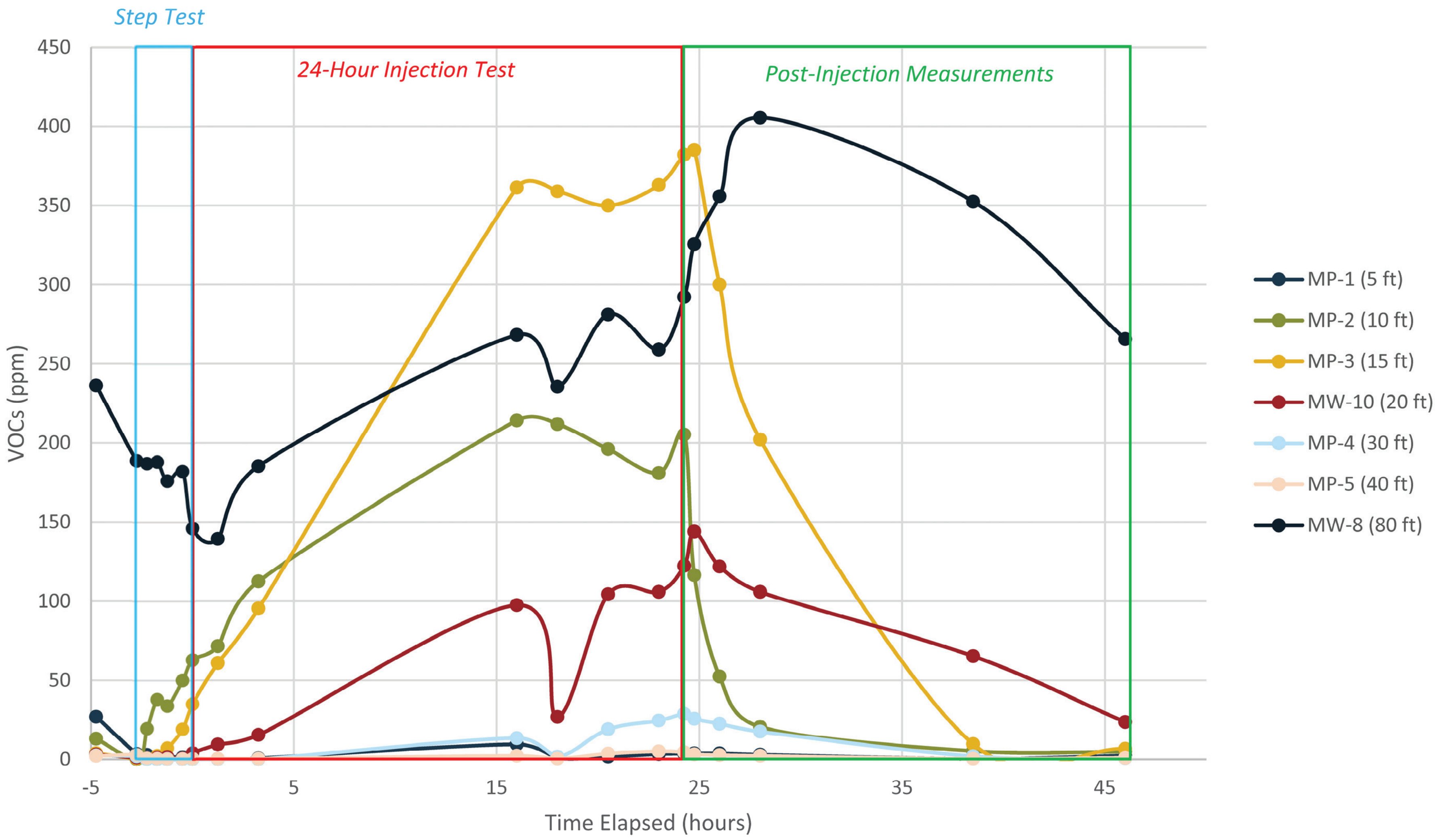

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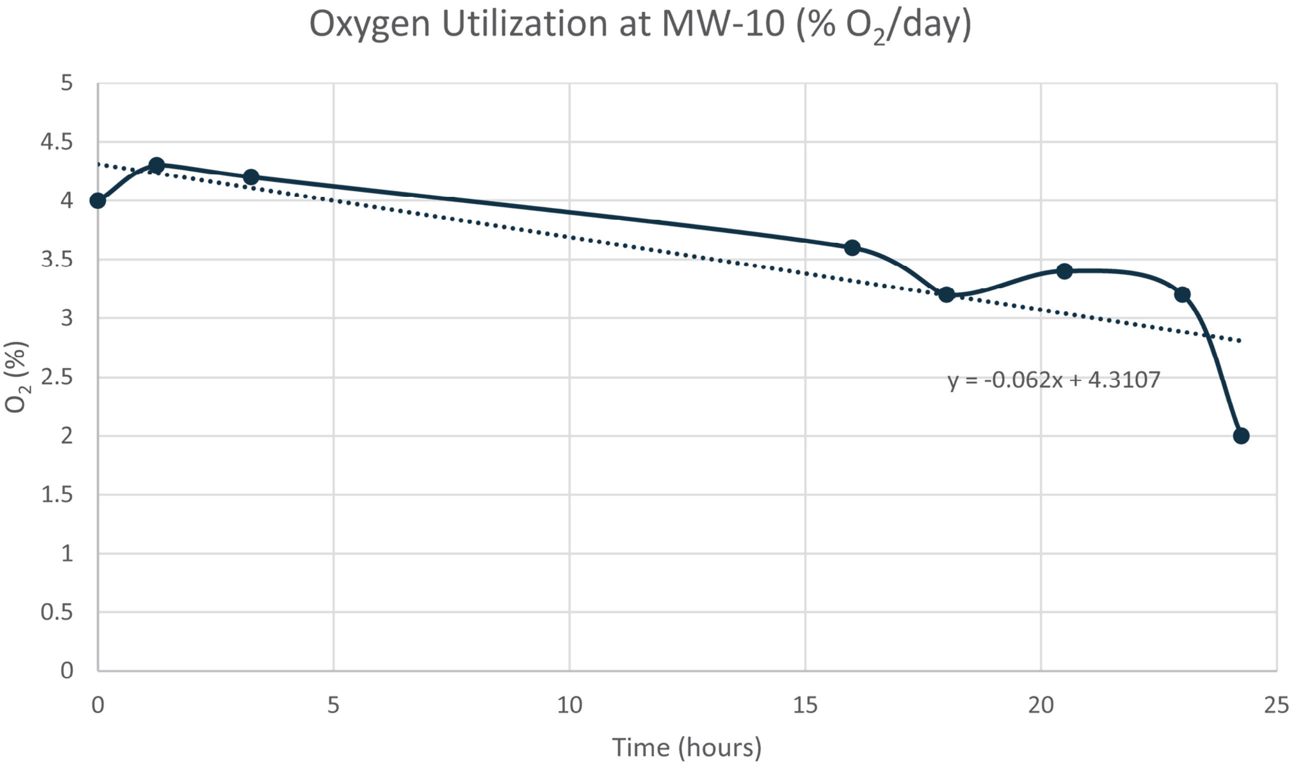
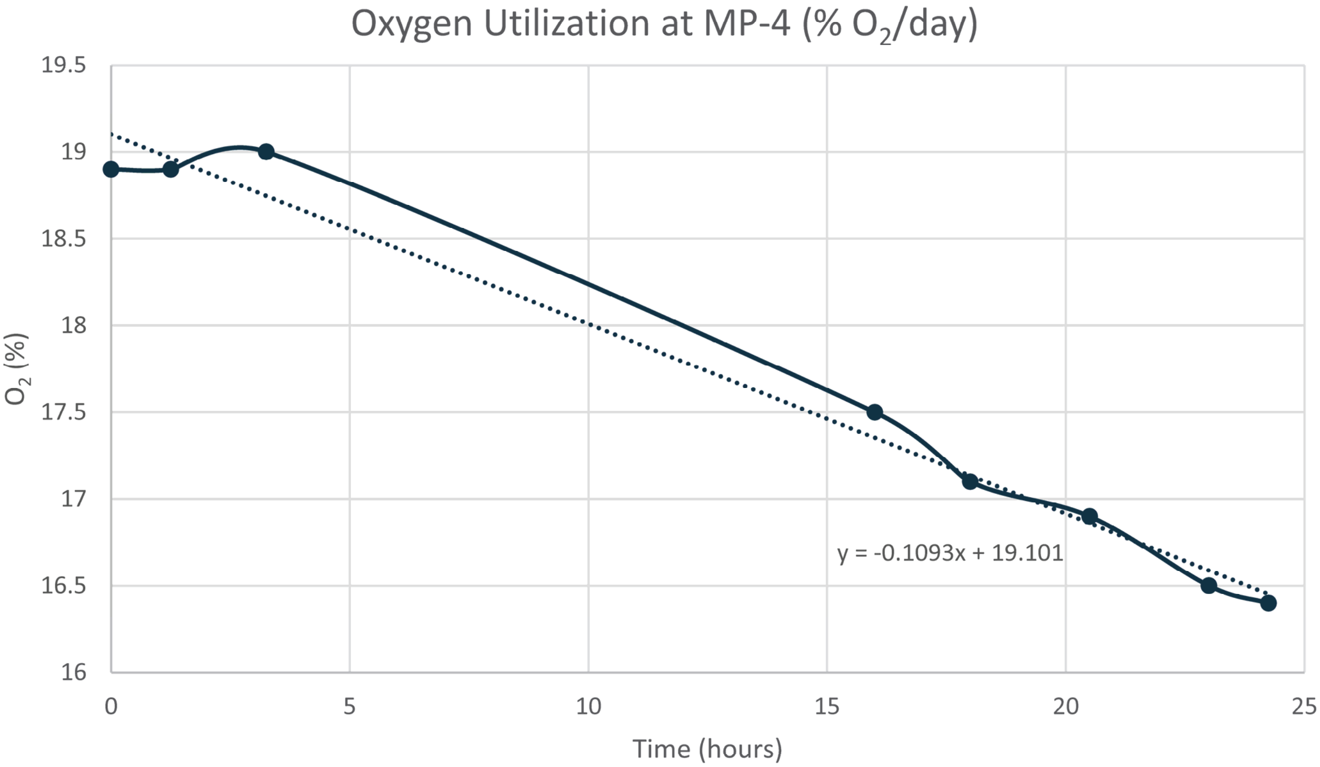
Figure 3b
Change in Volatile Organic Compound Concentration Over Time

9/9/2022





Oxygen utilization (% O_2/day) is the absolute value of the slope of the linear trendline of soil oxygen percentage over 24 hours of the injection test.

FLOYD | SNIDER strategy ▪ science ▪ engineering	**Engineering Design Report Addendum** **Big B Mini Mart Site** **Ellensburg, Washington**	Figure 4 Oxygen Utilization at MW-10 and MP-4

Attachment 1
HRC101 Specification Sheet

REPUBLIC MANUFACTURING

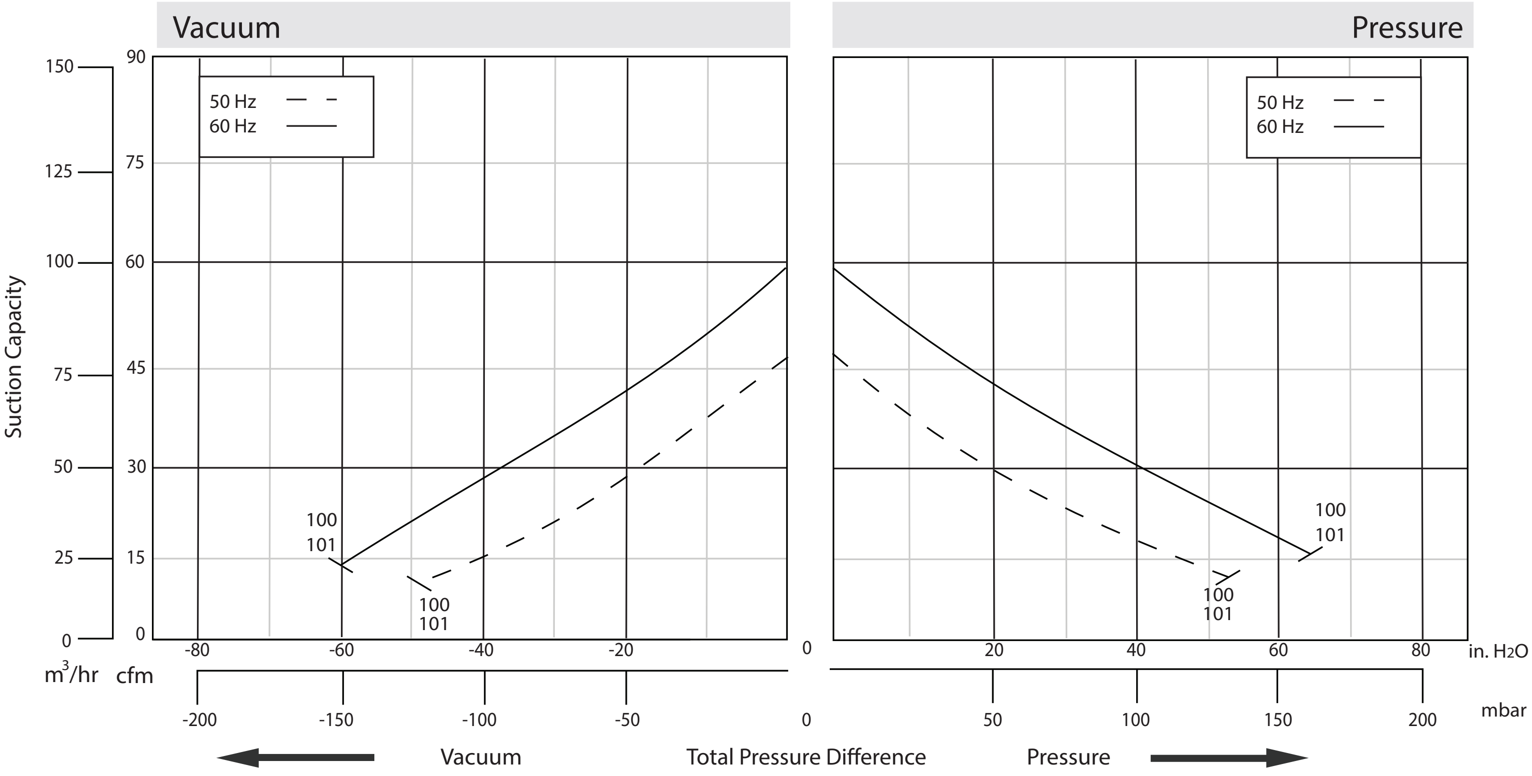
HRC 100/101

REGENERATIVE BLOWERS

Republic offers a complete line of regenerative blowers for high vacuum or compressed air applications in both horizontal and vertical mounted positions. TEFC motors are rated for 50/60 Hz operation and are IE3, cUL, UL, and CE certified. The impeller is directly connected to the motor shaft, providing powerful air force without undue friction. The bearings are outside the compression chamber, ensuring maximum operational reliability under high differential pressure. Constructed in robust die-cast aluminum, this low-maintenance, oil-free design provides continuous, dependable service to our customers.

IE3
CC339B
CE
c UL us
E493872

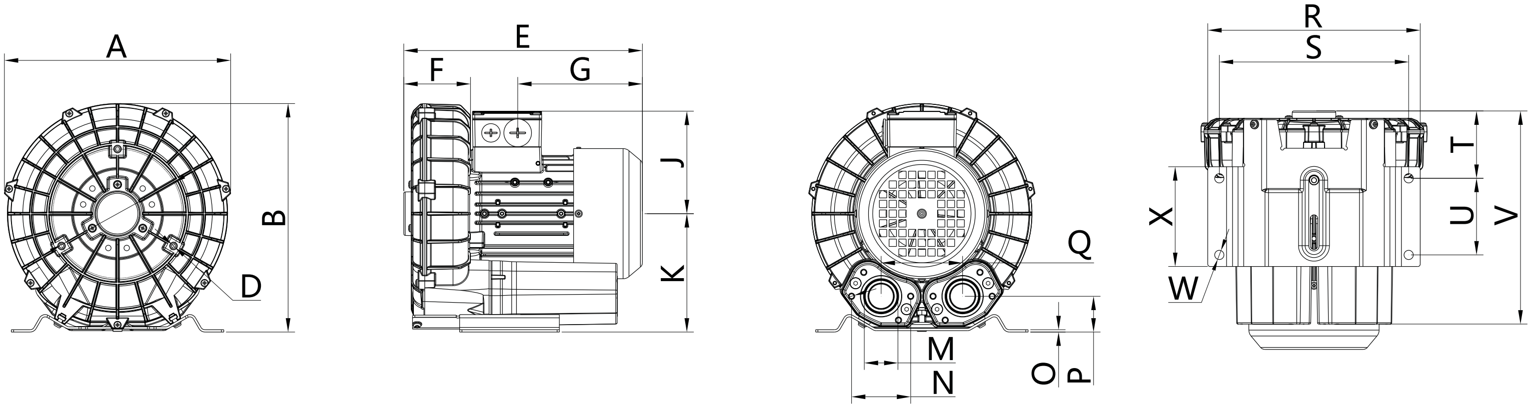
PERFORMANCE



Model	Phase	Frequency (Hz)	Air flow (CFM/m³/hr)	Rated Vacuum (in. H_2O/mbar)	Rated Pressure (in. H_2O/mbar)	Motor (HP/kW)	Voltage (V)	Current (A)	Sound Level (dB)	Weight (lb/kg)
HRC 100	3	50	47/80	48/120	52/130	0.5/0.4	190 YY/380 Y	2.6 YY/1.5 Y	53	22/10
		60	58/98	60/150	64/160	0.7/0.5	230 YY/460 Y	2.6 YY/1.5 Y	53	
HRC 101	1	50	47/80	48/120	52/130	0.5/0.4	230	2.7	53	24/11
		60	58/98	60/150	64/160	0.7/0.5	115/230	6.4/3.2	56	

The performance curves are based on air at a temperature of 59 °F and an atmospheric pressure of 29.91 inch Hg with a tolerance of +/-10%. The total pressure differences are valid for inlet and ambient temperatures up to 77 °F. Suction capacity relates to inlet conditions. Pressure capacity relates to atmospheric conditions. For other conditions please contact Republic. Three phase motor tolerances are +/-10% for fixed voltage motors and +/-5% for voltage range motors. Single phase machines are designed with a +/-5% tolerance. The frequency tolerance is +/-2% maximum.

APPROXIMATE DIMENSIONS

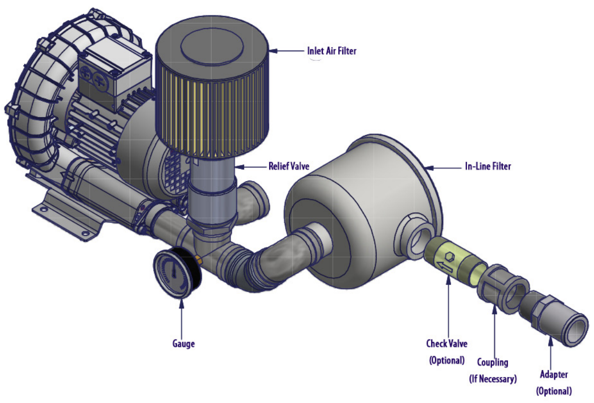


Model	Unit	A	B	D	E	F	G	J	K	M	N	O	P	Q	R	S	T	U	V	W	X
HRC 100	in	9.65	9.72	M6	10.16	2.83	5.31	4.37	5.04	1.25	2.52	0.10	1.54	3.46	9.06	8.07	2.87	3.27	9.06	0.39	4.25
	mm	245	247		258	72	135	111	128		64	2.5	39	88	230	205	73	83	230	10	108
HRC 101	in	9.65	9.72	M6	10.16	2.83	5.31	4.37	5.04	1.25	2.52	0.10	1.54	3.46	9.06	8.07	2.87	3.27	9.06	0.39	4.25
	mm	245	247		258	72	135	111	128		64	2.5	39	88	230	205	73	83	230	10	108

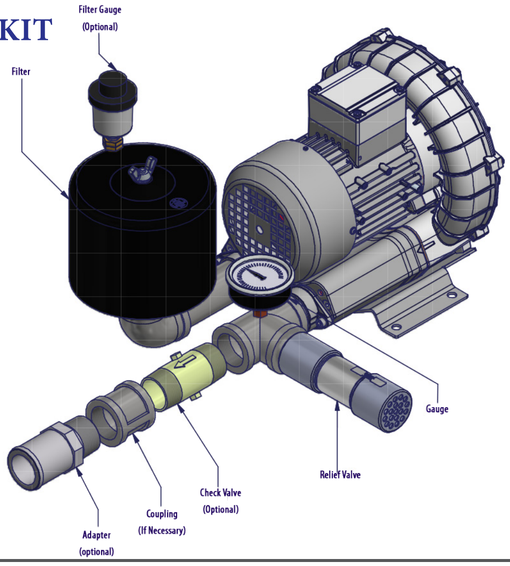
Available Options

All Republic Regenerative Blowers are available in pre-assembled kits for either pressure or vacuum applications. These kits include an inlet filter, gauge and relief valve, and are factory tested prior to shipment. Optional items for these kits include check valve, and tube adaptor; washdown motors, explosion proof motors, or other specialty motors; noise enclosures; and control panels such as VFD's, PLC's, or starter panels.

VACUUM KIT



PRESSURE KIT



REPUBLIC
MANUFACTURING

Attachment 2
Soil Gas Monitoring Results

Location: **MP-1**
Start Step Test (Time): 13:00
Start 24-hr Test (Time): 15:45
Distance from Injection Point (ft): 5.00

Date	**Time**	**Time Elapsed**	**O_2 (%)**	**VOCs (ppm)**	**LEL (Methane) (%)**	**Notes**
7/5/2022	11:00	-4.75	19.2	27	6	Baseline
7/5/2022	13:00	-2.75	20.9	3.6	5	Step test @ 10 cfm
7/5/2022	13:30	-2.25	21.1	3.1	5	Step test @ 10 cfm
7/5/2022	14:00	-1.75	20.9	2	5	Step test @ 30 cfm
7/5/2022	14:30	-1.25	20.9	1.8	5	Step test @ 30 cfm
7/5/2022	15:15	-0.5	20.9	1.5	5	Step test @ 50 cfm
7/5/2022	15:45	0	20.9	0.6	6	Step test @ 50 cfm (1)
7/5/2022	17:00	1.25	20.9	0	7	24-hr injection test @ 30 cfm
7/5/2022	19:00	3.25	21.2	0.7	6	24-hr injection test @ 30 cfm
7/6/2022	7:45	16	20.9	9.5	5	24-hr injection test @ 30 cfm
7/6/2022	9:45	18	20.9	0.9	5	24-hr injection test @ 30 cfm
7/6/2022	12:15	20.5	20.9	1.7	5	24-hr injection test @ 30 cfm
7/6/2022	14:45	23	20.9	3.3	5	24-hr injection test @ 30 cfm
7/6/2022	16:00	24.25	20.9	3.7	6	24-hr injection test @ 30 cfm
7/6/2022	16:45	24.75	20.9	3.8	9	Immediately post-shutdown
7/6/2022	18:00	26	20.9	3.8	9	Post-shutdown
7/6/2022	20:00	28	20.9	3	10	Post-shutdown
7/7/2022	6:30	38.5	19.7	0.4	7	Post-shutdown
7/7/2022	14:00	46	19.2	2.3	8	Post-shutdown

Note:

1 Blower discharge rate immediately lowered to 30 cfm to initiate 24-hour injection test after final step test measurements collected.

Abbreviations:

ft	feet
cfm	cubic feet per minute
ppm	parts per million
%	percent
LEL	Lower Explosive Limit
VOC	Volatile organic compound

Location: **MP-2**
Start Step Test (Time): 13:00
Start 24-hr Test (Time): 15:45
Distance from Injection Point (ft): 10.00

Date	Time	Time Elapsed	O_2 (%)	VOCs (ppm)	LEL (Methane) (%)	Notes
7/5/2022	11:00	-4.75	19.5	13.1	6	Baseline
7/5/2022	13:00	-2.75	15.1	NR	6	Step test @ 10 cfm
7/5/2022	13:30	-2.25	16.5	19.5	7	Step test @ 10 cfm
7/5/2022	14:00	-1.75	17.1	38	7	Step test @ 30 cfm
7/5/2022	14:30	-1.25	17.3	33.9	7	Step test @ 30 cfm
7/5/2022	15:15	-0.5	17.4	50	6	Step test @ 50 cfm
7/5/2022	15:45	0	17.5	62.8	7	Step test @ 50 cfm (1)
7/5/2022	17:00	1.25	17.5	71.6	8	24-hr injection test @ 30 cfm
7/5/2022	19:00	3.25	17.7	112.4	7	24-hr injection test @ 30 cfm
7/6/2022	7:45	16	18	214.3	7	24-hr injection test @ 30 cfm
7/6/2022	9:45	18	18	211.9(2)	7	24-hr injection test @ 30 cfm
7/6/2022	12:15	20.5	18.2	196.1	6	24-hr injection test @ 30 cfm
7/6/2022	14:45	23	18.1	180.9	7	24-hr injection test @ 30 cfm
7/6/2022	16:00	24.25	18.3	205.2	7	24-hr injection test @ 30 cfm
7/6/2022	16:45	24.75	19	116.4	9	Immediately post-shutdown
7/6/2022	18:00	26	19.2	52.4	9	Post-shutdown
7/6/2022	20:00	28	19.4	20.6	9	Post-shutdown
7/7/2022	6:30	38.5	19.4	5.3	8	Post-shutdown
7/7/2022	14:00	46	19.5	4.8	8	Post-shutdown

Notes:

1 Blower discharge rate immediately lowered after final step test measurements collected.
2 Measurement corrected from field form.

Abbreviations:

ft	feet
cfm	cubic feet per minute
ppm	parts per million
%	percent
LEL	Lower Explosive Limit
NR	Not recorded
VOC	Volatile organic compound

Location: **MP-3**
Start Step Test (Time): 13:00
Start 24-hr Test (Time): 15:45
Distance from Injection Point (ft): 15.00

Date	Time	Time Elapsed	O_2 (%)	VOCs (ppm)	LEL (Methane) (%)	Notes
7/5/2022	11:00	-4.75	20.2	3.9	5	Baseline
7/5/2022	13:00	-2.75	19.7	0.5	5	Step test @ 10 cfm
7/5/2022	13:30	-2.25	17.6	0.8	5	Step test @ 10 cfm
7/5/2022	14:00	-1.75	12.9	2.4	7	Step test @ 30 cfm
7/5/2022	14:30	-1.25	9.9	7.2	8	Step test @ 30 cfm
7/5/2022	15:15	-0.5	7.6	19.2	10	Step test @ 50 cfm
7/5/2022	15:45	0	7.8	35.1	11	Step test @ 50 cfm (1)
7/5/2022	17:00	1.25	10.1	60.9	11	24-hr injection test @ 30 cfm
7/5/2022	19:00	3.25	12.3	95.4	10	24-hr injection test @ 30 cfm
7/6/2022	7:45	16	13.8	361.4	8	24-hr injection test @ 30 cfm
7/6/2022	9:45	18	13.9	359	7	24-hr injection test @ 30 cfm
7/6/2022	12:15	20.5	13.8	350	8	24-hr injection test @ 30 cfm
7/6/2022	14:45	23	14	363	8	24-hr injection test @ 30 cfm
7/6/2022	16:00	24.25	14.3	382.1	8	24-hr injection test @ 30 cfm
7/6/2022	16:45	24.75	14.1	385.1	10	Immediately post-shutdown
7/6/2022	18:00	26	14.7	300.1	10	Post-shutdown
7/6/2022	20:00	28	16.1	202.1	10	Post-shutdown
7/7/2022	6:30	38.5	19	9.7	8	Post-shutdown
7/7/2022	14:00	46	19.5	6.7	8	Post-shutdown

Note:

1 Blower discharge rate immediately lowered after final step test measurements collected.

Abbreviations:

ft	feet
cfm	cubic feet per minute
ppm	parts per million
%	percent
LEL	Lower Explosive Limit
VOC	Volatile organic compound

Location: **MW-10**
Start Step Test (Time): 13:00
Start 24-hr Test (Time): 15:45
Distance from Injection Point (ft): 20.00

Date	**Time**	**Time Elapsed**	**O_2 (%)**	**VOCs (ppm)**	**LEL (Methane) (%)**	**Notes**
7/5/2022	11:00	-4.75	5.2	3.1	3	Baseline
7/5/2022	13:00	-2.75	6.9	1.1	6	Step test @ 10 cfm
7/5/2022	13:30	-2.25	5.8	0.9	6	Step test @ 10 cfm
7/5/2022	14:00	-1.75	5	1.3	6	Step test @ 30 cfm
7/5/2022	14:30	-1.25	4.7	1.7	6	Step test @ 30 cfm
7/5/2022	15:15	-0.5	4.4	0.8	6	Step test @ 50 cfm
7/5/2022	15:45	0	4	4.1	7	Step test @ 50 cfm (1)
7/5/2022	17:00	1.25	4.3	9.4	8	24-hr injection test @ 30 cfm
7/5/2022	19:00	3.25	4.2	15.5	8	24-hr injection test @ 30 cfm
7/6/2022	7:45	16	3.6	97.5	17	24-hr injection test @ 30 cfm
7/6/2022	9:45	18	3.2	26.9	18	24-hr injection test @ 30 cfm
7/6/2022	12:15	20.5	3.4	104.3	19	24-hr injection test @ 30 cfm
7/6/2022	14:45	23	3.2	105.9	19	24-hr injection test @ 30 cfm
7/6/2022	16:00	24.25	2	122.3	17	24-hr injection test @ 30 cfm
7/6/2022	16:45	24.75	3	144	23	Immediately post-shutdown
7/6/2022	18:00	26	4.6	121.8	21	Post-shutdown
7/6/2022	20:00	28	5.1	105.9	15	Post-shutdown
7/7/2022	6:30	38.5	5.2	65.2	9	Post-shutdown
7/7/2022	14:00	46	5.2	23.7	8	Post-shutdown

Note:

1 Blower discharge rate immediately lowered after final step test measurements collected.

Abbreviations:

ft	feet
cfm	cubic feet per minute
ppm	parts per million
%	percent
LEL	Lower Explosive Limit
VOC	Volatile organic compound

Location: MP-4
Start Step Test (Time): 13:00
Start 24-hr Test (Time): 15:45
Distance from Injection Point (ft): 30.00

Date	Time	Time Elapsed	O_2 (%)	VOCs (ppm)	LEL (Methane) (%)	Notes
7/5/2022	11:00	-4.75	19.7	2.4	5	Baseline
7/5/2022	13:00	-2.75	19.4	1.9	5	Step test @ 10 cfm
7/5/2022	13:30	-2.25	19.3	0	5	Step test @ 10 cfm
7/5/2022	14:00	-1.75	19.2	0	5	Step test @ 30 cfm
7/5/2022	14:30	-1.25	19.2	0	5	Step test @ 30 cfm
7/5/2022	15:15	-0.5	19.1	0	5	Step test @ 50 cfm
7/5/2022	15:45	0	18.9	0	6	Step test @ 50 cfm (1)
7/5/2022	17:00	1.25	18.9	0	7	24-hr injection test @ 30 cfm
7/5/2022	19:00	3.25	19	0	6	24-hr injection test @ 30 cfm
7/6/2022	7:45	16	17.5	13.5	6	24-hr injection test @ 30 cfm
7/6/2022	9:45	18	17.1	1.6	6	24-hr injection test @ 30 cfm
7/6/2022	12:15	20.5	16.9	19.1	6	24-hr injection test @ 30 cfm
7/6/2022	14:45	23	16.5	24.6	6	24-hr injection test @ 30 cfm
7/6/2022	16:00	24.25	16.4	28.8	7	24-hr injection test @ 30 cfm
7/6/2022	16:45	24.75	16.6	25.7	8	Immediately post-shutdown
7/6/2022	18:00	26	17.2	22.6	9	Post-shutdown
7/6/2022	20:00	28	18.1	17.6	9	Post-shutdown
7/7/2022	6:30	38.5	18.6	2	8	Post-shutdown
7/7/2022	14:00	46	18.8	0.7	8	Post-shutdown

Note:

1 Blower discharge rate immediately lowered after final step test measurements collected.

Abbreviations:

ft	feet
cfm	cubic feet per minute
ppm	parts per million
%	percent
LEL	Lower Explosive Limit
VOC	Volatile organic compound

Location: MP-5
Start Step Test (Time): 13:00
Start 24-hr Test (Time): 15:45
Distance from Injection Point (ft): 40.00

Date	Time	Time Elapsed	O_2 (%)	VOCs (ppm)	LEL (Methane) (%)	Notes
7/5/2022	11:00	-4.75	19.6	2.1	6	Baseline
7/5/2022	13:00	-2.75	19.3	3	5	Step test @ 10 cfm
7/5/2022	13:30	-2.25	19.4	0.9	5	Step test @ 10 cfm
7/5/2022	14:00	-1.75	19.3	0.7	5	Step test @ 30 cfm
7/5/2022	14:30	-1.25	19.3	0.5	5	Step test @ 30 cfm
7/5/2022	15:15	-0.5	19.3	0.5	5	Step test @ 50 cfm
7/5/2022	15:45	0	19.4	0.5	6	Step test @ 50 cfm (1)
7/5/2022	17:00	1.25	19.1	0.4	6	24-hr injection test @ 30 cfm
7/5/2022	19:00	3.25	19.3	0.4	6	24-hr injection test @ 30 cfm
7/6/2022	7:45	16	18.9	2.2	6	24-hr injection test @ 30 cfm
7/6/2022	9:45	18	18.9	0.4	6	24-hr injection test @ 30 cfm
7/6/2022	12:15	20.5	19.1	3.6	6	24-hr injection test @ 30 cfm
7/6/2022	14:45	23	19.2	5.1	6	24-hr injection test @ 30 cfm
7/6/2022	16:00	24.25	19.3	4.5	7	24-hr injection test @ 30 cfm
7/6/2022	16:45	24.75	19.2	3.2	8	Immediately post-shutdown
7/6/2022	18:00	26	19.2	2.7	8	Post-shutdown
7/6/2022	20:00	28	19.1	2.2	8	Post-shutdown
7/7/2022	6:30	38.5	19.2	0.4	8	Post-shutdown
7/7/2022	14:00	46	19.4	0.9	8	Post-shutdown

Note:

1 Blower discharge rate immediately lowered after final step test measurements collected.

Abbreviations:

ft	feet
cfm	cubic feet per minute
ppm	parts per million
%	percent
LEL	Lower Explosive Limit
VOC	Volatile organic compound

Location: MW-8
Start Step Test (Time): 13:00
Start 24-hr Test (Time): 15:45
Distance from Injection Point (ft): 80.00

Date	Time	Time Elapsed	O_2 (%)	VOCs (ppm)	LEL (Methane) (%)	Notes
7/5/2022	11:00	-4.75	2	236.2	16	Baseline
7/5/2022	13:00	-2.75	4.7	188.8	22	Step test @ 10 cfm
7/5/2022	13:30	-2.25	2.8	187	22	Step test @ 10 cfm
7/5/2022	14:00	-1.75	3	188	23	Step test @ 30 cfm
7/5/2022	14:30	-1.25	3	176	23	Step test @ 30 cfm
7/5/2022	15:15	-0.5	3.1	182	23	Step test @ 50 cfm
7/5/2022	15:45	0	2.6	146	25	Step test @ 50 cfm (1)
7/5/2022	17:00	1.25	3.5	139.4	28	24-hr injection test @ 30 cfm
7/5/2022	19:00	3.25	4.3	185.4	28	24-hr injection test @ 30 cfm
7/6/2022	7:45	16	6.2	268.3	19	24-hr injection test @ 30 cfm
7/6/2022	9:45	18	5.6	235.4	20	24-hr injection test @ 30 cfm
7/6/2022	12:15	20.5	4.6	281.2	21	24-hr injection test @ 30 cfm
7/6/2022	14:45	23	3.5	259	27	24-hr injection test @ 30 cfm
7/6/2022	16:00	24.25	3.2	292.2	31	24-hr injection test @ 30 cfm
7/6/2022	16:45	24.75	3.3	325.6	34	Immediately post-shutdown
7/6/2022	18:00	26	3.8	355.9	42	Post-shutdown
7/6/2022	20:00	28	5.3	405.5	36	Post-shutdown
7/7/2022	6:30	38.5	3.4	352.5	27	Post-shutdown
7/7/2022	14:00	46	3.3	265.6	28	Post-shutdown

Note:

1 Blower discharge rate immediately lowered after final step test measurements collected.

Abbreviations:

ft	feet
cfm	cubic feet per minute
ppm	parts per million
%	percent
LEL	Lower Explosive Limit
VOC	Volatile organic compound

Attachment 3

Bioventing System Operations and Maintenance Manual

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Two Union Square
601 Union Street, Suite 600
Seattle, WA 98101
tel: 206.292.2078 fax: 206.682.7867

Memorandum

To: Mr. John Mefford, Washington State Department of Ecology

Copies: Mr. Surjit Singh, Big B LLC
Louis Russell, Cascadia Law Group PLLC
Scott MacDonald, BNSF Railway Company

From: Gabe Cisneros and Manique Talaia-Murray, Floyd|Snider

Date: November 30, 2022

Project No: CL-Ellensburg, Big B (Cleanup Site ID: 4901)

Re: **Bioventing System Operations and Maintenance Manual**

This Bioventing System Operations and Maintenance (O&M) Manual has been created as a guide for monitoring and maintaining the performance of the bioventing blower and vent well plumbing at the Big B Mini Mart Site (Site; Facility Site ID [FSID] #386, Cleanup Site ID [CSID] #4901) located at 1611 Canyon Road in Ellensburg, Washington (herein referred to as the Big B property).

Bioventing is the forced injection of fresh air, or withdrawal of soil gas, to enhance the supply of oxygen for in situ bioremediation. At the Site, one pressure air injection blower unit is used to inject air into the soil, thereby supplying fresh atmospheric air (with approximately 20.8% oxygen) to remaining contaminated soils. Once oxygen is provided to the subsurface, existing bacteria aerobically break down fuel residuals. Aerobic biodegradation is much more efficient than anaerobic biodegradation, which occurs in soils when the soils are oxygen depleted.

A bioventing pilot test was conducted on July 5 through 7, 2022. The results of the pilot test inform the design of the bioventing system, as described in the Bioventing Pilot Test Results Summary (Floyd|Snider 2022).

Upon installation of the bioventing system, Floyd|Snider personnel will be primarily responsible for routine monitoring of the equipment. If significant problems are encountered with the operation of this system during its approximately 5 to 10 years of operation, Floyd|Snider will conduct the appropriate repairs.

This Bioventing System O&M Manual is subject to revision during bioventing system operations.

SYSTEM DESCRIPTION

Bioventing Line Configuration

The bioventing system in operation at the Site consists of one 0.7 horsepower (HP) regenerative blower injecting ambient air into three horizontal bioventing lines. The proposed design for the full-scale bioventing system is displayed on Figure 2 of the Bioventing Pilot Test Results Summary (Floyd|Snider 2022). All of the bioventing lines and screens south of the boundary between Toad's (Astro) Station (herein referred to as Toad's) property and Big B property were installed on June 22 and 23, 2022, during the Phase II excavation activities, prior to the pilot test activities. This was conducted with approval from the Washington State Department of Ecology (Ecology) to avoid having to access the Toad's and BNSF Railway Company (BNSF) properties and cause additional subsurface disruption at a future date. Because the pilot test had not been completed yet, the screens were placed in locations shown on Figure 2 of the Bioventing Pilot Test Results Summary using a 10-foot radius of influence (ROI). The 2-inch-diameter Schedule 40 polyvinyl chloride (PVC) lines and screens were placed directly on remaining impacted soil, just above ground water, and approximately 6 inches of pea gravel was placed over the screens to prevent the screens from being clogged with finer-grained soil. The screens at the end of the piping were placed at a slightly lower elevation then the lines running back toward the blower to allow the lines to drain, in the event of higher than typical groundwater elevations. Clean imported backfill was placed above the pea gravel.

The system will consist of three separate legs (vent well lines) that extend to various areas of the Site and are shown as light blue, pink, and orange lines on Figure 2 of the Bioventing Pilot Test Results Summary. The lines and screens will be constructed using 2-inch-diameter Schedule 40 PVC and 10-slot screens at the ends of each vent well line. The screens located between the ends and the blower will be constructed by drilling multiple small 1/8-inch diameter holes, as per the blower manufacturer's (Republic Manufacturing) instructions. The screens will be placed at locations shown in dark blue on these lines and are based on a 30-foot ROI. The screens will be placed directly on remaining impacted soil, just above the water table at the time of installation. A 6-inch layer of pea gravel will be placed over the screens to prevent them from becoming clogged with finer-grained material, and the rest of the trench will be backfilled to grade with the overburden removed during trenching activities. Similar to bioventing installation activities that were conducted during the Phase II excavation, the ends of the screens will be placed at a slightly lower elevation than the rest of the PVC lines to allow the lines to drain if they become submerged when groundwater levels rise.

All of the lines will run to the blower shed and will be connected to a manifold using 2-inch-diameter schedule 40 PVC as a conduit that will deliver the air supply. A check valve will be placed on each vent well line to regulate the air flow to each area across the Site. The piping from the manifold to the blower will be connected to the single-phase 0.7 HP regenerative blower that will supply air to the three vent well lines. The blower is equipped with an air filter to remove particulates that are entrained in the inlet air stream. A schematic of the blower, manifold, and vent line trenches are included in Exhibit 1.

The approximate cumulative lengths of each bioventing line are summarized as follows:

- **Bioventing Line 1** will consist of 240 linear feet of 2-inch-diameter Schedule 40 PVC pipe, 40 linear feet of which will consist of 5-foot screened intervals for subsurface air injection.
- **Bioventing Line 2** will consist of 285 linear feet of 2-inch-diameter Schedule 40 PVC, 25 feet of which will consist of 5-foot screened intervals for subsurface air injection.
- **Bioventing Line 3** will consist of 190 linear feet of 2-inch-diameter Schedule 40 PVC, 15 feet of which will consist of 5-foot screened intervals for subsurface air injection.

Bioventing lines 2 and 3 will be collocated in a single trench for approximately 65 linear feet. The lines will be placed side-by-side in the trench, and only bioventing line 3 will be screened at one 5-foot interval, as depicted on Exhibit 1 and on Figure 2 of the Bioventing Pilot Test Results Summary.

Blower System

The 0.7 HP single-phase KPHRC-101 regenerative pressure system blower is equipped with an air filter to remove particulates entrained in the inlet air stream. The blower has been retrofitted by the manufacturer with a 115-volt electrical outlet so that the blower can be connected to a generator or on-site power. A blower performance curve is provided in Attachment 1 of the Bioventing Pilot Test Results Summary.

Monitoring Gauges

The bioventing manifold system is equipped with gauges and ports to evaluate system performance. A pressure gauge is located in the outlet piping of the blower unit. A temperature gauge will be installed at the outlet of the blower. The locations of the gauges installed on the blower and manifold system are depicted in Exhibit 1.

Flow Measurement Ports

Flow measurement ports will be located in the piping of the three bioventing lines connected to the blower. The ports will be located in the line upstream of the flow control valves connected to the blower. These ports allow access to the air stream to measure air velocity in the pipelines.

Power Supply

The blower will be powered by a dedicated 115-volt single-phase power source connected to an on-site fuse box. The fuse box will be elevated at least 4 feet above ground surface and will be located on the eastern corner of the blower shed. To ensure safety of personnel and equipment, a qualified electrician will conduct any repairs requiring the dismantling or disconnection of the blower and will address any electrical supply problems.

SYSTEM MONITORING

Blower Performance Monitoring

Injection pressure and injection temperature will be measured as part of the routine monitoring of the blower operations. These data should be recorded at least every 2 weeks on a data collection sheet (Exhibit 2). All measurements should be taken while the system is running. Because the operating system may be loud, it may be necessary to wear hearing protection when collecting data and monitoring blower performance.

Blower Flow Rate

To collect blower performance data, the blower enclosure (i.e., the trailer) will be opened and all pressure readings will be recorded directly from the gauge (in inches of water or cubic feet per minute). The measurements will be recorded on a data collection sheet (Exhibit 2).

The flow rate directly from the blower can be estimated using the pressure performance curve (Attachment 1 of the Bioventing Pilot Test Results Summary). Pressure readings collected from the gauge can be correlated to a discharge rate on the pressure curve.

Bioventing Line Flow Rate

In addition to estimating total air flow, the air flow entering each of the three adjoined bioventing lines will be measured after each startup of the system and periodically during system operation. These flow measurements are calculated using direct measurements of in-line air velocity and pipe size data. The bioventing lines are designed to allow measurement of air velocity through a small port on the air injection piping.

A Dwyer Thermal Anemometer, or similar, will be used for air velocity measurement. The anemometer is a handheld device with a probe connected by cable for remote measurement. To make a measurement, remove the screw plug located in the flow measurement port and insert the anemometer probe tip into the pipeline through the flow measurement port (Exhibit 1).

Temperature

Blower temperature measurements can be measured by collecting readings directly from the gauge in degrees Fahrenheit. Record ambient atmospheric and system temperatures in the data collection sheet (Exhibit 2).

Monitoring Schedule

The following monitoring schedule is recommended for this system. During the initial months of operation, more frequent monitoring is recommended to ensure that any startup problems are quickly identified and corrected. The data collection records will enable field personnel to record changes in blower performance and equipment needs.

- Pressure: Recorded daily during first few days, then at least once every 2 weeks
- Temperature: Daily during first few days, then at least once every 2 weeks
- Air flow (from blower): After system startup and as necessary following repairs or major flow adjustments
- Air flow (into each bioventing line): After system startup and as necessary following repairs or major flow adjustments

SYSTEM MAINTENANCE

Periodic system maintenance will be required for proper operation and system longevity. Recommended maintenance procedures and schedules are described in detail in the blower manual included as Attachment 4 to the Bioventing Pilot Test Results Summary (Floyd|Snider 2022) and are summarized in the following sections.

Blower/Motor

The blower and motor should not require significant maintenance during the bioventing operation period. The blower and motor have sealed bearings and do not require lubrication. In the event of a power loss, the blower will restart automatically once power is restored.

Air Filter

To avoid damage caused by solids passing through the blower, an air filter has been installed inline before the blower. The filter element is paper and is accompanied by an inlet filter gauge that will be used to properly evaluate the efficiency of the filter over time. The filter gauge will eject and show a red indicator when the back pressure through the blower is too great because of a clogged filter.

The filter should be checked weekly for the first 2 months of operation. The best schedule for filter replacement will be determined during field checks of the system once every two weeks throughout the first year of operation. The paper filter element should be disposed of and replaced as necessary.

Filter inspection must be performed with the system turned off. To remove the filter, loosen the wing nuts on the filter casing, pull off the dome cover, and lift the paper filter. When replacing the filter, be careful that all rubber seals remain in place. Once the filter is changed, re-insert the filter gauge.

The filter element is manufactured by Republic Manufacturing. The product name is "1.25-1.5 In Pressure Element" and the filter model number on the manufacturer's website (www.republic-mfg.com) is 340-2206.

Maintenance Schedule

The following maintenance schedule is recommended for this system. During the initial months of operation, more frequent monitoring is recommended to ensure that any startup problems are quickly corrected. A daily inspection is recommended during the initial week of operation to ensure that blower system is still operating with no unusual sounds.

- Filter replacement: Check at least every other week for the first 2 months of operation, then monthly. Replace paper element when air flow is restricted.
- Pressure relief valve: Check monthly by pulling the grate from the relief valve and checking for rust in the valve mechanism. The blower must be shut down during this process.

Major Repairs

Blower systems are very reliable when properly maintained. However, possible major problems include the following:

- Motor does not start: (1) Check circuit breaker or (2) Have electrician check power supply.
- Blower motor makes noises or smokes: (1) Turn power off and unplug blower, (2) Call site manager, (3) Repair/replace motor.
- Blower fan (impellers) break or make noise when operated: (1) Turn power off and unplug blower, (2) Call site manager, (3) Repair/replace blower fan.
- Blower motor impellor shows bronze discoloration: (1) Blower is overheating due to clogged filter or other cause of back pressure; replace filter.

In the event of a potential fire or safety hazard, the blower system should be shut down immediately and the Floyd|Snider Site manager, Gabe Cisneros, should be notified at (206) 582-8223.

SAFETY PLAN

The following items associated with the Site bioventing system require caution by personnel visiting the Site and inspecting the blower and manifold system:

- Due to the use of high voltage power, a qualified electrician should perform all electrical work.
- Hearing protection is recommended for personnel taking readings inside the blower shed.
- A fire extinguisher should be staged on-site near the blower shed in the event of a mechanical fire.

REFERENCES

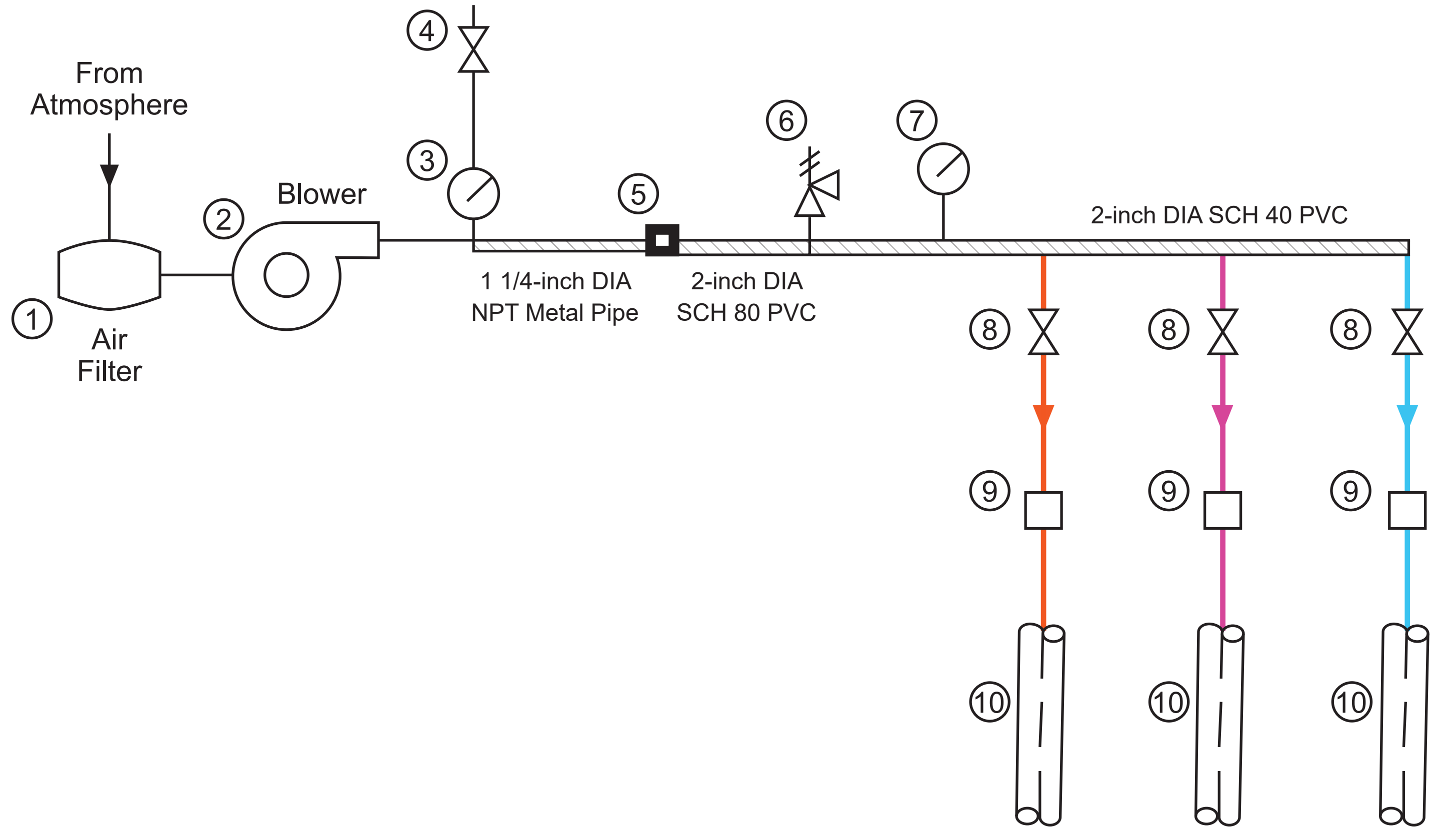
Floyd|Snider. 2022. *EDR Addendum—Bioventing Pilot Test Results Summary.* Memorandum from Gabe Cisneros and Manique Talaia-Murray, Floyd|Snider, to John Mefford, Washington State Department of Ecology. In development.

LIST OF EXHIBITS

Exhibit 1	Bioventing Manifold Design and Trench Schematics
Exhibit 2	Blower Injection System Data Collection Sheet

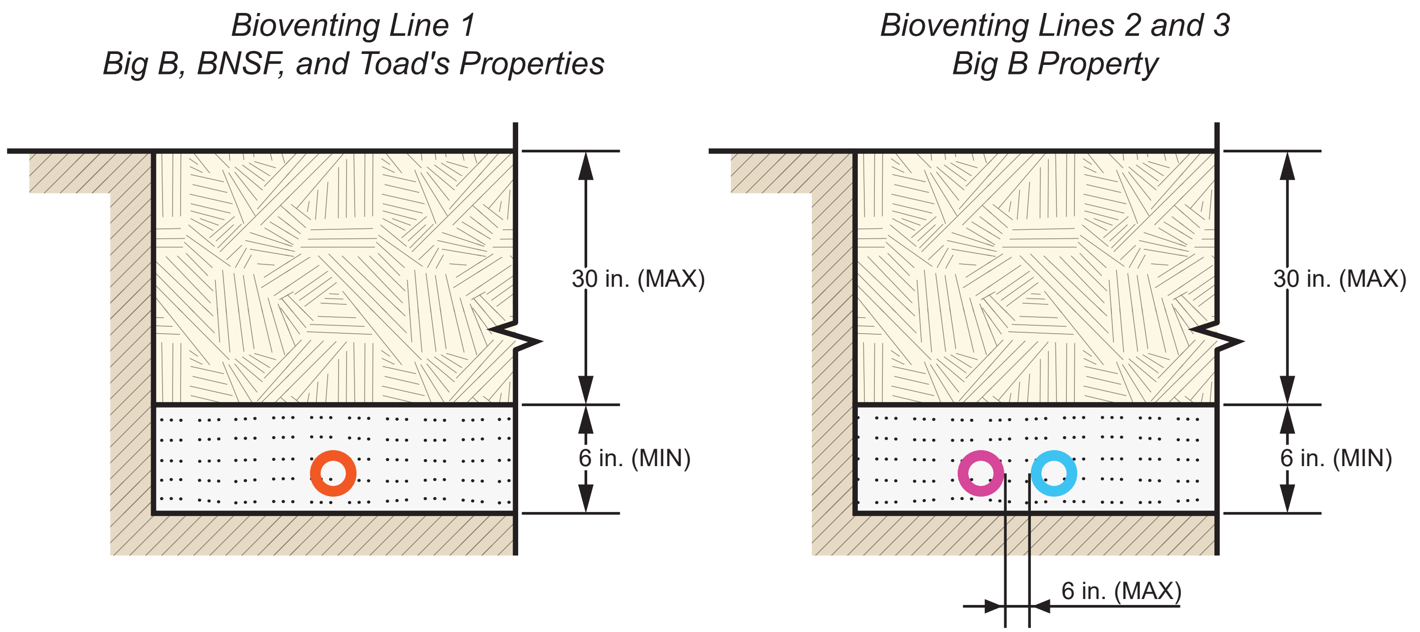
Exhibit 1
Bioventing Manifold Design and Trench Schematics

Bioventing Manifold Design



Not to scale.

Trench Schematics


Bioventing Line 1
Big B, BNSF, and Toad's Properties

Bioventing Lines 2 and 3
Big B Property

Not to scale.

Legend

○ 2-inch DIA SCH 40 PVC
▬ Bioventing Line 1
▬ Bioventing Line 2
▬ Bioventing Line 3
▨ Compacted Clean Soil Backfill
⁙ Pea Gravel
▨ Vadose Zone Soil

① Inlet Air Filter and Filter Monitoring Gauge (Existing)
② Blower - Republic Manufacturing, Inc., 0.7 HP KPHRC101 with 115 Volt Plug (Existing)
③ Pressure Gauge (Existing)
④ Automatic Pressure Relief Valve (Existing)
⑤ 1 1/4- to 2-inch DIA Rubber Adaptor (Existing)
⑥ Check Valve - 1 1/4-inch DIA NPT with Silicon Seal (Existing)
⑦ Temperature Gauge - Winters, 0 to 250 °F, 1.25-inch NPT Male Thermometer (Item No. 20JN89 from Grainger)
⑧ Flow Control Valve - 2-inch DIA SCH 40 PVC Ball Valve
⑨ Flow Measuring Port Fitted with Plug - 1/4-inch by 1/8-inch NPT brass reducing bushing, 1/8-inch NPT brass plug
⑩ Bioventing Line - 2-inch DIA SCH 40 PVC

Note:
- Refer to Figure 2 of the 2022 Floyd|Snider EDR Addendum—Bioventing Pilot Test Results Summary memorandum for locations of in-line bioventing discharge screens (existing on Toad's Property).

Abbreviations:
EDR = Engineering Design Report, °F = Degrees Fahrenheit, DIA = Diameter, in. = Inches, HP = Horsepower, MAX = Maximum, MIN = Minimum, NPT = National Pipe Thread, PVC = Polyvinyl chloride, SCH = Schedule

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Bioventing System Operations and Maintenance Manual
Big B Mini Mart Site
Ellensburg, Washington

Exhibit 1
Bioventing Manifold Design and Trench Schematics

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9/7/2022

Exhibit 2

Blower Injection System Data Collection Sheet

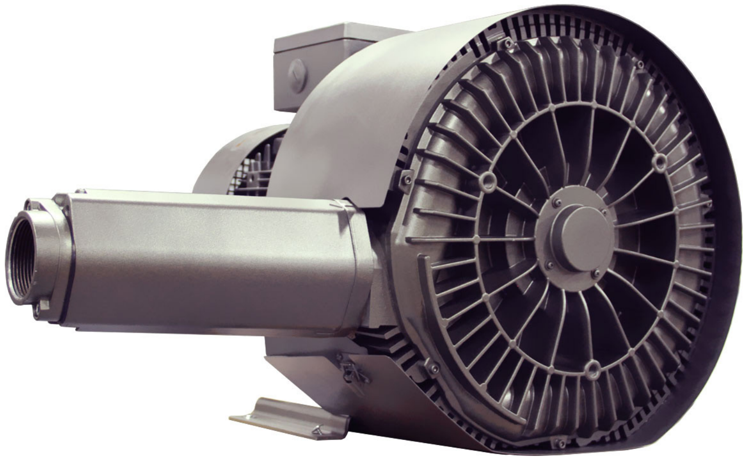
Blower Injection System Data Collection Sheet

Date	Time	Inlet Temp. (°F) (1)	Outlet Pressure (inches water/cfm) (2)	Outlet Temp. (°F) (2)	Air Filter Changed (Y or N)	Plumbing Inspection Comments	Comments	Checked By:

Notes:
1 Same as ambient temperature.
2 Gauge is located on the outlet piping between the blower and temperature gauge.

Attachment 4
HRC-4RC Regenerative Blower Manual

REPUBLIC MANUFACTURING



HRC/4RC-SERIES
REGENERATIVE BLOWER
Installation & Operating Instructions

Republic Regenerative Blowers
HRC100-HRC1502 • 4RC210-4RC630
Installation Instructions & Operating Manual

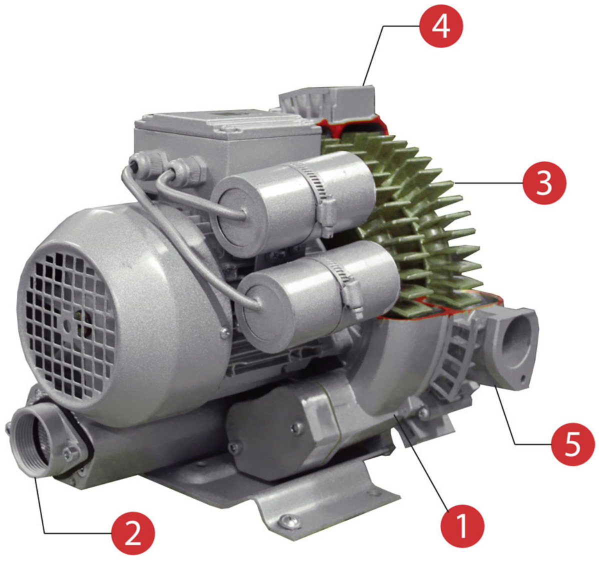
Republic Manufacturing®
5131 Cash Road
Dallas, TX 75247
(214) 631-8070
www.republic-mfg.com
info@republic-mfg.com

Warning

⚠ Service procedures beyond the scope of this manual should only be performed by trained service personnel at Republic Manufacturing.

Important

Read the following safety instructions carefully. Disconnect blower from electrical source using an approved lockout/tagout procedure before attempting service



1. Side channel
2. Air inlet
3. Impeller
4. Impeller chamber
5. Exhaust outlet

Working Principle
Air or gas is pulled into a side channel (1) through the air inlet (2) and is accelerated by an impeller (3) rotating inside the impeller chamber (4). The resulting pressurized air or gas is discharged through the exhaust outlet (5). This type of operation is also known as a ring blower design.

Table of Contents

Safety Instructions

To insure safe operation, we have provided many important safety guidelines in this manual for the Republic Regenerative Blower. Please read this manual carefully and pay particular attention to instructions with the following signs:

DANGER: Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING: Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

1. Always use qualified electrical and mechanical personnel for installation and maintenance of Republic Blowers and motors.

2. Disconnect the electrical power at the motor starter, fuse box or circuit breaker before working on the system. Take special precautions to make sure the power cannot be turned on while you are working on the blower. **Use an approved lockout/tagout system.**

3. Make sure the motor is electrically grounded, the mounting bolts are properly secured, and all guards are in place before start-up.

4. Wear safety glasses and earplugs when working on the blower or components within a Republic Blower system.

5. **Check the final installation for proper amp loads**.

6. Keep all tools, loose clothing and hands away from rotating or moving parts while the unit is running.

7. Inspect the blower at regular intervals for damaged or worn parts. **Replace damaged parts immediately! Do not connect or turn on a damaged blower!**

8. Inspect the inlet air filter at regular intervals and replace when necessary. A dirty air filter can cause improper blower performance.

9. Use only genuine Republic Manufacturing brand replacement parts.

10. Refer to Troubleshooting section of manual.

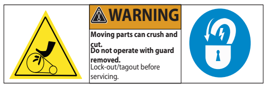
11. Make sure to install the inlet air filter or piping to blower inlet before starting the blower/motor.

12. Water, other liquids, aggressive or inflammable gases and vapors may not be handled. Handling of inflammable or aggressive gases and vapors is only possible with special versions.

13. Improper use of the unit can result in serious or even fatal injuries. Only operate the blower for the purposes indicated under "Intended Use", with the fluids indicated under "Intended Use" and with the values indicated under "Technical Data".

14. High temperatures of up to approximately 320ºF (160ºC) can occur on the surface of the blower. Allow to cool down after shut-down.

Lockout/Tagout Procedures



1. Notify all affected employees that a lockout or tagout is about to occur on a specific piece of equipment or machinery. The authorized employee to use the lockout/tagout system shall know the type and magnitude of energy that the machine or equipment utilizes and the hazards that exist with the energy source before preparing to shutdown.

2. If the machine or equipment is operating, please use normal stopping or rundown procedures for that machine.

3. Operate the switch, valve, or other energy isolating devices so that the equipment is isolated from its energy source. Isolating the equipment from its energy source may involve turning off such items as the operating control, a line valve, or an electrical circuit breaker.

4. Apply the lockout/tagout isolating device with assigned individual locks or tags.

5. Release any potentially-hazardous stored or residual energy. In order to do so, this may mean to return springs to a normal position, or bleeding down. Since the machine must be in a zero energy state, if there is any chance the stored energy may reaccumulate, verification of isolation must be continued until the servicing or maintenance is complete.

6. The machine or equipment is now locked out or tagged out.

Blower Description & Model Identification

Republic Manufacturing Regenerative Blowers are industrial grade regenerative blowers capable of producing high pressure air at low operating costs. Many models are available within each series:

- HRC-Series: Standard regenerative blowers with integral motor operating at 50 or 60 Hz, with 3 or 1 phase motor. 0.5-38.9 HP (0.4-29.0 kW) Motor Sizes

- 4RC-Series: High pressure regenerative blowers with integral motor operating at 50 or 60 Hz, with 3 or 1 phase motor. 0.7-11.5 HP (0.5-8.6 kW)

Republic Blowers have a nameplate containing the serial and model number located on the blower head near the exhaust port. When placing a service call, please provide the Republic serial number. Call us at (800) 847-0380 or e-mail info@republic-mfg.com.

- Models come with 1.25 in. (31.8 mm), 2.0 in. (50.8 mm), 2.5 in. (63.5 mm), or 4 in. (101.6 mm) inlet and ports; and can accommodate piping/hose in 1.25 in. (31.8mm), 20 in. (50.8 mm), 2.5 in. (63.5 mm), or 4 in. (101.6 mm) connections.

- All models can be mounted in a variety of positions. (Please refer to Installation section of manual.)

Equipment Arrival & Inspection

Inspect the blower system at time of receipt to ensure that all components and accessories, as noted on the packing slip, were received and in good condition. Verify that the serial number on the packing slip matches the serial number shown on the blower head nameplate. Inspect the blower and motor assembly to ensure that the motor horsepower and voltage are correct.

If any equipment was damaged in transit, you will need to make a claim against the freight carrier immediately. If you have any shortages, discrepancies, or damage, please call your Republic Manufacturing Distributor or Republic Manufacturing at (800) 847-0380. No training required.

Storage Conditions

1. Must store blower in a place that meets the following conditions: clean, dry, and dust-free.
2. The temperature during storage must be between 32 (0°C) and 104°F (40°C).

Long Term Storage

The new blower may initially be stored following delivery.

1. Under advantageous storage conditions (as specified above): 1 year.
2. Under disadvantageous storage conditions (e.g. high humidity, salty air, sandy or dusty air): Inquire with Republic Manufacturing regarding service at (800) 847-0380.

Commissioning After Longer Standstill:

Before recommissioning after a longer standstill, measure the insulation resistance of the drive motor. With values ≤ 1kΩ per volt of nominal voltage, the winding is too dry.

Suitability & Environmental Conditions

⚠ The units are suitable for the use in the industrial field.

⚠ Use only clean, dry air. Do not use explosive gases or atmosphere that contains such gases.

⚠ The ambient and suction temperatures must be between 32°F (0°C) and 104°F (40°C). For temperatures outside this range please contact your supplier.

⚠ In all applications where an unplanned shut down of the blower could possibly cause harm to persons or installations, a corresponding safety backup system must be installed.

⚠ Protect all surrounding items from exhausted air. This exhausted air can be very hot.

⚠ Protect unit from contaminants and moisture. Air particles, water vapor, oil-based contaminants or other liquids must be removed.

⚠ Blower must be installed with the proper-sized inlet and inline filter, gauge and relief valve to protect the blower from contaminants and over-heating, overpressure.

⚠ When using the blower at a high altitude or high temperatures, please consult with Republic Manufacturing prior to use.

Space Required for Installation

1. Allow at least 3 inches (76.2 mm) of clearance for removal and venting at the fan guard.

2. Allow at least 2 inches (50.8 mm) of clearance around the face of the blower cover.

3. Please refer to the blower dimensional drawings on individual specification sheets to determine the appropriate machine footprint.

Intended Use

This operating manual

- is intended for regenerative blowers models HRC100-HRC1502 and 4RC210-4RC630.
- contains instructions regarding transport and handling, installation, commissioning, operation, shut-down, storage, services, and disposal.
- must be completely read and understood by all operating and servicing personnel before beginning to work with or on the blowers.
- must be strictly observed.
- must be available at the site of operation.

The HRC100-1502 & 4RC210-630

- are blower-motor units for generating vacuum or pressure.
- are used to extract, pump and compress the following gases:
    - Air.
    - Non-flammable, non-aggressive, non-toxic and non-explosive gases or gas-air mixtures.
    - With differing gases/gas-air mixtures, inquire with Republic Manufacturing.
- are equipped with one of the following kind of drive motors:
    - 3-phase AC drive motor with a standard, or
    - Single-phase AC drive motor.

These operating instructions apply only to blower units with a standard design:

- are intended for industrial applications.
- are designed for continuous operation. With increased switch-on frequency (6x per hour with equal pauses and operating times) or with increased gas inflow and ambient temperature, the excess temperature limit of the coil and the bearing can be exceeded. Consult Republic Manufacturing under such conditions.

The limits listed in “Technical Data” must always be complied with when operating Republic Regenerative Blowers.

Foreseeable Misuse

It is prohibited

- to use the HRC100-HRC1502 or 4RC210-4RC630 in applications other than industrial applications unless the necessary protection is provided on the system, e.g. guards suitable for children’s fingers;
- to use the device in areas in which explosive gases can occur if the blower is not expressly intended for this purpose;
- to extract, to deliver and to compress explosive, flammable, corrosive or toxic fluids, unless the blower is specifically designed for this purpose;
- to operate the blower with values other than those specified in “Technical Data”.

Any unauthorized modifications of the blower are prohibited for safety reasons. The operator is only permitted to perform the maintenance and service work described in these operating instructions. Maintenance and servicing work which goes beyond this may only be carried out by companies which have been authorized by Republic Manufacturing.

Technical Data

Blower	Weight		Noise Level (dBa)	Blower	Weight		Noise Level (dBa)
	lb	kg			lb	kg	
HRC100	22	10	53	HRC102	33	15	68
HRC101	24	11	56	HRC202	33	15	61
HRC200	30	15	64	HRC202/1	35	16	61
HRC201	30	15	64	HRC302	40	18	60
HRC300	51	23	70	HRC302/1	38	17	60
HRC301	53	24	70	HRC402S	55	25	69
HRC400	57	26	70	HRC402	60	27	6
HRC401	57	26	70	HRC402/1	68	31	72
HRC500	68	31	72	HRC502	78	35	74
HRC501	66	30	74	HRC602	88	40	74
HRC600	79	36	72	HRC702	90	41	74
HRC700	88	40	72	HRC802	123	56	76
HRC750	112	51	74	HRC902	154	70	76
HRC800	137	62	82	HRC1002	163	74	76
HRC900	143	65	82	HRC1102	230	104	78
HRC1000	265	121	82	HRC1202	265	120	78
HRC1020	126	57	74	HRC1302	412	187	78
HRC1040	146	66	74	HRC1402	434	197	78
HRC1060	153	69	74	HRC1452	450	204	78
HRC1100	205	93	79	HRC1502	465	211	78
HRC1200	256	116	79				
HRC1300	278	126	79				

Blower	Weight		Noise Level (dBa)	Blower	Weight		Noise Level (dBa)
	lb	kg			lb	kg	
4RC210-A75	40	20	62	4RC220-A75	67	34	62
4RC210-H16	36	18	62	4RC220-H26	53	27	62
4RC310-A71	40	20	62	4RC220-H56	67	34	62
4RC310-H16	36	18	62	4RC320-A75	79	36	63
4RC310-H26	36	18	62	4RC320-H46	71	32	63
4RC410-A41	57	26	62	4RC320-H56	75	34	63
4RC410-H16	57	26	62	4RC420-H26	82	37	66
4RC510-H16	64	29	68	4RC420-H56	95	43	66
4RC510-H26	70	32	68	4RC520-H26	100	45	70
4RC610-H16	80	36	71	4RC520-H77	126	57	71
4RC610-H26	86	39	71	4RC620-H36	106	48	71
4RC630-H67	188	86	76	4RC620-H57	144	65	72

Tightening Torques for Screw Connections

The following values apply if no other information is available.
With non-electrical connections, property classes of 8.8 and 8 or higher as per ISO 898-1 are assumed.

	Tightening torques for non-electrical connections	
Thread	**[Nm]**	**[ft lbs]**
M4	2.7 - 3.3	1.99 - 4.44
M5	3.6 - 4.4	2.65 - 3.25
M6	7.2 - 8.8	5.31 - 6.5
M8	21.6 - 26.4	15.9 - 19.5
M10	37.8 - 46.2	27.9 - 34.1
M12	63.0 - 77.0	46.5 - 56.8

The following information for electrical connection applies to all terminal board connections with the exception of terminal strips.

	Tightening torques for electrical connections	
Thread	**[Nm]**	**[ft lbs]**
M4	0.8 - 1.2	0.59 - 0.89
M5	1.8 - 2.5	1.33 - 1.84

Especially for metal and plastic threaded cable glands and pipe unions, the following values apply:

	Tightening torques for metal threaded glands/unions	
Thread	**[Nm]**	**[ft lbs]**
M12x1.5	4 - 6	2.95 - 4.43
M 16x1.5	5 - 7.5	3.69 - 5.53
M25x1.5	6 - 9	4.43 - 6.64
M32x1.5	8 - 12	5.9 - 8.85
M40x1.5		

	Tightening torques for plastic threaded glands/unions	
Thread	**[Nm]**	**[ft lbs]**
M12x1.5	2 - 3.5	1.48 - 2.58
M16x1.5	3 - 4	2.21 - 2.95
M25x1.5	4 - 5	2.95 - 3.69
M32x1.5	5 - 7	3.69 - 5.16
M40x1.5		

Installation

Blower may be lifted manually or utilizing lifting equipment based on the instructions below:
WARNING: Danger from lifting heavy loads. Manual handling of the unit is only permitted within the following limits:

- max. 66 lbs (30 kg) for men
- max. 22 lbs (10 kg) for women
- mas. 11 lbs (5 kg) for pregnant women

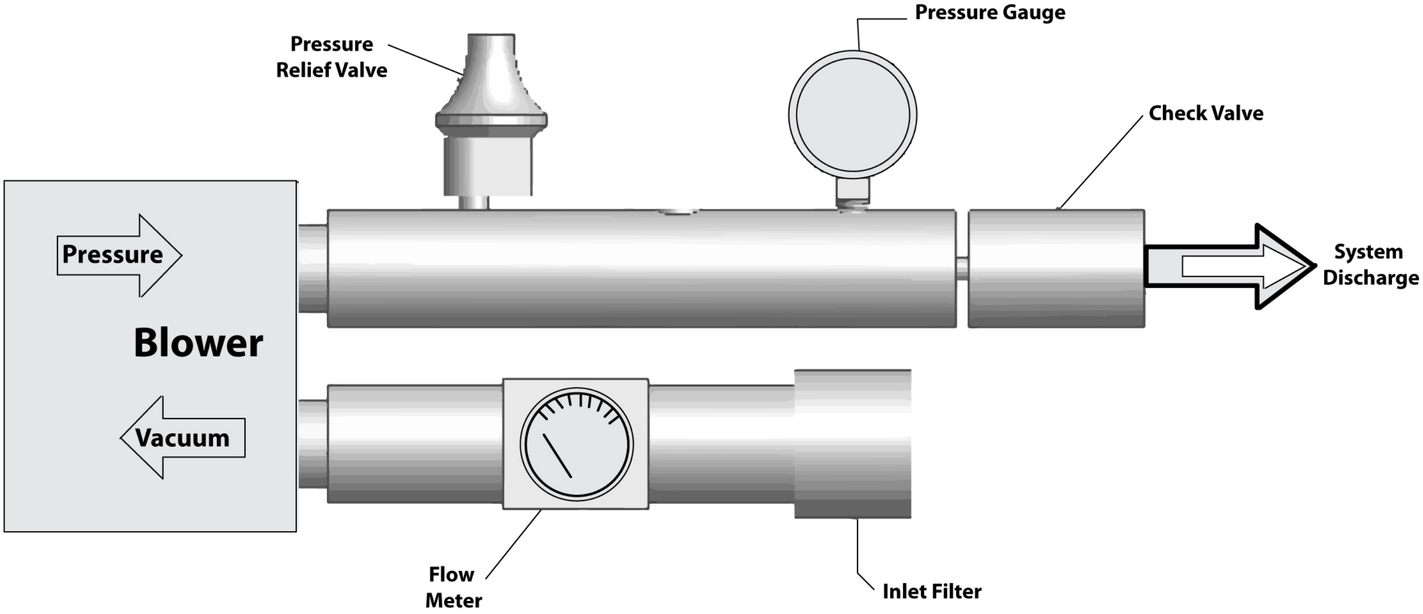
For the weight of the blower, see Mechanical Data section of this manual. All blowers heavier than the maximums stated above must be lifted using lifting equipment.

1. The blower is ready to connect upon delivery.
2. Install the blower on a level, stable operating surface and use the optional isolation pads to reduce noise and vibration. Attach the included loose muffler if necessary.
3. Have a qualified electrician configure the motor to your incoming voltage as noted in the "Motor Wiring" section of the manual. Refer to the nameplate on the motor for the correct power supply requirements.
4. To ensure sufficient cooling of the blower, it is absolutely necessary that the required minimum distances to the fan guard and the face of the blower cover be maintained. See "Mechanical Data" for minimum distances. Ventilation screens and openings must remain clear. Discharge air of other units may not be directly sucked in again.
5. The blower is suitable for installation within the following ambient conditions: dusty or damp environment, in buildings, in the open (though only if protected from intense sunlight exposure. The blower may be installed within the following conditions: on level surfaces, and at a maximum elevation of 1000 ft. above sea level. (For higher altitudes, contact Republic Manufacturing at 800-847-0380.)
6. Blower may be installed in any vertical/horizontal axis position with one exception: vertically with the blower face pointing upward.
7. From the motor side of the blower, verify the blower is rotating in the direction indicated by the arrow on the motor. (The motor side is marked with an arrow on most models.) Proper rotation can also be checked by the air flow at the inlet and outlet ports. On blowers powered by a 3 phase motor, change the connection of any two (2) wires to reverse blower rotation if needed.

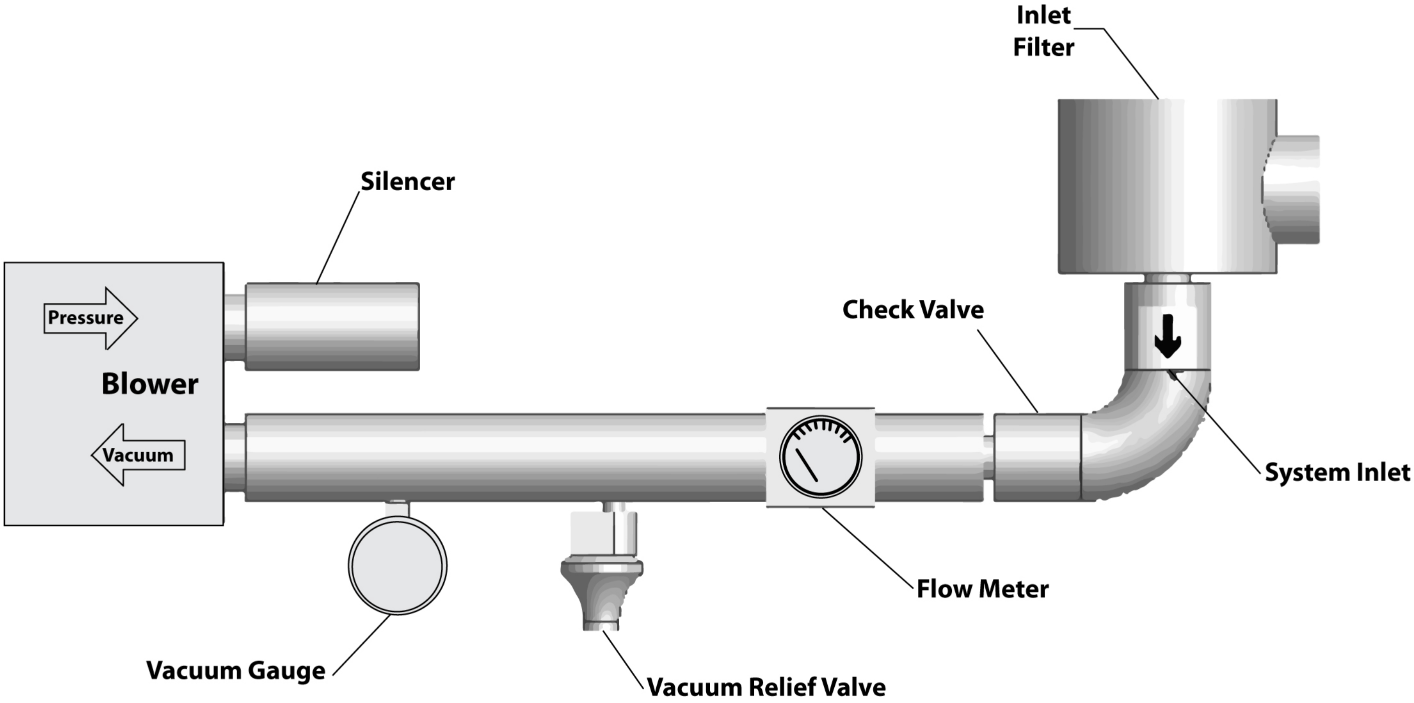
Plumbing & Accessories

1. Remove any foreign material (e.g. burrs, chips, welding drops, pipe cuttings, excess sealant, etc.) from plumbing.
2. Verify the motor is securely mounted and proper blower rotation before connecting to plumbing. The inlet and outlet port are not designed to support the plumbing without proper supporting elements.
3. Remove safety rubber plugs from the inlet and outlet ports.
4. Connect the plumbing with properly sized fittings.
5. Use a relief valve to discharge excess air beyond the preset level on pressure applications. Use a vacuum relief valve to draw in excess air when preset vacuum level is achieved.
6. Install an intake filter to prevent foreign material from entering the blower. In applications where there is high humidity or liquids being used in the process, install a moisture separator with a drain valve.
7. Install two (2) gauges - one before and one after the filter - to monitor differential air flow through the filter element. As filters become clogged, performance efficiency will be reduced. Filters should be checked periodically and replaced when necessary. The recommended check valves provide minimal pressure drop, positive sealing, and are resistant to the high discharge temperatures of the blowers.
8. Recommended piping should be, at minimum, the same size as the inlet and outlet ports on pressure systems.
   WARNING: Exhaust air temperature increases significantly above 65" WC (162 mbar). Discharged air is typically too hot for most plastic piping, therefore metal piping is recommended. This piping must be guarded and marked "DANGER-HOT-DO-NOT TOUCH".
9. Metal piping is recommended for the first 5 ft. (1.5 m) to 8 ft. (2.4 m) from the blower on pressure systems. Elbows increase friction, so elbows should be minimized to decrease friction loss.
10. Pressure or relief valves should be installed in a "T" that is at least one (1) pipe size larger than the port diameter.

Typical Pressure Layout



Typical Vacuum Layout



Electrical Connection

DANGER: Malpractice can result in severe injuries and material damage. The electrical connection may be performed by trained and authorized electricians only. Before beginning work on the unit or system, the following measures must be carried out:

- De-energize.
- Perform proper lockout/tagout procedures such that electricity cannot be turned on again.
- Confirm unit is de-energized.
- Ground and short-circuit.
- Cover or block-off adjacent energized parts

WARNING: Incorrect connection of the motor can lead to serious damage to the unit.

- ELECTRICAL POWER SUPPLY: Observe the rating plate. It is imperative that the operating conditions correspond to the data given on the rating plate. Deviations permissible without reduction in performance include:
  - +/- 5% voltage deviation
  - +/- 2% frequency deviation
- CONNECTION TO TERMINAL BOX: Open the required cable entry openings on the terminal box. Here the following two cases are differentiated:
  - The cable entry opening is prefabricated and provided with a sealing plug.
  - Screw out sealing plug.

OR

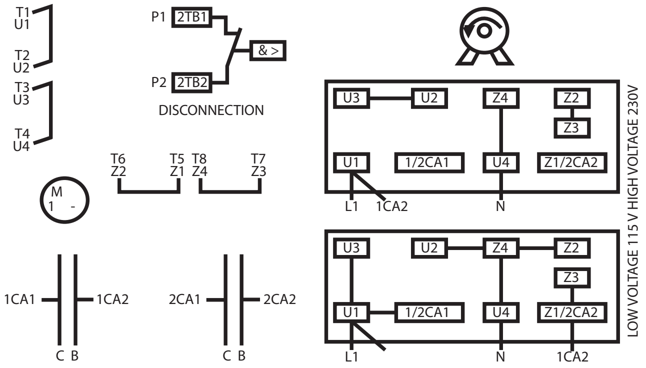
  - The cable entry opening is closed off with a casting skin (only on blower with drive-motor axis heights of 100” [2.5 m] to 160” [4.0 m] in standard design).
  - Break out casting skin using a suitable tool. For example, use a metal pin with a corresponding diameter or a chisel and hammer.

- Mount cable glands on the terminal box. Proceed as follows:
  - Select one cable gland in each case which is suitable for the cable diameter.
  - Insert this cable gland in the opening of the terminal box. Use a reducer if necessary.
  - Screw on the cable gland so that no moisture, dirt, etc. can penetrate into the terminal box.
- Carry out the connection and arrangement of the jumpers in accordance with the wiring diagram in the terminal box or “Wiring Diagram” section of this manual.
- The electrical connection must be carried out as follows:
  - The electrical connection must be permanently safe.
  - **DANGER:** The terminal box must be free from foreign bodies, dirt, and humidity. Terminal box cover and cable entries must be tightly closed so as to make them dust-proof and waterproof. Check for tightness at regular intervals.
  - **DANGER:** There may be no protruding wire ends.
  - **DANGER:** Clearance between bare live parts and between bare live parts and ground : $\geq$ 0.22 in. (5.5 mm) at a nominal voltage of $U_N \leq 690$ V.
  - For the tightening torques for terminal board connections (except terminal strips), see “Tightening Torques for Screw Connections”.
- For motor overload protection, use motor circuit breakers and adjust to the specified nominal current as listed on the rating plate.
- **DANGER:** There is danger of an electrical shock when a defective blower is touched. Mount motor circuit breaker. Have electrical equipment checked regularly by an electrician.

Wiring Diagram - Single Phase

Republic's single phase regenerative blowers have one of these wiring configurations. Check the wiring diagram on the inside of the terminal box cover to select the appropriate wiring configuration.

Connection	
Low Voltage (2Y)	High Voltage (Y)
110V R S I I 1 2 I I 3 4 I I 6 5	230V R S I I 4 1 I 5 2 – 3 – 6
Reverse: R-1-3-5 S-2-4-6	Reverse: R-4 S-1-5 2-3-6
Connect hot lead to 1. Connect neutral lead to 4.	

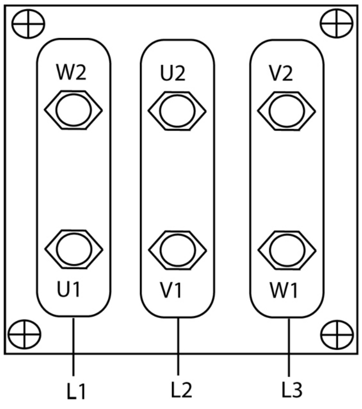


Wiring Diagram - Three Phase

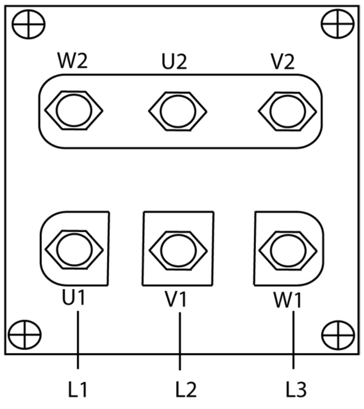
Republic's three phase regenerative blowers have one of two wiring configurations. Check the wiring diagram on the inside of the terminal box cover to select the appropriate wiring configuration.

Connection								
HRC100, 102, 200, 202, 300, 302, 400, 402, 402S, 500, 502, 600, 602, 702, 750, 802				HRC800, 900, 902, 1000, 1002, 1100, 1102. 1200, 1202, 1302, 1402, 1502				
6 cable		Y 9 cable		△ 9 cable		12 cable		
Low Voltage 220	High Voltage 380-440	Low Voltage 220	High Voltage 440	Low Voltage 220	High Voltage 440	Low Voltage 220	Middle Voltage 380	High Voltage 440
L_1 L_2 L_3 | | | 1 2 3 | | | 6 4 5	L_1 L_2 L_3 | | | 1 2 3 6 - 4 - 5	L_1 L_2 L_3 | | | 1 2 3 | | | 7 8 9 4 - 5 - 6	L_1 L_2 L_3 | | | 1 2 3 4 5 6 | | | 7 8 9	L_1 L_2 L_3 | | | 1 2 3 | | | 6 4 5 | | | 7 8 9	L_1 L_2 L_3 | | | 1 2 3 4 5 6 | | | 7 8 9	L_1 L_2 L_3 | | | 1 2 3 | | | 6 4 5 | | | 7 8 9 | | | 12 10 11	L_1 L_2 L_3 | | | 1 2 3 | | | 7 8 9 4 5 6 | | | 12 -10 -11	L_1 L_2 L_3 | | | 1 2 3 | | | 12 10 11 4 5 6 | | | 7 8 9

Low Voltage
220V



High Voltage
440V



Check rotation. If reversed, swap any two leads.

Commissioning

WARNING: Improper use of the unit can result in serious or even fatal injuries. Do not proceed without reading Safety Instructions.
WARNING: Danger from rotating parts cutting/cutting off of extremities, grasping/winding up of hair and clothing.
WARNING: Danger due to vacuum and pressure, sudden escape of vapor (skin and eye injuries), sudden drawing in of hair and clothing, or burns.
Only start-up and operate under the following conditions:

- The blower must be completely assembled. Pay particular attention to the following components:
    - the blower cover,
    - the muffler on inlet and discharge connections, and
    - the fan guard.
- The pipes/hoses must be connected to inlet and discharge connections.
- Inlet and discharge connections and the connected pipes/hoses may not be closed, clogged or soiled.
- Check the mounting elements, connections of the pipe/hose, lines, fittings and containers for strength, leaks and firm seating at regular intervals.

Preparation

DANGER: Blower can overheat causing damage to the drive motor winding if intake or discharge connections are closed/soiled. Before start-up, make sure the inlet and discharge connections are not closed, clogged or soiled.
CAUTION: Before starting up after a longer standstill: Measure the insulation resistance of the motor. With values $\leq$ 1 kΩ per volt of nominal voltage, the winding is too dry.

1. Check the direction of the rotation. The intended rotating direction of the shaft is marked with arrows on the housing.
2. The gas delivery direction is marked with arrows on the inlet and discharge connections.
3. Make sure the pipes/hoses on the inlet and discharge connections are properly connected.
4. Switch the blower on briefly and then off again.
5. Compare the actual rotating direction of the external fan with the intended shaft rotating direction indicated with the arrows shortly before the blower comes to a standstill.
6. If necessary, revers the direction of the rotation of the motor.
7. Observe the operating speed specified on the rating plate. This may not be exceeded, as otherwise the noise radiation, vibration behavior, grease consumption duration and bearing change interval worsen. To prevent damage as a result of higher speeds, it may be necessary to inquire with Republic Manufacturing as to the maximum speed.

Start-Up

1. Open shut-off device in intake/discharge pipe.
2. Switch on power supply for drive motor.
3. Operate blower for an hour, and then check:
    - Ambient temperature - increased room temperatures may require stronger ventilation especially for larger blowers. Room temperature should not exceed 104 (40°C).
    - Pressure and vacuum valves - adjust relief valve pressure or vacuum setting if needed.
    - Motor current - check that current supply matches recommended current rating on blower nameplate.
    - Electrical overload cutout - check that current matches rating on blower nameplate

If motor fails to start or slows down significantly under load, shut off and disconnect from power supply. Check that the voltage is correct for the motor and that the motor is turning in the proper direction.

Shut-Down

1. Switch off power supply for drive motor.
2. Close shut-off device in intake/discharge pipe, if applicable.

Operation

WARNING: Improper use of the unit can result in serious or even fatal injuries. Do not proceed without reading Safety Instructions.
WARNING: Danger due to vacuum and pressure, sudden escape of vapors (skin and eye injuries), sudden drawing in of hair and clothing.
WARNING: Danger of overheating due to hot surface of blower. High temperatures of up to approximately 320°F (160°C) can occur on the surface of the blower. Do not touch during operation. Allow to cool after shut-down.
CAUTION: Danger of overheating due to hot surface of blower. Temperature sensitive parts, such as lines or electronic components, may not come into contact with the surface of the blower.
CAUTION: Danger of rusting due to collection of condensed water in drive motor area. On drive motors with closed condensed water openings, remove closures occasionally to allow any water which has collected to drain off.
CAUTION: Danger of bearing damage. Heavy mechanical impacts must be avoided during operating and while at standstill.

Shut-Down & Longer Standstills

Preparing for shut-down or longer standstill

WARNING: Improper use of the unit can result in serious or even fatal injuries. Do not proceed without reading "Safety Instructions".
CAUTION: Danger of rusting due to collection of condensed water in drive motor area. On drive motors with closed condensed water openings, remove closures occasionally to allow any water which has collected to drain off.
CAUTION: Danger of bearing damage. Heavy mechanical impacts must be avoided during operating and while at standstill.
Prior to shut-down or longer standstill, proceed as follows:

1. Switch off the blower.
2. Close shut-off device in inlet and pressure line if installed.
3. Disconnect blower from power supply.
4. Release pressure. Open pipes/hoses slowly and carefully so that the vacuum or gauge pressure in the blower can be released.
5. Remove pipes/hoses.
6. Provide mufflers on inlet and discharge side with sealing plugs.

Servicing

WARNING: Improper use of the unit can result in serious or even fatal injuries. Do not proceed without reading "Safety Instructions".

Emptying/Rinsing/Cleaning

Before any maintenance/servicing work, empty, rinse and clean the outside of the unit.

1. Empty unit with air and rinse until all residues have been removed.
2. Clean the outside of the unit with compressed air.
    - Wear gloves and protective safety glasses.
    - Secure the surrounding area.
    - Clean the entire surface of the unit and exterior fan with compressed air.

Preventative Maintenance

After the first 100 hours of operation, the following need to be checked:

- filter elements;
- noise absorbing foam in mufflers; and
- motor and blower cleanliness.

Replace filter elements as needed. Mufflers should be checked on a monthly basis.

Troubleshooting

Problem	Reason	Remedy
Increased sound	Noise absorbing foam is damaged	Replace foam.
	Impeller rubbing inside	Send unit to Republic Authorized Repair Facility.
Excessive vibration	Damaged impeller	Replace impeller.
	Motor and/or impeller are dirty	Clean motor and impeller periodically.
Ambient and exhaust temperature increases	Motor and/or blower are dirty	Clean motor and blower periodically.
	Filters are dirty	Replace filters.
Decreased inlet air pressure	Inlet air filter is clogged	Clean inlet filter or replace cartridge.
Unit is very hot	Wrong wiring	Check wiring.
	Low voltage	Supply proper voltage.
	Inlet air filter is clogged	Clean inlet filter.
	Motor and/or blower are dirty	Replace cartridge.
	Operating pressure or vacuum is too high	Clean motor and blower periodically.
		Install a relief valve and pressure or vacuum gauge.
Unusual sound	Impeller is damaged or dirty	Clean or replace impeller.
	Bearing failure	Send unit to Republic Authorized Repair Facility.
	Flow speed is too high	Clean pipes. Use pipe with larger cross-section if necessary.
	Muffler is dirty	Clean or replace muffler inserts.
Motor overload	Low voltage	Check power source.
		Check wire size and wire connections.
Unit does not start	Incorrect electrical connection or power source	Check wiring diagram, circuit fusing and circuit capacity.
	Impeller is damaged	Clean or replace impeller.
		Install proper filtration.
Blower does not generate any or generates insufficient pressure difference	Leak in system	Seal leak in system.
	Wrong direction of rotation	Reverse direction of rotation by interchanging two connecting leads.
	Incorrect frequency	Correct frequency.
	Shaft seal defective	Replace shaft seal.
	Different density of pumped gas	Take conversion of pressure values into account. Inquire with Republic Manufacturing.
	Impeller is damaged	Clean or replace impeller.
Blower leaking	Seals on muffler are defective	Check muffler seals and replace if necessary.
	Seals in motor area are defective	Check motor seals and replace if necessary.

In the Event of a Breakdown

1. Use a lockout/tagout procedure to ensure the blower may be worked on safely.
2. Refer to the "Troubleshooting" section of the manual to determine the cause of the breakdown and the appropriate action to take.
3. If further assistance is needed, please call Republic Manufacturing at 800-847-0380.

When to Ship the Blower Back to Republic

If you cannot fix or troubleshoot your blower system using this manual then a skilled Republic Manufacturing professional is required. Please ship your blower back to Republic Manufacturing.

Disabling, Dismantling, and Scrapping of Blower

1. Disable the blower using the lockout/tagout procedure outlined in the manual.
2. Scrap entire unit using a suitable disposal company.
3. Most components are aluminum, stainless steel, or zinc-plated mild steel and may be recycled or disposed of as such.

Warranty Terms and Conditions

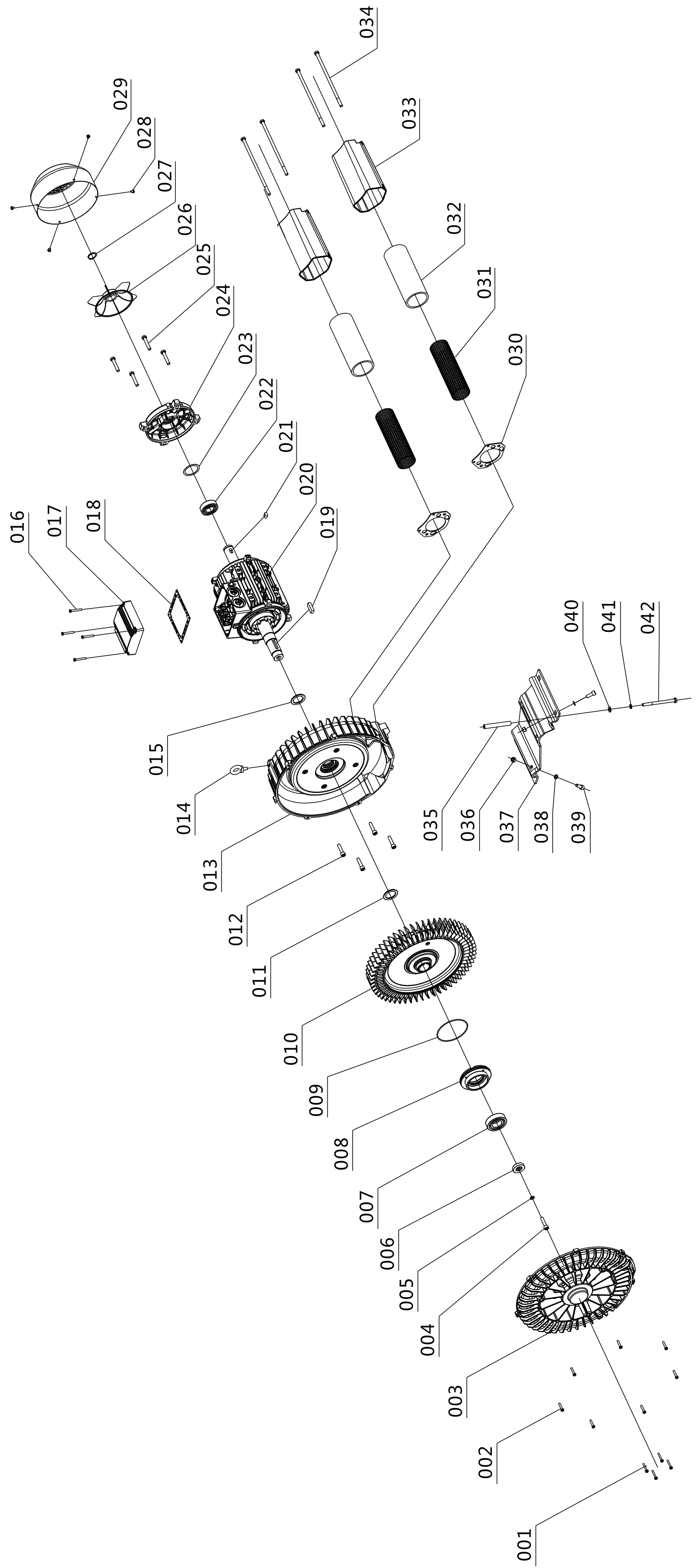
Republic Manufacturing warrants all finished Republic Manufacturing products to be free from functional defects in material and workmanship for a period of twelve (12) months from the date of installation, or no longer than eighteen (18) months from shipment.
Wear parts such as filter elements, hoses and piping are not covered by the 12 to 18 month warranty.

DISASSEMBLY OF BLOWER MAY VOID WARRANTY.

To obtain service within the warranty period, first contact your authorized Republic Manufacturing dealer or Republic Manufacturing Service Department. Republic's responsibility under this warranty shall be to provide an analysis of the blower, which will determine course of action. Any product found to be defective within the warranty period will merit either:
a. A no charge repair of existing blower. Any freight charges will be the purchaser's responsibility.
b. A replacement blower*. Any freight charges will be the purchaser's responsibility.
*This option would be a chargeable replacement until the original blower is received by Republic Manufacturing, and warranty is approved.

Republic Manufacturing shall not be liable for incidental nor consequential damages resulting from the use of this product. There are no expressed nor implied warranties, which extend beyond the warranty of merchantability or fitness for a particular purpose to the equipment and/or its parts and components.

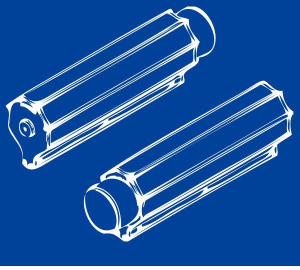
EXPLODED VIEW



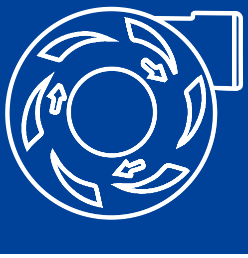
REGENERATIVE BLOWER PARTS LIST

Position No.	Description
001	Screw
002	Screw
003	Front Cover
004	Screw
005	Spring lock washer
006	Washer
007	Front bearing
008	Bearing cover
009	O-Ring
010	Impeller
011	Washer
012	Screw
013	Housing
014	Lift eye bolt
015	Shaft lip seal
016	Screw
017	Motor box cover
018	Motor box gasket
019	Key
020	Motor
021	Rotor
022	Rear bearing
023	Washer
024	Motor cover
025	Screw
026	External fan
027	Retaining ring
028	Screw
029	Fan cowl
030	Gasket
031	Silencer insert
032	Silencer inlet filter
033	Silencer housing
034	Screw
035	Pin
036	Nut
037	Base
038	Lock washer
039	Screw
040	Washer
041	Lock washer
042	Screw

REPUBLIC
MANUFACTURING



Air Knife Systems



Centrifugal Blowers

Regenerative Blowers

Vacuum Pumps

5131 Cash Road, Dallas, TX 75247 | 800.847.0380 | republic-mfg.com

Remedial Action Completion Report

Big B Mini Mart Site

Appendix E
Boring Logs

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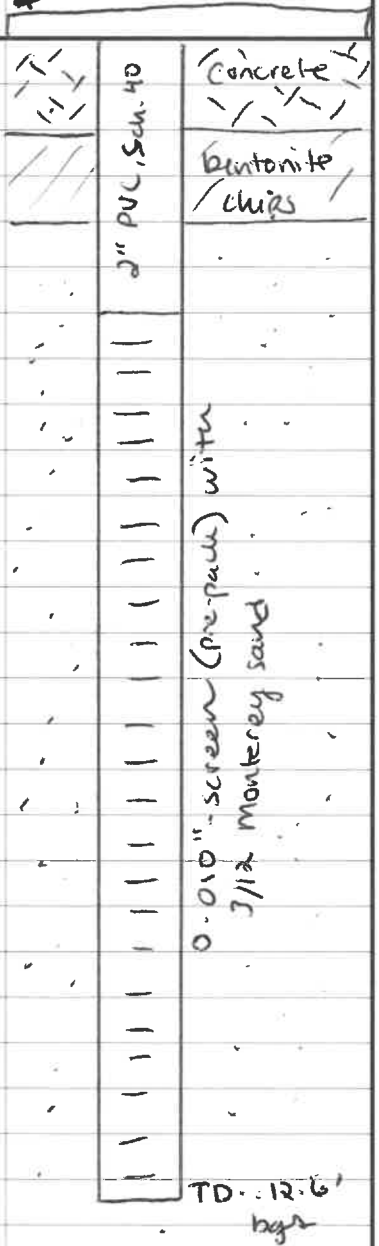
PROJECT: CL-Ellensburg
LOCATION: Big B
WELL ID: MW-4B
LOGGED BY: mtm
DRILL DATE: 7/6/22
ECOLOGY WELL ID: BNM-659
DRILLED BY: AEC (Cole Pickering)
BORING DIAMETER: 4"
COORDINATE SYSTEM:
DRILLING EQUIPMENT: 7822 DT
SCREENED INTERVAL: ~3-13' bgs
~~NORTHING:~~ LAT: 46.976723
~~EASTING:~~ LONG: -120.543243
DRILLING METHOD: Direct Push
GROUND SURFACE ELEV.: -
TOC ELEVATION: -
SAMPLING METHOD: Poly Sleeves
TOTAL DEPTH (ft bgs): 12.6' bgs / 15'
DEPTH TO WATER (ft bgs): 4.72'

Depth (feet)	USCS	Description	Drive	Recovery	# of Blows	PID (ppm)	Sample ID
0–2.7	GW-GM	0-2.7 - Dark brown, well-graded GRAVEL with sand and silt. Gravel well-rounded to subangular, sand is fine to coarse. Occasional brick fragments, moist, faint odor (fill)				1.3 11.8	no samples collected
2.7–3	GW	2.7-3 gray GRAVEL with sand and trace fines. Sand is m-c, med. dense, v. moist to wet				20.2	
3–5		3.0-5.0 - No recovery.					
5–7.6	GW	5.0-7.6 - Same as above, strong odor and sheen, fainter odor in lower interval and no sheen, wet.				76.2 183.9 8.7	
7.6–10		7.6-10.0 - No recovery					
10–13.5	GW	10-13.5 - Same as above, faint odor, wet, no sheen				27.8 6.0 2.1	
13.5–13.7		13.5-13.7 - Light brown/orange GRAVEL with sand and silt (likely slough)				1.5	
13.7–15		13.7-15 - No recovery Bottom of boring at 15' bgs					

Well Construction



*well completed with 6" concrete monument above ground surface.

ABBREVIATIONS:
ft bgs = feet below ground surface
ppm = parts per million
USCS = Unified Soil Classification System
▼ = denotes groundwater table

NOTES:

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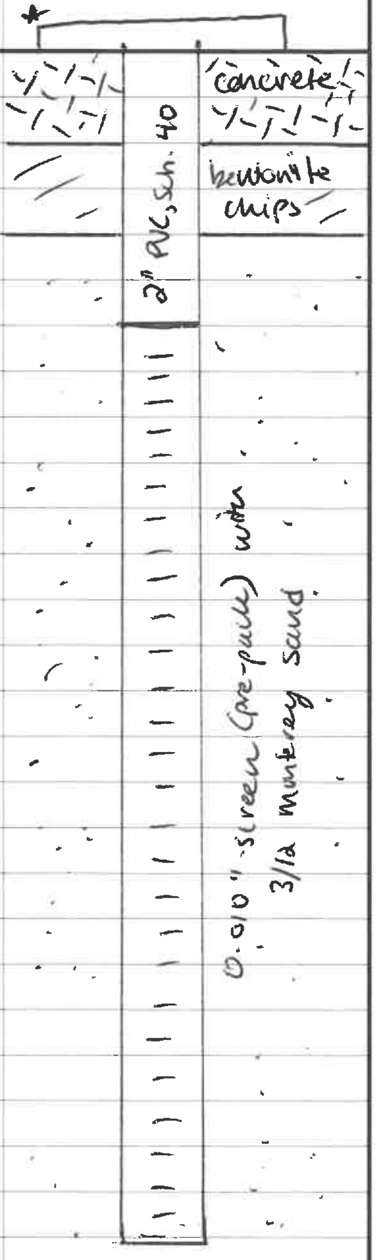
PROJECT: CL-Ellensburg
LOCATION: Big B
WELL ID: MW-9A
LOGGED BY: MTM
DRILL DATE: 7/6/22
ECOLOGY WELL ID: BNM-660
DRILLED BY: AEC (Cole Pickering)
BORING DIAMETER: 4"
COORDINATE SYSTEM:
DRILLING EQUIPMENT: 7822 DT
SCREENED INTERVAL: ~ 3 - 13' bgs
~~NORTHING:~~ LAT 46.976807
~~EASTING:~~ LONG -120.542965
DRILLING METHOD: Direct Push
GROUND SURFACE ELEV.: –
TOC ELEVATION: –
SAMPLING METHOD: Poly sleeves
TOTAL DEPTH (ft bgs): 13.1' bgs / 15'
DEPTH TO WATER (ft bgs): 4.95'

Depth (feet)	USCS	Description	Drive	Recovery	# of Blows	PID (ppm)	Sample ID
0	GW-GM	0 - 3.5 - Dark brown, well-graded gravel with sand and silt. No odor, moist in lower 0.5'. Sand is fine to coarse. GW-GM (fill)				0.6 0.5 0.5	
3.5		3.5-5.0 - No recovery					
5	GW-GM	5.0-5.5 - Same as above; v. moist to wet, faint odor.				0.4	No samples collected
5.5	GW	5.5-7.5 - Dark gray, sandy GRAVEL. Sand is medium to coarse, gravel is fine to coarse, wet, no odor.				1.8 0.7	
7.5		7.5-10 - No recovery					
10	GW	10 - 11.5 - Same as above, wet, no odor				0.3	
11.5	GW	11.5-12.3 - Orange-reddish GRAVEL with sand, lens of siltier material at 11.5-11.7', wet.				0.2 0.1	
12.3		12.3-15' - No recovery.					
15		Bottom of boring at 15' bgs					

Well Construction



*well completed with 6" concrete monument stick-up

ABBREVIATIONS:
ft bgs = feet below ground surface
USCS = Unified Soil Classification System
ppm = parts per million
▼ = denotes groundwater table

NOTES:

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PROJECT: CL-Ellensburg
LOCATION: Big B
WELL ID: MW-2A
LOGGED BY: MTM
DRILL DATE: 7/6/22
ECOLOGY WELL ID: BNM-658
DRILLED BY: AEC (Cole Pickering)
BORING DIAMETER: 4"
COORDINATE SYSTEM:
DRILLING EQUIPMENT: 7822 DT
SCREENED INTERVAL: ~3-13' bgs
~~NORTHING~~ LAT: 46.977066
~~EASTING~~ LONG: -120.543273
DRILLING METHOD: Direct Push
GROUND SURFACE ELEV.: –
TOC ELEVATION: –
SAMPLING METHOD: Poly Sleeves
TOTAL DEPTH (ft bgs): 12.8' / 15'
DEPTH TO WATER (ft bgs): 5.86

Depth (feet)	USCS	Description	Drive	Recovery	# of Blows	PID (ppm)	Sample ID
0							
1		0-5' - No recovery					
2							
3							
4							
5	GW-GM	5-6' - Light brown GRAVEL with sand and silt. Gravel is subangular to rounded, sand is well-graded, moist, faint odor (All)				3.7	No samples collected
6	GW					60	
7		6-7' - Gray, well-graded GRAVEL with sand. Gravel is subangular to rounded, sand is medium to coarse, wet, faint odor, no visible sheen.					
8							
9							
10		7-10 - No recovery 10-13.7 - Same as above, few fines, no odor, occasional beds of coarse sand in gravel				35	
11	GW					1.8	
12						1.2	
13		13.7-15 - No recovery				0.7	
14		Bottom of core at 15' bgs					
15							

Well Construction

* well completed with 6" concrete monument stick-up.

ABBREVIATIONS:
ft bgs = feet below ground surface
ppm = parts per million
USCS = Unified Soil Classification System
▼ = denotes groundwater table

NOTES: