August 22, 2022
Cardno 03144702.R12

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

SUBJECT **Federal Avenue Trenching – Sampling and Analysis Report**
ExxonMobil ADC
2717/2731 Federal Avenue
Everett, Washington

Mr. Cook:

At the request of ExxonMobil Environmental and Property Solutions, on behalf of ExxonMobil Oil Corporation (ExxonMobil) and American Distribution Company (ADC), Cardno, now Stantec, prepared the enclosed *Federal Avenue Trenching – Sampling and Analysis Report*, dated August 22, 2022 for the subject site.

Please contact Mr. Bobby Thompson, Cardno Project Manager for this site at 206 510 5855, or Mr. Jeff Johnson, ExxonMobil Project Manager for this site at 815 860 7290, with questions.

Sincerely,

Laina Cole
Senior Program Coordinator
Cardno
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ENCLOSURE

Cardno's *Federal Avenue Trenching – Sampling and Analysis Report*, dated August 22, 2022

cc: w/ enclosures
Mr. Erik Gerking, Port of Everett *(Email)*
Mr. Steve Miller, American Distribution Company *(Email)*
Ms. Sandra Caldwell, Washington State Department of Ecology *(Email)*
Mr. Jeff Johnson, ExxonMobil Environmental and Property Solutions Company *(Project folder)*

Federal Avenue Trenching – Sampling and Analysis Report

ExxonMobil ADC
2717/2731 Federal Avenue
Everett, Washington

Cardno 03144702.R12

Prepared for
ExxonMobil Environmental and Property Solutions and American Distribution Company

August 22, 2022

Cardno

now

Stantec

Federal Avenue Trenching – Sampling and Analysis Report

ExxonMobil ADC
5100 15th Avenue Northwest
Seattle, Washington

Cardno 03144702.R12

August 22, 2022

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Acronym List

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

1 Introduction

At the request of the Port of Everett, and as directed by the Washington State Department of Ecology (Ecology), a summary of soil analytical data collected during trenching activities within Federal Avenue was prepared for the ExxonMobil ADC Site (Ecology Site). The Ecology Site is located at 2717/2731 Federal Avenue, Everett, Snohomish County, Washington. The purpose of the sampling activities was to characterize soil that will remain in place beneath the planned utility trench in the City of Everett right-of-way beneath and adjacent to Federal Avenue in Everett, Washington. The utility work was performed by Strider Construction Company, Inc. (Strider) and Northwest Construction, Inc. (Northwest Construction) for the Port of Everett. Cardno preformed the sampling activities to characterize soil conditions along the utility trench bottoms. Strider and Northwest Construction were responsible for all other utility work as described in the *Norton Terminal Development & MTCA 3rd Interim Action Soil Removal, Stockpiling, and Disposal Plan*, dated September 25, 2021 (Strider, 2021). The location of the Site is shown on Plates 1 and 2.

2 Site Information

Property Name:	ExxonMobil ADC
Property Address:	2717/2731 Federal Avenue Everett, Washington
Tax Parcels:	00437161900100 00437161900101 00437161901000
Section / Township / Range / Quarter-Quarter:	Township 29 North, Section 19, Range 5 East
Regulatory Agency:	Washington State Department of Ecology
Facility Site ID:	2728
Project Consultant:	Cardno
Project Consultant Contact Information:	Bobby Thompson 309 South Cloverdale Street, Unit A13 Seattle, Washington 98108 Phone: +1 206 550 5855 Email: robert.thompson@stantec.com
Potential Liable Party:	Jeff Johnson ExxonMobil Environmental and Property Solutions Company 25915 South Frontage Road Channahon, Illinois 60410 Phone: +1 815 860 7290 Email: jeff.a-sh-e.johnson@exxonmobil.com
Current Property Owners:	Southern Parcel - ExxonMobil Oil Corporation (ExxonMobil) Northern Parcels - American Distribution Company (ADC)
Current Property Use:	Paved vacant lot

3 Trenching and Soil Sampling Results

Soil samples were collected from the bottom of utility trenches and test pits located within the Ecology Site boundary (Plate 3) between January 20 and June 2, 2022. Cardno collected soil samples in approximately 50-foot intervals, in accordance with Section 6.6.3 of Ecology's *Guidance for Remediation of Petroleum Contaminated Sites*, dated June 2016 (Ecology, 2016), and Cardno's *Federal Avenue Trenching – Sampling and Analysis Plan*, dated October 19, 2021 (Cardno, 2021).

All soil samples were collected in accordance with Cardno's standard field protocol (Appendix A). Locations of individual soil samples are shown on Plate 4. Soil analytical results summarized in Tables 1 and 2.

4 Soil Sampling Analysis

Soil Samples were shipped to Eurofins Calscience and Eurofins Tustin, state-certified laboratories, located in Garden Grove and Tustin, California, respectively. Laboratory analytical reports and COC documentation are included as Appendix B. Soil samples were analyzed for the following constituents of concern:

- TPHg in accordance with Ecology Method NWTPH-Gx.
- TPHd and TPHmo in accordance with Ecology Method NWTPH-Dx with silica gel clean-up.
- BTEX in accordance with EPA Method 8260C.
- PAHs in accordance with EPA Method 8270C with selective ion monitoring (SIM).

5 Limitations

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

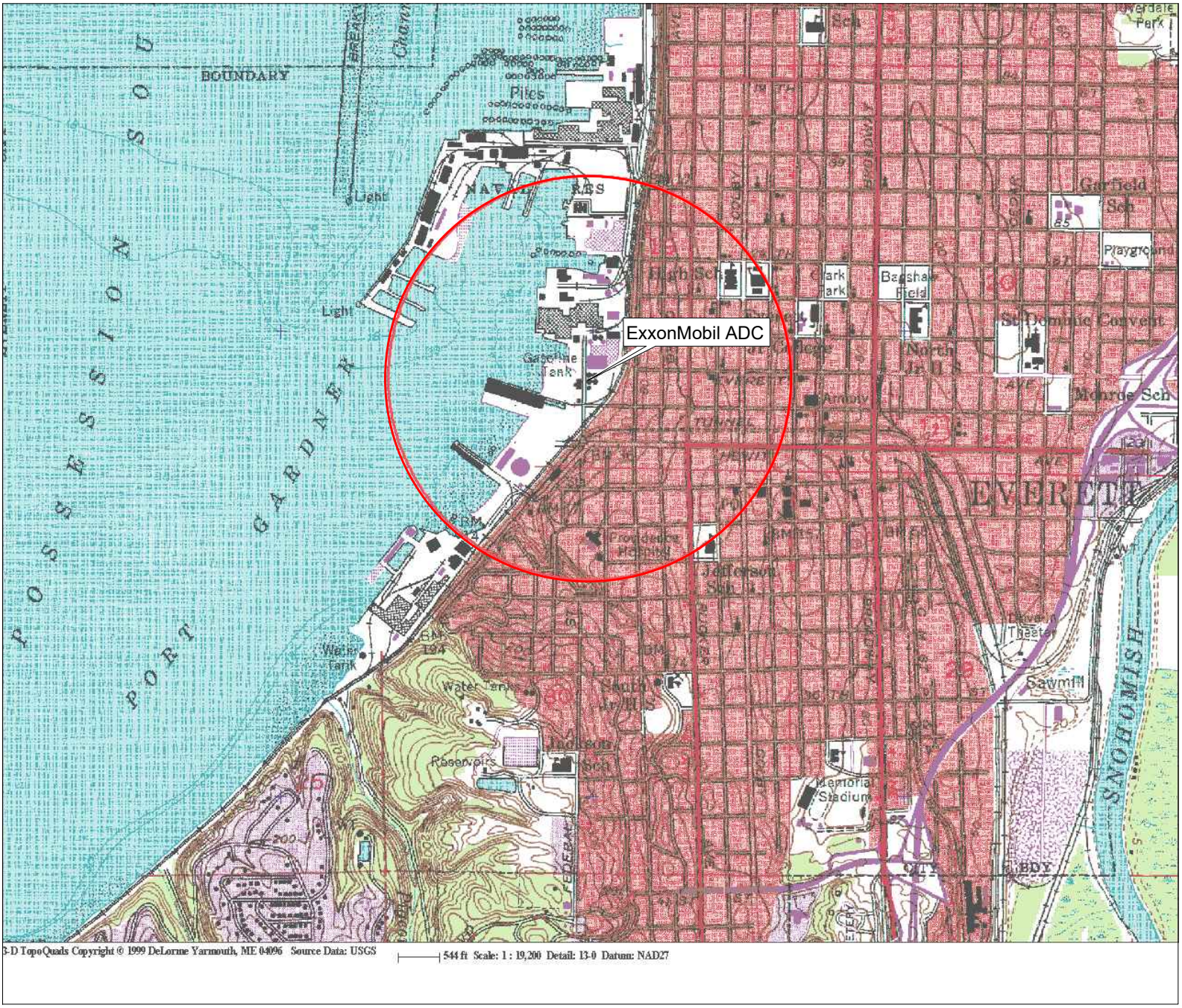
This report and the work performed have been undertaken in good faith, with due diligence and with the expertise, experience, capability and specialized knowledge necessary to perform the work in a good and workmanlike manner and within all accepted standards pertaining to providers of environmental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

6 References

Cardno. October 19, 2021. *Federal Avenue Trenching – Sampling and Analysis Plan*, ExxonMobil ADC, Agreed Order No.: DE 6184, 2717/2731 Federal Avenue, Everett, Washington.

State of Washington Department of Ecology (Ecology). June 2016. *Guidance for Remediation of Petroleum Contaminated Sites*.

Strider Construction Company, Inc. (Strider). September 25, 2021. *Norton Terminal Development & MTCA 3rd Interim Action Soil Removal, Stockpiling, and Disposal Plan*.



FN 0314470001

EXPLANATION

1/2-mile radius circle

N

APPROXIMATE SCALE

0 0.5 1 mile

Cardno now Stantec

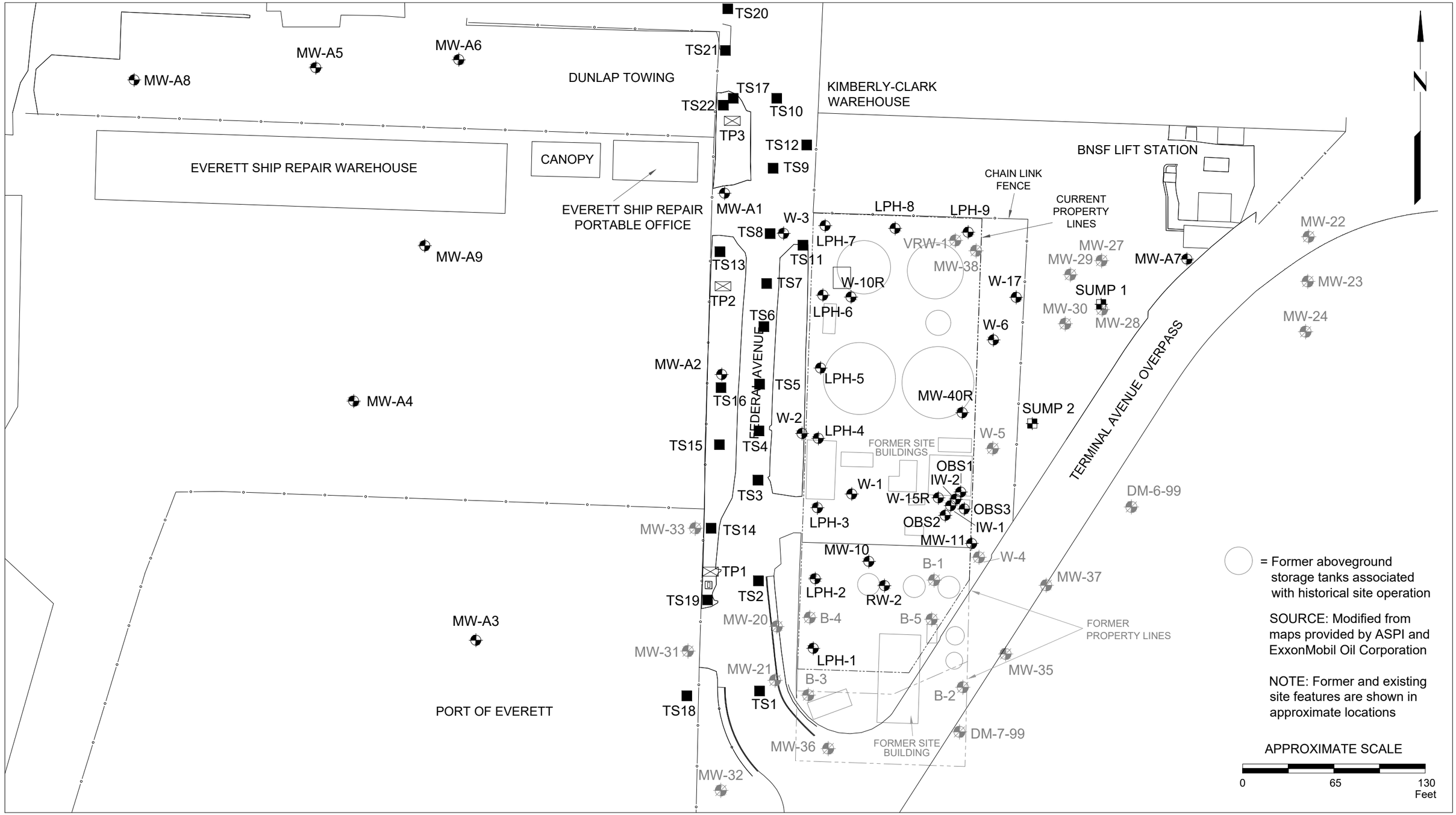
SITE LOCATION MAP

EXXONMOBIL ADC
2717/2731 Federal Avenue
Everett, Washington

PROJECT NO.
031447

PLATE
1

LEC: 02/16/22



FN 0314470002

Cardno now Stantec

GENERALIZED SITE PLAN

EXXOMOBIL ADC
2717/2731 Federal Avenue
Everett, Washington

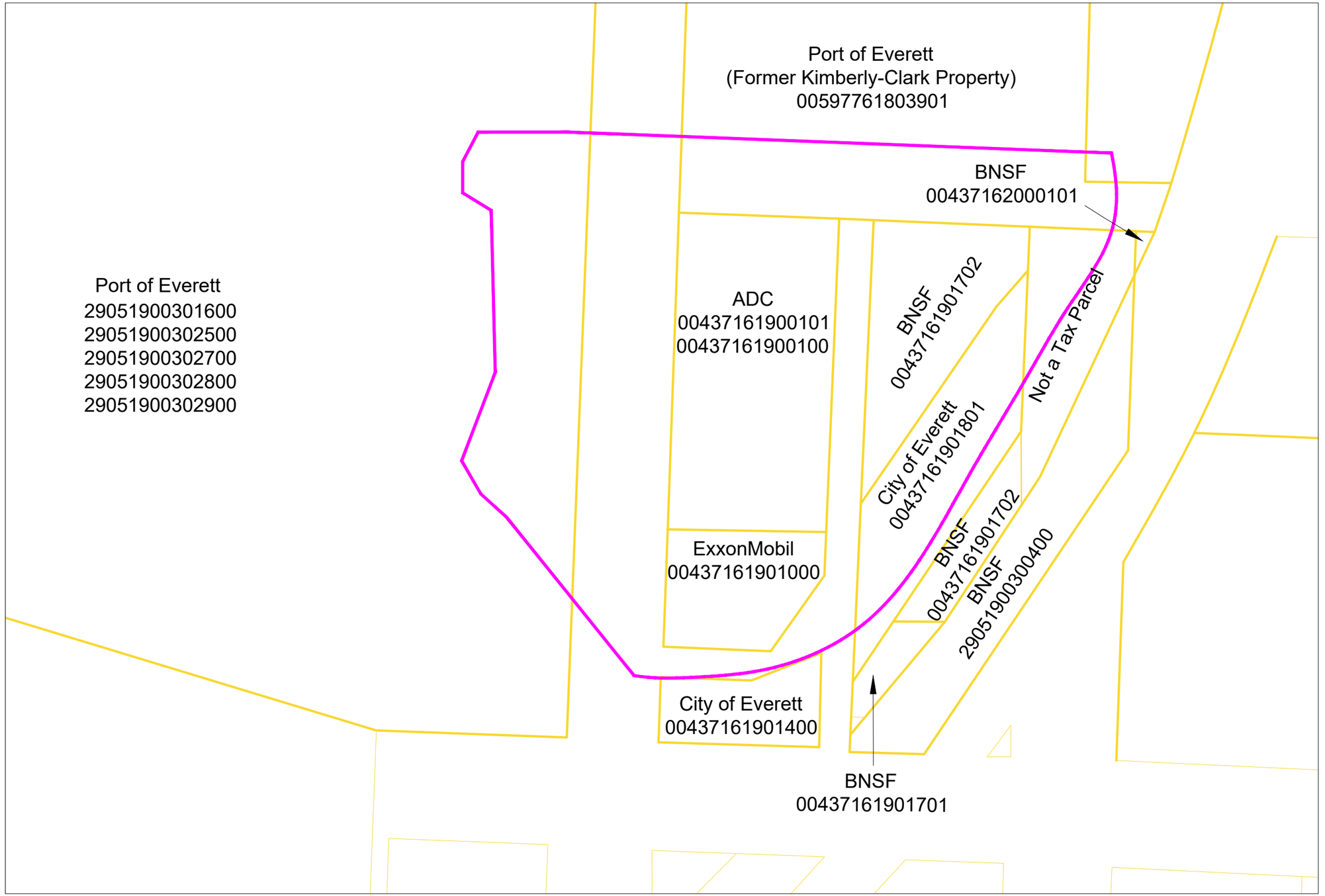
EXPLANATION

MW-A9	Groundwater Monitoring Well	OBS1	Observation Well
SUMP 2	Groundwater Sump	TS23	Trenching Grab Sample
MW-38	Destroyed Groundwater Monitoring Well	TP3	Test Pit Grab Sample

PROJECT NO. 031447

PLATE 2

CPA: 07/14/22



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EXPLANATION

MTCA Site Boundary

Tax Parcel Boundary

SOURCE: Modified from maps provided by the Snohomish County Assessor

FN 0314470002

APPROXIMATE SCALE

0 75 150 Feet

Cardno now Stantec

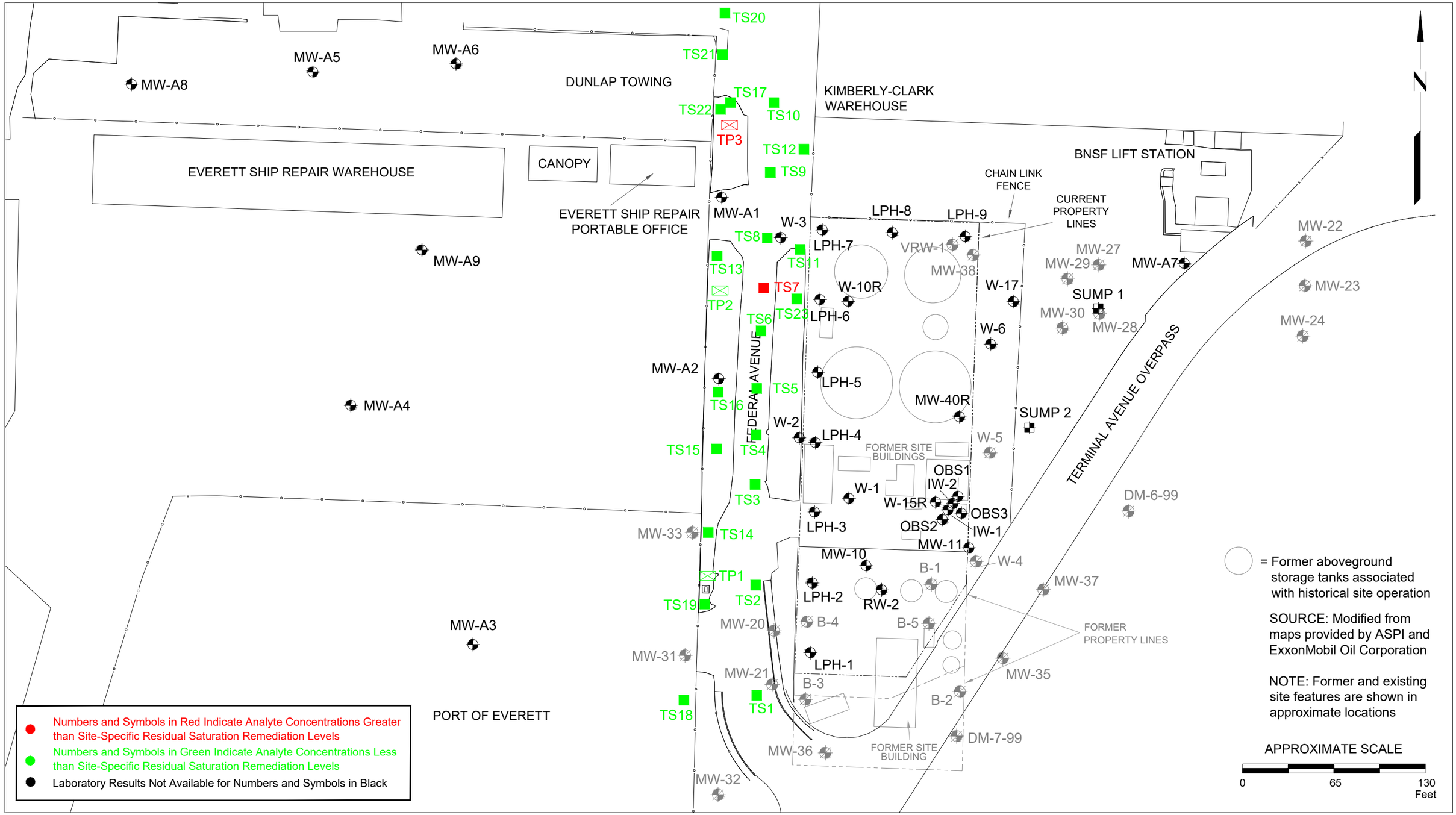
SITE BOUNDARY MAP

EXXONMOBIL ADC
2717/2731 Federal Avenue
Everett, Washington

PROJECT NO.
031447

PLATE
3

LEC: 12/16/21



FN 0314470002

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TRENCHING SOIL SAMPLE ANALYSIS MAP - 01/20 THROUGH 06/02/22

EXXOMOBIL ADC
2717/2731 Federal Avenue
Everett, Washington

EXPLANATION

MW-A9	Groundwater Monitoring Well	OBS1	Observation Well
SUMP 2	Groundwater Sump	TS23	Trenching Grab Sample
MW-38	Destroyed Groundwater Monitoring Well	TP3	Test Pit Grab Sample

PROJECT NO. 031447

PLATE 4

CPA: 07/22/22

TABLE 1
TRENCHING SOIL ANALYTICAL RESULTS - TPH / BTEX / cPAHs
ExxonMobil ADC
2717/2731 Federal Avenue
Everett, Washington

Sample ID	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	TEF-Adjusted Total cPAHs[a] (mg/kg)
Cardno - Federal Avenue Trenching - Sampling and Analysis Report - August 22, 2022:											
TP1-6	01/20/22	6	--	<0.24	6.8	<6.6	<0.0010	<0.0010	<0.0010	<0.0020	0.0049
TP2-6.5	01/20/22	6.5	--	**450**	**3,100**	430	<0.061	<0.061	<0.061	<0.12	**0.182**
TP3-7	01/20/22	7	--	**300**	**5,100**	470	<0.049	<0.049	<0.049	<0.097	0.061
TS1	02/26/22	6	--	<0.24	<5.3	<5.3	<0.0010	<0.0010	<0.0010	<0.0020	0.0040
TS2	02/26/22	6	--	<0.41	<6.7	<6.7	<0.0012	<0.0012	<0.0012	<0.0025	0.0050
TS3	02/26/22	6	--	<0.22	8.6	170	<0.00093	<0.00093	<0.00093	<0.0019	0.0176
TS4	02/26/22	6	--	<0.24	<6.3	7.9	<0.00054	<0.00054	<0.00054	0.0025	0.0048
TS5	02/26/22	6	--	1.7	<6.1	<6.1	<0.00099	<0.00099	<0.00099	<0.0020	0.0047
TS6	02/27/22	6	--	**960**	**3,500**	240	<0.0010	<0.0010	<0.0010	<0.0021	0.0278
TS7	02/27/22	6	--	**970**	**5,400**	530	<0.063	0.070	<0.063	<0.13	**0.181**
TS8	02/27/22	6	--	<0.27	<5.0	11	<0.0011	0.0012	<0.0011	<0.0022	0.0223
TS9	02/27/22	6	--	<0.25	<5.1	<5.1	<0.0010	<0.0010	<0.0010	<0.0020	0.0039
TS10	02/27/22	6	--	<0.21	<5.4	<5.4	<0.00086	<0.00086	<0.00086	<0.0017	0.0042
TS11	03/07/22	4	--	<0.24	12	36	<0.0011	<0.0011	<0.0011	<0.0023	0.0544
TS12	03/07/22	4	--	<0.24	17	88	<0.00096	<0.00096	<0.00096	<0.0019	0.0041
TS13	03/09/22	10	--	8.2	14	24	<0.0012	<0.0012	<0.0012	<0.0023	0.0048
TS14	03/15/22	4	--	<0.21	14	24	<0.00085	<0.00085	<0.00085	<0.0017	0.0045
TS15	03/15/22	4	--	0.83	14	21	<0.00099	<0.00099	<0.00099	<0.0020	0.0048
TS16	03/16/22	4	--	<0.27	6.6	15	<0.0012	<0.0012	<0.0012	<0.0024	0.0046
TS17	03/25/22	8	--	**860**	**3,600**	220	<0.54	<0.54	<0.54	<1.1	0.024
TS18	04/25/22	3	--	<0.19	6.9	14	<0.00082	<0.00082	<0.00082	<0.0016	**0.136**
TS19	04/26/22	3.5	--	<0.22	<6.1	<6.1	<0.0012	<0.0012	<0.0012	<0.0023	0.0080
TS20	04/26/22	3.5	--	<0.34	<6.3	77	<0.0012	<0.0012	<0.0012	<0.0025	0.0147
TS21	04/27/22	3.5	--	<0.30	<6.7	11	<0.0013	<0.0013	<0.0013	<0.0026	0.0150
Site-Specific Residual Saturation Remediation Levels				2,470	4,800	5,810	N/A	N/A	N/A	N/A	N/A
MTCA Method A Cleanup Levels				30/100[b]	2,000	2,000	0.03	7	6	9	0.1

TABLE 1
TRENCHING SOIL ANALYTICAL RESULTS - TPH / BTEX / cPAHs
ExxonMobil ADC
2717/2731 Federal Avenue
Everett, Washington

Sample ID	Date	Sample Depth (feet bgs)	LNAPL Observed	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	TEF-Adjusted Total cPAHs[a] (mg/kg)
Cardno - Federal Avenue Trenching - Sampling and Analysis Report - August 22, 2022 (continued):											
TS22	04/27/22	3.5	--	<0.29	<5.9	9.3	<0.00093	<0.00093	<0.00093	<0.0019	0.0044
TS23	06/02/22	5	--	0.36	59	17	<0.0010	<0.0010	<0.0010	<0.0020	0.0059
Site-Specific Residual Saturation Remediation Levels				2,470	4,800	5,810	N/A	N/A	N/A	N/A	N/A
MTCA Method A Cleanup Levels				30/100[b]	2,000	2,000	0.03	7	6	9	0.1

EXPLANATION:
feet bgs = Feet below ground surface
mg/kg = Milligrams per kilogram
LNAPL = Light Non-aqueous Phase Liquid
TPH = Total Petroleum Hydrocarbons
TPHg = Total Petroleum Hydrocarbons as Gasoline in accordance with Ecology Method NWTPH-Gx
TPHd, TPHmo = Total Petroleum Hydrocarbons as Diesel and as Oil, respectively, in accordance with Ecology Method NWTPH-Dx with silica gel cleanup
B = Benzene; T = Toluene; E = Ethylbenzene; X = Total Xylenes
BTEX = Aromatic compounds analyzed in accordance with EPA Method 8260C
TEF-Adjusted Total cPAHs = Carcinogenic Polycyclic Aromatic Hydrocarbons analyzed in accordance with EPA Method 8270C SIM
N/A = Not applicable
< = Less than the stated laboratory reporting limit; -- = Not Observed
Bolded values equal or exceed MTCA Method A Cleanup Levels
Shaded values equal or exceed Site-Specific Residual Saturation Remediation Levels
a = Toxicity Equivalency Factors (TEF) in accordance with Table 708-2 under WAC 173-340-708(e)
b = TPHg soil cleanup level is 30 mg/kg, unless benzene is not detected in the sample, or if toluene, ethylbenzene, and total xylenes constitute less than 1% of the TPHg present in the sample. If these conditions are met, the cleanup level for TPHg may be elevated to 100 mg/kg.

TABLE 2
TRENCHING SOIL ANALYTICAL RESULTS - cPAH TEF CALCULATIONS
ExxonMobil ADC
2717/2731 Federal Avenue
Everett, Washington

Sample ID	Sample Date	Sample Depth (feet bgs)		B(a)A (mg/kg)	B(a)P (mg/kg)	B(b)F (mg/kg)	B(k)F (mg/kg)	Chrysene (mg/kg)	DB(a,h)A (mg/kg)	IP (mg/kg)	Total cPAHs (mg/kg)[a]
			TEF	0.1	1	0.1	0.1	0.01	0.1	0.1	--
MTCA Method A Cleanup Level				--	0.1	--	--	--	--	--	0.1
TP1-6	01/20/22	6	Lab value	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0033	--
			TEQ*value	0.0003	0.0033	0.0003	0.0003	0.0000	0.0003	0.0003	0.0049
TP2-6.5	01/20/22	6.5	Lab value	0.14	0.13	0.11	0.078	0.22	0.079	0.091	--
			TEQ*value	0.01	0.13	0.01	0.008	0.00	0.008	0.009	**0.182**
TP3-7	01/20/22	7	Lab value	0.048	0.044	0.043	0.036	0.082	< 0.017	< 0.017	--
			TEQ*value	0.005	0.044	0.004	0.004	0.001	0.002	0.002	0.061
TS1	02/26/22	6	Lab value	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027	< 0.0027	--
			TEQ*value	0.0003	0.0027	0.0003	0.0003	0.0000	0.0003	0.0003	0.0040
TS2	02/26/22	6	Lab value	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0033	< 0.0033	--
			TEQ*value	0.0003	0.0033	0.0003	0.0003	0.0000	0.0003	0.0003	0.0050
TS3	02/26/22	6	Lab value	0.012	0.013	0.011	0.0083	0.013	< 0.0031	0.0099	--
			TEQ*value	0.001	0.013	0.001	0.0008	0.000	0.0003	0.0010	0.0176
TS4	02/26/22	6	Lab value	< 0.0032	< 0.0032	< 0.0032	< 0.0032	< 0.0032	< 0.0032	< 0.0032	--
			TEQ*value	0.0003	0.0032	0.0003	0.0003	0.0000	0.0003	0.0003	0.0048
TS5	02/26/22	6	Lab value	< 0.0031	< 0.0031	< 0.0031	< 0.0031	< 0.0031	< 0.0031	< 0.0031	--
			TEQ*value	0.0003	0.0031	0.0003	0.0003	0.0000	0.0003	0.0003	0.0047
TS6	02/27/22	6	Lab value	0.035	0.020	0.014	0.011	0.063	< 0.0029	0.0087	--
			TEQ*value	0.004	0.020	0.001	0.001	0.001	0.0003	0.0009	0.0278
TS7	02/27/22	6	Lab value	0.13	0.14	0.088	0.078	0.20	0.017	0.073	--
			TEQ*value	0.01	0.14	0.009	0.008	0.00	0.002	0.007	**0.181**
TS8	02/27/22	6	Lab value	0.012	0.017	0.013	0.011	0.013	< 0.0026	0.013	--
			TEQ*value	0.001	0.017	0.001	0.001	0.000	0.0003	0.001	0.0223
TS9	02/27/22	6	Lab value	< 0.0026	< 0.0026	< 0.0026	< 0.0026	< 0.0026	< 0.0026	< 0.0026	--
			TEQ*value	0.0003	0.0026	0.0003	0.0003	0.0000	0.0003	0.0003	0.0039
TS10	02/27/22	6	Lab value	< 0.0028	< 0.0028	< 0.0028	< 0.0028	< 0.0028	< 0.0028	< 0.0028	--
			TEQ*value	0.0003	0.0028	0.0003	0.0003	0.0000	0.0003	0.0003	0.0042
TS11	03/07/22	4	Lab value	0.034	0.041	0.031	0.031	0.040	0.0057	0.028	--
			TEQ*value	0.003	0.041	0.003	0.003	0.000	0.0006	0.003	0.0544
TS12	03/07/22	4	Lab value	< 0.0027	< 0.0027	< 0.0027	< 0.0027	0.0054	< 0.0027	< 0.0027	--
			TEQ*value	0.0003	0.0027	0.0003	0.0003	0.0001	0.0003	0.0003	0.0041
TS13	03/09/22	10	Lab value	< 0.0032	< 0.0032	< 0.0032	< 0.0032	< 0.0032	< 0.0032	< 0.0032	--
			TEQ*value	0.0003	0.0032	0.0003	0.0003	0.0000	0.0003	0.0003	0.0048
TS14	03/15/22	4	Lab value	< 0.0030	< 0.0030	< 0.0030	< 0.0030	< 0.0030	< 0.0030	< 0.0030	--
			TEQ*value	0.0003	0.0030	0.0003	0.0003	0.0000	0.0003	0.0003	0.0045

TABLE 2
TRENCHING SOIL ANALYTICAL RESULTS - cPAH TEF CALCULATIONS
ExxonMobil ADC
2717/2731 Federal Avenue
Everett, Washington

Sample ID	Sample Date	Sample Depth (feet bgs)		B(a)A (mg/kg)	B(a)P (mg/kg)	B(b)F (mg/kg)	B(k)F (mg/kg)	Chrysene (mg/kg)	DB(a,h)A (mg/kg)	IP (mg/kg)	Total cPAHs (mg/kg)[a]
			TEF	0.1	1	0.1	0.1	0.01	0.1	0.1	--
MTCA Method A Cleanup Level				--	0.1	--	--	--	--	--	0.1
TS15	03/15/22	4	Lab value	< 0.0032	< 0.0032	< 0.0032	< 0.0032	< 0.0032	< 0.0032	< 0.0032	--
			TEQ*value	0.0003	0.0032	0.0003	0.0003	0.0000	0.0003	0.0003	0.0048
TS16	03/16/22	4	Lab value	< 0.0031	< 0.0031	< 0.0031	< 0.0031	< 0.0031	< 0.0031	< 0.0031	--
			TEQ*value	0.0003	0.0031	0.0003	0.0003	0.0000	0.0003	0.0003	0.0046
TS17	03/25/22	8	Lab value	0.049	< 0.013	< 0.013	< 0.013	0.084	< 0.013	< 0.013	--
			TEQ*value	0.005	0.013	0.001	0.001	0.001	0.001	0.001	0.024
TS18	04/25/22	3	Lab value	0.063	0.10	0.11	0.077	0.088	0.017	0.082	--
			TEQ*value	0.006	0.10	0.01	0.008	0.001	0.002	0.008	**0.136**
TS19	04/26/22	3.5	Lab value	< 0.0030	0.0064	< 0.0030	< 0.0030	0.0064	< 0.0030	< 0.0030	--
			TEQ*value	0.0003	0.0064	0.0003	0.0003	0.0001	0.0003	0.0003	0.0080
TS20	04/26/22	3.5	Lab value	0.0087	0.010	0.015	0.0087	0.014	< 0.0033	0.0098	--
			TEQ*value	0.0009	0.010	0.002	0.0009	0.000	0.0003	0.0010	0.0147
TS21	04/27/22	3.5	Lab value	0.0084	0.011	0.0087	0.0077	0.010	< 0.0032	0.011	--
			TEQ*value	0.0008	0.011	0.0009	0.0008	0.000	0.0003	0.001	0.0150
TS22	04/27/22	3.5	Lab value	< 0.0029	< 0.0029	< 0.0029	< 0.0029	< 0.0029	< 0.0029	< 0.0029	--
			TEQ*value	0.0003	0.0029	0.0003	0.0003	0.0000	0.0003	0.0003	0.0044
TS23	06/02/22	5	Lab value	< 0.0031	< 0.0031	0.015	< 0.0031	< 0.0031	< 0.0031	< 0.0031	--
			TEQ*value	0.0003	0.0031	0.002	0.0003	0.0000	0.0003	0.0003	0.0059

EXPLANATION:
mg/kg = Milligrams per kilogram
B(a)A = Benzo(a)anthracene
B(a)P = Benzo(a)pyrene
B(b)F = Benzo(b)fluoranthene
B(k)F = Benzo(k)fluoranthene
DB(a,h)A = Dibenzo(a,h)anthracene
IP = Indeno(1,2,3-cd)pyrene
cPAH = Carcinogenic Polycyclic Aromatic Hydrocarbons analyzed in accordance with EPA Method 8270C SIM
TEF = Toxicity Equivalency Factor
TEQ = Toxic Equivalent Concentration (TEF multiplied by the reported value or 1/2 the reporting limit for non-detect values)
-- = Not applicable
< = Less than the stated laboratory reporting limit
Bolded values equal or exceed MTCA Method A Cleanup Level
a = Toxicity Equivalency Factors (TEF) in accordance with Table 708-2 under WAC 173-340-708(e). One-half of the reporting limit was used for non-detected cPAH constituents in calculating TEQ-adjusted total cPAH concentrations.

ExxonMobil ADC

Cardno 03144702.R12

APPENDIX A
FIELD PROTOCOL

Excavation Field Protocol

Preliminary Activities

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

Excavation and Soil Sampling Procedures

The excavation is performed by a licensed general contractor. Air monitoring is conducted as required by the regulatory agency or client, and the readings are recorded on a log. Excavated soil is temporarily stockpiled, covered with an impervious material (e.g., plastic sheeting), secured and labeled, or immediately containerized into bins.

Upon reaching the planned limit of the excavation, soil samples are collected from the bottom and sidewalls of the excavation, as directed by the regulatory agency or as specified in the work plan. Soil samples are collected using the bucket of the excavating equipment (e.g., backhoe or excavator), and then the sample container (sleeve or glass jar) is pushed by hand into the soil near the teeth of the equipment bucket to ensure that soil from the limit of the excavation, not slough, is collected. Alternatively, a metal sleeve may be driven by slide hammer into the soil. Samples from the stockpile(s) are collected in the same manner.

Soil samples are preserved in the metal or plastic sleeve, in glass jars or other manner required by the local regulatory agency (e.g., Environmental Protection Agency Method 5035). Each sleeve is promptly sealed with TeflonTM tape, capped, labeled and placed in a cooler chilled to 4º Celsius. The samples are transferred under chain-of-custody protocol to a client-approved, state-certified laboratory for analysis.
Field Screening Procedures

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

Field Screening Procedures

Field screening is conducted during the excavation activities, and the excavated material is segregated into stockpiles based on concentrations above and below regulatory action levels. The stockpiled soil with concentrations above regulatory action levels is placed on an imperious surface (e.g., paving or plastic).

A photo-ionization detector (PID) or similar device is used to measure organic vapor concentration and segregate the excavated soil. The tip of the measuring device is placed approximately 3 inches above the excavated soil. At a minimum, the PID or other device is calibrated on a daily basis in accordance with manufacturer's specifications using a hexane or isobutylene standard. The calibration gas and concentration are recorded on a calibration log.

Instruments such as the PID are useful for evaluating relative concentrations of volatilized hydrocarbons, but they do not measure the concentration of petroleum hydrocarbons in the soil matrix with the same precision as laboratory analysis.

Cardno trained personnel describe the soil according to the Unified Soil Classification System and record the description, sampling method and sampling depth on the field notes.

Backfilling of Excavation

The excavation is backfilled using excavated stockpile material with concentrations below regulatory action levels and/or clean import fill. Import fill typically is virgin material obtained from a quarry; if the material is obtained from another source, it is selectively sampled to verify it does not contain constituents of concern.

Decontamination Procedures

Cardno decontaminates soil sampling equipment between each sampling event with a non-phosphate solution, followed by a minimum of two tap water rinses. De-ionized water may be used for the final rinse. The bucket of the excavating equipment is not typically decontaminated between sampling events.

Waste Treatment and Soil Disposal

The stockpiled soil containing concentrations above regulatory action levels is removed from the site and transported under manifest to a client- and regulatory-approved facility for recycling or disposal, or remediated on site and placed back into the excavation. Decontamination fluids are stored on site in labeled, regulatory-approved storage containers. Fluids are subsequently transported under manifest to a client- and regulatory-approved facility for disposal or treated with a permitted mobile or fixed-base carbon treatment system.

ExxonMobil ADC

Cardno 03144702.R12

APPENDIX B

LABORATORY ANALYTICAL REPORTS

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Calscience
7440 Lincoln Way
Garden Grove, CA 92841
Tel: (714)895-5494

Laboratory Job ID: 570-82412-1
Client Project/Site: Mobil/ADC/031447

For:
Cardno, Inc
309 South Cloverdale Street
Unit A13
Seattle, Washington 98108

Attn: Bobby Thompson

Cecile de Guia

Authorized for release by:
2/7/2022 8:04:03 AM

Cecile de Guia, Project Manager I
(714)895-5494
Cecile.deGuia@eurofinset.com

Table of Contents

Sample Summary

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-82412-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-82412-1	TP1-6	Solid	01/20/22 09:00	01/21/22 10:15
570-82412-2	TP2-6.5	Solid	01/20/22 09:45	01/21/22 10:15
570-82412-3	TP3-7	Solid	01/20/22 10:30	01/21/22 10:15

Definitions/Glossary

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-82412-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-82412-1

Job ID: 570-82412-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative
570-82412-1

Comments
No additional comments.

Receipt
The samples were received on 1/21/2022 10:15 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.1º C.

GC/MS VOA
Method 8260C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-209341. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

Method 8260C: The following samples were diluted due to the abundance of non-target hydrocarbons: TP2-6.5 (570-82412-2) and TP3-7 (570-82412-3). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270C SIM: Surrogate recovery for the following sample was outside control limits: TP2-6.5 (570-82412-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC VOA
Method NWTPH-Gx: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 209256. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-82412-1

Client Sample ID: TP1-6 — Lab Sample ID: 570-82412-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
TPH as Diesel Range	6.8		6.6		mg/Kg	1	☼	NWTPH-Dx	Silica Gel Cleanup

Client Sample ID: TP2-6.5 — Lab Sample ID: 570-82412-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Acenaphthene - DL	0.26		0.066		mg/Kg	10	☼	8270C SIM	Total/NA
Anthracene - DL	0.23		0.066		mg/Kg	10	☼	8270C SIM	Total/NA
Benzo[a]anthracene - DL	0.14		0.066		mg/Kg	10	☼	8270C SIM	Total/NA
Benzo[a]pyrene - DL	0.13		0.066		mg/Kg	10	☼	8270C SIM	Total/NA
Benzo[b]fluoranthene - DL	0.11		0.066		mg/Kg	10	☼	8270C SIM	Total/NA
Benzo[g,h,i]perylene - DL	0.12		0.066		mg/Kg	10	☼	8270C SIM	Total/NA
Benzo[k]fluoranthene - DL	0.078		0.066		mg/Kg	10	☼	8270C SIM	Total/NA
Chrysene - DL	0.22		0.066		mg/Kg	10	☼	8270C SIM	Total/NA
Dibenz(a,h)anthracene - DL	0.079		0.066		mg/Kg	10	☼	8270C SIM	Total/NA
Fluoranthene - DL	0.27		0.066		mg/Kg	10	☼	8270C SIM	Total/NA
Fluorene - DL	1.5		0.066		mg/Kg	10	☼	8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene - DL	0.091		0.066		mg/Kg	10	☼	8270C SIM	Total/NA
Naphthalene - DL	0.17		0.066		mg/Kg	10	☼	8270C SIM	Total/NA
Phenanthrene - DL	2.0		0.066		mg/Kg	10	☼	8270C SIM	Total/NA
Pyrene - DL	0.39		0.066		mg/Kg	10	☼	8270C SIM	Total/NA
TPH as Gasoline (C4-C13)	450		71		mg/Kg	500	☼	NWTPH-Gx	Total/NA
TPH as Diesel Range	3100		66		mg/Kg	10	☼	NWTPH-Dx	Silica Gel Cleanup
TPH as Motor Oil Range	430		66		mg/Kg	10	☼	NWTPH-Dx	Silica Gel Cleanup

Client Sample ID: TP3-7 — Lab Sample ID: 570-82412-3

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Acenaphthene - DL	0.15		0.033		mg/Kg	5	☼	8270C SIM	Total/NA
Anthracene - DL	0.082		0.033		mg/Kg	5	☼	8270C SIM	Total/NA
Benzo[a]anthracene - DL	0.048		0.033		mg/Kg	5	☼	8270C SIM	Total/NA
Benzo[a]pyrene - DL	0.044		0.033		mg/Kg	5	☼	8270C SIM	Total/NA
Benzo[b]fluoranthene - DL	0.043		0.033		mg/Kg	5	☼	8270C SIM	Total/NA
Benzo[g,h,i]perylene - DL	0.037		0.033		mg/Kg	5	☼	8270C SIM	Total/NA
Benzo[k]fluoranthene - DL	0.036		0.033		mg/Kg	5	☼	8270C SIM	Total/NA
Chrysene - DL	0.082		0.033		mg/Kg	5	☼	8270C SIM	Total/NA
Fluoranthene - DL	0.11		0.033		mg/Kg	5	☼	8270C SIM	Total/NA
Fluorene - DL	0.12		0.033		mg/Kg	5	☼	8270C SIM	Total/NA
Phenanthrene - DL	0.052		0.033		mg/Kg	5	☼	8270C SIM	Total/NA
Pyrene - DL	0.12		0.033		mg/Kg	5	☼	8270C SIM	Total/NA
TPH as Gasoline (C4-C13)	300		16		mg/Kg	50	☼	NWTPH-Gx	Total/NA
TPH as Diesel Range	5100		66		mg/Kg	10	☼	NWTPH-Dx	Silica Gel Cleanup
TPH as Motor Oil Range	470		66		mg/Kg	10	☼	NWTPH-Dx	Silica Gel Cleanup

This Detection Summary does not include radiochemical test results.

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-82412-1

Client Sample ID: TP1-6
Date Collected: 01/20/22 09:00
Date Received: 01/21/22 10:15

Lab Sample ID: 570-82412-1
Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0010		mg/Kg	☼	01/21/22 21:13	01/25/22 20:48	1
Ethylbenzene	ND		0.0010		mg/Kg	☼	01/21/22 21:13	01/25/22 20:48	1
Toluene	ND		0.0010		mg/Kg	☼	01/21/22 21:13	01/25/22 20:48	1
m,p-Xylene	ND		0.0020		mg/Kg	☼	01/21/22 21:13	01/25/22 20:48	1
o-Xylene	ND		0.0010		mg/Kg	☼	01/21/22 21:13	01/25/22 20:48	1
Xylenes, Total	ND		0.0020		mg/Kg	☼	01/21/22 21:13	01/25/22 20:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*80 - 142*	*01/21/22 21:13*	*01/25/22 20:48*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*	*01/21/22 21:13*	*01/25/22 20:48*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 123*	*01/21/22 21:13*	*01/25/22 20:48*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*	*01/21/22 21:13*	*01/25/22 20:48*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0065		mg/Kg	☼	01/25/22 14:58	01/31/22 19:09	1
Acenaphthylene	ND		0.0065		mg/Kg	☼	01/25/22 14:58	01/31/22 19:09	1
Anthracene	ND		0.0065		mg/Kg	☼	01/25/22 14:58	01/31/22 19:09	1
Benzo[a]anthracene	ND		0.0065		mg/Kg	☼	01/25/22 14:58	01/31/22 19:09	1
Benzo[a]pyrene	ND		0.0065		mg/Kg	☼	01/25/22 14:58	01/31/22 19:09	1
Benzo[b]fluoranthene	ND		0.0065		mg/Kg	☼	01/25/22 14:58	01/31/22 19:09	1
Benzo[g,h,i]perylene	ND		0.0065		mg/Kg	☼	01/25/22 14:58	01/31/22 19:09	1
Benzo[k]fluoranthene	ND		0.0065		mg/Kg	☼	01/25/22 14:58	01/31/22 19:09	1
Chrysene	ND		0.0065		mg/Kg	☼	01/25/22 14:58	01/31/22 19:09	1
Dibenz(a,h)anthracene	ND		0.0065		mg/Kg	☼	01/25/22 14:58	01/31/22 19:09	1
Fluoranthene	ND		0.0065		mg/Kg	☼	01/25/22 14:58	01/31/22 19:09	1
Fluorene	ND		0.0065		mg/Kg	☼	01/25/22 14:58	01/31/22 19:09	1
Indeno[1,2,3-cd]pyrene	ND		0.0065		mg/Kg	☼	01/25/22 14:58	01/31/22 19:09	1
1-Methylnaphthalene	ND		0.0065		mg/Kg	☼	01/25/22 14:58	01/31/22 19:09	1
2-Methylnaphthalene	ND		0.0065		mg/Kg	☼	01/25/22 14:58	01/31/22 19:09	1
Naphthalene	ND		0.0065		mg/Kg	☼	01/25/22 14:58	01/31/22 19:09	1
Phenanthrene	ND		0.0065		mg/Kg	☼	01/25/22 14:58	01/31/22 19:09	1
Pyrene	ND		0.0065		mg/Kg	☼	01/25/22 14:58	01/31/22 19:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*86*		*12 - 132*	*01/25/22 14:58*	*01/31/22 19:09*	*1*
Nitrobenzene-d5 (Surr)	*62*		*10 - 128*	*01/25/22 14:58*	*01/31/22 19:09*	*1*
p-Terphenyl-d14 (Surr)	*71*		*20 - 120*	*01/25/22 14:58*	*01/31/22 19:09*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.24		mg/Kg	☼	01/21/22 21:13	01/25/22 12:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*50 - 150*	*01/21/22 21:13*	*01/25/22 12:31*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	**6.8**		6.6		mg/Kg	☼	02/03/22 09:39	02/04/22 19:39	1
TPH as Motor Oil Range	ND		6.6		mg/Kg	☼	02/03/22 09:39	02/04/22 19:39	1

Client Sample ID: TP1-6

Date Collected: 01/20/22 09:00
Date Received: 01/21/22 10:15

Lab Sample ID: 570-82412-1
Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*108*		*50 - 150*	*02/03/22 09:39*	*02/04/22 19:39*	*1*

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**23.4**		0.1		%			01/26/22 14:54	1
Percent Solids	**76.6**		0.1		%			01/26/22 14:54	1

Client Sample ID: TP2-6.5

Date Collected: 01/20/22 09:45
Date Received: 01/21/22 10:15

Lab Sample ID: 570-82412-2
Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.061		mg/Kg	☼	01/21/22 21:18	01/25/22 21:39	50
Ethylbenzene	ND		0.061		mg/Kg	☼	01/21/22 21:18	01/25/22 21:39	50
Toluene	ND		0.061		mg/Kg	☼	01/21/22 21:18	01/25/22 21:39	50
m,p-Xylene	ND		0.12		mg/Kg	☼	01/21/22 21:18	01/25/22 21:39	50
o-Xylene	ND		0.061		mg/Kg	☼	01/21/22 21:18	01/25/22 21:39	50
Xylenes, Total	ND		0.12		mg/Kg	☼	01/21/22 21:18	01/25/22 21:39	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*84*		*80 - 142*	*01/21/22 21:18*	*01/25/22 21:39*	*50*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*	*01/21/22 21:18*	*01/25/22 21:39*	*50*
Dibromofluoromethane (Surr)	*94*		*80 - 123*	*01/21/22 21:18*	*01/25/22 21:39*	*50*
Toluene-d8 (Surr)	*119*		*80 - 120*	*01/21/22 21:18*	*01/25/22 21:39*	*50*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) - DL

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**0.26**		0.066		mg/Kg	☼	01/25/22 14:58	02/01/22 15:21	10
Acenaphthylene	ND		0.066		mg/Kg	☼	01/25/22 14:58	02/01/22 15:21	10
Anthracene	**0.23**		0.066		mg/Kg	☼	01/25/22 14:58	02/01/22 15:21	10
Benzo[a]anthracene	**0.14**		0.066		mg/Kg	☼	01/25/22 14:58	02/01/22 15:21	10
Benzo[a]pyrene	**0.13**		0.066		mg/Kg	☼	01/25/22 14:58	02/01/22 15:21	10
Benzo[b]fluoranthene	**0.11**		0.066		mg/Kg	☼	01/25/22 14:58	02/01/22 15:21	10
Benzo[g,h,i]perylene	**0.12**		0.066		mg/Kg	☼	01/25/22 14:58	02/01/22 15:21	10
Benzo[k]fluoranthene	**0.078**		0.066		mg/Kg	☼	01/25/22 14:58	02/01/22 15:21	10
Chrysene	**0.22**		0.066		mg/Kg	☼	01/25/22 14:58	02/01/22 15:21	10
Dibenz(a,h)anthracene	**0.079**		0.066		mg/Kg	☼	01/25/22 14:58	02/01/22 15:21	10
Fluoranthene	**0.27**		0.066		mg/Kg	☼	01/25/22 14:58	02/01/22 15:21	10
Fluorene	**1.5**		0.066		mg/Kg	☼	01/25/22 14:58	02/01/22 15:21	10
Indeno[1,2,3-cd]pyrene	**0.091**		0.066		mg/Kg	☼	01/25/22 14:58	02/01/22 15:21	10
1-Methylnaphthalene	ND		0.066		mg/Kg	☼	01/25/22 14:58	02/01/22 15:21	10
2-Methylnaphthalene	ND		0.066		mg/Kg	☼	01/25/22 14:58	02/01/22 15:21	10
Naphthalene	**0.17**		0.066		mg/Kg	☼	01/25/22 14:58	02/01/22 15:21	10
Phenanthrene	**2.0**		0.066		mg/Kg	☼	01/25/22 14:58	02/01/22 15:21	10
Pyrene	**0.39**		0.066		mg/Kg	☼	01/25/22 14:58	02/01/22 15:21	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*422*	*S1+*	*12 - 132*	*01/25/22 14:58*	*02/01/22 15:21*	*10*
Nitrobenzene-d5 (Surr)	*429*	*S1+*	*10 - 128*	*01/25/22 14:58*	*02/01/22 15:21*	*10*
p-Terphenyl-d14 (Surr)	*161*	*S1+*	*20 - 120*	*01/25/22 14:58*	*02/01/22 15:21*	*10*

Client Sample ID: TP2-6.5

Date Collected: 01/20/22 09:45
Date Received: 01/21/22 10:15

Lab Sample ID: 570-82412-2

Matrix: Solid

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	450		71		mg/Kg	☼	01/21/22 21:18	01/25/22 14:09	500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*50 - 150*	*01/21/22 21:18*	*01/25/22 14:09*	*500*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	3100		66		mg/Kg	☼	02/03/22 09:39	02/04/22 20:07	10
TPH as Motor Oil Range	430		66		mg/Kg	☼	02/03/22 09:39	02/04/22 20:07	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*97*		*50 - 150*	*02/03/22 09:39*	*02/04/22 20:07*	*10*

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	24.6		0.1		%			01/26/22 14:54	1
Percent Solids	75.4		0.1		%			01/26/22 14:54	1

Client Sample ID: TP3-7

Date Collected: 01/20/22 10:30
Date Received: 01/21/22 10:15

Lab Sample ID: 570-82412-3

Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.049		mg/Kg	☼	01/21/22 21:18	01/25/22 22:05	50
Ethylbenzene	ND		0.049		mg/Kg	☼	01/21/22 21:18	01/25/22 22:05	50
Toluene	ND		0.049		mg/Kg	☼	01/21/22 21:18	01/25/22 22:05	50
m,p-Xylene	ND		0.097		mg/Kg	☼	01/21/22 21:18	01/25/22 22:05	50
o-Xylene	ND		0.049		mg/Kg	☼	01/21/22 21:18	01/25/22 22:05	50
Xylenes, Total	ND		0.097		mg/Kg	☼	01/21/22 21:18	01/25/22 22:05	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*80 - 142*	*01/21/22 21:18*	*01/25/22 22:05*	*50*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*	*01/21/22 21:18*	*01/25/22 22:05*	*50*
Dibromofluoromethane (Surr)	*92*		*80 - 123*	*01/21/22 21:18*	*01/25/22 22:05*	*50*
Toluene-d8 (Surr)	*115*		*80 - 120*	*01/21/22 21:18*	*01/25/22 22:05*	*50*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) - DL

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.15		0.033		mg/Kg	☼	01/25/22 14:58	02/01/22 15:41	5
Acenaphthylene	ND		0.033		mg/Kg	☼	01/25/22 14:58	02/01/22 15:41	5
Anthracene	0.082		0.033		mg/Kg	☼	01/25/22 14:58	02/01/22 15:41	5
Benzo[a]anthracene	0.048		0.033		mg/Kg	☼	01/25/22 14:58	02/01/22 15:41	5
Benzo[a]pyrene	0.044		0.033		mg/Kg	☼	01/25/22 14:58	02/01/22 15:41	5
Benzo[b]fluoranthene	0.043		0.033		mg/Kg	☼	01/25/22 14:58	02/01/22 15:41	5
Benzo[g,h,i]perylene	0.037		0.033		mg/Kg	☼	01/25/22 14:58	02/01/22 15:41	5
Benzo[k]fluoranthene	0.036		0.033		mg/Kg	☼	01/25/22 14:58	02/01/22 15:41	5
Chrysene	0.082		0.033		mg/Kg	☼	01/25/22 14:58	02/01/22 15:41	5
Dibenz(a,h)anthracene	ND		0.033		mg/Kg	☼	01/25/22 14:58	02/01/22 15:41	5
Fluoranthene	0.11		0.033		mg/Kg	☼	01/25/22 14:58	02/01/22 15:41	5
Fluorene	0.12		0.033		mg/Kg	☼	01/25/22 14:58	02/01/22 15:41	5

Client Sample ID: TP3-7
Date Collected: 01/20/22 10:30
Date Received: 01/21/22 10:15

Lab Sample ID: 570-82412-3
Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) - DL (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	ND		0.033		mg/Kg	☼	01/25/22 14:58	02/01/22 15:41	5
1-Methylnaphthalene	ND		0.033		mg/Kg	☼	01/25/22 14:58	02/01/22 15:41	5
2-Methylnaphthalene	ND		0.033		mg/Kg	☼	01/25/22 14:58	02/01/22 15:41	5
Naphthalene	ND		0.033		mg/Kg	☼	01/25/22 14:58	02/01/22 15:41	5
Phenanthrene	**0.052**		0.033		mg/Kg	☼	01/25/22 14:58	02/01/22 15:41	5
Pyrene	**0.12**		0.033		mg/Kg	☼	01/25/22 14:58	02/01/22 15:41	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*103*		*12 - 132*	*01/25/22 14:58*	*02/01/22 15:41*	*5*
Nitrobenzene-d5 (Surr)	*128*		*10 - 128*	*01/25/22 14:58*	*02/01/22 15:41*	*5*
p-Terphenyl-d14 (Surr)	*115*		*20 - 120*	*01/25/22 14:58*	*02/01/22 15:41*	*5*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	**300**		16		mg/Kg	☼	01/21/22 21:18	01/25/22 15:47	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*50 - 150*	*01/21/22 21:18*	*01/25/22 15:47*	*50*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	**5100**		66		mg/Kg	☼	02/03/22 09:39	02/04/22 20:34	10
TPH as Motor Oil Range	**470**		66		mg/Kg	☼	02/03/22 09:39	02/04/22 20:34	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*97*		*50 - 150*	*02/03/22 09:39*	*02/04/22 20:34*	*10*

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**24.3**		0.1		%			01/26/22 14:54	1
Percent Solids	**75.7**		0.1		%			01/26/22 14:54	1

Surrogate Summary

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-82412-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid | **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-142)	(80-120)	(80-123)	(80-120)
570-82412-1	TP1-6	91	100	98	102
570-82412-2	TP2-6.5	84	98	94	119
570-82412-3	TP3-7	82	95	92	115
LCS 570-209341/4	Lab Control Sample	94	97	96	100
LCSD 570-209341/5	Lab Control Sample Dup	92	95	95	100
MB 570-209341/10	Method Blank	88	101	94	99
MB 570-209341/9	Method Blank	91	101	96	98

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Matrix: Solid | **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHd14
Lab Sample ID	Client Sample ID	(12-132)	(10-128)	(20-120)
570-82412-1	TP1-6	86	62	71
570-82412-1 MS	TP1-6	67	47	59
570-82412-1 MSD	TP1-6	82	56	70
570-82412-2 - DL	TP2-6.5	422 S1+	429 S1+	161 S1+
570-82412-3 - DL	TP3-7	103	128	115
LCS 570-209368/2-A	Lab Control Sample	91	70	80
LCSD 570-209368/3-A	Lab Control Sample Dup	100	81	87
MB 570-209368/1-A	Method Blank	91	71	81

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Matrix: Solid | **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		BFB1
Lab Sample ID	Client Sample ID	(50-150)
570-82412-1	TP1-6	85
570-82412-2	TP2-6.5	86
570-82412-3	TP3-7	81
LCS 570-209256/3	Lab Control Sample	96
LCSD 570-209256/4	Lab Control Sample Dup	98
MB 570-209256/5	Method Blank	114
MB 570-209256/6	Method Blank	88

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Surrogate Summary

Client: Cardno, Inc
Job ID: 570-82412-1
Project/Site: Mobil/ADC/031447

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Matrix: Solid **Prep Type: Silica Gel Cleanup**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	OTCSN (50-150)
570-82412-1	TP1-6	108
570-82412-1 MS	TP1-6	105
570-82412-1 MS	TP1-6	102
570-82412-1 MSD	TP1-6	106
570-82412-1 MSD	TP1-6	108
570-82412-2	TP2-6.5	97
570-82412-3	TP3-7	97
LCS 570-211043/2-A	Lab Control Sample	102
LCS 570-211043/6-A	Lab Control Sample	101
LCSD 570-211043/3-A	Lab Control Sample Dup	103
LCSD 570-211043/7-A	Lab Control Sample Dup	101
MB 570-211043/1-A	Method Blank	98

Surrogate Legend

OTCSN = n-Octacosane (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 570-209341/10
Matrix: Solid
Analysis Batch: 209341

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.050		mg/Kg			01/25/22 14:16	50
Ethylbenzene	ND		0.050		mg/Kg			01/25/22 14:16	50
Toluene	ND		0.050		mg/Kg			01/25/22 14:16	50
m,p-Xylene	ND		0.10		mg/Kg			01/25/22 14:16	50
o-Xylene	ND		0.050		mg/Kg			01/25/22 14:16	50
Xylenes, Total	ND		0.10		mg/Kg			01/25/22 14:16	50

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*80 - 142*		*01/25/22 14:16*	*50*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*01/25/22 14:16*	*50*
Dibromofluoromethane (Surr)	*94*		*80 - 123*		*01/25/22 14:16*	*50*
Toluene-d8 (Surr)	*99*		*80 - 120*		*01/25/22 14:16*	*50*

Lab Sample ID: MB 570-209341/9
Matrix: Solid
Analysis Batch: 209341

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0010		mg/Kg			01/25/22 13:50	1
Ethylbenzene	ND		0.0010		mg/Kg			01/25/22 13:50	1
Toluene	ND		0.0010		mg/Kg			01/25/22 13:50	1
m,p-Xylene	ND		0.0020		mg/Kg			01/25/22 13:50	1
o-Xylene	ND		0.0010		mg/Kg			01/25/22 13:50	1
Xylenes, Total	ND		0.0020		mg/Kg			01/25/22 13:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*80 - 142*		*01/25/22 13:50*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*01/25/22 13:50*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 123*		*01/25/22 13:50*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*01/25/22 13:50*	*1*

Lab Sample ID: LCS 570-209341/4
Matrix: Solid
Analysis Batch: 209341

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.05055		mg/Kg		101	79 - 120		
Ethylbenzene			0.0500	0.04920		mg/Kg		98	80 - 120		
Toluene			0.0500	0.04919		mg/Kg		98	80 - 120		
m,p-Xylene			0.100	0.09544		mg/Kg		95	79 - 120		
o-Xylene			0.0500	0.04864		mg/Kg		97	79 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*80 - 142*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*80 - 123*
Toluene-d8 (Surr)	*100*		*80 - 120*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 570-209341/5
Matrix: Solid
Analysis Batch: 209341

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.05083		mg/Kg		102	79 - 120	1	20
Ethylbenzene			0.0500	0.04848		mg/Kg		97	80 - 120	1	20
Toluene			0.0500	0.04929		mg/Kg		99	80 - 120	0	20
m,p-Xylene			0.100	0.09491		mg/Kg		95	79 - 120	1	20
o-Xylene			0.0500	0.04833		mg/Kg		97	79 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*92*		*80 - 142*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*
Dibromofluoromethane (Surr)	*95*		*80 - 123*
Toluene-d8 (Surr)	*100*		*80 - 120*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Lab Sample ID: MB 570-209368/1-A
Matrix: Solid
Analysis Batch: 210358

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 209368

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		01/25/22 14:58	01/31/22 11:21	1
Acenaphthylene	ND		0.0050		mg/Kg		01/25/22 14:58	01/31/22 11:21	1
Anthracene	ND		0.0050		mg/Kg		01/25/22 14:58	01/31/22 11:21	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		01/25/22 14:58	01/31/22 11:21	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		01/25/22 14:58	01/31/22 11:21	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		01/25/22 14:58	01/31/22 11:21	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		01/25/22 14:58	01/31/22 11:21	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		01/25/22 14:58	01/31/22 11:21	1
Chrysene	ND		0.0050		mg/Kg		01/25/22 14:58	01/31/22 11:21	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		01/25/22 14:58	01/31/22 11:21	1
Fluoranthene	ND		0.0050		mg/Kg		01/25/22 14:58	01/31/22 11:21	1
Fluorene	ND		0.0050		mg/Kg		01/25/22 14:58	01/31/22 11:21	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		01/25/22 14:58	01/31/22 11:21	1
1-Methylnaphthalene	ND		0.0050		mg/Kg		01/25/22 14:58	01/31/22 11:21	1
2-Methylnaphthalene	ND		0.0050		mg/Kg		01/25/22 14:58	01/31/22 11:21	1
Naphthalene	ND		0.0050		mg/Kg		01/25/22 14:58	01/31/22 11:21	1
Phenanthrene	ND		0.0050		mg/Kg		01/25/22 14:58	01/31/22 11:21	1
Pyrene	ND		0.0050		mg/Kg		01/25/22 14:58	01/31/22 11:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*91*		*12 - 132*	*01/25/22 14:58*	*01/31/22 11:21*	*1*
Nitrobenzene-d5 (Surr)	*71*		*10 - 128*	*01/25/22 14:58*	*01/31/22 11:21*	*1*
p-Terphenyl-d14 (Surr)	*81*		*20 - 120*	*01/25/22 14:58*	*01/31/22 11:21*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCS 570-209368/2-A
Matrix: Solid
Analysis Batch: 210358

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 209368

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Acenaphthene			0.0500	0.03215		mg/Kg		64	45 - 134		
Acenaphthylene			0.0500	0.03713		mg/Kg		74	45 - 147		
Anthracene			0.0500	0.03554		mg/Kg		71	45 - 139		
Benzo[a]anthracene			0.0500	0.03738		mg/Kg		75	51 - 136		
Benzo[a]pyrene			0.0500	0.03741		mg/Kg		75	44 - 145		
Benzo[b]fluoranthene			0.0500	0.03880		mg/Kg		78	41 - 156		
Benzo[g,h,i]perylene			0.0500	0.03669		mg/Kg		73	41 - 154		
Benzo[k]fluoranthene			0.0500	0.03285		mg/Kg		66	50 - 145		
Chrysene			0.0500	0.03275		mg/Kg		66	48 - 134		
Dibenz(a,h)anthracene			0.0500	0.03624		mg/Kg		72	45 - 153		
Fluoranthene			0.0500	0.03536		mg/Kg		71	45 - 137		
Fluorene			0.0500	0.03681		mg/Kg		74	49 - 134		
Indeno[1,2,3-cd]pyrene			0.0500	0.03372		mg/Kg		67	41 - 152		
1-Methylnaphthalene			0.0500	0.03104		mg/Kg		62	52 - 138		
2-Methylnaphthalene			0.0500	0.02929		mg/Kg		59	43 - 151		
Naphthalene			0.0500	0.03165		mg/Kg		63	45 - 135		
Phenanthrene			0.0500	0.03425		mg/Kg		68	45 - 133		
Pyrene			0.0500	0.03510		mg/Kg		70	47 - 138		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*91*		*12 - 132*
Nitrobenzene-d5 (Surr)	*70*		*10 - 128*
p-Terphenyl-d14 (Surr)	*80*		*20 - 120*

Lab Sample ID: LCSD 570-209368/3-A
Matrix: Solid
Analysis Batch: 210358

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 209368

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene			0.0500	0.03512		mg/Kg		70	45 - 134	9	25
Acenaphthylene			0.0500	0.04024		mg/Kg		80	45 - 147	8	28
Anthracene			0.0500	0.03786		mg/Kg		76	45 - 139	6	24
Benzo[a]anthracene			0.0500	0.03857		mg/Kg		77	51 - 136	3	24
Benzo[a]pyrene			0.0500	0.04113		mg/Kg		82	44 - 145	9	25
Benzo[b]fluoranthene			0.0500	0.04185		mg/Kg		84	41 - 156	8	25
Benzo[g,h,i]perylene			0.0500	0.03850		mg/Kg		77	41 - 154	5	30
Benzo[k]fluoranthene			0.0500	0.03552		mg/Kg		71	50 - 145	8	25
Chrysene			0.0500	0.03489		mg/Kg		70	48 - 134	6	22
Dibenz(a,h)anthracene			0.0500	0.03848		mg/Kg		77	45 - 153	6	26
Fluoranthene			0.0500	0.03674		mg/Kg		73	45 - 137	4	24
Fluorene			0.0500	0.03965		mg/Kg		79	49 - 134	7	27
Indeno[1,2,3-cd]pyrene			0.0500	0.03557		mg/Kg		71	41 - 152	5	27
1-Methylnaphthalene			0.0500	0.03486		mg/Kg		70	52 - 138	12	26
2-Methylnaphthalene			0.0500	0.03255		mg/Kg		65	43 - 151	11	27
Naphthalene			0.0500	0.03599		mg/Kg		72	45 - 135	13	26
Phenanthrene			0.0500	0.03586		mg/Kg		72	45 - 133	5	27
Pyrene			0.0500	0.03617		mg/Kg		72	47 - 138	3	27

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCSD 570-209368/3-A
Matrix: Solid
Analysis Batch: 210358

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 209368

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	100		12 - 132
Nitrobenzene-d5 (Surr)	81		10 - 128
p-Terphenyl-d14 (Surr)	87		20 - 120

Lab Sample ID: 570-82412-1 MS
Matrix: Solid
Analysis Batch: 210358

Client Sample ID: TP1-6
Prep Type: Total/NA
Prep Batch: 209368

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	ND		0.0650	0.03072		mg/Kg	☼	47	10 - 175
Acenaphthylene	ND		0.0650	0.03471		mg/Kg	☼	53	10 - 180
Anthracene	ND		0.0650	0.03341		mg/Kg	☼	51	10 - 158
Benzo[a]anthracene	ND		0.0650	0.03424		mg/Kg	☼	53	10 - 180
Benzo[a]pyrene	ND		0.0650	0.03526		mg/Kg	☼	54	10 - 180
Benzo[b]fluoranthene	ND		0.0650	0.03600		mg/Kg	☼	55	10 - 180
Benzo[g,h,i]perylene	ND		0.0650	0.02722		mg/Kg	☼	42	10 - 180
Benzo[k]fluoranthene	ND		0.0650	0.03087		mg/Kg	☼	47	10 - 180
Chrysene	ND		0.0650	0.03065		mg/Kg	☼	47	10 - 180
Dibenz(a,h)anthracene	ND		0.0650	0.03051		mg/Kg	☼	47	10 - 180
Fluoranthene	ND		0.0650	0.03400		mg/Kg	☼	45	10 - 180
Fluorene	ND		0.0650	0.03519		mg/Kg	☼	54	10 - 168
Indeno[1,2,3-cd]pyrene	ND		0.0650	0.02740		mg/Kg	☼	42	10 - 172
1-Methylnaphthalene	ND		0.0650	0.03017		mg/Kg	☼	46	13 - 143
2-Methylnaphthalene	ND		0.0650	0.02851		mg/Kg	☼	44	26 - 144
Naphthalene	ND		0.0650	0.03054		mg/Kg	☼	47	10 - 161
Phenanthrene	ND		0.0650	0.03181		mg/Kg	☼	49	10 - 180
Pyrene	ND		0.0650	0.03306		mg/Kg	☼	51	10 - 180

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Fluorobiphenyl (Surr)	67		12 - 132
Nitrobenzene-d5 (Surr)	47		10 - 128
p-Terphenyl-d14 (Surr)	59		20 - 120

Lab Sample ID: 570-82412-1 MSD
Matrix: Solid
Analysis Batch: 210358

Client Sample ID: TP1-6
Prep Type: Total/NA
Prep Batch: 209368

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	ND		0.0651	0.03909		mg/Kg	☼	60	10 - 175	24	40
Acenaphthylene	ND		0.0651	0.04396		mg/Kg	☼	68	10 - 180	24	40
Anthracene	ND		0.0651	0.04108		mg/Kg	☼	63	10 - 158	21	40
Benzo[a]anthracene	ND		0.0651	0.04236		mg/Kg	☼	65	10 - 180	21	40
Benzo[a]pyrene	ND		0.0651	0.04425		mg/Kg	☼	68	10 - 180	23	40
Benzo[b]fluoranthene	ND		0.0651	0.04493		mg/Kg	☼	69	10 - 180	22	40
Benzo[g,h,i]perylene	ND		0.0651	0.03332		mg/Kg	☼	51	10 - 180	20	40
Benzo[k]fluoranthene	ND		0.0651	0.03938		mg/Kg	☼	61	10 - 180	24	40
Chrysene	ND		0.0651	0.03756		mg/Kg	☼	58	10 - 180	20	40
Dibenz(a,h)anthracene	ND		0.0651	0.03786		mg/Kg	☼	58	10 - 180	21	40

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 570-82412-1 MSD
Matrix: Solid
Analysis Batch: 210358

Client Sample ID: TP1-6
Prep Type: Total/NA
Prep Batch: 209368

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoranthene	ND		0.0651	0.04172		mg/Kg	☼	57	10 - 180	20	40
Fluorene	ND		0.0651	0.04390		mg/Kg	☼	67	10 - 168	22	40
Indeno[1,2,3-cd]pyrene	ND		0.0651	0.03430		mg/Kg	☼	53	10 - 172	22	40
1-Methylnaphthalene	ND		0.0651	0.03749		mg/Kg	☼	58	13 - 143	22	40
2-Methylnaphthalene	ND		0.0651	0.03506		mg/Kg	☼	54	26 - 144	21	40
Naphthalene	ND		0.0651	0.03791		mg/Kg	☼	58	10 - 161	22	40
Phenanthrene	ND		0.0651	0.04086		mg/Kg	☼	63	10 - 180	25	40
Pyrene	ND		0.0651	0.04095		mg/Kg	☼	63	10 - 180	21	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*82*		*12 - 132*
Nitrobenzene-d5 (Surr)	*56*		*10 - 128*
p-Terphenyl-d14 (Surr)	*70*		*20 - 120*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 570-209256/5
Matrix: Solid
Analysis Batch: 209256

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.25		mg/Kg			01/25/22 10:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*50 - 150*		*01/25/22 10:54*	*1*

Lab Sample ID: MB 570-209256/6
Matrix: Solid
Analysis Batch: 209256

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		5.0		mg/Kg			01/25/22 11:19	20

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*50 - 150*		*01/25/22 11:19*	*20*

Lab Sample ID: LCS 570-209256/3
Matrix: Solid
Analysis Batch: 209256

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
TPH as Gasoline (C4-C13)			1.96	2.098		mg/Kg		107	77 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*50 - 150*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCSD 570-209256/4
Matrix: Solid
Analysis Batch: 209256

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
TPH as Gasoline (C4-C13)			1.97	2.095		mg/Kg		107	77 - 128	0	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*50 - 150*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 570-211043/1-A
Matrix: Solid
Analysis Batch: 211414

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 211043

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	ND		5.0		mg/Kg		02/03/22 09:39	02/04/22 15:32	1
TPH as Motor Oil Range	ND		5.0		mg/Kg		02/03/22 09:39	02/04/22 15:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*98*		*50 - 150*	*02/03/22 09:39*	*02/04/22 15:32*	*1*

Lab Sample ID: LCS 570-211043/2-A
Matrix: Solid
Analysis Batch: 211414

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 211043

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
TPH as Diesel (C10-C28)			400	380.5		mg/Kg		95	76 - 126		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*102*		*50 - 150*

Lab Sample ID: LCS 570-211043/6-A
Matrix: Solid
Analysis Batch: 211414

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 211043

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
TPH as Motor Oil (C17-C44)			400	442.3		mg/Kg		111	71 - 139		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*101*		*50 - 150*

Lab Sample ID: LCSD 570-211043/3-A
Matrix: Solid
Analysis Batch: 211414

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 211043

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
TPH as Diesel (C10-C28)			400	402.9		mg/Kg		101	76 - 126	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*103*		*50 - 150*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCSD 570-211043/7-A
Matrix: Solid
Analysis Batch: 211414

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 211043

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
TPH as Motor Oil (C17-C44)			400	450.4		mg/Kg		113	71 - 139	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*101*		*50 - 150*

Lab Sample ID: 570-82412-1 MS
Matrix: Solid
Analysis Batch: 211414

Client Sample ID: TP1-6
Prep Type: Silica Gel Cleanup
Prep Batch: 211043

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
TPH as Diesel (C10-C28)	6.6		525	532.6		mg/Kg	☼	100	37 - 175

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
n-Octacosane (Surr)	*105*		*50 - 150*

Lab Sample ID: 570-82412-1 MS
Matrix: Solid
Analysis Batch: 211414

Client Sample ID: TP1-6
Prep Type: Silica Gel Cleanup
Prep Batch: 211043

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
TPH as Motor Oil (C17-C44)	ND		520	577.6		mg/Kg	☼	110	71 - 174

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
n-Octacosane (Surr)	*102*		*50 - 150*

Lab Sample ID: 570-82412-1 MSD
Matrix: Solid
Analysis Batch: 211414

Client Sample ID: TP1-6
Prep Type: Silica Gel Cleanup
Prep Batch: 211043

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
TPH as Diesel (C10-C28)	6.6		521	530.6		mg/Kg	☼	101	37 - 175	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
n-Octacosane (Surr)	*106*		*50 - 150*

Lab Sample ID: 570-82412-1 MSD
Matrix: Solid
Analysis Batch: 211414

Client Sample ID: TP1-6
Prep Type: Silica Gel Cleanup
Prep Batch: 211043

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
TPH as Motor Oil (C17-C44)	ND		523	587.3		mg/Kg	☼	111	71 - 174	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
n-Octacosane (Surr)	*108*		*50 - 150*

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-82412-1

Method: Moisture - Percent Moisture

Lab Sample ID: 570-82330-A-1 DU
Matrix: Solid
Analysis Batch: 665515

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	7.4			6.6		%				11	20
Percent Solids	92.6			93.4		%				0.8	20

GC/MS VOA

Prep Batch: 208902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-82412-1	TP1-6	Total/NA	Solid	5035	

Prep Batch: 208904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-82412-2	TP2-6.5	Total/NA	Solid	5035	
570-82412-3	TP3-7	Total/NA	Solid	5035	

Analysis Batch: 209341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-82412-1	TP1-6	Total/NA	Solid	8260C	208902
570-82412-2	TP2-6.5	Total/NA	Solid	8260C	208904
570-82412-3	TP3-7	Total/NA	Solid	8260C	208904
MB 570-209341/10	Method Blank	Total/NA	Solid	8260C	
MB 570-209341/9	Method Blank	Total/NA	Solid	8260C	
LCS 570-209341/4	Lab Control Sample	Total/NA	Solid	8260C	
LCSD 570-209341/5	Lab Control Sample Dup	Total/NA	Solid	8260C	

GC/MS Semi VOA

Prep Batch: 209368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-82412-1	TP1-6	Total/NA	Solid	3546	
570-82412-2 - DL	TP2-6.5	Total/NA	Solid	3546	
570-82412-3 - DL	TP3-7	Total/NA	Solid	3546	
MB 570-209368/1-A	Method Blank	Total/NA	Solid	3546	
LCS 570-209368/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 570-209368/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
570-82412-1 MS	TP1-6	Total/NA	Solid	3546	
570-82412-1 MSD	TP1-6	Total/NA	Solid	3546	

Analysis Batch: 210358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-82412-1	TP1-6	Total/NA	Solid	8270C SIM	209368
MB 570-209368/1-A	Method Blank	Total/NA	Solid	8270C SIM	209368
LCS 570-209368/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	209368
LCSD 570-209368/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM	209368
570-82412-1 MS	TP1-6	Total/NA	Solid	8270C SIM	209368
570-82412-1 MSD	TP1-6	Total/NA	Solid	8270C SIM	209368

Analysis Batch: 210559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-82412-2 - DL	TP2-6.5	Total/NA	Solid	8270C SIM	209368
570-82412-3 - DL	TP3-7	Total/NA	Solid	8270C SIM	209368

GC VOA

Prep Batch: 208902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-82412-1	TP1-6	Total/NA	Solid	5035	

GC VOA

Prep Batch: 208904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-82412-2	TP2-6.5	Total/NA	Solid	5035	
570-82412-3	TP3-7	Total/NA	Solid	5035	

Analysis Batch: 209256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-82412-1	TP1-6	Total/NA	Solid	NWTPH-Gx	208902
570-82412-2	TP2-6.5	Total/NA	Solid	NWTPH-Gx	208904
570-82412-3	TP3-7	Total/NA	Solid	NWTPH-Gx	208904
MB 570-209256/5	Method Blank	Total/NA	Solid	NWTPH-Gx	
MB 570-209256/6	Method Blank	Total/NA	Solid	NWTPH-Gx	
LCS 570-209256/3	Lab Control Sample	Total/NA	Solid	NWTPH-Gx	
LCSD 570-209256/4	Lab Control Sample Dup	Total/NA	Solid	NWTPH-Gx	

GC Semi VOA

Prep Batch: 211043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-82412-1	TP1-6	Silica Gel Cleanup	Solid	3550C SGC	
570-82412-2	TP2-6.5	Silica Gel Cleanup	Solid	3550C SGC	
570-82412-3	TP3-7	Silica Gel Cleanup	Solid	3550C SGC	
MB 570-211043/1-A	Method Blank	Silica Gel Cleanup	Solid	3550C SGC	
LCS 570-211043/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3550C SGC	
LCS 570-211043/6-A	Lab Control Sample	Silica Gel Cleanup	Solid	3550C SGC	
LCSD 570-211043/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3550C SGC	
LCSD 570-211043/7-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3550C SGC	
570-82412-1 MS	TP1-6	Silica Gel Cleanup	Solid	3550C SGC	
570-82412-1 MS	TP1-6	Silica Gel Cleanup	Solid	3550C SGC	
570-82412-1 MSD	TP1-6	Silica Gel Cleanup	Solid	3550C SGC	
570-82412-1 MSD	TP1-6	Silica Gel Cleanup	Solid	3550C SGC	

Analysis Batch: 211414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-82412-1	TP1-6	Silica Gel Cleanup	Solid	NWTPH-Dx	211043
570-82412-2	TP2-6.5	Silica Gel Cleanup	Solid	NWTPH-Dx	211043
570-82412-3	TP3-7	Silica Gel Cleanup	Solid	NWTPH-Dx	211043
MB 570-211043/1-A	Method Blank	Silica Gel Cleanup	Solid	NWTPH-Dx	211043
LCS 570-211043/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	NWTPH-Dx	211043
LCS 570-211043/6-A	Lab Control Sample	Silica Gel Cleanup	Solid	NWTPH-Dx	211043
LCSD 570-211043/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	NWTPH-Dx	211043
LCSD 570-211043/7-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	NWTPH-Dx	211043
570-82412-1 MS	TP1-6	Silica Gel Cleanup	Solid	NWTPH-Dx	211043
570-82412-1 MS	TP1-6	Silica Gel Cleanup	Solid	NWTPH-Dx	211043
570-82412-1 MSD	TP1-6	Silica Gel Cleanup	Solid	NWTPH-Dx	211043
570-82412-1 MSD	TP1-6	Silica Gel Cleanup	Solid	NWTPH-Dx	211043

General Chemistry

Analysis Batch: 665515

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-82412-1	TP1-6	Total/NA	Solid	Moisture	
570-82412-2	TP2-6.5	Total/NA	Solid	Moisture	
570-82412-3	TP3-7	Total/NA	Solid	Moisture	

General Chemistry (Continued)

Analysis Batch: 665515 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-82330-A-1 DU	Duplicate	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-82412-1

Client Sample ID: TP1-6

Date Collected: 01/20/22 09:00
Date Received: 01/21/22 10:15

Lab Sample ID: 570-82412-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.451 g	5 g	208902	01/21/22 21:13	G6NI	ECL 2
Total/NA	Analysis	8260C		1	5 mL	5 mL	209341	01/25/22 20:48	U4JL	ECL 2
	Instrument ID: GCMSLL									
Total/NA	Prep	3546			20.11 g	1 mL	209368	01/25/22 14:58	USUL	ECL 1
Total/NA	Analysis	8270C SIM		1			210358	01/31/22 19:09	AJ2Q	ECL 1
	Instrument ID: GCMSAAA									
Total/NA	Prep	5035			6.676 g	5 g	208902	01/21/22 21:13	G6NI	ECL 2
Total/NA	Analysis	NWTPH-Gx		1	5 g	5 mL	209256	01/25/22 12:31	A9VE	ECL 2
	Instrument ID: GC22									
Silica Gel Cleanup	Prep	3550C SGC			9.96 g	10 mL	211043	02/03/22 09:39	UFLU	ECL 1
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			211414	02/04/22 19:39	N1A	ECL 1
	Instrument ID: GC69A									
Total/NA	Analysis	Moisture		1			665515	01/26/22 14:54	HBR9	IRV 2
	Instrument ID: NOEQUIP									

Client Sample ID: TP2-6.5

Date Collected: 01/20/22 09:45
Date Received: 01/21/22 10:15

Lab Sample ID: 570-82412-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.456 g	5 mL	208904	01/21/22 21:18	G6NI	ECL 2
Total/NA	Analysis	8260C		50	5 mL	5 mL	209341	01/25/22 21:39	U4JL	ECL 2
	Instrument ID: GCMSLL									
Total/NA	Prep	3546	DL		20.09 g	1 mL	209368	01/25/22 14:58	USUL	ECL 1
Total/NA	Analysis	8270C SIM	DL	10			210559	02/01/22 15:21	AJ2Q	ECL 1
	Instrument ID: GCMSAAA									
Total/NA	Prep	5035			11.705 g	5 mL	208904	01/21/22 21:18	G6NI	ECL 2
Total/NA	Analysis	NWTPH-Gx		500	5 mL	5 mL	209256	01/25/22 14:09	A9VE	ECL 2
	Instrument ID: GC22									
Silica Gel Cleanup	Prep	3550C SGC			10.00 g	10 mL	211043	02/03/22 09:39	UFLU	ECL 1
Silica Gel Cleanup	Analysis	NWTPH-Dx		10			211414	02/04/22 20:07	N1A	ECL 1
	Instrument ID: GC69A									
Total/NA	Analysis	Moisture		1			665515	01/26/22 14:54	HBR9	IRV 2
	Instrument ID: NOEQUIP									

Client Sample ID: TP3-7

Date Collected: 01/20/22 10:30
Date Received: 01/21/22 10:15

Lab Sample ID: 570-82412-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.792 g	5 mL	208904	01/21/22 21:18	G6NI	ECL 2
Total/NA	Analysis	8260C		50	5 mL	5 mL	209341	01/25/22 22:05	U4JL	ECL 2
	Instrument ID: GCMSLL									
Total/NA	Prep	3546	DL		20.12 g	1 mL	209368	01/25/22 14:58	USUL	ECL 1
Total/NA	Analysis	8270C SIM	DL	5			210559	02/01/22 15:41	AJ2Q	ECL 1
	Instrument ID: GCMSAAA									

Lab Chronicle

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-82412-1

Client Sample ID: TP3-7

Date Collected: 01/20/22 10:30
Date Received: 01/21/22 10:15

Lab Sample ID: 570-82412-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.223 g	5 mL	208904	01/21/22 21:18	G6NI	ECL 2
Total/NA	Analysis	NWTPH-Gx		50	5 mL	5 mL	209256	01/25/22 15:47	A9VE	ECL 2
	Instrument ID: GC22									
Silica Gel Cleanup	Prep	3550C SGC			9.98 g	10 mL	211043	02/03/22 09:39	UFLU	ECL 1
Silica Gel Cleanup	Analysis	NWTPH-Dx		10			211414	02/04/22 20:34	N1A	ECL 1
	Instrument ID: GC69A									
Total/NA	Analysis	Moisture		1			665515	01/26/22 14:54	HBR9	IRV 2
	Instrument ID: NOEQUIP									

Laboratory References:

ECL 1 = Eurofins Calscience Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

ECL 2 = Eurofins Calscience Lampson, 7445 Lampson Ave, Garden Grove, CA 92841, TEL (714)895-5494

IRV 2 = Eurofins Calscience Tustin Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (949)261-1022

Accreditation/Certification Summary

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-82412-1

Laboratory: Eurofins Calscience

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Washington	State	C916-18	10-12-22

Laboratory: Eurofins Calscience Tustin

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Washington	State	C900	09-03-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-82412-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	ECL 2
8270C SIM	Semivolatile Organic Compound (GC/MS SIM LL)	SW846	ECL 1
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC)	NWTPH	ECL 2
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	ECL 1
Moisture	Percent Moisture	EPA	IRV 2
3546	Microwave Extraction (Low Level)	SW846	ECL 1
3550C SGC	Ultrasonic Extraction	SW846	ECL 1
5035	Closed System Purge and Trap	SW846	ECL 2

Protocol References:

EPA = US Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ECL 1 = Eurofins Calscience Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

ECL 2 = Eurofins Calscience Lampson, 7445 Lampson Ave, Garden Grove, CA 92841, TEL (714)895-5494

IRV 2 = Eurofins Calscience Tustin Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (949)261-1022

de Guia, Cecile

From: Bobby Thompson <robert.thompson@cardno.com>
Sent: Tuesday, January 25, 2022 5:59 AM
To: de Guia, Cecile; Cam Penner-Ash; Laina Cole
Subject: RE: Eurofins Environment Testing Southwest, LLC sample confirmation files from 570-82412-1 Mobil/ADC/031447

EXTERNAL EMAIL*

Hello Cecile,

Yes, please analyze for percent moisture.

Thank you,

Bobby

Bobby Thompson
SENIOR PROJECT MANAGER
CARDNO

Cardno now Stantec

Mobile +1 206 510 5855
Address 309 South Cloverdale Street, Unit A13, Seattle, Washington 98108
Email robert.thompson@cardno.com Web www.cardno.com

CONNECT WITH CARDNO

From: de Guia, Cecile <Cecile.deGuia@eurofinset.com>
Sent: Monday, January 24, 2022 5:13 PM
To: Cam Penner-Ash <cameron.penner-ash@cardno.com>; Laina Cole <laina.cole@cardno.com>; Bobby Thompson <robert.thompson@cardno.com>
Subject: FW: Eurofins Environment Testing Southwest, LLC sample confirmation files from 570-82412-1 Mobil/ADC/031447

Hello,

Do we need to analyze the samples for % Moisture?
Please advise ASAP.
Thank you.

Cecile

From: de Guia, Cecile <Cecile.deGuia@eurofinset.com>
Sent: Sunday, January 23, 2022 9:01 PM
To: Cameron Penner-Ash <cameron.penner-ash@cardno.com>; Laina Cole <laina.cole@cardno.com>; Bobby Thompson <robert.thompson@cardno.com>
Subject: Eurofins Environment Testing Southwest, LLC sample confirmation files from 570-82412-1 Mobil/ADC/031447

Hello,

Attached please find the sample confirmation files for job 570-82412-1; Mobil/ADC/031447

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

Thank you.

Cecile de Guia
Project Manager

Eurofins Calscience
Phone: 714-895-5494

E-mail: Cecile.deGuia@eurofinset.com
www.eurofinsus.com/env

Reference: [570-282164]
Attachments: 2

> > Bank information has changed, please refer to remittance information on invoice. < <

8241 2

eurofins | Calscience
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
TEL: (714) 895-5494 FAX: (714) 894-7501

Site Name	Everett Bulk Plant
Provide MRN for retail or AFE for major projects	
Retail Project (MRN)	
Major Project (AFE)	
Project Name	MobilADC/031447

CHAIN OF CUSTODY RECORD

DATE. 1/20/2022

PAGE. 1 OF 1

ExxonMobil Engr: Jennifer Sedlachek

LABORATORY CLIENT: Cardno

ADDRESS: 309 South Cloverdale Street Unit A13

CITY: Seattle, WA 98108

TEL: 206-510-5855 FAX: N/A robert.thompson@cardno.com

GLOBAL ID #/ COELT LOG CODE:

P O 0314476040, Agreement# A2604415

PROJECT CONTACT: Robert Thompson

SAMPLER(S): Paul Prevou

LAB USE ONLY

COOLER RECEIPT Temp: °C

TURNAROUND TIME

☐SAME DAY ☐24 HR ☐48 HR ☐72 HR ☐ 5 DAYS ☑ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)

☐RWQCB REPORTING ☐ARCHIVE SAMPLES UNTIL ____/____/____

SPECIAL INSTRUCTIONS:

Required EIM and Cardno EDDs. Please perform Silica Gel Cleanup for NWTPH-DX

Report to: laina.cole@cardno.com, robert.thompson@cardno.com, and cameron.penner-ash@cardno.com

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	Field Point Name	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT	TPHg by Ecology Method NWTPH-GX	TPHd and TPHmo by Ecology Method NWTPH-DX	BTEX and 1-Methylnapthalene by EPA Method 8260C	PAHs by 8270C SIM		CONTAINER TYPE
	TP1-6	TP1-6	01/20/22	9 00	S	10	X	X	X	X		6 Sodium Bisulfate VOAs 3 Methanol VOA, 6 4oz un-preserved glass jar
	TP2-6 5	TP2-6 5	01/20/22	9 45	S	10	X	X	X	X		6 Sodium Bisulfate VOAs 3 Methanol VOA, 6 4oz un-preserved glass jar
	TP3-7	TP3-7	01/20/22	10 30	S	10	X	X	X	X		6 Sodium Bisulfate VOAs, 3 Methanol VOA, 6 4oz un-preserved glass jar

570-82412 Chain of Custody

Relinquished by: (Signature)	Received by: (Signature)	Date, & Time:
Paul Prevou	FedEx	1/20/22 14 45
FedEx	EC1	01/21/22 1015

0.6/2.1 SCG

8242

ORIGIN ID:LKEA (817) 965-6081
PAUL PREVOU
CARDNO
309 S CLOVERDALE ST

SEATTLE, WA 98108
UNITED STATES US

SHIP DATE: 20JAN22
ACTWGT: 51.00 LB
CAD: 6754193/SSFO2220
DIMS: 26x15x14 IN

BILL RECIPIENT

TO

CAL SCIENCE ENVIRONMENTAL LAB
7440 LINCOLN WAY

GARDEN GROVE CA 92841
(714) 895-5494 REF:
INV:
PO. DEPT:

FedEx Express

E

J221022010501uv

Part # 156297-435 RRDB EXP 01/23

TRK# 0215 **8158 1729 8349**

FRI - 21 JAN 10:30A
PRIORITY OVERNIGHT

92 APVA

92841
CA-US **SNA**

Date: 1/20/2022
Signature:

570-82412 Waybill

CUSTODY
ENVIRONMENTAL SAMPLING SUPPLY
www.essvial.com 800-233-8425

C
8349
01.21
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10:30

RT 399
ST 5

8

Eurofins Calscience
7440 Lincoln Way
Garden Grove, CA 92841
Phone 714-895-5494 Fax: 714-894-7501

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler	Lab PM: de Guia Cecile	Carrier Tracking No(s):	COC No: 570-152864 1
Client Contact: Shipping/Receiving	Phone	E-Mail: Cecile deGuia@eurofinset.com	State of Origin: Washington	Page: Page 1 of 1
Company: Eurofins Environment Testing Southwest,		Accreditations Required (See note): State - Washington		Job #: 570-82412-1
Address: 2841 Dow Avenue, ,	Due Date Requested: 1/25/2022			
City: Tustin	TAT Requested (days):			
State, Zip: CA, 92780				
Phone: 949-261-1022(Tel) 949-260-3297(Fax)	PO #:			
Email:	WO #:			
Project Name: Mobil/ADC/031447	Project #: 57002344			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture/ (MOD) Copy Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
TP1-6 (570-82412-1)	1/20/22	09:00 Pacific		Solid			X	1	
TP2-6 5 (570-82412-2)	1/20/22	09:45 Pacific		Solid			X	1	
TP3-7 (570-82412-3)	1/20/22	10 30 Pacific		Solid			X	1	

Note: Since laboratory accreditations are subject to change Eurofins Environment Testing Southwest, LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Southwest, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southwest, LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing Southwest, LLC

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I, II, III, IV Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements. TR-89 1.4/1.4

Empty Kit Relinquished by:	Date	Time	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		1/24/22	ECI			
2		Date/Time	Company	Received by	Date/Time	Company
				Olga Pinelas	01/24/22 1830	FGT
3		Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Custody Seal No

Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Cardno, Inc

Job Number: 570-82412-1

Login Number: 82412
List Number: 1
Creator: Patel, Jayesh

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Cardno, Inc

Job Number: 570-82412-1

Login Number: 82412
List Number: 2
Creator: Ornelas, Olga

List Source: Eurofins Calscience Tustin
List Creation: 01/25/22 11:34 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	True	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin, CA 92780
Tel: (714)895-5494

Laboratory Job ID: 570-86223-1
Client Project/Site: MobilADC/031447

For:
Cardno, Inc
309 South Cloverdale Street
Unit A13
Seattle, Washington 98108

Attn: Bobby Thompson

Cecile de Guia

Authorized for release by:
3/16/2022 8:57:46 PM

Cecile de Guia, Project Manager I
(714)895-5494
Cecile.deGuia@eurofinset.com

Table of Contents

Sample Summary

Client: Cardno, Inc
Project/Site: MobilADC/031447

Job ID: 570-86223-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-86223-1	TS1	Solid	02/26/22 09:20	03/01/22 11:15
570-86223-2	TS2	Solid	02/26/22 10:55	03/01/22 11:15
570-86223-3	TS3	Solid	02/26/22 13:55	03/01/22 11:15
570-86223-4	TS4	Solid	02/26/22 14:05	03/01/22 11:15
570-86223-5	TS5	Solid	02/26/22 14:25	03/01/22 11:15
570-86223-6	TS6	Solid	02/27/22 08:25	03/01/22 11:15
570-86223-7	TS7	Solid	02/27/22 10:00	03/01/22 11:15
570-86223-8	TS8	Solid	02/27/22 11:35	03/01/22 11:15
570-86223-9	TS9	Solid	02/27/22 12:20	03/01/22 11:15
570-86223-10	TS10	Solid	02/27/22 13:10	03/01/22 11:15

Definitions/Glossary

Client: Cardno, Inc
Project/Site: MobilADC/031447

Job ID: 570-86223-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.

GC/MS Semi VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high biased.

GC VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.

GC Semi VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 570-86223-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative
570-86223-1

Comments
No additional comments.

Receipt
The samples were received on 3/1/2022 11:15 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.9º C.

GC/MS VOA
Method 8260C: Surrogate recovery for 4-Bromofluorobenzene for the following samples was outside control limits: TS6 (570-86223-6). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8260C: The following sample was diluted due to the nature of the sample matrix: TS7 (570-86223-7). Elevated reporting limits (RLs) are provided.

Method 8260C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-216777. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

Method 8260C: The continuing calibration verification (CCV) associated with batch 570-217108 recovered above the upper control limit for Methyl-t-Butyl Ether. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: TS1 (570-86223-1) and (CCVIS 570-217108/3).

Method 8260C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-217108. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270C SIM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 570-217287 and analytical batch 570-218952 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8270C SIM: Surrogate recovery for the following sample was outside control limits: TS6 (570-86223-6). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8270C SIM: Surrogate recovery for the following sample was outside control limits: TS7 (570-86223-7). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC VOA
Method NWTPH-Gx: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-218188. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

Method NWTPH-Gx: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-218779. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

Method NWTPH-Gx: Surrogate recovery for the following sample was outside control limits: TS8 (570-86223-8). Re-extraction and/or re-analysis was performed and surrogate recovery was outside control limits.

Job ID: 570-86223-1 (Continued)

Laboratory: Eurofins Calscience (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method NWTPH-Dx: The native sample, matrix spike, and matrix spike duplicate (MS/MSD) associated with preparation batch 570-218956 and analytical batch 570-218993 were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of TPH as Diesel (C10-C28) and TPH as Motor Oil (C17-C44) in the MS/MSD was above the instrument calibration range. The data have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Cardno, Inc
Project/Site: MobilADC/031447

Job ID: 570-86223-1

Client Sample ID: TS1 — Lab Sample ID: 570-86223-1

No Detections.

Client Sample ID: TS2 — Lab Sample ID: 570-86223-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.031		0.0066		mg/Kg	1	☼	8270C SIM	Total/NA
Anthracene	0.049		0.0066		mg/Kg	1	☼	8270C SIM	Total/NA
Fluoranthene	0.013		0.0066		mg/Kg	1	☼	8270C SIM	Total/NA
Fluorene	0.027		0.0066		mg/Kg	1	☼	8270C SIM	Total/NA
1-Methylnaphthalene	0.011		0.0066		mg/Kg	1	☼	8270C SIM	Total/NA
Pyrene	0.024		0.0066		mg/Kg	1	☼	8270C SIM	Total/NA

Client Sample ID: TS3 — Lab Sample ID: 570-86223-3

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.015		0.0061		mg/Kg	1	☼	8270C SIM	Total/NA
Anthracene	0.012		0.0061		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[a]anthracene	0.012		0.0061		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[a]pyrene	0.013		0.0061		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[b]fluoranthene	0.011		0.0061		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[g,h,i]perylene	0.011		0.0061		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[k]fluoranthene	0.0083		0.0061		mg/Kg	1	☼	8270C SIM	Total/NA
Chrysene	0.013		0.0061		mg/Kg	1	☼	8270C SIM	Total/NA
Fluoranthene	0.023		0.0061		mg/Kg	1	☼	8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	0.0099		0.0061		mg/Kg	1	☼	8270C SIM	Total/NA
1-Methylnaphthalene	0.0069		0.0061		mg/Kg	1	☼	8270C SIM	Total/NA
Naphthalene	0.0073		0.0061		mg/Kg	1	☼	8270C SIM	Total/NA
Phenanthrene	0.018		0.0061		mg/Kg	1	☼	8270C SIM	Total/NA
Pyrene	0.024		0.0061		mg/Kg	1	☼	8270C SIM	Total/NA
TPH as Diesel Range	8.6		6.1		mg/Kg	1	☼	NWTPH-Dx	Silica Gel Cleanup
TPH as Motor Oil Range	170		6.1		mg/Kg	1	☼	NWTPH-Dx	Silica Gel Cleanup

Client Sample ID: TS4 — Lab Sample ID: 570-86223-4

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
m,p-Xylene	0.0015		0.0011		mg/Kg	1	☼	8260C	Total/NA
o-Xylene	0.00095		0.00054		mg/Kg	1	☼	8260C	Total/NA
Xylenes, Total	0.0025		0.0011		mg/Kg	1	☼	8260C	Total/NA
Acenaphthene	0.016		0.0064		mg/Kg	1	☼	8270C SIM	Total/NA
TPH as Motor Oil Range	7.9		6.3		mg/Kg	1	☼	NWTPH-Dx	Silica Gel Cleanup

Client Sample ID: TS5 — Lab Sample ID: 570-86223-5

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.033		0.0062		mg/Kg	1	☼	8270C SIM	Total/NA
Anthracene	0.0075		0.0062		mg/Kg	1	☼	8270C SIM	Total/NA
Fluoranthene	0.026		0.0062		mg/Kg	1	☼	8270C SIM	Total/NA
Fluorene	0.011		0.0062		mg/Kg	1	☼	8270C SIM	Total/NA
1-Methylnaphthalene	0.0063		0.0062		mg/Kg	1	☼	8270C SIM	Total/NA
2-Methylnaphthalene	0.0068		0.0062		mg/Kg	1	☼	8270C SIM	Total/NA
Naphthalene	0.017		0.0062		mg/Kg	1	☼	8270C SIM	Total/NA
Phenanthrene	0.0081		0.0062		mg/Kg	1	☼	8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Cardno, Inc
Project/Site: MobilADC/031447

Job ID: 570-86223-1

Client Sample ID: TS5 (Continued) — Lab Sample ID: 570-86223-5

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Pyrene	0.024		0.0062		mg/Kg	1	☼	8270C SIM	Total/NA
TPH as Gasoline (C4-C13)	1.7		0.24		mg/Kg	1	☼	NWTPH-Gx	Total/NA

Client Sample ID: TS6 — Lab Sample ID: 570-86223-6

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.19		0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Anthracene	0.18		0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[a]anthracene	0.035		0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[a]pyrene	0.020		0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[b]fluoranthene	0.014		0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[g,h,i]perylene	0.012		0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[k]fluoranthene	0.011		0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Chrysene	0.063		0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Fluoranthene	0.056		0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Fluorene	0.20		0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	0.0087		0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
1-Methylnaphthalene	0.58		0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Naphthalene	0.11		0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Phenanthrene	0.19		0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Pyrene	0.14		0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
TPH as Gasoline (C4-C13)	960		180		mg/Kg	500	☼	NWTPH-Gx	Total/NA
TPH as Diesel Range - DL	3500		58		mg/Kg	10	☼	NWTPH-Dx	Silica Gel Cleanup
TPH as Motor Oil Range - DL	240		58		mg/Kg	10	☼	NWTPH-Dx	Silica Gel Cleanup

Client Sample ID: TS7 — Lab Sample ID: 570-86223-7

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Toluene	0.070		0.063		mg/Kg	50	☼	8260C	Total/NA
Acenaphthene	0.39		0.0053		mg/Kg	1	☼	8270C SIM	Total/NA
Anthracene	0.28		0.0053		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[a]anthracene	0.13		0.0053		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[a]pyrene	0.14		0.0053		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[b]fluoranthene	0.088		0.0053		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[g,h,i]perylene	0.084		0.0053		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[k]fluoranthene	0.078		0.0053		mg/Kg	1	☼	8270C SIM	Total/NA
Chrysene	0.20		0.0053		mg/Kg	1	☼	8270C SIM	Total/NA
Dibenz(a,h)anthracene	0.017		0.0053		mg/Kg	1	☼	8270C SIM	Total/NA
Fluoranthene	0.32		0.0053		mg/Kg	1	☼	8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	0.073		0.0053		mg/Kg	1	☼	8270C SIM	Total/NA
Naphthalene	0.13		0.0053		mg/Kg	1	☼	8270C SIM	Total/NA
Phenanthrene	0.44		0.0053		mg/Kg	1	☼	8270C SIM	Total/NA
Pyrene	0.46		0.0053		mg/Kg	1	☼	8270C SIM	Total/NA
Fluorene - DL	1.1		0.027		mg/Kg	5	☼	8270C SIM	Total/NA
TPH as Gasoline (C4-C13)	970		160		mg/Kg	500	☼	NWTPH-Gx	Total/NA
TPH as Diesel Range - DL	5400		52		mg/Kg	10	☼	NWTPH-Dx	Silica Gel Cleanup
TPH as Motor Oil Range - DL	530		52		mg/Kg	10	☼	NWTPH-Dx	Silica Gel Cleanup

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Cardno, Inc
Project/Site: MobilADC/031447

Job ID: 570-86223-1

Client Sample ID: TS8 — Lab Sample ID: 570-86223-8

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Toluene	0.0012		0.0011		mg/Kg	1	☼	8260C	Total/NA
Anthracene	0.0053	F2	0.0052		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[a]anthracene	0.012	F2	0.0052		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[a]pyrene	0.017		0.0052		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[b]fluoranthene	0.013		0.0052		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[g,h,i]perylene	0.017	F2	0.0052		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[k]fluoranthene	0.011	F2	0.0052		mg/Kg	1	☼	8270C SIM	Total/NA
Chrysene	0.013	F2	0.0052		mg/Kg	1	☼	8270C SIM	Total/NA
Fluoranthene	0.017	F2	0.0052		mg/Kg	1	☼	8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	0.013		0.0052		mg/Kg	1	☼	8270C SIM	Total/NA
Phenanthrene	0.0084		0.0052		mg/Kg	1	☼	8270C SIM	Total/NA
Pyrene	0.021	F2	0.0052		mg/Kg	1	☼	8270C SIM	Total/NA
TPH as Motor Oil Range	11		5.0		mg/Kg	1	☼	NWTPH-Dx	Silica Gel Cleanup

Client Sample ID: TS9 — Lab Sample ID: 570-86223-9

No Detections.

Client Sample ID: TS10 — Lab Sample ID: 570-86223-10

No Detections.

This Detection Summary does not include radiochemical test results.

Client: Cardno, Inc
Project/Site: MobilADC/031447

Job ID: 570-86223-1

Client Sample ID: TS1
Date Collected: 02/26/22 09:20
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-1
Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0010		mg/Kg	☼	03/02/22 01:40	03/04/22 19:08	1
Ethylbenzene	ND		0.0010		mg/Kg	☼	03/02/22 01:40	03/04/22 19:08	1
Toluene	ND		0.0010		mg/Kg	☼	03/02/22 01:40	03/04/22 19:08	1
m,p-Xylene	ND		0.0020		mg/Kg	☼	03/02/22 01:40	03/04/22 19:08	1
o-Xylene	ND		0.0010		mg/Kg	☼	03/02/22 01:40	03/04/22 19:08	1
Xylenes, Total	ND		0.0020		mg/Kg	☼	03/02/22 01:40	03/04/22 19:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 142*	*03/02/22 01:40*	*03/04/22 19:08*	*1*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*	*03/02/22 01:40*	*03/04/22 19:08*	*1*
Dibromofluoromethane (Surr)	*95*		*80 - 123*	*03/02/22 01:40*	*03/04/22 19:08*	*1*
Toluene-d8 (Surr)	*108*		*80 - 120*	*03/02/22 01:40*	*03/04/22 19:08*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 17:40	1
Acenaphthylene	ND		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 17:40	1
Anthracene	ND		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 17:40	1
Benzo[a]anthracene	ND		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 17:40	1
Benzo[a]pyrene	ND		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 17:40	1
Benzo[b]fluoranthene	ND		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 17:40	1
Benzo[g,h,i]perylene	ND		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 17:40	1
Benzo[k]fluoranthene	ND		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 17:40	1
Chrysene	ND		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 17:40	1
Dibenz(a,h)anthracene	ND		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 17:40	1
Fluoranthene	ND		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 17:40	1
Fluorene	ND		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 17:40	1
Indeno[1,2,3-cd]pyrene	ND		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 17:40	1
1-Methylnaphthalene	ND		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 17:40	1
2-Methylnaphthalene	ND		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 17:40	1
Naphthalene	ND		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 17:40	1
Phenanthrene	ND		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 17:40	1
Pyrene	ND		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 17:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*75*		*12 - 147*	*03/04/22 15:33*	*03/11/22 17:40*	*1*
Nitrobenzene-d5 (Surr)	*88*		*10 - 143*	*03/04/22 15:33*	*03/11/22 17:40*	*1*
p-Terphenyl-d14 (Surr)	*77*		*10 - 145*	*03/04/22 15:33*	*03/11/22 17:40*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.24		mg/Kg	☼	03/02/22 01:40	03/09/22 17:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*72*		*50 - 150*	*03/02/22 01:40*	*03/09/22 17:29*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	ND		5.3		mg/Kg	☼	03/11/22 15:47	03/12/22 05:20	1
TPH as Motor Oil Range	ND		5.3		mg/Kg	☼	03/11/22 15:47	03/12/22 05:20	1

Client Sample ID: TS1

Date Collected: 02/26/22 09:20
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-1
Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*102*		*50 - 150*	*03/11/22 15:47*	*03/12/22 05:20*	*1*

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**5.8**		0.1		%			03/02/22 11:20	1
Percent Solids	**94.2**		0.1		%			03/02/22 11:20	1

Client Sample ID: TS2

Date Collected: 02/26/22 10:55
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-2
Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0012		mg/Kg	☼	03/02/22 01:40	03/03/22 14:59	1
Ethylbenzene	ND		0.0012		mg/Kg	☼	03/02/22 01:40	03/03/22 14:59	1
Toluene	ND		0.0012		mg/Kg	☼	03/02/22 01:40	03/03/22 14:59	1
m,p-Xylene	ND		0.0025		mg/Kg	☼	03/02/22 01:40	03/03/22 14:59	1
o-Xylene	ND		0.0012		mg/Kg	☼	03/02/22 01:40	03/03/22 14:59	1
Xylenes, Total	ND		0.0025		mg/Kg	☼	03/02/22 01:40	03/03/22 14:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*80 - 142*	*03/02/22 01:40*	*03/03/22 14:59*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*	*03/02/22 01:40*	*03/03/22 14:59*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 123*	*03/02/22 01:40*	*03/03/22 14:59*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*	*03/02/22 01:40*	*03/03/22 14:59*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**0.031**		0.0066		mg/Kg	☼	03/04/22 15:33	03/11/22 18:00	1
Acenaphthylene	ND		0.0066		mg/Kg	☼	03/04/22 15:33	03/11/22 18:00	1
Anthracene	**0.049**		0.0066		mg/Kg	☼	03/04/22 15:33	03/11/22 18:00	1
Benzo[a]anthracene	ND		0.0066		mg/Kg	☼	03/04/22 15:33	03/11/22 18:00	1
Benzo[a]pyrene	ND		0.0066		mg/Kg	☼	03/04/22 15:33	03/11/22 18:00	1
Benzo[b]fluoranthene	ND		0.0066		mg/Kg	☼	03/04/22 15:33	03/11/22 18:00	1
Benzo[g,h,i]perylene	ND		0.0066		mg/Kg	☼	03/04/22 15:33	03/11/22 18:00	1
Benzo[k]fluoranthene	ND		0.0066		mg/Kg	☼	03/04/22 15:33	03/11/22 18:00	1
Chrysene	ND		0.0066		mg/Kg	☼	03/04/22 15:33	03/11/22 18:00	1
Dibenz(a,h)anthracene	ND		0.0066		mg/Kg	☼	03/04/22 15:33	03/11/22 18:00	1
Fluoranthene	**0.013**		0.0066		mg/Kg	☼	03/04/22 15:33	03/11/22 18:00	1
Fluorene	**0.027**		0.0066		mg/Kg	☼	03/04/22 15:33	03/11/22 18:00	1
Indeno[1,2,3-cd]pyrene	ND		0.0066		mg/Kg	☼	03/04/22 15:33	03/11/22 18:00	1
1-Methylnaphthalene	**0.011**		0.0066		mg/Kg	☼	03/04/22 15:33	03/11/22 18:00	1
2-Methylnaphthalene	ND		0.0066		mg/Kg	☼	03/04/22 15:33	03/11/22 18:00	1
Naphthalene	ND		0.0066		mg/Kg	☼	03/04/22 15:33	03/11/22 18:00	1
Phenanthrene	ND		0.0066		mg/Kg	☼	03/04/22 15:33	03/11/22 18:00	1
Pyrene	**0.024**		0.0066		mg/Kg	☼	03/04/22 15:33	03/11/22 18:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*73*		*12 - 147*	*03/04/22 15:33*	*03/11/22 18:00*	*1*
Nitrobenzene-d5 (Surr)	*69*		*10 - 143*	*03/04/22 15:33*	*03/11/22 18:00*	*1*
p-Terphenyl-d14 (Surr)	*84*		*10 - 145*	*03/04/22 15:33*	*03/11/22 18:00*	*1*

Client Sample ID: TS2

Date Collected: 02/26/22 10:55
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-2
Matrix: Solid

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.41		mg/Kg	☼	03/02/22 01:40	03/09/22 17:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*50 - 150*	*03/02/22 01:40*	*03/09/22 17:52*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	ND		6.7		mg/Kg	☼	03/11/22 15:47	03/12/22 05:45	1
TPH as Motor Oil Range	ND		6.7		mg/Kg	☼	03/11/22 15:47	03/12/22 05:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*100*		*50 - 150*	*03/11/22 15:47*	*03/12/22 05:45*	*1*

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**24.3**		0.1		%			03/02/22 11:20	1
Percent Solids	**75.7**		0.1		%			03/02/22 11:20	1

Client Sample ID: TS3

Date Collected: 02/26/22 13:55
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-3
Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00093		mg/Kg	☼	03/02/22 01:40	03/03/22 15:25	1
Ethylbenzene	ND		0.00093		mg/Kg	☼	03/02/22 01:40	03/03/22 15:25	1
Toluene	ND		0.00093		mg/Kg	☼	03/02/22 01:40	03/03/22 15:25	1
m,p-Xylene	ND		0.0019		mg/Kg	☼	03/02/22 01:40	03/03/22 15:25	1
o-Xylene	ND		0.00093		mg/Kg	☼	03/02/22 01:40	03/03/22 15:25	1
Xylenes, Total	ND		0.0019		mg/Kg	☼	03/02/22 01:40	03/03/22 15:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 142*	*03/02/22 01:40*	*03/03/22 15:25*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*	*03/02/22 01:40*	*03/03/22 15:25*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 123*	*03/02/22 01:40*	*03/03/22 15:25*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*	*03/02/22 01:40*	*03/03/22 15:25*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**0.015**		0.0061		mg/Kg	☼	03/04/22 15:33	03/11/22 18:19	1
Acenaphthylene	ND		0.0061		mg/Kg	☼	03/04/22 15:33	03/11/22 18:19	1
Anthracene	**0.012**		0.0061		mg/Kg	☼	03/04/22 15:33	03/11/22 18:19	1
Benzo[a]anthracene	**0.012**		0.0061		mg/Kg	☼	03/04/22 15:33	03/11/22 18:19	1
Benzo[a]pyrene	**0.013**		0.0061		mg/Kg	☼	03/04/22 15:33	03/11/22 18:19	1
Benzo[b]fluoranthene	**0.011**		0.0061		mg/Kg	☼	03/04/22 15:33	03/11/22 18:19	1
Benzo[g,h,i]perylene	**0.011**		0.0061		mg/Kg	☼	03/04/22 15:33	03/11/22 18:19	1
Benzo[k]fluoranthene	**0.0083**		0.0061		mg/Kg	☼	03/04/22 15:33	03/11/22 18:19	1
Chrysene	**0.013**		0.0061		mg/Kg	☼	03/04/22 15:33	03/11/22 18:19	1
Dibenz(a,h)anthracene	ND		0.0061		mg/Kg	☼	03/04/22 15:33	03/11/22 18:19	1
Fluoranthene	**0.023**		0.0061		mg/Kg	☼	03/04/22 15:33	03/11/22 18:19	1
Fluorene	ND		0.0061		mg/Kg	☼	03/04/22 15:33	03/11/22 18:19	1

Client Sample ID: TS3

Date Collected: 02/26/22 13:55
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-3
Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	**0.0099**		0.0061		mg/Kg	☼	03/04/22 15:33	03/11/22 18:19	1
1-Methylnaphthalene	**0.0069**		0.0061		mg/Kg	☼	03/04/22 15:33	03/11/22 18:19	1
2-Methylnaphthalene	ND		0.0061		mg/Kg	☼	03/04/22 15:33	03/11/22 18:19	1
Naphthalene	**0.0073**		0.0061		mg/Kg	☼	03/04/22 15:33	03/11/22 18:19	1
Phenanthrene	**0.018**		0.0061		mg/Kg	☼	03/04/22 15:33	03/11/22 18:19	1
Pyrene	**0.024**		0.0061		mg/Kg	☼	03/04/22 15:33	03/11/22 18:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*80*		*12 - 147*	*03/04/22 15:33*	*03/11/22 18:19*	*1*
Nitrobenzene-d5 (Surr)	*71*		*10 - 143*	*03/04/22 15:33*	*03/11/22 18:19*	*1*
p-Terphenyl-d14 (Surr)	*105*		*10 - 145*	*03/04/22 15:33*	*03/11/22 18:19*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.22		mg/Kg	☼	03/02/22 01:40	03/09/22 18:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*50 - 150*	*03/02/22 01:40*	*03/09/22 18:16*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	**8.6**		6.1		mg/Kg	☼	03/11/22 15:47	03/12/22 06:09	1
TPH as Motor Oil Range	**170**		6.1		mg/Kg	☼	03/11/22 15:47	03/12/22 06:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*95*		*50 - 150*	*03/11/22 15:47*	*03/12/22 06:09*	*1*

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**18.8**		0.1		%			03/02/22 11:20	1
Percent Solids	**81.2**		0.1		%			03/02/22 11:20	1

Client Sample ID: TS4

Date Collected: 02/26/22 14:05
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-4
Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00054		mg/Kg	☼	03/02/22 01:40	03/03/22 15:50	1
Ethylbenzene	ND		0.00054		mg/Kg	☼	03/02/22 01:40	03/03/22 15:50	1
Toluene	ND		0.00054		mg/Kg	☼	03/02/22 01:40	03/03/22 15:50	1
m,p-Xylene	**0.0015**		0.0011		mg/Kg	☼	03/02/22 01:40	03/03/22 15:50	1
o-Xylene	**0.00095**		0.00054		mg/Kg	☼	03/02/22 01:40	03/03/22 15:50	1
Xylenes, Total	**0.0025**		0.0011		mg/Kg	☼	03/02/22 01:40	03/03/22 15:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*80 - 142*	*03/02/22 01:40*	*03/03/22 15:50*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*	*03/02/22 01:40*	*03/03/22 15:50*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 123*	*03/02/22 01:40*	*03/03/22 15:50*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*	*03/02/22 01:40*	*03/03/22 15:50*	*1*

Client Sample ID: TS4

Date Collected: 02/26/22 14:05
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-4
Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**0.016**		0.0064		mg/Kg	☼	03/04/22 15:33	03/11/22 18:38	1
Acenaphthylene	ND		0.0064		mg/Kg	☼	03/04/22 15:33	03/11/22 18:38	1
Anthracene	ND		0.0064		mg/Kg	☼	03/04/22 15:33	03/11/22 18:38	1
Benzo[a]anthracene	ND		0.0064		mg/Kg	☼	03/04/22 15:33	03/11/22 18:38	1
Benzo[a]pyrene	ND		0.0064		mg/Kg	☼	03/04/22 15:33	03/11/22 18:38	1
Benzo[b]fluoranthene	ND		0.0064		mg/Kg	☼	03/04/22 15:33	03/11/22 18:38	1
Benzo[g,h,i]perylene	ND		0.0064		mg/Kg	☼	03/04/22 15:33	03/11/22 18:38	1
Benzo[k]fluoranthene	ND		0.0064		mg/Kg	☼	03/04/22 15:33	03/11/22 18:38	1
Chrysene	ND		0.0064		mg/Kg	☼	03/04/22 15:33	03/11/22 18:38	1
Dibenz(a,h)anthracene	ND		0.0064		mg/Kg	☼	03/04/22 15:33	03/11/22 18:38	1
Fluoranthene	ND		0.0064		mg/Kg	☼	03/04/22 15:33	03/11/22 18:38	1
Fluorene	ND		0.0064		mg/Kg	☼	03/04/22 15:33	03/11/22 18:38	1
Indeno[1,2,3-cd]pyrene	ND		0.0064		mg/Kg	☼	03/04/22 15:33	03/11/22 18:38	1
1-Methylnaphthalene	ND		0.0064		mg/Kg	☼	03/04/22 15:33	03/11/22 18:38	1
2-Methylnaphthalene	ND		0.0064		mg/Kg	☼	03/04/22 15:33	03/11/22 18:38	1
Naphthalene	ND		0.0064		mg/Kg	☼	03/04/22 15:33	03/11/22 18:38	1
Phenanthrene	ND		0.0064		mg/Kg	☼	03/04/22 15:33	03/11/22 18:38	1
Pyrene	ND		0.0064		mg/Kg	☼	03/04/22 15:33	03/11/22 18:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*66*		*12 - 147*	*03/04/22 15:33*	*03/11/22 18:38*	*1*
Nitrobenzene-d5 (Surr)	*74*		*10 - 143*	*03/04/22 15:33*	*03/11/22 18:38*	*1*
p-Terphenyl-d14 (Surr)	*102*		*10 - 145*	*03/04/22 15:33*	*03/11/22 18:38*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.24		mg/Kg	☼	03/02/22 01:40	03/09/22 18:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*50 - 150*	*03/02/22 01:40*	*03/09/22 18:40*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	ND		6.3		mg/Kg	☼	03/11/22 15:47	03/12/22 06:34	1
TPH as Motor Oil Range	**7.9**		6.3		mg/Kg	☼	03/11/22 15:47	03/12/22 06:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*100*		*50 - 150*	*03/11/22 15:47*	*03/12/22 06:34*	*1*

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**21.6**		0.1		%			03/02/22 11:20	1
Percent Solids	**78.4**		0.1		%			03/02/22 11:20	1

Client Sample ID: TS5

Date Collected: 02/26/22 14:25
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-5
Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00099		mg/Kg	☼	03/02/22 01:40	03/03/22 17:33	1

Client Sample ID: TS5
Date Collected: 02/26/22 14:25
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-5
Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		0.00099		mg/Kg	☼	03/02/22 01:40	03/03/22 17:33	1
Toluene	ND		0.00099		mg/Kg	☼	03/02/22 01:40	03/03/22 17:33	1
m,p-Xylene	ND		0.0020		mg/Kg	☼	03/02/22 01:40	03/03/22 17:33	1
o-Xylene	ND		0.00099		mg/Kg	☼	03/02/22 01:40	03/03/22 17:33	1
Xylenes, Total	ND		0.0020		mg/Kg	☼	03/02/22 01:40	03/03/22 17:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 142*	*03/02/22 01:40*	*03/03/22 17:33*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*	*03/02/22 01:40*	*03/03/22 17:33*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 123*	*03/02/22 01:40*	*03/03/22 17:33*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*	*03/02/22 01:40*	*03/03/22 17:33*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**0.033**		0.0062		mg/Kg	☼	03/04/22 15:33	03/11/22 18:58	1
Acenaphthylene	ND		0.0062		mg/Kg	☼	03/04/22 15:33	03/11/22 18:58	1
Anthracene	**0.0075**		0.0062		mg/Kg	☼	03/04/22 15:33	03/11/22 18:58	1
Benzo[a]anthracene	ND		0.0062		mg/Kg	☼	03/04/22 15:33	03/11/22 18:58	1
Benzo[a]pyrene	ND		0.0062		mg/Kg	☼	03/04/22 15:33	03/11/22 18:58	1
Benzo[b]fluoranthene	ND		0.0062		mg/Kg	☼	03/04/22 15:33	03/11/22 18:58	1
Benzo[g,h,i]perylene	ND		0.0062		mg/Kg	☼	03/04/22 15:33	03/11/22 18:58	1
Benzo[k]fluoranthene	ND		0.0062		mg/Kg	☼	03/04/22 15:33	03/11/22 18:58	1
Chrysene	ND		0.0062		mg/Kg	☼	03/04/22 15:33	03/11/22 18:58	1
Dibenz(a,h)anthracene	ND		0.0062		mg/Kg	☼	03/04/22 15:33	03/11/22 18:58	1
Fluoranthene	**0.026**		0.0062		mg/Kg	☼	03/04/22 15:33	03/11/22 18:58	1
Fluorene	**0.011**		0.0062		mg/Kg	☼	03/04/22 15:33	03/11/22 18:58	1
Indeno[1,2,3-cd]pyrene	ND		0.0062		mg/Kg	☼	03/04/22 15:33	03/11/22 18:58	1
1-Methylnaphthalene	**0.0063**		0.0062		mg/Kg	☼	03/04/22 15:33	03/11/22 18:58	1
2-Methylnaphthalene	**0.0068**		0.0062		mg/Kg	☼	03/04/22 15:33	03/11/22 18:58	1
Naphthalene	**0.017**		0.0062		mg/Kg	☼	03/04/22 15:33	03/11/22 18:58	1
Phenanthrene	**0.0081**		0.0062		mg/Kg	☼	03/04/22 15:33	03/11/22 18:58	1
Pyrene	**0.024**		0.0062		mg/Kg	☼	03/04/22 15:33	03/11/22 18:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*88*		*12 - 147*	*03/04/22 15:33*	*03/11/22 18:58*	*1*
Nitrobenzene-d5 (Surr)	*89*		*10 - 143*	*03/04/22 15:33*	*03/11/22 18:58*	*1*
p-Terphenyl-d14 (Surr)	*102*		*10 - 145*	*03/04/22 15:33*	*03/11/22 18:58*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	**1.7**		0.24		mg/Kg	☼	03/02/22 01:40	03/09/22 19:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*132*		*50 - 150*	*03/02/22 01:40*	*03/09/22 19:04*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	ND		6.1		mg/Kg	☼	03/11/22 15:47	03/12/22 06:58	1
TPH as Motor Oil Range	ND		6.1		mg/Kg	☼	03/11/22 15:47	03/12/22 06:58	1

Client Sample ID: TS5

Date Collected: 02/26/22 14:25
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-5

Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*101*		*50 - 150*	*03/11/22 15:47*	*03/12/22 06:58*	*1*

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**18.8**		0.1		%			03/02/22 11:20	1
Percent Solids	**81.2**		0.1		%			03/02/22 11:20	1

Client Sample ID: TS6

Date Collected: 02/27/22 08:25
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-6

Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0010		mg/Kg	☼	03/02/22 01:40	03/03/22 17:59	1
Ethylbenzene	ND		0.0010		mg/Kg	☼	03/02/22 01:40	03/03/22 17:59	1
Toluene	ND		0.0010		mg/Kg	☼	03/02/22 01:40	03/03/22 17:59	1
m,p-Xylene	ND		0.0021		mg/Kg	☼	03/02/22 01:40	03/03/22 17:59	1
o-Xylene	ND		0.0010		mg/Kg	☼	03/02/22 01:40	03/03/22 17:59	1
Xylenes, Total	ND		0.0021		mg/Kg	☼	03/02/22 01:40	03/03/22 17:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*117*		*80 - 142*	*03/02/22 01:40*	*03/03/22 17:59*	*1*
4-Bromofluorobenzene (Surr)	*137*	*S1+*	*80 - 120*	*03/02/22 01:40*	*03/03/22 17:59*	*1*
Dibromofluoromethane (Surr)	*121*		*80 - 123*	*03/02/22 01:40*	*03/03/22 17:59*	*1*
Toluene-d8 (Surr)	*118*		*80 - 120*	*03/02/22 01:40*	*03/03/22 17:59*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**0.19**		0.0058		mg/Kg	☼	03/04/22 15:33	03/11/22 19:17	1
Acenaphthylene	ND		0.0058		mg/Kg	☼	03/04/22 15:33	03/11/22 19:17	1
Anthracene	**0.18**		0.0058		mg/Kg	☼	03/04/22 15:33	03/11/22 19:17	1
Benzo[a]anthracene	**0.035**		0.0058		mg/Kg	☼	03/04/22 15:33	03/11/22 19:17	1
Benzo[a]pyrene	**0.020**		0.0058		mg/Kg	☼	03/04/22 15:33	03/11/22 19:17	1
Benzo[b]fluoranthene	**0.014**		0.0058		mg/Kg	☼	03/04/22 15:33	03/11/22 19:17	1
Benzo[g,h,i]perylene	**0.012**		0.0058		mg/Kg	☼	03/04/22 15:33	03/11/22 19:17	1
Benzo[k]fluoranthene	**0.011**		0.0058		mg/Kg	☼	03/04/22 15:33	03/11/22 19:17	1
Chrysene	**0.063**		0.0058		mg/Kg	☼	03/04/22 15:33	03/11/22 19:17	1
Dibenz(a,h)anthracene	ND		0.0058		mg/Kg	☼	03/04/22 15:33	03/11/22 19:17	1
Fluoranthene	**0.056**		0.0058		mg/Kg	☼	03/04/22 15:33	03/11/22 19:17	1
Fluorene	**0.20**		0.0058		mg/Kg	☼	03/04/22 15:33	03/11/22 19:17	1
Indeno[1,2,3-cd]pyrene	**0.0087**		0.0058		mg/Kg	☼	03/04/22 15:33	03/11/22 19:17	1
1-Methylnaphthalene	**0.58**		0.0058		mg/Kg	☼	03/04/22 15:33	03/11/22 19:17	1
2-Methylnaphthalene	ND		0.0058		mg/Kg	☼	03/04/22 15:33	03/11/22 19:17	1
Naphthalene	**0.11**		0.0058		mg/Kg	☼	03/04/22 15:33	03/11/22 19:17	1
Phenanthrene	**0.19**		0.0058		mg/Kg	☼	03/04/22 15:33	03/11/22 19:17	1
Pyrene	**0.14**		0.0058		mg/Kg	☼	03/04/22 15:33	03/11/22 19:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*76*		*12 - 147*	*03/04/22 15:33*	*03/11/22 19:17*	*1*
Nitrobenzene-d5 (Surr)	*199*	*S1+*	*10 - 143*	*03/04/22 15:33*	*03/11/22 19:17*	*1*
p-Terphenyl-d14 (Surr)	*107*		*10 - 145*	*03/04/22 15:33*	*03/11/22 19:17*	*1*

Client Sample ID: TS6

Date Collected: 02/27/22 08:25
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-6
Matrix: Solid

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	960		180		mg/Kg	☼	03/02/22 01:41	03/11/22 17:20	500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*55*		*50 - 150*	*03/02/22 01:41*	*03/11/22 17:20*	*500*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup - DL

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	3500		58		mg/Kg	☼	03/11/22 15:47	03/13/22 04:24	10
TPH as Motor Oil Range	240		58		mg/Kg	☼	03/11/22 15:47	03/13/22 04:24	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*86*		*50 - 150*	*03/11/22 15:47*	*03/13/22 04:24*	*10*

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	14.3		0.1		%			03/02/22 11:20	1
Percent Solids	85.7		0.1		%			03/02/22 11:20	1

Client Sample ID: TS7

Date Collected: 02/27/22 10:00
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-7
Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.063		mg/Kg	☼	03/02/22 01:41	03/03/22 18:49	50
Ethylbenzene	ND		0.063		mg/Kg	☼	03/02/22 01:41	03/03/22 18:49	50
Toluene	0.070		0.063		mg/Kg	☼	03/02/22 01:41	03/03/22 18:49	50
m,p-Xylene	ND		0.13		mg/Kg	☼	03/02/22 01:41	03/03/22 18:49	50
o-Xylene	ND		0.063		mg/Kg	☼	03/02/22 01:41	03/03/22 18:49	50
Xylenes, Total	ND		0.13		mg/Kg	☼	03/02/22 01:41	03/03/22 18:49	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*80 - 142*	*03/02/22 01:41*	*03/03/22 18:49*	*50*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*	*03/02/22 01:41*	*03/03/22 18:49*	*50*
Dibromofluoromethane (Surr)	*94*		*80 - 123*	*03/02/22 01:41*	*03/03/22 18:49*	*50*
Toluene-d8 (Surr)	*118*		*80 - 120*	*03/02/22 01:41*	*03/03/22 18:49*	*50*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.39		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 19:37	1
Acenaphthylene	ND		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 19:37	1
Anthracene	0.28		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 19:37	1
Benzo[a]anthracene	0.13		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 19:37	1
Benzo[a]pyrene	0.14		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 19:37	1
Benzo[b]fluoranthene	0.088		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 19:37	1
Benzo[g,h,i]perylene	0.084		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 19:37	1
Benzo[k]fluoranthene	0.078		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 19:37	1
Chrysene	0.20		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 19:37	1
Dibenz(a,h)anthracene	0.017		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 19:37	1
Fluoranthene	0.32		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 19:37	1
Indeno[1,2,3-cd]pyrene	0.073		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 19:37	1

Client Sample ID: TS7

Date Collected: 02/27/22 10:00
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-7
Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 19:37	1
2-Methylnaphthalene	ND		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 19:37	1
Naphthalene	**0.13**		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 19:37	1
Phenanthrene	**0.44**		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 19:37	1
Pyrene	**0.46**		0.0053		mg/Kg	☼	03/04/22 15:33	03/11/22 19:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*62*		*12 - 147*	*03/04/22 15:33*	*03/11/22 19:37*	*1*
Nitrobenzene-d5 (Surr)	*108*		*10 - 143*	*03/04/22 15:33*	*03/11/22 19:37*	*1*
p-Terphenyl-d14 (Surr)	*107*		*10 - 145*	*03/04/22 15:33*	*03/11/22 19:37*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) - DL

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	**1.1**		0.027		mg/Kg	☼	03/04/22 15:33	03/16/22 13:37	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*77*		*12 - 147*	*03/04/22 15:33*	*03/16/22 13:37*	*5*
Nitrobenzene-d5 (Surr)	*150*	*S1+*	*10 - 143*	*03/04/22 15:33*	*03/16/22 13:37*	*5*
p-Terphenyl-d14 (Surr)	*89*		*10 - 145*	*03/04/22 15:33*	*03/16/22 13:37*	*5*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	**970**		160		mg/Kg	☼	03/02/22 01:41	03/11/22 16:56	500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*70*		*50 - 150*	*03/02/22 01:41*	*03/11/22 16:56*	*500*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup - DL

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	**5400**		52		mg/Kg	☼	03/11/22 15:47	03/13/22 04:49	10
TPH as Motor Oil Range	**530**		52		mg/Kg	☼	03/11/22 15:47	03/13/22 04:49	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*91*		*50 - 150*	*03/11/22 15:47*	*03/13/22 04:49*	*10*

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**5.4**		0.1		%			03/02/22 11:20	1
Percent Solids	**94.6**		0.1		%			03/02/22 11:20	1

Client Sample ID: TS8

Date Collected: 02/27/22 11:35
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-8
Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0011		mg/Kg	☼	03/02/22 01:44	03/03/22 16:16	1
Ethylbenzene	ND		0.0011		mg/Kg	☼	03/02/22 01:44	03/03/22 16:16	1
Toluene	**0.0012**		0.0011		mg/Kg	☼	03/02/22 01:44	03/03/22 16:16	1
m,p-Xylene	ND		0.0022		mg/Kg	☼	03/02/22 01:44	03/03/22 16:16	1
o-Xylene	ND		0.0011		mg/Kg	☼	03/02/22 01:44	03/03/22 16:16	1
Xylenes, Total	ND		0.0022		mg/Kg	☼	03/02/22 01:44	03/03/22 16:16	1

Client Sample ID: TS8
Date Collected: 02/27/22 11:35
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-8
Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 142*	*03/02/22 01:44*	*03/03/22 16:16*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*	*03/02/22 01:44*	*03/03/22 16:16*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 123*	*03/02/22 01:44*	*03/03/22 16:16*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*	*03/02/22 01:44*	*03/03/22 16:16*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0052	mg/Kg	☼	03/04/22 15:33	03/11/22 19:56	1
Acenaphthylene	ND		0.0052	mg/Kg	☼	03/04/22 15:33	03/11/22 19:56	1
Anthracene	**0.0053**	**F2**	0.0052	mg/Kg	☼	03/04/22 15:33	03/11/22 19:56	1
Benzo[a]anthracene	**0.012**	**F2**	0.0052	mg/Kg	☼	03/04/22 15:33	03/11/22 19:56	1
Benzo[a]pyrene	**0.017**		0.0052	mg/Kg	☼	03/04/22 15:33	03/11/22 19:56	1
Benzo[b]fluoranthene	**0.013**		0.0052	mg/Kg	☼	03/04/22 15:33	03/11/22 19:56	1
Benzo[g,h,i]perylene	**0.017**	**F2**	0.0052	mg/Kg	☼	03/04/22 15:33	03/11/22 19:56	1
Benzo[k]fluoranthene	**0.011**	**F2**	0.0052	mg/Kg	☼	03/04/22 15:33	03/11/22 19:56	1
Chrysene	**0.013**	**F2**	0.0052	mg/Kg	☼	03/04/22 15:33	03/11/22 19:56	1
Dibenz(a,h)anthracene	ND	F2	0.0052	mg/Kg	☼	03/04/22 15:33	03/11/22 19:56	1
Fluoranthene	**0.017**	**F2**	0.0052	mg/Kg	☼	03/04/22 15:33	03/11/22 19:56	1
Fluorene	ND		0.0052	mg/Kg	☼	03/04/22 15:33	03/11/22 19:56	1
Indeno[1,2,3-cd]pyrene	**0.013**		0.0052	mg/Kg	☼	03/04/22 15:33	03/11/22 19:56	1
1-Methylnaphthalene	ND		0.0052	mg/Kg	☼	03/04/22 15:33	03/11/22 19:56	1
2-Methylnaphthalene	ND		0.0052	mg/Kg	☼	03/04/22 15:33	03/11/22 19:56	1
Naphthalene	ND		0.0052	mg/Kg	☼	03/04/22 15:33	03/11/22 19:56	1
Phenanthrene	**0.0084**		0.0052	mg/Kg	☼	03/04/22 15:33	03/11/22 19:56	1
Pyrene	**0.021**	**F2**	0.0052	mg/Kg	☼	03/04/22 15:33	03/11/22 19:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*63*		*12 - 147*	*03/04/22 15:33*	*03/11/22 19:56*	*1*
Nitrobenzene-d5 (Surr)	*72*		*10 - 143*	*03/04/22 15:33*	*03/11/22 19:56*	*1*
p-Terphenyl-d14 (Surr)	*69*		*10 - 145*	*03/04/22 15:33*	*03/11/22 19:56*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.27	mg/Kg	☼	03/02/22 01:44	03/11/22 16:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*48*	*S1-*	*50 - 150*	*03/02/22 01:44*	*03/11/22 16:33*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	ND		5.0	mg/Kg	☼	03/11/22 15:47	03/12/22 08:12	1
TPH as Motor Oil Range	**11**		5.0	mg/Kg	☼	03/11/22 15:47	03/12/22 08:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*102*		*50 - 150*	*03/11/22 15:47*	*03/12/22 08:12*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**4.1**		0.1	%			03/02/22 11:20	1
Percent Solids	**95.9**		0.1	%			03/02/22 11:20	1

Client: Cardno, Inc
Project/Site: MobilADC/031447

Job ID: 570-86223-1

Client Sample ID: TS9
Date Collected: 02/27/22 12:20
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-9
Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0010		mg/Kg	☼	03/02/22 01:44	03/03/22 16:41	1
Ethylbenzene	ND		0.0010		mg/Kg	☼	03/02/22 01:44	03/03/22 16:41	1
Toluene	ND		0.0010		mg/Kg	☼	03/02/22 01:44	03/03/22 16:41	1
m,p-Xylene	ND		0.0020		mg/Kg	☼	03/02/22 01:44	03/03/22 16:41	1
o-Xylene	ND		0.0010		mg/Kg	☼	03/02/22 01:44	03/03/22 16:41	1
Xylenes, Total	ND		0.0020		mg/Kg	☼	03/02/22 01:44	03/03/22 16:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*80 - 142*	*03/02/22 01:44*	*03/03/22 16:41*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*	*03/02/22 01:44*	*03/03/22 16:41*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 123*	*03/02/22 01:44*	*03/03/22 16:41*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*	*03/02/22 01:44*	*03/03/22 16:41*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0052		mg/Kg	☼	03/04/22 15:33	03/11/22 20:15	1
Acenaphthylene	ND		0.0052		mg/Kg	☼	03/04/22 15:33	03/11/22 20:15	1
Anthracene	ND		0.0052		mg/Kg	☼	03/04/22 15:33	03/11/22 20:15	1
Benzo[a]anthracene	ND		0.0052		mg/Kg	☼	03/04/22 15:33	03/11/22 20:15	1
Benzo[a]pyrene	ND		0.0052		mg/Kg	☼	03/04/22 15:33	03/11/22 20:15	1
Benzo[b]fluoranthene	ND		0.0052		mg/Kg	☼	03/04/22 15:33	03/11/22 20:15	1
Benzo[g,h,i]perylene	ND		0.0052		mg/Kg	☼	03/04/22 15:33	03/11/22 20:15	1
Benzo[k]fluoranthene	ND		0.0052		mg/Kg	☼	03/04/22 15:33	03/11/22 20:15	1
Chrysene	ND		0.0052		mg/Kg	☼	03/04/22 15:33	03/11/22 20:15	1
Dibenz(a,h)anthracene	ND		0.0052		mg/Kg	☼	03/04/22 15:33	03/11/22 20:15	1
Fluoranthene	ND		0.0052		mg/Kg	☼	03/04/22 15:33	03/11/22 20:15	1
Fluorene	ND		0.0052		mg/Kg	☼	03/04/22 15:33	03/11/22 20:15	1
Indeno[1,2,3-cd]pyrene	ND		0.0052		mg/Kg	☼	03/04/22 15:33	03/11/22 20:15	1
1-Methylnaphthalene	ND		0.0052		mg/Kg	☼	03/04/22 15:33	03/11/22 20:15	1
2-Methylnaphthalene	ND		0.0052		mg/Kg	☼	03/04/22 15:33	03/11/22 20:15	1
Naphthalene	ND		0.0052		mg/Kg	☼	03/04/22 15:33	03/11/22 20:15	1
Phenanthrene	ND		0.0052		mg/Kg	☼	03/04/22 15:33	03/11/22 20:15	1
Pyrene	ND		0.0052		mg/Kg	☼	03/04/22 15:33	03/11/22 20:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*76*		*12 - 147*	*03/04/22 15:33*	*03/11/22 20:15*	*1*
Nitrobenzene-d5 (Surr)	*78*		*10 - 143*	*03/04/22 15:33*	*03/11/22 20:15*	*1*
p-Terphenyl-d14 (Surr)	*87*		*10 - 145*	*03/04/22 15:33*	*03/11/22 20:15*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.25		mg/Kg	☼	03/02/22 01:44	03/09/22 20:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*50 - 150*	*03/02/22 01:44*	*03/09/22 20:38*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	ND		5.1		mg/Kg	☼	03/11/22 15:47	03/12/22 08:35	1
TPH as Motor Oil Range	ND		5.1		mg/Kg	☼	03/11/22 15:47	03/12/22 08:35	1

Client Sample ID: TS9

Date Collected: 02/27/22 12:20
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-9
Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*103*		*50 - 150*	*03/11/22 15:47*	*03/12/22 08:35*	*1*

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**3.1**		0.1		%			03/02/22 11:20	1
Percent Solids	**96.9**		0.1		%			03/02/22 11:20	1

Client Sample ID: TS10

Date Collected: 02/27/22 13:10
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-10
Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00086		mg/Kg	☼	03/02/22 01:44	03/03/22 17:07	1
Ethylbenzene	ND		0.00086		mg/Kg	☼	03/02/22 01:44	03/03/22 17:07	1
Toluene	ND		0.00086		mg/Kg	☼	03/02/22 01:44	03/03/22 17:07	1
m,p-Xylene	ND		0.0017		mg/Kg	☼	03/02/22 01:44	03/03/22 17:07	1
o-Xylene	ND		0.00086		mg/Kg	☼	03/02/22 01:44	03/03/22 17:07	1
Xylenes, Total	ND		0.0017		mg/Kg	☼	03/02/22 01:44	03/03/22 17:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 142*	*03/02/22 01:44*	*03/03/22 17:07*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*	*03/02/22 01:44*	*03/03/22 17:07*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 123*	*03/02/22 01:44*	*03/03/22 17:07*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*	*03/02/22 01:44*	*03/03/22 17:07*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0056		mg/Kg	☼	03/04/22 15:33	03/11/22 20:35	1
Acenaphthylene	ND		0.0056		mg/Kg	☼	03/04/22 15:33	03/11/22 20:35	1
Anthracene	ND		0.0056		mg/Kg	☼	03/04/22 15:33	03/11/22 20:35	1
Benzo[a]anthracene	ND		0.0056		mg/Kg	☼	03/04/22 15:33	03/11/22 20:35	1
Benzo[a]pyrene	ND		0.0056		mg/Kg	☼	03/04/22 15:33	03/11/22 20:35	1
Benzo[b]fluoranthene	ND		0.0056		mg/Kg	☼	03/04/22 15:33	03/11/22 20:35	1
Benzo[g,h,i]perylene	ND		0.0056		mg/Kg	☼	03/04/22 15:33	03/11/22 20:35	1
Benzo[k]fluoranthene	ND		0.0056		mg/Kg	☼	03/04/22 15:33	03/11/22 20:35	1
Chrysene	ND		0.0056		mg/Kg	☼	03/04/22 15:33	03/11/22 20:35	1
Dibenz(a,h)anthracene	ND		0.0056		mg/Kg	☼	03/04/22 15:33	03/11/22 20:35	1
Fluoranthene	ND		0.0056		mg/Kg	☼	03/04/22 15:33	03/11/22 20:35	1
Fluorene	ND		0.0056		mg/Kg	☼	03/04/22 15:33	03/11/22 20:35	1
Indeno[1,2,3-cd]pyrene	ND		0.0056		mg/Kg	☼	03/04/22 15:33	03/11/22 20:35	1
1-Methylnaphthalene	ND		0.0056		mg/Kg	☼	03/04/22 15:33	03/11/22 20:35	1
2-Methylnaphthalene	ND		0.0056		mg/Kg	☼	03/04/22 15:33	03/11/22 20:35	1
Naphthalene	ND		0.0056		mg/Kg	☼	03/04/22 15:33	03/11/22 20:35	1
Phenanthrene	ND		0.0056		mg/Kg	☼	03/04/22 15:33	03/11/22 20:35	1
Pyrene	ND		0.0056		mg/Kg	☼	03/04/22 15:33	03/11/22 20:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*91*		*12 - 147*	*03/04/22 15:33*	*03/11/22 20:35*	*1*
Nitrobenzene-d5 (Surr)	*93*		*10 - 143*	*03/04/22 15:33*	*03/11/22 20:35*	*1*
p-Terphenyl-d14 (Surr)	*93*		*10 - 145*	*03/04/22 15:33*	*03/11/22 20:35*	*1*

Client: Cardno, Inc
Project/Site: MobilADC/031447

Job ID: 570-86223-1

Client Sample ID: TS10

Date Collected: 02/27/22 13:10
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-10

Matrix: Solid

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.21		mg/Kg	☼	03/02/22 01:44	03/09/22 21:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*50 - 150*	*03/02/22 01:44*	*03/09/22 21:02*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	ND		5.4		mg/Kg	☼	03/11/22 15:47	03/12/22 08:58	1
TPH as Motor Oil Range	ND		5.4		mg/Kg	☼	03/11/22 15:47	03/12/22 08:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*100*		*50 - 150*	*03/11/22 15:47*	*03/12/22 08:58*	*1*

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**10.5**		0.1		%			03/02/22 11:20	1
Percent Solids	**89.5**		0.1		%			03/02/22 11:20	1

Surrogate Summary

Client: Cardno, Inc
Project/Site: MobilADC/031447

Job ID: 570-86223-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-142)	(80-120)	(80-123)	(80-120)
570-86223-1	TS1	103	106	95	108
570-86223-2	TS2	111	101	105	105
570-86223-3	TS3	109	100	103	103
570-86223-4	TS4	92	99	96	106
570-86223-5	TS5	105	99	99	104
570-86223-6	TS6	117	137 S1+	121	118
570-86223-7	TS7	90	100	94	118
570-86223-8	TS8	109	102	104	103
570-86223-9	TS9	111	102	103	105
570-86223-10	TS10	109	104	102	106
LCS 570-216777/4	Lab Control Sample	98	98	99	98
LCS 570-217108/4	Lab Control Sample	99	101	99	99
LCSD 570-216777/5	Lab Control Sample Dup	98	100	99	99
LCSD 570-217108/5	Lab Control Sample Dup	96	100	97	99
MB 570-216777/10	Method Blank	94	102	97	105
MB 570-216777/9	Method Blank	99	102	98	105
MB 570-217108/10	Method Blank	92	100	92	105

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHd14
Lab Sample ID	Client Sample ID	(12-147)	(10-143)	(10-145)
570-86223-1	TS1	75	88	77
570-86223-2	TS2	73	69	84
570-86223-3	TS3	80	71	105
570-86223-4	TS4	66	74	102
570-86223-5	TS5	88	89	102
570-86223-6	TS6	76	199 S1+	107
570-86223-7	TS7	62	108	107
570-86223-7 - DL	TS7	77	150 S1+	89
570-86223-8	TS8	63	72	69
570-86223-8 MS	TS8	67	78	88
570-86223-8 MSD	TS8	61	79	56
570-86223-9	TS9	76	78	87
570-86223-10	TS10	91	93	93
LCS 570-217287/2-A	Lab Control Sample	105	107	125
LCSD 570-217287/3-A	Lab Control Sample Dup	93	95	129
MB 570-217287/1-A	Method Blank	104	106	118

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)

Surrogate Summary

Client: Cardno, Inc
Project/Site: MobilADC/031447

Job ID: 570-86223-1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	BFB1 (50-150)
570-86223-1	TS1	72
570-86223-2	TS2	86
570-86223-3	TS3	82
570-86223-4	TS4	84
570-86223-5	TS5	132
570-86223-6	TS6	55
570-86223-7	TS7	70
570-86223-8	TS8	48 S1-
570-86223-9	TS9	87
570-86223-10	TS10	86
LCS 570-218188/3	Lab Control Sample	98
LCS 570-218779/3	Lab Control Sample	100
LCSD 570-218188/4	Lab Control Sample Dup	112
LCSD 570-218779/4	Lab Control Sample Dup	102
MB 570-218188/5	Method Blank	72
MB 570-218779/5	Method Blank	70
MB 570-218779/6	Method Blank	52

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Matrix: Solid **Prep Type: Silica Gel Cleanup**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	OTCSN (50-150)
570-86223-1	TS1	102
570-86223-2	TS2	100
570-86223-3	TS3	95
570-86223-4	TS4	100
570-86223-5	TS5	101
570-86223-6 - DL	TS6	86
570-86223-6 MS	TS6	99
570-86223-6 MS	TS6	99
570-86223-6 MSD	TS6	102
570-86223-6 MSD	TS6	100
570-86223-7 - DL	TS7	91
570-86223-8	TS8	102
570-86223-9	TS9	103
570-86223-10	TS10	100
LCS 570-218956/2-A	Lab Control Sample	103
LCS 570-218956/6-A	Lab Control Sample	101
LCSD 570-218956/3-A	Lab Control Sample Dup	99
LCSD 570-218956/7-A	Lab Control Sample Dup	103
MB 570-218956/1-A	Method Blank	101

Surrogate Legend

OTCSN = n-Octacosane (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 570-216777/10
Matrix: Solid
Analysis Batch: 216777

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.050		mg/Kg			03/03/22 12:52	50
Ethylbenzene	ND		0.050		mg/Kg			03/03/22 12:52	50
Toluene	ND		0.050		mg/Kg			03/03/22 12:52	50
m,p-Xylene	ND		0.10		mg/Kg			03/03/22 12:52	50
o-Xylene	ND		0.050		mg/Kg			03/03/22 12:52	50
Xylenes, Total	ND		0.10		mg/Kg			03/03/22 12:52	50

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*80 - 142*		*03/03/22 12:52*	*50*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*03/03/22 12:52*	*50*
Dibromofluoromethane (Surr)	*97*		*80 - 123*		*03/03/22 12:52*	*50*
Toluene-d8 (Surr)	*105*		*80 - 120*		*03/03/22 12:52*	*50*

Lab Sample ID: MB 570-216777/9
Matrix: Solid
Analysis Batch: 216777

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0010		mg/Kg			03/03/22 12:26	1
Ethylbenzene	ND		0.0010		mg/Kg			03/03/22 12:26	1
Toluene	ND		0.0010		mg/Kg			03/03/22 12:26	1
m,p-Xylene	ND		0.0020		mg/Kg			03/03/22 12:26	1
o-Xylene	ND		0.0010		mg/Kg			03/03/22 12:26	1
Xylenes, Total	ND		0.0020		mg/Kg			03/03/22 12:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 142*		*03/03/22 12:26*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*03/03/22 12:26*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 123*		*03/03/22 12:26*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*03/03/22 12:26*	*1*

Lab Sample ID: LCS 570-216777/4
Matrix: Solid
Analysis Batch: 216777

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.05201		mg/Kg		104	79 - 120		
Ethylbenzene			0.0500	0.05074		mg/Kg		101	80 - 120		
Toluene			0.0500	0.05057		mg/Kg		101	80 - 120		
m,p-Xylene			0.100	0.09929		mg/Kg		99	79 - 120		
o-Xylene			0.0500	0.05096		mg/Kg		102	79 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 142*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 123*
Toluene-d8 (Surr)	*98*		*80 - 120*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 570-216777/5
Matrix: Solid
Analysis Batch: 216777

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.05232		mg/Kg		105	79 - 120	1	20
Ethylbenzene			0.0500	0.05107		mg/Kg		102	80 - 120	1	20
Toluene			0.0500	0.05110		mg/Kg		102	80 - 120	1	20
m,p-Xylene			0.100	0.1016		mg/Kg		102	79 - 120	2	20
o-Xylene			0.0500	0.05123		mg/Kg		102	79 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 142*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 123*
Toluene-d8 (Surr)	*99*		*80 - 120*

Lab Sample ID: MB 570-217108/10
Matrix: Solid
Analysis Batch: 217108

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0010		mg/Kg			03/04/22 11:20	1
Ethylbenzene	ND		0.0010		mg/Kg			03/04/22 11:20	1
Toluene	ND		0.0010		mg/Kg			03/04/22 11:20	1
m,p-Xylene	ND		0.0020		mg/Kg			03/04/22 11:20	1
o-Xylene	ND		0.0010		mg/Kg			03/04/22 11:20	1
Xylenes, Total	ND		0.0020		mg/Kg			03/04/22 11:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*80 - 142*		*03/04/22 11:20*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*03/04/22 11:20*	*1*
Dibromofluoromethane (Surr)	*92*		*80 - 123*		*03/04/22 11:20*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*03/04/22 11:20*	*1*

Lab Sample ID: LCS 570-217108/4
Matrix: Solid
Analysis Batch: 217108

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene			0.0500	0.05055		mg/Kg		101	79 - 120
Ethylbenzene			0.0500	0.04953		mg/Kg		99	80 - 120
Toluene			0.0500	0.04986		mg/Kg		100	80 - 120
m,p-Xylene			0.100	0.09943		mg/Kg		99	79 - 120
o-Xylene			0.0500	0.05063		mg/Kg		101	79 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 142*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 123*
Toluene-d8 (Surr)	*99*		*80 - 120*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 570-217108/5
Matrix: Solid
Analysis Batch: 217108

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.04945		mg/Kg		99	79 - 120	2	20
Ethylbenzene			0.0500	0.04884		mg/Kg		98	80 - 120	1	20
Toluene			0.0500	0.04839		mg/Kg		97	80 - 120	3	20
m,p-Xylene			0.100	0.09728		mg/Kg		97	79 - 120	2	20
o-Xylene			0.0500	0.04984		mg/Kg		100	79 - 120	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*80 - 142*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*80 - 123*
Toluene-d8 (Surr)	*99*		*80 - 120*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Lab Sample ID: MB 570-217287/1-A
Matrix: Solid
Analysis Batch: 218952

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 217287

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		03/04/22 15:33	03/11/22 16:03	1
Acenaphthylene	ND		0.0050		mg/Kg		03/04/22 15:33	03/11/22 16:03	1
Anthracene	ND		0.0050		mg/Kg		03/04/22 15:33	03/11/22 16:03	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		03/04/22 15:33	03/11/22 16:03	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		03/04/22 15:33	03/11/22 16:03	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		03/04/22 15:33	03/11/22 16:03	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		03/04/22 15:33	03/11/22 16:03	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		03/04/22 15:33	03/11/22 16:03	1
Chrysene	ND		0.0050		mg/Kg		03/04/22 15:33	03/11/22 16:03	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		03/04/22 15:33	03/11/22 16:03	1
Fluoranthene	ND		0.0050		mg/Kg		03/04/22 15:33	03/11/22 16:03	1
Fluorene	ND		0.0050		mg/Kg		03/04/22 15:33	03/11/22 16:03	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		03/04/22 15:33	03/11/22 16:03	1
1-Methylnaphthalene	ND		0.0050		mg/Kg		03/04/22 15:33	03/11/22 16:03	1
2-Methylnaphthalene	ND		0.0050		mg/Kg		03/04/22 15:33	03/11/22 16:03	1
Naphthalene	ND		0.0050		mg/Kg		03/04/22 15:33	03/11/22 16:03	1
Phenanthrene	ND		0.0050		mg/Kg		03/04/22 15:33	03/11/22 16:03	1
Pyrene	ND		0.0050		mg/Kg		03/04/22 15:33	03/11/22 16:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*104*		*12 - 147*	*03/04/22 15:33*	*03/11/22 16:03*	*1*
Nitrobenzene-d5 (Surr)	*106*		*10 - 143*	*03/04/22 15:33*	*03/11/22 16:03*	*1*
p-Terphenyl-d14 (Surr)	*118*		*10 - 145*	*03/04/22 15:33*	*03/11/22 16:03*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCS 570-217287/2-A
Matrix: Solid
Analysis Batch: 218952

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217287

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Acenaphthene			0.0500	0.05681		mg/Kg		114	45 - 134		
Acenaphthylene			0.0500	0.06219		mg/Kg		124	45 - 147		
Anthracene			0.0500	0.05517		mg/Kg		110	45 - 139		
Benzo[a]anthracene			0.0500	0.06747		mg/Kg		135	51 - 136		
Benzo[a]pyrene			0.0500	0.06222		mg/Kg		124	44 - 145		
Benzo[b]fluoranthene			0.0500	0.06377		mg/Kg		128	41 - 156		
Benzo[g,h,i]perylene			0.0500	0.06699		mg/Kg		134	41 - 154		
Benzo[k]fluoranthene			0.0500	0.06345		mg/Kg		127	50 - 145		
Chrysene			0.0500	0.06199		mg/Kg		124	48 - 134		
Dibenz(a,h)anthracene			0.0500	0.06763		mg/Kg		135	45 - 153		
Fluoranthene			0.0500	0.06137		mg/Kg		123	45 - 137		
Fluorene			0.0500	0.06041		mg/Kg		121	49 - 134		
Indeno[1,2,3-cd]pyrene			0.0500	0.06703		mg/Kg		134	41 - 152		
1-Methylnaphthalene			0.0500	0.05851		mg/Kg		117	52 - 138		
2-Methylnaphthalene			0.0500	0.05527		mg/Kg		111	43 - 151		
Naphthalene			0.0500	0.05558		mg/Kg		111	45 - 135		
Phenanthrene			0.0500	0.05886		mg/Kg		118	45 - 133		
Pyrene			0.0500	0.06448		mg/Kg		129	47 - 138		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*105*		*12 - 147*
Nitrobenzene-d5 (Surr)	*107*		*10 - 143*
p-Terphenyl-d14 (Surr)	*125*		*10 - 145*

Lab Sample ID: LCSD 570-217287/3-A
Matrix: Solid
Analysis Batch: 218952

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 217287

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene			0.0500	0.05367		mg/Kg		107	45 - 134	6	25
Acenaphthylene			0.0500	0.05852		mg/Kg		117	45 - 147	6	28
Anthracene			0.0500	0.05893		mg/Kg		118	45 - 139	7	24
Benzo[a]anthracene			0.0500	0.06806		mg/Kg		136	51 - 136	1	24
Benzo[a]pyrene			0.0500	0.06636		mg/Kg		133	44 - 145	6	25
Benzo[b]fluoranthene			0.0500	0.06735		mg/Kg		135	41 - 156	5	25
Benzo[g,h,i]perylene			0.0500	0.06726		mg/Kg		135	41 - 154	0	30
Benzo[k]fluoranthene			0.0500	0.06378		mg/Kg		128	50 - 145	1	25
Chrysene			0.0500	0.06311		mg/Kg		126	48 - 134	2	22
Dibenz(a,h)anthracene			0.0500	0.06620		mg/Kg		132	45 - 153	2	26
Fluoranthene			0.0500	0.06549		mg/Kg		131	45 - 137	6	24
Fluorene			0.0500	0.06101		mg/Kg		122	49 - 134	1	27
Indeno[1,2,3-cd]pyrene			0.0500	0.06685		mg/Kg		134	41 - 152	0	27
1-Methylnaphthalene			0.0500	0.05283		mg/Kg		106	52 - 138	10	26
2-Methylnaphthalene			0.0500	0.05098		mg/Kg		102	43 - 151	8	27
Naphthalene			0.0500	0.05055		mg/Kg		101	45 - 135	9	26
Phenanthrene			0.0500	0.06196		mg/Kg		124	45 - 133	5	27
Pyrene			0.0500	0.06599		mg/Kg		132	47 - 138	2	27

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCSD 570-217287/3-A
Matrix: Solid
Analysis Batch: 218952

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 217287

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	93		12 - 147
Nitrobenzene-d5 (Surr)	95		10 - 143
p-Terphenyl-d14 (Surr)	129		10 - 145

Lab Sample ID: 570-86223-8 MS
Matrix: Solid
Analysis Batch: 218952

Client Sample ID: TS8
Prep Type: Total/NA
Prep Batch: 217287

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	ND		0.0522	0.04432		mg/Kg	☼	85	10 - 175
Acenaphthylene	ND		0.0522	0.05244		mg/Kg	☼	91	10 - 180
Anthracene	0.0053	F2	0.0522	0.04916		mg/Kg	☼	84	10 - 158
Benzo[a]anthracene	0.012	F2	0.0522	0.06409		mg/Kg	☼	99	10 - 180
Benzo[a]pyrene	0.017		0.0522	0.07223		mg/Kg	☼	106	10 - 180
Benzo[b]fluoranthene	0.013		0.0522	0.07253		mg/Kg	☼	113	10 - 180
Benzo[g,h,i]perylene	0.017	F2	0.0522	0.08135		mg/Kg	☼	124	10 - 180
Benzo[k]fluoranthene	0.011	F2	0.0522	0.06267		mg/Kg	☼	98	10 - 180
Chrysene	0.013	F2	0.0522	0.06295		mg/Kg	☼	95	10 - 180
Dibenz(a,h)anthracene	ND	F2	0.0522	0.05353		mg/Kg	☼	96	10 - 180
Fluoranthene	0.017	F2	0.0522	0.06696		mg/Kg	☼	96	10 - 180
Fluorene	ND		0.0522	0.04862		mg/Kg	☼	93	10 - 168
Indeno[1,2,3-cd]pyrene	0.013		0.0522	0.07417		mg/Kg	☼	116	10 - 172
1-Methylnaphthalene	ND		0.0522	0.04143		mg/Kg	☼	79	13 - 143
2-Methylnaphthalene	ND		0.0522	0.04018		mg/Kg	☼	77	26 - 144
Naphthalene	ND		0.0522	0.04570		mg/Kg	☼	83	10 - 161
Phenanthrene	0.0084		0.0522	0.05226		mg/Kg	☼	84	10 - 180
Pyrene	0.021	F2	0.0522	0.07429		mg/Kg	☼	102	10 - 180

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Fluorobiphenyl (Surr)	67		12 - 147
Nitrobenzene-d5 (Surr)	78		10 - 143
p-Terphenyl-d14 (Surr)	88		10 - 145

Lab Sample ID: 570-86223-8 MSD
Matrix: Solid
Analysis Batch: 218952

Client Sample ID: TS8
Prep Type: Total/NA
Prep Batch: 217287

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	ND		0.0520	0.03645		mg/Kg	☼	70	10 - 175	19	40
Acenaphthylene	ND		0.0520	0.04309		mg/Kg	☼	74	10 - 180	20	40
Anthracene	0.0053	F2	0.0520	0.03223	F2	mg/Kg	☼	52	10 - 158	42	40
Benzo[a]anthracene	0.012	F2	0.0520	0.04133	F2	mg/Kg	☼	56	10 - 180	43	40
Benzo[a]pyrene	0.017		0.0520	0.05158		mg/Kg	☼	66	10 - 180	33	40
Benzo[b]fluoranthene	0.013		0.0520	0.04999		mg/Kg	☼	70	10 - 180	37	40
Benzo[g,h,i]perylene	0.017	F2	0.0520	0.05221	F2	mg/Kg	☼	68	10 - 180	44	40
Benzo[k]fluoranthene	0.011	F2	0.0520	0.04114	F2	mg/Kg	☼	57	10 - 180	41	40
Chrysene	0.013	F2	0.0520	0.04011	F2	mg/Kg	☼	52	10 - 180	44	40
Dibenz(a,h)anthracene	ND	F2	0.0520	0.03508	F2	mg/Kg	☼	61	10 - 180	42	40

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 570-86223-8 MSD
Matrix: Solid
Analysis Batch: 218952

Client Sample ID: TS8
Prep Type: Total/NA
Prep Batch: 217287

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoranthene	0.017	F2	0.0520	0.04135	F2	mg/Kg	☼	47	10 - 180	47	40
Fluorene	ND		0.0520	0.03681		mg/Kg	☼	71	10 - 168	28	40
Indeno[1,2,3-cd]pyrene	0.013		0.0520	0.04936		mg/Kg	☼	69	10 - 172	40	40
1-Methylnaphthalene	ND		0.0520	0.04394		mg/Kg	☼	84	13 - 143	6	40
2-Methylnaphthalene	ND		0.0520	0.04383		mg/Kg	☼	84	26 - 144	9	40
Naphthalene	ND		0.0520	0.04908		mg/Kg	☼	89	10 - 161	7	40
Phenanthrene	0.0084		0.0520	0.03616		mg/Kg	☼	53	10 - 180	36	40
Pyrene	0.021	F2	0.0520	0.04334	F2	mg/Kg	☼	43	10 - 180	53	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*61*		*12 - 147*
Nitrobenzene-d5 (Surr)	*79*		*10 - 143*
p-Terphenyl-d14 (Surr)	*56*		*10 - 145*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 570-218188/5
Matrix: Solid
Analysis Batch: 218188

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.25		mg/Kg			03/09/22 11:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*72*		*50 - 150*		*03/09/22 11:59*	*1*

Lab Sample ID: LCS 570-218188/3
Matrix: Solid
Analysis Batch: 218188

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
TPH as Gasoline (C4-C13)			1.97	1.850		mg/Kg		94	77 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*50 - 150*

Lab Sample ID: LCSD 570-218188/4
Matrix: Solid
Analysis Batch: 218188

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
TPH as Gasoline (C4-C13)			1.97	1.848		mg/Kg		94	77 - 128	0	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*50 - 150*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: MB 570-218779/5
Matrix: Solid
Analysis Batch: 218779

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.25		mg/Kg			03/11/22 12:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*70*		*50 - 150*		*03/11/22 12:16*	*1*

Lab Sample ID: MB 570-218779/6
Matrix: Solid
Analysis Batch: 218779

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		5.0		mg/Kg			03/11/22 12:39	20

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*52*		*50 - 150*		*03/11/22 12:39*	*20*

Lab Sample ID: LCS 570-218779/3
Matrix: Solid
Analysis Batch: 218779

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
TPH as Gasoline (C4-C13)			1.97	1.622		mg/Kg		82	77 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*50 - 150*

Lab Sample ID: LCSD 570-218779/4
Matrix: Solid
Analysis Batch: 218779

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
TPH as Gasoline (C4-C13)			1.97	1.751		mg/Kg		89	77 - 128	8	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*50 - 150*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 570-218956/1-A
Matrix: Solid
Analysis Batch: 218993

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 218956

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	ND		5.0		mg/Kg		03/11/22 15:47	03/11/22 22:27	1
TPH as Motor Oil Range	ND		5.0		mg/Kg		03/11/22 15:47	03/11/22 22:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*101*		*50 - 150*	*03/11/22 15:47*	*03/11/22 22:27*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 570-218956/2-A
Matrix: Solid
Analysis Batch: 218993

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 218956

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
TPH as Diesel (C10-C28)			400	444.8		mg/Kg		111	76 - 126		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*103*		*50 - 150*

Lab Sample ID: LCS 570-218956/6-A
Matrix: Solid
Analysis Batch: 218993

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 218956

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
TPH as Motor Oil (C17-C44)			400	388.2		mg/Kg		97	71 - 139		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*101*		*50 - 150*

Lab Sample ID: LCSD 570-218956/3-A
Matrix: Solid
Analysis Batch: 218993

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 218956

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
TPH as Diesel (C10-C28)			400	438.3		mg/Kg		110	76 - 126	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*99*		*50 - 150*

Lab Sample ID: LCSD 570-218956/7-A
Matrix: Solid
Analysis Batch: 218993

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 218956

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
TPH as Motor Oil (C17-C44)			400	391.7		mg/Kg		98	71 - 139	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*103*		*50 - 150*

Lab Sample ID: 570-86223-6 MS
Matrix: Solid
Analysis Batch: 218993

Client Sample ID: TS6
Prep Type: Silica Gel Cleanup
Prep Batch: 218956

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
TPH as Diesel (C10-C28)	3600		450	3919	E 4	mg/Kg	☼	69	37 - 175		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
n-Octacosane (Surr)	*99*		*50 - 150*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: 570-86223-6 MS
Matrix: Solid
Analysis Batch: 218993

Client Sample ID: TS6
Prep Type: Silica Gel Cleanup
Prep Batch: 218956

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
TPH as Motor Oil (C17-C44)	1100		449	1481	E	mg/Kg	☼	79	71 - 174		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
n-Octacosane (Surr)	*99*		*50 - 150*

Lab Sample ID: 570-86223-6 MSD
Matrix: Solid
Analysis Batch: 218993

Client Sample ID: TS6
Prep Type: Silica Gel Cleanup
Prep Batch: 218956

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
TPH as Diesel (C10-C28)	3600		471	3991	E 4	mg/Kg	☼	81	37 - 175	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
n-Octacosane (Surr)	*102*		*50 - 150*

Lab Sample ID: 570-86223-6 MSD
Matrix: Solid
Analysis Batch: 218993

Client Sample ID: TS6
Prep Type: Silica Gel Cleanup
Prep Batch: 218956

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
TPH as Motor Oil (C17-C44)	1100		445	1501	E	mg/Kg	☼	84	71 - 174	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
n-Octacosane (Surr)	*100*		*50 - 150*

Method: Moisture - Percent Moisture

Lab Sample ID: 570-86223-2 DU
Matrix: Solid
Analysis Batch: 216516

Client Sample ID: TS2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	24.3			24.2		%				0.4	10
Percent Solids	75.7			75.8		%				0.1	10

GC/MS VOA

Prep Batch: 216453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-86223-1	TS1	Total/NA	Solid	5035	
570-86223-2	TS2	Total/NA	Solid	5035	
570-86223-3	TS3	Total/NA	Solid	5035	
570-86223-4	TS4	Total/NA	Solid	5035	
570-86223-5	TS5	Total/NA	Solid	5035	
570-86223-6	TS6	Total/NA	Solid	5035	
570-86223-8	TS8	Total/NA	Solid	5035	
570-86223-9	TS9	Total/NA	Solid	5035	
570-86223-10	TS10	Total/NA	Solid	5035	

Prep Batch: 216454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-86223-7	TS7	Total/NA	Solid	5035	

Analysis Batch: 216777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-86223-2	TS2	Total/NA	Solid	8260C	216453
570-86223-3	TS3	Total/NA	Solid	8260C	216453
570-86223-4	TS4	Total/NA	Solid	8260C	216453
570-86223-5	TS5	Total/NA	Solid	8260C	216453
570-86223-6	TS6	Total/NA	Solid	8260C	216453
570-86223-7	TS7	Total/NA	Solid	8260C	216454
570-86223-8	TS8	Total/NA	Solid	8260C	216453
570-86223-9	TS9	Total/NA	Solid	8260C	216453
570-86223-10	TS10	Total/NA	Solid	8260C	216453
MB 570-216777/10	Method Blank	Total/NA	Solid	8260C	
MB 570-216777/9	Method Blank	Total/NA	Solid	8260C	
LCS 570-216777/4	Lab Control Sample	Total/NA	Solid	8260C	
LCSD 570-216777/5	Lab Control Sample Dup	Total/NA	Solid	8260C	

Analysis Batch: 217108

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-86223-1	TS1	Total/NA	Solid	8260C	216453
MB 570-217108/10	Method Blank	Total/NA	Solid	8260C	
LCS 570-217108/4	Lab Control Sample	Total/NA	Solid	8260C	
LCSD 570-217108/5	Lab Control Sample Dup	Total/NA	Solid	8260C	

GC/MS Semi VOA

Prep Batch: 217287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-86223-1	TS1	Total/NA	Solid	3546	
570-86223-2	TS2	Total/NA	Solid	3546	
570-86223-3	TS3	Total/NA	Solid	3546	
570-86223-4	TS4	Total/NA	Solid	3546	
570-86223-5	TS5	Total/NA	Solid	3546	
570-86223-6	TS6	Total/NA	Solid	3546	
570-86223-7	TS7	Total/NA	Solid	3546	
570-86223-7 - DL	TS7	Total/NA	Solid	3546	
570-86223-8	TS8	Total/NA	Solid	3546	
570-86223-9	TS9	Total/NA	Solid	3546	

GC/MS Semi VOA (Continued)

Prep Batch: 217287 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-86223-10	TS10	Total/NA	Solid	3546	
MB 570-217287/1-A	Method Blank	Total/NA	Solid	3546	
LCS 570-217287/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 570-217287/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
570-86223-8 MS	TS8	Total/NA	Solid	3546	
570-86223-8 MSD	TS8	Total/NA	Solid	3546	

Analysis Batch: 218952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-86223-1	TS1	Total/NA	Solid	8270C SIM	217287
570-86223-2	TS2	Total/NA	Solid	8270C SIM	217287
570-86223-3	TS3	Total/NA	Solid	8270C SIM	217287
570-86223-4	TS4	Total/NA	Solid	8270C SIM	217287
570-86223-5	TS5	Total/NA	Solid	8270C SIM	217287
570-86223-6	TS6	Total/NA	Solid	8270C SIM	217287
570-86223-7	TS7	Total/NA	Solid	8270C SIM	217287
570-86223-8	TS8	Total/NA	Solid	8270C SIM	217287
570-86223-9	TS9	Total/NA	Solid	8270C SIM	217287
570-86223-10	TS10	Total/NA	Solid	8270C SIM	217287
MB 570-217287/1-A	Method Blank	Total/NA	Solid	8270C SIM	217287
LCS 570-217287/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	217287
LCSD 570-217287/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM	217287
570-86223-8 MS	TS8	Total/NA	Solid	8270C SIM	217287
570-86223-8 MSD	TS8	Total/NA	Solid	8270C SIM	217287

Analysis Batch: 219949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-86223-7 - DL	TS7	Total/NA	Solid	8270C SIM	217287

GC VOA

Prep Batch: 216453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-86223-1	TS1	Total/NA	Solid	5035	
570-86223-2	TS2	Total/NA	Solid	5035	
570-86223-3	TS3	Total/NA	Solid	5035	
570-86223-4	TS4	Total/NA	Solid	5035	
570-86223-5	TS5	Total/NA	Solid	5035	
570-86223-8	TS8	Total/NA	Solid	5035	
570-86223-9	TS9	Total/NA	Solid	5035	
570-86223-10	TS10	Total/NA	Solid	5035	

Prep Batch: 216454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-86223-6	TS6	Total/NA	Solid	5035	
570-86223-7	TS7	Total/NA	Solid	5035	

Analysis Batch: 218188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-86223-1	TS1	Total/NA	Solid	NWTPH-Gx	216453
570-86223-2	TS2	Total/NA	Solid	NWTPH-Gx	216453

GC VOA (Continued)

Analysis Batch: 218188 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-86223-3	TS3	Total/NA	Solid	NWTPH-Gx	216453
570-86223-4	TS4	Total/NA	Solid	NWTPH-Gx	216453
570-86223-5	TS5	Total/NA	Solid	NWTPH-Gx	216453
570-86223-9	TS9	Total/NA	Solid	NWTPH-Gx	216453
570-86223-10	TS10	Total/NA	Solid	NWTPH-Gx	216453
MB 570-218188/5	Method Blank	Total/NA	Solid	NWTPH-Gx	
LCS 570-218188/3	Lab Control Sample	Total/NA	Solid	NWTPH-Gx	
LCSD 570-218188/4	Lab Control Sample Dup	Total/NA	Solid	NWTPH-Gx	

Analysis Batch: 218779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-86223-6	TS6	Total/NA	Solid	NWTPH-Gx	216454
570-86223-7	TS7	Total/NA	Solid	NWTPH-Gx	216454
570-86223-8	TS8	Total/NA	Solid	NWTPH-Gx	216453
MB 570-218779/5	Method Blank	Total/NA	Solid	NWTPH-Gx	
MB 570-218779/6	Method Blank	Total/NA	Solid	NWTPH-Gx	
LCS 570-218779/3	Lab Control Sample	Total/NA	Solid	NWTPH-Gx	
LCSD 570-218779/4	Lab Control Sample Dup	Total/NA	Solid	NWTPH-Gx	

GC Semi VOA

Prep Batch: 218956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-86223-1	TS1	Silica Gel Cleanup	Solid	3550C SGC	
570-86223-2	TS2	Silica Gel Cleanup	Solid	3550C SGC	
570-86223-3	TS3	Silica Gel Cleanup	Solid	3550C SGC	
570-86223-4	TS4	Silica Gel Cleanup	Solid	3550C SGC	
570-86223-5	TS5	Silica Gel Cleanup	Solid	3550C SGC	
570-86223-6 - DL	TS6	Silica Gel Cleanup	Solid	3550C SGC	
570-86223-7 - DL	TS7	Silica Gel Cleanup	Solid	3550C SGC	
570-86223-8	TS8	Silica Gel Cleanup	Solid	3550C SGC	
570-86223-9	TS9	Silica Gel Cleanup	Solid	3550C SGC	
570-86223-10	TS10	Silica Gel Cleanup	Solid	3550C SGC	
MB 570-218956/1-A	Method Blank	Silica Gel Cleanup	Solid	3550C SGC	
LCS 570-218956/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3550C SGC	
LCS 570-218956/6-A	Lab Control Sample	Silica Gel Cleanup	Solid	3550C SGC	
LCSD 570-218956/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3550C SGC	
LCSD 570-218956/7-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3550C SGC	
570-86223-6 MS	TS6	Silica Gel Cleanup	Solid	3550C SGC	
570-86223-6 MS	TS6	Silica Gel Cleanup	Solid	3550C SGC	
570-86223-6 MSD	TS6	Silica Gel Cleanup	Solid	3550C SGC	
570-86223-6 MSD	TS6	Silica Gel Cleanup	Solid	3550C SGC	

Analysis Batch: 218993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-86223-1	TS1	Silica Gel Cleanup	Solid	NWTPH-Dx	218956
570-86223-2	TS2	Silica Gel Cleanup	Solid	NWTPH-Dx	218956
570-86223-3	TS3	Silica Gel Cleanup	Solid	NWTPH-Dx	218956
570-86223-4	TS4	Silica Gel Cleanup	Solid	NWTPH-Dx	218956
570-86223-5	TS5	Silica Gel Cleanup	Solid	NWTPH-Dx	218956
570-86223-6 - DL	TS6	Silica Gel Cleanup	Solid	NWTPH-Dx	218956

GC Semi VOA (Continued)

Analysis Batch: 218993 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-86223-7 - DL	TS7	Silica Gel Cleanup	Solid	NWTPH-Dx	218956
570-86223-8	TS8	Silica Gel Cleanup	Solid	NWTPH-Dx	218956
570-86223-9	TS9	Silica Gel Cleanup	Solid	NWTPH-Dx	218956
570-86223-10	TS10	Silica Gel Cleanup	Solid	NWTPH-Dx	218956
MB 570-218956/1-A	Method Blank	Silica Gel Cleanup	Solid	NWTPH-Dx	218956
LCS 570-218956/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	NWTPH-Dx	218956
LCS 570-218956/6-A	Lab Control Sample	Silica Gel Cleanup	Solid	NWTPH-Dx	218956
LCSD 570-218956/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	NWTPH-Dx	218956
LCSD 570-218956/7-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	NWTPH-Dx	218956
570-86223-6 MS	TS6	Silica Gel Cleanup	Solid	NWTPH-Dx	218956
570-86223-6 MS	TS6	Silica Gel Cleanup	Solid	NWTPH-Dx	218956
570-86223-6 MSD	TS6	Silica Gel Cleanup	Solid	NWTPH-Dx	218956
570-86223-6 MSD	TS6	Silica Gel Cleanup	Solid	NWTPH-Dx	218956

General Chemistry

Analysis Batch: 216516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-86223-1	TS1	Total/NA	Solid	Moisture	
570-86223-2	TS2	Total/NA	Solid	Moisture	
570-86223-3	TS3	Total/NA	Solid	Moisture	
570-86223-4	TS4	Total/NA	Solid	Moisture	
570-86223-5	TS5	Total/NA	Solid	Moisture	
570-86223-6	TS6	Total/NA	Solid	Moisture	
570-86223-7	TS7	Total/NA	Solid	Moisture	
570-86223-8	TS8	Total/NA	Solid	Moisture	
570-86223-9	TS9	Total/NA	Solid	Moisture	
570-86223-10	TS10	Total/NA	Solid	Moisture	
570-86223-2 DU	TS2	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Cardno, Inc
Project/Site: MobilADC/031447

Job ID: 570-86223-1

Client Sample ID: TS1

Lab Sample ID: 570-86223-1

Date Collected: 02/26/22 09:20

Matrix: Solid

Date Received: 03/01/22 11:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.275 g	5 mL	216453	03/02/22 01:40		ECL 4
Total/NA	Analysis	8260C		1	5 mL	5 mL	217108	03/04/22 19:08	OH1	ECL 4
	Instrument ID: GCMSLL									
Total/NA	Prep	3546			19.89 g	1 mL	217287	03/04/22 15:33	SP9M	ECL 1
Total/NA	Analysis	8270C SIM		1			218952	03/11/22 17:40	ULLI	ECL 4
	Instrument ID: GCMSAAA									
Total/NA	Prep	5035			5.617 g	5 mL	216453	03/02/22 01:40		ECL 4
Total/NA	Analysis	NWTPH-Gx		1	5 g	5 mL	218188	03/09/22 17:29	P1R	ECL 2
	Instrument ID: GC1									
Silica Gel Cleanup	Prep	3550C SGC			10.08 g	10 mL	218956	03/11/22 15:47	KG5J	ECL 4
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			218993	03/12/22 05:20	N5Y3	ECL 4
	Instrument ID: GC48									
Total/NA	Analysis	Moisture		1			216516	03/02/22 11:20	FRT7	ECL 4
	Instrument ID: BAL62									

Client Sample ID: TS2

Lab Sample ID: 570-86223-2

Date Collected: 02/26/22 10:55

Matrix: Solid

Date Received: 03/01/22 11:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.332 g	5 mL	216453	03/02/22 01:40		ECL 4
Total/NA	Analysis	8260C		1	5 mL	5 mL	216777	03/03/22 14:59	C5SC	ECL 4
	Instrument ID: GCMSLL									
Total/NA	Prep	3546			19.91 g	1 mL	217287	03/04/22 15:33	SP9M	ECL 1
Total/NA	Analysis	8270C SIM		1			218952	03/11/22 18:00	ULLI	ECL 4
	Instrument ID: GCMSAAA									
Total/NA	Prep	5035			3.993 g	5 mL	216453	03/02/22 01:40		ECL 4
Total/NA	Analysis	NWTPH-Gx		1	5 g	5 mL	218188	03/09/22 17:52	P1R	ECL 2
	Instrument ID: GC1									
Silica Gel Cleanup	Prep	3550C SGC			9.88 g	10 mL	218956	03/11/22 15:47	KG5J	ECL 4
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			218993	03/12/22 05:45	N5Y3	ECL 4
	Instrument ID: GC48									
Total/NA	Analysis	Moisture		1			216516	03/02/22 11:20	FRT7	ECL 4
	Instrument ID: BAL62									

Client Sample ID: TS3

Lab Sample ID: 570-86223-3

Date Collected: 02/26/22 13:55

Matrix: Solid

Date Received: 03/01/22 11:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.649 g	5 mL	216453	03/02/22 01:40		ECL 4
Total/NA	Analysis	8260C		1	5 mL	5 mL	216777	03/03/22 15:25	C5SC	ECL 4
	Instrument ID: GCMSLL									
Total/NA	Prep	3546			20.02 g	1 mL	217287	03/04/22 15:33	SP9M	ECL 1
Total/NA	Analysis	8270C SIM		1			218952	03/11/22 18:19	ULLI	ECL 4
	Instrument ID: GCMSAAA									

Lab Chronicle

Client: Cardno, Inc
Project/Site: MobilADC/031447

Job ID: 570-86223-1

Client Sample ID: TS3

Date Collected: 02/26/22 13:55
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.94 g	5 mL	216453	03/02/22 01:40		ECL 4
Total/NA	Analysis	NWTPH-Gx		1	5 g	5 mL	218188	03/09/22 18:16	P1R	ECL 2
	Instrument ID: GC1									
Silica Gel Cleanup	Prep	3550C SGC			10.10 g	10 mL	218956	03/11/22 15:47	KG5J	ECL 4
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			218993	03/12/22 06:09	N5Y3	ECL 4
	Instrument ID: GC48									
Total/NA	Analysis	Moisture		1			216516	03/02/22 11:20	FRT7	ECL 4
	Instrument ID: BAL62									

Client Sample ID: TS4

Date Collected: 02/26/22 14:05
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			11.731 g	5 mL	216453	03/02/22 01:40		ECL 4
Total/NA	Analysis	8260C		1	5 mL	5 mL	216777	03/03/22 15:50	C5SC	ECL 4
	Instrument ID: GCMSLL									
Total/NA	Prep	3546			20.06 g	1 mL	217287	03/04/22 15:33	SP9M	ECL 1
Total/NA	Analysis	8270C SIM		1			218952	03/11/22 18:38	ULLI	ECL 4
	Instrument ID: GCMSAAA									
Total/NA	Prep	5035			6.66 g	5 mL	216453	03/02/22 01:40		ECL 4
Total/NA	Analysis	NWTPH-Gx		1	5 g	5 mL	218188	03/09/22 18:40	P1R	ECL 2
	Instrument ID: GC1									
Silica Gel Cleanup	Prep	3550C SGC			10.16 g	10 mL	218956	03/11/22 15:47	KG5J	ECL 4
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			218993	03/12/22 06:34	N5Y3	ECL 4
	Instrument ID: GC48									
Total/NA	Analysis	Moisture		1			216516	03/02/22 11:20	FRT7	ECL 4
	Instrument ID: BAL62									

Client Sample ID: TS5

Date Collected: 02/26/22 14:25
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.227 g	5 mL	216453	03/02/22 01:40		ECL 4
Total/NA	Analysis	8260C		1	5 mL	5 mL	216777	03/03/22 17:33	C5SC	ECL 4
	Instrument ID: GCMSLL									
Total/NA	Prep	3546			19.94 g	1 mL	217287	03/04/22 15:33	SP9M	ECL 1
Total/NA	Analysis	8270C SIM		1			218952	03/11/22 18:58	ULLI	ECL 4
	Instrument ID: GCMSAAA									
Total/NA	Prep	5035			6.411 g	5 mL	216453	03/02/22 01:40		ECL 4
Total/NA	Analysis	NWTPH-Gx		1	5 g	5 mL	218188	03/09/22 19:04	P1R	ECL 2
	Instrument ID: GC1									
Silica Gel Cleanup	Prep	3550C SGC			10.12 g	10 mL	218956	03/11/22 15:47	KG5J	ECL 4
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			218993	03/12/22 06:58	N5Y3	ECL 4
	Instrument ID: GC48									

Client Sample ID: TS5

Lab Sample ID: 570-86223-5

Date Collected: 02/26/22 14:25

Matrix: Solid

Date Received: 03/01/22 11:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			216516	03/02/22 11:20	FRT7	ECL 4

Client Sample ID: TS6

Lab Sample ID: 570-86223-6

Date Collected: 02/27/22 08:25

Matrix: Solid

Date Received: 03/01/22 11:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.582 g	5 mL	216453	03/02/22 01:40		ECL 4
Total/NA	Analysis	8260C		1	5 mL	5 mL	216777	03/03/22 17:59	C5SC	ECL 4
	Instrument ID: GCMSLL									
Total/NA	Prep	3546			19.96 g	1 mL	217287	03/04/22 15:33	SP9M	ECL 1
Total/NA	Analysis	8270C SIM		1			218952	03/11/22 19:17	ULLI	ECL 4
	Instrument ID: GCMSAAA									
Total/NA	Prep	5035			4.114 g	5 mL	216454	03/02/22 01:41		ECL 4
Total/NA	Analysis	NWTPH-Gx		500	5 mL	5 mL	218779	03/11/22 17:20	P1R	ECL 2
	Instrument ID: GC57									
Silica Gel Cleanup	Prep	3550C SGC	DL		9.98 g	10 mL	218956	03/11/22 15:47	KG5J	ECL 4
Silica Gel Cleanup	Analysis	NWTPH-Dx	DL	10			218993	03/13/22 04:24	N5Y3	ECL 4
	Instrument ID: GC48									
Total/NA	Analysis	Moisture		1			216516	03/02/22 11:20	FRT7	ECL 4
	Instrument ID: BAL62									

Client Sample ID: TS7

Lab Sample ID: 570-86223-7

Date Collected: 02/27/22 10:00

Matrix: Solid

Date Received: 03/01/22 11:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.193 g	5 mL	216454	03/02/22 01:41		ECL 4
Total/NA	Analysis	8260C		50	5 mL	5 mL	216777	03/03/22 18:49	C5SC	ECL 4
	Instrument ID: GCMSLL									
Total/NA	Prep	3546			19.91 g	1 mL	217287	03/04/22 15:33	SP9M	ECL 1
Total/NA	Analysis	8270C SIM		1			218952	03/11/22 19:37	ULLI	ECL 4
	Instrument ID: GCMSAAA									
Total/NA	Prep	3546	DL		19.91 g	1 mL	217287	03/04/22 15:33	SP9M	ECL 1
Total/NA	Analysis	8270C SIM	DL	5			219949	03/16/22 13:37	ULLI	ECL 4
	Instrument ID: GCMSAAA									
Total/NA	Prep	5035			4.193 g	5 mL	216454	03/02/22 01:41		ECL 4
Total/NA	Analysis	NWTPH-Gx		500	5 mL	5 mL	218779	03/11/22 16:56	P1R	ECL 2
	Instrument ID: GC57									
Silica Gel Cleanup	Prep	3550C SGC	DL		10.21 g	10 mL	218956	03/11/22 15:47	KG5J	ECL 4
Silica Gel Cleanup	Analysis	NWTPH-Dx	DL	10			218993	03/13/22 04:49	N5Y3	ECL 4
	Instrument ID: GC48									
Total/NA	Analysis	Moisture		1			216516	03/02/22 11:20	FRT7	ECL 4
	Instrument ID: BAL62									

Lab Chronicle

Client: Cardno, Inc
Project/Site: MobilADC/031447

Job ID: 570-86223-1

Client Sample ID: TS8

Lab Sample ID: 570-86223-8

Date Collected: 02/27/22 11:35

Matrix: Solid

Date Received: 03/01/22 11:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.818 g	5 mL	216453	03/02/22 01:44		ECL 4
Total/NA	Analysis	8260C		1	5 mL	5 mL	216777	03/03/22 16:16	C5SC	ECL 4
	Instrument ID: GCMSLL									
Total/NA	Prep	3546			19.97 g	1 mL	217287	03/04/22 15:33	SP9M	ECL 1
Total/NA	Analysis	8270C SIM		1			218952	03/11/22 19:56	ULLI	ECL 4
	Instrument ID: GCMSAAA									
Total/NA	Prep	5035			4.789 g	5 mL	216453	03/02/22 01:44		ECL 4
Total/NA	Analysis	NWTPH-Gx		1	5 g	5 mL	218779	03/11/22 16:33	P1R	ECL 2
	Instrument ID: GC57									
Silica Gel Cleanup	Prep	3550C SGC			10.40 g	10 mL	218956	03/11/22 15:47	KG5J	ECL 4
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			218993	03/12/22 08:12	N5Y3	ECL 4
	Instrument ID: GC48									
Total/NA	Analysis	Moisture		1			216516	03/02/22 11:20	FRT7	ECL 4
	Instrument ID: BAL62									

Client Sample ID: TS9

Lab Sample ID: 570-86223-9

Date Collected: 02/27/22 12:20

Matrix: Solid

Date Received: 03/01/22 11:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.082 g	5 mL	216453	03/02/22 01:44		ECL 4
Total/NA	Analysis	8260C		1	5 mL	5 mL	216777	03/03/22 16:41	C5SC	ECL 4
	Instrument ID: GCMSLL									
Total/NA	Prep	3546			19.99 g	1 mL	217287	03/04/22 15:33	SP9M	ECL 1
Total/NA	Analysis	8270C SIM		1			218952	03/11/22 20:15	ULLI	ECL 4
	Instrument ID: GCMSAAA									
Total/NA	Prep	5035			5.159 g	5 mL	216453	03/02/22 01:44		ECL 4
Total/NA	Analysis	NWTPH-Gx		1	5 g	5 mL	218188	03/09/22 20:38	P1R	ECL 2
	Instrument ID: GC1									
Silica Gel Cleanup	Prep	3550C SGC			10.04 g	10 mL	218956	03/11/22 15:47	KG5J	ECL 4
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			218993	03/12/22 08:35	N5Y3	ECL 4
	Instrument ID: GC48									
Total/NA	Analysis	Moisture		1			216516	03/02/22 11:20	FRT7	ECL 4
	Instrument ID: BAL62									

Client Sample ID: TS10

Lab Sample ID: 570-86223-10

Date Collected: 02/27/22 13:10

Matrix: Solid

Date Received: 03/01/22 11:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.482 g	5 mL	216453	03/02/22 01:44		ECL 4
Total/NA	Analysis	8260C		1	5 mL	5 mL	216777	03/03/22 17:07	C5SC	ECL 4
	Instrument ID: GCMSLL									
Total/NA	Prep	3546			19.96 g	1 mL	217287	03/04/22 15:33	SP9M	ECL 1
Total/NA	Analysis	8270C SIM		1			218952	03/11/22 20:35	ULLI	ECL 4
	Instrument ID: GCMSAAA									

Eurofins Calscience

Lab Chronicle

Client: Cardno, Inc
Project/Site: MobilADC/031447

Job ID: 570-86223-1

Client Sample ID: TS10

Date Collected: 02/27/22 13:10
Date Received: 03/01/22 11:15

Lab Sample ID: 570-86223-10

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.704 g	5 mL	216453	03/02/22 01:44		ECL 4
Total/NA	Analysis	NWTPH-Gx		1	5 g	5 mL	218188	03/09/22 21:02	P1R	ECL 2
	Instrument ID: GC1									
Silica Gel Cleanup	Prep	3550C SGC			10.32 g	10 mL	218956	03/11/22 15:47	KG5J	ECL 4
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			218993	03/12/22 08:58	N5Y3	ECL 4
	Instrument ID: GC48									
Total/NA	Analysis	Moisture		1			216516	03/02/22 11:20	FRT7	ECL 4
	Instrument ID: BAL62									

Laboratory References:

ECL 1 = Eurofins Calscience Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494
ECL 2 = Eurofins Calscience Lampson, 7445 Lampson Ave, Garden Grove, CA 92841, TEL (714)895-5494
ECL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Accreditation/Certification Summary

Client: Cardno, Inc
Project/Site: MobilADC/031447

Job ID: 570-86223-1

Laboratory: Eurofins Calscience

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Washington	State	C916-18	10-12-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: Cardno, Inc
Project/Site: MobilADC/031447

Job ID: 570-86223-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	ECL 4
8270C SIM	Semivolatile Organic Compound (GC/MS SIM LL)	SW846	ECL 4
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC)	NWTPH	ECL 2
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	ECL 4
Moisture	Percent Moisture	EPA	ECL 4
3546	Microwave Extraction (Low Level)	SW846	ECL 1
3550C SGC	Ultrasonic Extraction	SW846	ECL 4
5035	Closed System Purge and Trap	SW846	ECL 4

Protocol References:

EPA = US Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ECL 1 = Eurofins Calscience Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

ECL 2 = Eurofins Calscience Lampson, 7445 Lampson Ave, Garden Grove, CA 92841, TEL (714)895-5494

ECL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

86223

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7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
TEL (714) 895-5494 FAX (714) 894-7501

CHAIN OF CUSTODY RECORD

DATE 2/28/2022
PAGE 1 OF 1

Site Name	Everett Bulk Plant
Provide MRN for retail or AFE for major projects	
Retail Project (MRN)	
Major Project (AFE)	
Project Name	MobilADC/031447

ExxonMobil Engr: Ken Drake

LABORATORY CLIENT: Cardno
ADDRESS: 309 South Cloverdale Street Unit A13
CITY: Seattle, WA 98108
TEL: 206-510-5855 FAX: N/A robert.thompson@cardno.com

GLOBAL ID #/ COELT LOG CODE:
PROJECT CONTACT: Robert Thompson
SAMPLER(S): John Considine

P O 0314476040 Agreement# A2604415
LAB USE ONLY
COOLER RECEIPT Temp = °C

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☑ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ____/____/____

SPECIAL INSTRUCTIONS:
Required EIM and Cardno EDDs. Please perform Silica Gel Cleanup for NWTPH-DX - % moisture for dry weight correction

Report to: laina.cole@cardno.com, robert.thompson@cardno.com, and cameron.penner-ash@cardno.com

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	Field Point Name	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT	TPHg by Ecology Method NWTPH-GX	TPHd and TPHmo by Ecology Method NWTPH-DX	BTEX by EPA Method 8260C	PAHs and 1-Methylnapthalene by 8260C		CONTAINER TYPE
	TS1	TS1	02/26/22	9 20	S	8	X	X	X	X		4 Sodium Bisulfate VOAs, 2 Methanol VOA, 2 4oz un-preserved glass jar
	TS2	TS2	02/26/22	10 55	S	8	X	X	X	X		4 Sodium Bisulfate VOAs, 2 Methanol VOA, 2 4oz un-preserved glass jar
	TS3	TS3	02/26/22	13 55	S	8	X	X	X	X		4 Sodium Bisulfate VOAs, 2 Methanol VOA, 2 4oz un-preserved glass jar
	TS4	TS4	02/26/22	14 05	S	8	X	X	X	X		4 Sodium Bisulfate VOAs, 2 Methanol VOA, 2 4oz un-preserved glass jar
	TS5	TS5	02/26/22	14 25	S	8	X	X	X	X		4 Sodium Bisulfate VOAs, 2 Methanol VOA, 2 4oz un-preserved glass jar
	TS6	TS6	02/27/22	8:25	S	8	X	X	X	X		4 Sodium Bisulfate VOAs, 2 Methanol VOA, 2 4oz un-preserved glass jar
	TS7	TS7	02/27/22	10 00	S	8	X	X	X	X		4 Sodium Bisulfate VOAs, 2 Methanol VOA, 2 4oz un-preserved glass jar
	TS8	TS8	02/27/22	11 35	S	8	X	X	X	X		4 Sodium Bisulfate VOAs, 2 Methanol VOA, 2 4oz un-preserved glass jar
	TS9	TS9	02/27/22	12.20	S	8	X	X	X	X		4 Sodium Bisulfate VOAs, 2 Methanol VOA, 2 4oz un-preserved glass jar
	TS10	TS10	02/27/22	13 10	S	8	X	X	X	X		4 Sodium Bisulfate VOAs, 2 Methanol VOA, 2 4oz un-preserved glass jar

Relinquished by: (Signature)	Received by: (Signature) FedEx	Date, & Time: 2/28/22
Relinquished by: (Signature)	Received by: (Signature)	Date & Time: 3/1/22 11:15
Relinquished by: (Signature)	Received by: (Signature)	Date & Time:

1.9/1.9 IR 89

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3/16/2022

COC\031447 - SOIL COC Drilling und Trenching Template

570-86223 Chain of Custody

Login Sample Receipt Checklist

Client: Cardno, Inc

Job Number: 570-86223-1

Login Number: 86223
List Number: 1
Creator: Cortez Diaz, Antonio

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin, CA 92780
Tel: (714)895-5494

Laboratory Job ID: 570-87790-1
Client Project/Site: Mobil/ADC/031447-Everett - Soil

For:
Cardno, Inc
309 South Cloverdale Street
Unit A13
Seattle, Washington 98108

Attn: Bobby Thompson

Cecile de Guia

Authorized for release by:
3/25/2022 10:46:21 AM

Cecile de Guia, Project Manager I
(714)895-5494
Cecile.deGuia@eurofinset.com

Table of Contents

Sample Summary

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447-Everett - Soil

Job ID: 570-87790-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-87790-1	TS11	Solid	03/07/22 08:05	03/11/22 14:59
570-87790-2	TS12	Solid	03/07/22 13:35	03/11/22 14:59
570-87790-3	TS13	Solid	03/09/22 10:55	03/11/22 14:59

Definitions/Glossary

Client: Cardno, Inc
Job ID: 570-87790-1
Project/Site: Mobil/ADC/031447-Everett - Soil

Qualifiers

General Chemistry

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447-Everett - Soil

Job ID: 570-87790-1

Job ID: 570-87790-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative
570-87790-1

Comments
No additional comments.

Receipt
The samples were received on 3/11/2022 2:59 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.5º C.

GC/MS VOA
Method 8260C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-220554. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC VOA
Method NWTPH-Gx: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-219567. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

Method NWTPH-Gx: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-221591. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method Moisture: The sample duplicate (DUP) precision for analytical batch 570-219931 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447-Everett - Soil

Job ID: 570-87790-1

Client Sample ID: TS11 — Lab Sample ID: 570-87790-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.019		0.0057		mg/Kg	1	☼	8270C SIM	Total/NA
Anthracene	0.014		0.0057		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[a]anthracene	0.034		0.0057		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[a]pyrene	0.041		0.0057		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[b]fluoranthene	0.031		0.0057		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[g,h,i]perylene	0.031		0.0057		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[k]fluoranthene	0.031		0.0057		mg/Kg	1	☼	8270C SIM	Total/NA
Chrysene	0.040		0.0057		mg/Kg	1	☼	8270C SIM	Total/NA
Dibenz(a,h)anthracene	0.0057		0.0057		mg/Kg	1	☼	8270C SIM	Total/NA
Fluoranthene	0.075		0.0057		mg/Kg	1	☼	8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	0.028		0.0057		mg/Kg	1	☼	8270C SIM	Total/NA
1-Methylnaphthalene	0.0070		0.0057		mg/Kg	1	☼	8270C SIM	Total/NA
2-Methylnaphthalene	0.011		0.0057		mg/Kg	1	☼	8270C SIM	Total/NA
Naphthalene	0.022		0.0057		mg/Kg	1	☼	8270C SIM	Total/NA
Phenanthrene	0.057		0.0057		mg/Kg	1	☼	8270C SIM	Total/NA
Pyrene	0.081		0.0057		mg/Kg	1	☼	8270C SIM	Total/NA
TPH as Diesel Range	12		5.5		mg/Kg	1	☼	NWTPH-Dx	Silica Gel Cleanup
TPH as Motor Oil Range	36		5.5		mg/Kg	1	☼	NWTPH-Dx	Silica Gel Cleanup

Client Sample ID: TS12 — Lab Sample ID: 570-87790-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzo[g,h,i]perylene	0.0064		0.0054		mg/Kg	1	☼	8270C SIM	Total/NA
Chrysene	0.0054		0.0054		mg/Kg	1	☼	8270C SIM	Total/NA
Fluoranthene	0.0087		0.0054		mg/Kg	1	☼	8270C SIM	Total/NA
Pyrene	0.010		0.0054		mg/Kg	1	☼	8270C SIM	Total/NA
TPH as Diesel Range	17		5.4		mg/Kg	1	☼	NWTPH-Dx	Silica Gel Cleanup
TPH as Motor Oil Range	88		5.4		mg/Kg	1	☼	NWTPH-Dx	Silica Gel Cleanup

Client Sample ID: TS13 — Lab Sample ID: 570-87790-3

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.010		0.0064		mg/Kg	1	☼	8270C SIM	Total/NA
Anthracene	0.0085		0.0064		mg/Kg	1	☼	8270C SIM	Total/NA
Fluoranthene	0.018		0.0064		mg/Kg	1	☼	8270C SIM	Total/NA
Fluorene	0.026		0.0064		mg/Kg	1	☼	8270C SIM	Total/NA
1-Methylnaphthalene	0.0092		0.0064		mg/Kg	1	☼	8270C SIM	Total/NA
2-Methylnaphthalene	0.011		0.0064		mg/Kg	1	☼	8270C SIM	Total/NA
Phenanthrene	0.023		0.0064		mg/Kg	1	☼	8270C SIM	Total/NA
Pyrene	0.022		0.0064		mg/Kg	1	☼	8270C SIM	Total/NA
TPH as Gasoline (C4-C13)	8.2		0.25		mg/Kg	1	☼	NWTPH-Gx	Total/NA
TPH as Diesel Range	14		6.4		mg/Kg	1	☼	NWTPH-Dx	Silica Gel Cleanup
TPH as Motor Oil Range	24		6.4		mg/Kg	1	☼	NWTPH-Dx	Silica Gel Cleanup

This Detection Summary does not include radiochemical test results.

Client Sample ID: TS11

Date Collected: 03/07/22 08:05
Date Received: 03/11/22 14:59

Lab Sample ID: 570-87790-1

Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0011		mg/Kg	☼	03/13/22 09:58	03/18/22 18:32	1
Ethylbenzene	ND		0.0011		mg/Kg	☼	03/13/22 09:58	03/18/22 18:32	1
Toluene	ND		0.0011		mg/Kg	☼	03/13/22 09:58	03/18/22 18:32	1
m,p-Xylene	ND		0.0023		mg/Kg	☼	03/13/22 09:58	03/18/22 18:32	1
o-Xylene	ND		0.0011		mg/Kg	☼	03/13/22 09:58	03/18/22 18:32	1
Xylenes, Total	ND		0.0023		mg/Kg	☼	03/13/22 09:58	03/18/22 18:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*124*		*80 - 142*	*03/13/22 09:58*	*03/18/22 18:32*	*1*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*	*03/13/22 09:58*	*03/18/22 18:32*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 123*	*03/13/22 09:58*	*03/18/22 18:32*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*	*03/13/22 09:58*	*03/18/22 18:32*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0057		mg/Kg	☼	03/16/22 12:51	03/18/22 16:23	1
Acenaphthylene	**0.019**		0.0057		mg/Kg	☼	03/16/22 12:51	03/18/22 16:23	1
Anthracene	**0.014**		0.0057		mg/Kg	☼	03/16/22 12:51	03/18/22 16:23	1
Benzo[a]anthracene	**0.034**		0.0057		mg/Kg	☼	03/16/22 12:51	03/18/22 16:23	1
Benzo[a]pyrene	**0.041**		0.0057		mg/Kg	☼	03/16/22 12:51	03/18/22 16:23	1
Benzo[b]fluoranthene	**0.031**		0.0057		mg/Kg	☼	03/16/22 12:51	03/18/22 16:23	1
Benzo[g,h,i]perylene	**0.031**		0.0057		mg/Kg	☼	03/16/22 12:51	03/18/22 16:23	1
Benzo[k]fluoranthene	**0.031**		0.0057		mg/Kg	☼	03/16/22 12:51	03/18/22 16:23	1
Chrysene	**0.040**		0.0057		mg/Kg	☼	03/16/22 12:51	03/18/22 16:23	1
Dibenz(a,h)anthracene	**0.0057**		0.0057		mg/Kg	☼	03/16/22 12:51	03/18/22 16:23	1
Fluoranthene	**0.075**		0.0057		mg/Kg	☼	03/16/22 12:51	03/18/22 16:23	1
Fluorene	ND		0.0057		mg/Kg	☼	03/16/22 12:51	03/18/22 16:23	1
Indeno[1,2,3-cd]pyrene	**0.028**		0.0057		mg/Kg	☼	03/16/22 12:51	03/18/22 16:23	1
1-Methylnaphthalene	**0.0070**		0.0057		mg/Kg	☼	03/16/22 12:51	03/18/22 16:23	1
2-Methylnaphthalene	**0.011**		0.0057		mg/Kg	☼	03/16/22 12:51	03/18/22 16:23	1
Naphthalene	**0.022**		0.0057		mg/Kg	☼	03/16/22 12:51	03/18/22 16:23	1
Phenanthrene	**0.057**		0.0057		mg/Kg	☼	03/16/22 12:51	03/18/22 16:23	1
Pyrene	**0.081**		0.0057		mg/Kg	☼	03/16/22 12:51	03/18/22 16:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*74*		*12 - 147*	*03/16/22 12:51*	*03/18/22 16:23*	*1*
Nitrobenzene-d5 (Surr)	*73*		*10 - 143*	*03/16/22 12:51*	*03/18/22 16:23*	*1*
p-Terphenyl-d14 (Surr)	*85*		*10 - 145*	*03/16/22 12:51*	*03/18/22 16:23*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.24		mg/Kg	☼	03/13/22 09:58	03/15/22 17:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*71*		*50 - 150*	*03/13/22 09:58*	*03/15/22 17:15*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	**12**		5.5		mg/Kg	☼	03/21/22 11:59	03/23/22 20:51	1
TPH as Motor Oil Range	**36**		5.5		mg/Kg	☼	03/21/22 11:59	03/23/22 20:51	1

Client Sample ID: TS11
Lab Sample ID: 570-87790-1
Date Collected: 03/07/22 08:05
Matrix: Solid
Date Received: 03/11/22 14:59

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*117*		*50 - 150*	*03/21/22 11:59*	*03/23/22 20:51*	*1*

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**12.6**		0.1		%			03/14/22 21:24	1
Percent Solids	**87.4**		0.1		%			03/14/22 21:24	1

Client Sample ID: TS12
Lab Sample ID: 570-87790-2
Date Collected: 03/07/22 13:35
Matrix: Solid
Date Received: 03/11/22 14:59

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00096		mg/Kg	☼	03/13/22 09:58	03/18/22 18:57	1
Ethylbenzene	ND		0.00096		mg/Kg	☼	03/13/22 09:58	03/18/22 18:57	1
Toluene	ND		0.00096		mg/Kg	☼	03/13/22 09:58	03/18/22 18:57	1
m,p-Xylene	ND		0.0019		mg/Kg	☼	03/13/22 09:58	03/18/22 18:57	1
o-Xylene	ND		0.00096		mg/Kg	☼	03/13/22 09:58	03/18/22 18:57	1
Xylenes, Total	ND		0.0019		mg/Kg	☼	03/13/22 09:58	03/18/22 18:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*126*		*80 - 142*	*03/13/22 09:58*	*03/18/22 18:57*	*1*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*	*03/13/22 09:58*	*03/18/22 18:57*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 123*	*03/13/22 09:58*	*03/18/22 18:57*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*	*03/13/22 09:58*	*03/18/22 18:57*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0054		mg/Kg	☼	03/16/22 12:51	03/18/22 16:43	1
Acenaphthylene	ND		0.0054		mg/Kg	☼	03/16/22 12:51	03/18/22 16:43	1
Anthracene	ND		0.0054		mg/Kg	☼	03/16/22 12:51	03/18/22 16:43	1
Benzo[a]anthracene	ND		0.0054		mg/Kg	☼	03/16/22 12:51	03/18/22 16:43	1
Benzo[a]pyrene	ND		0.0054		mg/Kg	☼	03/16/22 12:51	03/18/22 16:43	1
Benzo[b]fluoranthene	ND		0.0054		mg/Kg	☼	03/16/22 12:51	03/18/22 16:43	1
Benzo[g,h,i]perylene	**0.0064**		0.0054		mg/Kg	☼	03/16/22 12:51	03/18/22 16:43	1
Benzo[k]fluoranthene	ND		0.0054		mg/Kg	☼	03/16/22 12:51	03/18/22 16:43	1
Chrysene	**0.0054**		0.0054		mg/Kg	☼	03/16/22 12:51	03/18/22 16:43	1
Dibenz(a,h)anthracene	ND		0.0054		mg/Kg	☼	03/16/22 12:51	03/18/22 16:43	1
Fluoranthene	**0.0087**		0.0054		mg/Kg	☼	03/16/22 12:51	03/18/22 16:43	1
Fluorene	ND		0.0054		mg/Kg	☼	03/16/22 12:51	03/18/22 16:43	1
Indeno[1,2,3-cd]pyrene	ND		0.0054		mg/Kg	☼	03/16/22 12:51	03/18/22 16:43	1
1-Methylnaphthalene	ND		0.0054		mg/Kg	☼	03/16/22 12:51	03/18/22 16:43	1
2-Methylnaphthalene	ND		0.0054		mg/Kg	☼	03/16/22 12:51	03/18/22 16:43	1
Naphthalene	ND		0.0054		mg/Kg	☼	03/16/22 12:51	03/18/22 16:43	1
Phenanthrene	ND		0.0054		mg/Kg	☼	03/16/22 12:51	03/18/22 16:43	1
Pyrene	**0.010**		0.0054		mg/Kg	☼	03/16/22 12:51	03/18/22 16:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*76*		*12 - 147*	*03/16/22 12:51*	*03/18/22 16:43*	*1*
Nitrobenzene-d5 (Surr)	*73*		*10 - 143*	*03/16/22 12:51*	*03/18/22 16:43*	*1*
p-Terphenyl-d14 (Surr)	*96*		*10 - 145*	*03/16/22 12:51*	*03/18/22 16:43*	*1*

Client Sample ID: TS12
Lab Sample ID: 570-87790-2
Date Collected: 03/07/22 13:35
Matrix: Solid
Date Received: 03/11/22 14:59

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.24		mg/Kg	☼	03/13/22 09:58	03/15/22 17:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*50 - 150*	*03/13/22 09:58*	*03/15/22 17:38*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	**17**		5.4		mg/Kg	☼	03/21/22 11:59	03/23/22 21:13	1
TPH as Motor Oil Range	**88**		5.4		mg/Kg	☼	03/21/22 11:59	03/23/22 21:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*110*		*50 - 150*	*03/21/22 11:59*	*03/23/22 21:13*	*1*

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**7.7**		0.1		%			03/14/22 21:24	1
Percent Solids	**92.3**		0.1		%			03/14/22 21:24	1

Client Sample ID: TS13
Lab Sample ID: 570-87790-3
Date Collected: 03/09/22 10:55
Matrix: Solid
Date Received: 03/11/22 14:59

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0012		mg/Kg	☼	03/13/22 09:58	03/18/22 19:21	1
Ethylbenzene	ND		0.0012		mg/Kg	☼	03/13/22 09:58	03/18/22 19:21	1
Toluene	ND		0.0012		mg/Kg	☼	03/13/22 09:58	03/18/22 19:21	1
m,p-Xylene	ND		0.0023		mg/Kg	☼	03/13/22 09:58	03/18/22 19:21	1
o-Xylene	ND		0.0012		mg/Kg	☼	03/13/22 09:58	03/18/22 19:21	1
Xylenes, Total	ND		0.0023		mg/Kg	☼	03/13/22 09:58	03/18/22 19:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*125*		*80 - 142*	*03/13/22 09:58*	*03/18/22 19:21*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*	*03/13/22 09:58*	*03/18/22 19:21*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 123*	*03/13/22 09:58*	*03/18/22 19:21*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*	*03/13/22 09:58*	*03/18/22 19:21*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**0.010**		0.0064		mg/Kg	☼	03/16/22 12:51	03/18/22 17:02	1
Acenaphthylene	ND		0.0064		mg/Kg	☼	03/16/22 12:51	03/18/22 17:02	1
Anthracene	**0.0085**		0.0064		mg/Kg	☼	03/16/22 12:51	03/18/22 17:02	1
Benzo[a]anthracene	ND		0.0064		mg/Kg	☼	03/16/22 12:51	03/18/22 17:02	1
Benzo[a]pyrene	ND		0.0064		mg/Kg	☼	03/16/22 12:51	03/18/22 17:02	1
Benzo[b]fluoranthene	ND		0.0064		mg/Kg	☼	03/16/22 12:51	03/18/22 17:02	1
Benzo[g,h,i]perylene	ND		0.0064		mg/Kg	☼	03/16/22 12:51	03/18/22 17:02	1
Benzo[k]fluoranthene	ND		0.0064		mg/Kg	☼	03/16/22 12:51	03/18/22 17:02	1
Chrysene	ND		0.0064		mg/Kg	☼	03/16/22 12:51	03/18/22 17:02	1
Dibenz(a,h)anthracene	ND		0.0064		mg/Kg	☼	03/16/22 12:51	03/18/22 17:02	1
Fluoranthene	**0.018**		0.0064		mg/Kg	☼	03/16/22 12:51	03/18/22 17:02	1
Fluorene	**0.026**		0.0064		mg/Kg	☼	03/16/22 12:51	03/18/22 17:02	1

Client Sample ID: TS13
Lab Sample ID: 570-87790-3

Date Collected: 03/09/22 10:55
Matrix: Solid
Date Received: 03/11/22 14:59

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	ND		0.0064		mg/Kg	☼	03/16/22 12:51	03/18/22 17:02	1
1-Methylnaphthalene	**0.0092**		0.0064		mg/Kg	☼	03/16/22 12:51	03/18/22 17:02	1
2-Methylnaphthalene	**0.011**		0.0064		mg/Kg	☼	03/16/22 12:51	03/18/22 17:02	1
Naphthalene	ND		0.0064		mg/Kg	☼	03/16/22 12:51	03/18/22 17:02	1
Phenanthrene	**0.023**		0.0064		mg/Kg	☼	03/16/22 12:51	03/18/22 17:02	1
Pyrene	**0.022**		0.0064		mg/Kg	☼	03/16/22 12:51	03/18/22 17:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*69*		*12 - 147*	*03/16/22 12:51*	*03/18/22 17:02*	*1*
Nitrobenzene-d5 (Surr)	*68*		*10 - 143*	*03/16/22 12:51*	*03/18/22 17:02*	*1*
p-Terphenyl-d14 (Surr)	*80*		*10 - 145*	*03/16/22 12:51*	*03/18/22 17:02*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	**8.2**		0.25		mg/Kg	☼	03/13/22 09:58	03/23/22 13:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*74*		*50 - 150*	*03/13/22 09:58*	*03/23/22 13:02*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	**14**		6.4		mg/Kg	☼	03/21/22 11:59	03/23/22 21:36	1
TPH as Motor Oil Range	**24**		6.4		mg/Kg	☼	03/21/22 11:59	03/23/22 21:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*113*		*50 - 150*	*03/21/22 11:59*	*03/23/22 21:36*	*1*

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**22.4**		0.1		%			03/16/22 10:26	1
Percent Solids	**77.6**		0.1		%			03/16/22 10:26	1

Surrogate Summary

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447-Everett - Soil

Job ID: 570-87790-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid | **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-142)	(80-120)	(80-123)	(80-120)
570-87790-1	TS11	124	89	109	99
570-87790-2	TS12	126	92	109	100
570-87790-3	TS13	125	98	110	102
LCS 570-220554/4	Lab Control Sample	92	101	97	100
LCSD 570-220554/5	Lab Control Sample Dup	93	101	98	100
MB 570-220554/7	Method Blank	96	97	93	98

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Matrix: Solid | **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHd14
Lab Sample ID	Client Sample ID	(12-147)	(10-143)	(10-145)
570-87790-1	TS11	74	73	85
570-87790-1 MS	TS11	76	78	85
570-87790-1 MSD	TS11	78	78	91
570-87790-2	TS12	76	73	96
570-87790-3	TS13	69	68	80
LCS 570-219980/2-A	Lab Control Sample	106	109	109
LCSD 570-219980/3-A	Lab Control Sample Dup	88	93	92
MB 570-219980/1-A	Method Blank	95	98	108

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Matrix: Solid | **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		BFB1
Lab Sample ID	Client Sample ID	(50-150)
570-87790-1	TS11	71
570-87790-2	TS12	81
570-87790-3	TS13	74
LCS 570-219567/3	Lab Control Sample	100
LCS 570-221591/4	Lab Control Sample	104
LCSD 570-219567/4	Lab Control Sample Dup	101
LCSD 570-221591/5	Lab Control Sample Dup	102
MB 570-219567/5	Method Blank	90
MB 570-221591/6	Method Blank	84

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Surrogate Summary

Client: Cardno, Inc
Job ID: 570-87790-1
Project/Site: Mobil/ADC/031447-Everett - Soil

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Matrix: Solid **Prep Type: Silica Gel Cleanup**

		Percent Surrogate Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	OTCSN (50-150)						
570-87790-1	TS11	117						
570-87790-1 MS	TS11	110						
570-87790-1 MS	TS11	125						
570-87790-1 MSD	TS11	107						
570-87790-1 MSD	TS11	121						
570-87790-2	TS12	110						
570-87790-3	TS13	113						
LCS 570-221062/2-A	Lab Control Sample	108						
LCS 570-221062/6-A	Lab Control Sample	111						
LCSD 570-221062/3-A	Lab Control Sample Dup	106						
LCSD 570-221062/7-A	Lab Control Sample Dup	107						
MB 570-221062/1-A	Method Blank	104						

Surrogate Legend

OTCSN = n-Octacosane (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 570-220554/7
Matrix: Solid
Analysis Batch: 220554

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0010		mg/Kg			03/18/22 10:32	1
Ethylbenzene	ND		0.0010		mg/Kg			03/18/22 10:32	1
Toluene	ND		0.0010		mg/Kg			03/18/22 10:32	1
m,p-Xylene	ND		0.0020		mg/Kg			03/18/22 10:32	1
o-Xylene	ND		0.0010		mg/Kg			03/18/22 10:32	1
Xylenes, Total	ND		0.0020		mg/Kg			03/18/22 10:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*80 - 142*		*03/18/22 10:32*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*03/18/22 10:32*	*1*
Dibromofluoromethane (Surr)	*93*		*80 - 123*		*03/18/22 10:32*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*03/18/22 10:32*	*1*

Lab Sample ID: LCS 570-220554/4
Matrix: Solid
Analysis Batch: 220554

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.05038		mg/Kg		101	79 - 120		
Ethylbenzene			0.0500	0.05187		mg/Kg		104	80 - 120		
Toluene			0.0500	0.04996		mg/Kg		100	80 - 120		
m,p-Xylene			0.100	0.1046		mg/Kg		105	79 - 120		
o-Xylene			0.0500	0.05217		mg/Kg		104	79 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*92*		*80 - 142*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*80 - 123*
Toluene-d8 (Surr)	*100*		*80 - 120*

Lab Sample ID: LCSD 570-220554/5
Matrix: Solid
Analysis Batch: 220554

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.05064		mg/Kg		101	79 - 120	1	20
Ethylbenzene			0.0500	0.05185		mg/Kg		104	80 - 120	0	20
Toluene			0.0500	0.05011		mg/Kg		100	80 - 120	0	20
m,p-Xylene			0.100	0.1050		mg/Kg		105	79 - 120	0	20
o-Xylene			0.0500	0.05257		mg/Kg		105	79 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 142*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*98*		*80 - 123*
Toluene-d8 (Surr)	*100*		*80 - 120*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Lab Sample ID: MB 570-219980/1-A
Matrix: Solid
Analysis Batch: 220555

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 219980

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		03/16/22 12:51	03/18/22 13:13	1
Acenaphthylene	ND		0.0050		mg/Kg		03/16/22 12:51	03/18/22 13:13	1
Anthracene	ND		0.0050		mg/Kg		03/16/22 12:51	03/18/22 13:13	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		03/16/22 12:51	03/18/22 13:13	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		03/16/22 12:51	03/18/22 13:13	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		03/16/22 12:51	03/18/22 13:13	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		03/16/22 12:51	03/18/22 13:13	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		03/16/22 12:51	03/18/22 13:13	1
Chrysene	ND		0.0050		mg/Kg		03/16/22 12:51	03/18/22 13:13	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		03/16/22 12:51	03/18/22 13:13	1
Fluoranthene	ND		0.0050		mg/Kg		03/16/22 12:51	03/18/22 13:13	1
Fluorene	ND		0.0050		mg/Kg		03/16/22 12:51	03/18/22 13:13	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		03/16/22 12:51	03/18/22 13:13	1
1-Methylnaphthalene	ND		0.0050		mg/Kg		03/16/22 12:51	03/18/22 13:13	1
2-Methylnaphthalene	ND		0.0050		mg/Kg		03/16/22 12:51	03/18/22 13:13	1
Naphthalene	ND		0.0050		mg/Kg		03/16/22 12:51	03/18/22 13:13	1
Phenanthrene	ND		0.0050		mg/Kg		03/16/22 12:51	03/18/22 13:13	1
Pyrene	ND		0.0050		mg/Kg		03/16/22 12:51	03/18/22 13:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*95*		*12 - 147*	*03/16/22 12:51*	*03/18/22 13:13*	*1*
Nitrobenzene-d5 (Surr)	*98*		*10 - 143*	*03/16/22 12:51*	*03/18/22 13:13*	*1*
p-Terphenyl-d14 (Surr)	*108*		*10 - 145*	*03/16/22 12:51*	*03/18/22 13:13*	*1*

Lab Sample ID: LCS 570-219980/2-A
Matrix: Solid
Analysis Batch: 220555

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 219980

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	0.0500	0.04947		mg/Kg		99	45 - 134
Acenaphthylene	0.0500	0.05442		mg/Kg		109	45 - 147
Anthracene	0.0500	0.04821		mg/Kg		96	45 - 139
Benzo[a]anthracene	0.0500	0.05425		mg/Kg		108	51 - 136
Benzo[a]pyrene	0.0500	0.05861		mg/Kg		117	44 - 145
Benzo[b]fluoranthene	0.0500	0.05342		mg/Kg		107	41 - 156
Benzo[g,h,i]perylene	0.0500	0.05506		mg/Kg		110	41 - 154
Benzo[k]fluoranthene	0.0500	0.05484		mg/Kg		110	50 - 145
Chrysene	0.0500	0.04790		mg/Kg		96	48 - 134
Dibenz(a,h)anthracene	0.0500	0.05428		mg/Kg		109	45 - 153
Fluoranthene	0.0500	0.04986		mg/Kg		100	45 - 137
Fluorene	0.0500	0.05046		mg/Kg		101	49 - 134
Indeno[1,2,3-cd]pyrene	0.0500	0.05106		mg/Kg		102	41 - 152
1-Methylnaphthalene	0.0500	0.05000		mg/Kg		100	52 - 138
2-Methylnaphthalene	0.0500	0.04622		mg/Kg		92	43 - 151
Naphthalene	0.0500	0.04724		mg/Kg		94	45 - 135
Phenanthrene	0.0500	0.04728		mg/Kg		95	45 - 133
Pyrene	0.0500	0.04646		mg/Kg		93	47 - 138

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCS 570-219980/2-A
Matrix: Solid
Analysis Batch: 220555

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 219980

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	106		12 - 147
Nitrobenzene-d5 (Surr)	109		10 - 143
p-Terphenyl-d14 (Surr)	109		10 - 145

Lab Sample ID: LCSD 570-219980/3-A
Matrix: Solid
Analysis Batch: 220555

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 219980

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene			0.0500	0.04038		mg/Kg		81	45 - 134	20	25
Acenaphthylene			0.0500	0.04482		mg/Kg		90	45 - 147	19	28
Anthracene			0.0500	0.04053		mg/Kg		81	45 - 139	17	24
Benzo[a]anthracene			0.0500	0.04545		mg/Kg		91	51 - 136	18	24
Benzo[a]pyrene			0.0500	0.04833		mg/Kg		97	44 - 145	19	25
Benzo[b]fluoranthene			0.0500	0.04528		mg/Kg		91	41 - 156	16	25
Benzo[g,h,i]perylene			0.0500	0.04625		mg/Kg		93	41 - 154	17	30
Benzo[k]fluoranthene			0.0500	0.04416		mg/Kg		88	50 - 145	22	25
Chrysene			0.0500	0.03962		mg/Kg		79	48 - 134	19	22
Dibenz(a,h)anthracene			0.0500	0.04633		mg/Kg		93	45 - 153	16	26
Fluoranthene			0.0500	0.04120		mg/Kg		82	45 - 137	19	24
Fluorene			0.0500	0.04244		mg/Kg		85	49 - 134	17	27
Indeno[1,2,3-cd]pyrene			0.0500	0.04320		mg/Kg		86	41 - 152	17	27
1-Methylnaphthalene			0.0500	0.04088		mg/Kg		82	52 - 138	20	26
2-Methylnaphthalene			0.0500	0.03960		mg/Kg		79	43 - 151	15	27
Naphthalene			0.0500	0.04039		mg/Kg		81	45 - 135	16	26
Phenanthrene			0.0500	0.04005		mg/Kg		80	45 - 133	17	27
Pyrene			0.0500	0.03970		mg/Kg		79	47 - 138	16	27

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	88		12 - 147
Nitrobenzene-d5 (Surr)	93		10 - 143
p-Terphenyl-d14 (Surr)	92		10 - 145

Lab Sample ID: 570-87790-1 MS
Matrix: Solid
Analysis Batch: 220555

Client Sample ID: TS11
Prep Type: Total/NA
Prep Batch: 219980

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Acenaphthene	ND		0.0568	0.04285		mg/Kg	☼	75	10 - 175		
Acenaphthylene	0.019		0.0568	0.06325		mg/Kg	☼	79	10 - 180		
Anthracene	0.014		0.0568	0.05178		mg/Kg	☼	66	10 - 158		
Benzo[a]anthracene	0.034		0.0568	0.07447		mg/Kg	☼	70	10 - 180		
Benzo[a]pyrene	0.041		0.0568	0.08921		mg/Kg	☼	84	10 - 180		
Benzo[b]fluoranthene	0.031		0.0568	0.08337		mg/Kg	☼	93	10 - 180		
Benzo[g,h,i]perylene	0.031		0.0568	0.08063		mg/Kg	☼	88	10 - 180		
Benzo[k]fluoranthene	0.031		0.0568	0.07076		mg/Kg	☼	70	10 - 180		
Chrysene	0.040		0.0568	0.07666		mg/Kg	☼	64	10 - 180		
Dibenz(a,h)anthracene	0.0057		0.0568	0.05318		mg/Kg	☼	84	10 - 180		

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 570-87790-1 MS
Matrix: Solid
Analysis Batch: 220555

Client Sample ID: TS11
Prep Type: Total/NA
Prep Batch: 219980

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoranthene	0.075		0.0568	0.1084		mg/Kg	☼	58	10 - 180
Fluorene	ND		0.0568	0.04865		mg/Kg	☼	77	10 - 168
Indeno[1,2,3-cd]pyrene	0.028		0.0568	0.07221		mg/Kg	☼	77	10 - 172
1-Methylnaphthalene	0.0070		0.0568	0.05283		mg/Kg	☼	81	13 - 143
2-Methylnaphthalene	0.011		0.0568	0.05666		mg/Kg	☼	81	26 - 144
Naphthalene	0.022		0.0568	0.07320		mg/Kg	☼	89	10 - 161
Phenanthrene	0.057		0.0568	0.09324		mg/Kg	☼	64	10 - 180
Pyrene	0.081		0.0568	0.1070		mg/Kg	☼	46	10 - 180

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*76*		*12 - 147*
Nitrobenzene-d5 (Surr)	*78*		*10 - 143*
p-Terphenyl-d14 (Surr)	*85*		*10 - 145*

Lab Sample ID: 570-87790-1 MSD
Matrix: Solid
Analysis Batch: 220555

Client Sample ID: TS11
Prep Type: Total/NA
Prep Batch: 219980

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	ND		0.0567	0.04530		mg/Kg	☼	80	10 - 175	6	40
Acenaphthylene	0.019		0.0567	0.06075		mg/Kg	☼	74	10 - 180	4	40
Anthracene	0.014		0.0567	0.05114		mg/Kg	☼	65	10 - 158	1	40
Benzo[a]anthracene	0.034		0.0567	0.06963		mg/Kg	☼	62	10 - 180	7	40
Benzo[a]pyrene	0.041		0.0567	0.08158		mg/Kg	☼	71	10 - 180	9	40
Benzo[b]fluoranthene	0.031		0.0567	0.07691		mg/Kg	☼	82	10 - 180	8	40
Benzo[g,h,i]perylene	0.031		0.0567	0.07983		mg/Kg	☼	87	10 - 180	1	40
Benzo[k]fluoranthene	0.031		0.0567	0.06843		mg/Kg	☼	66	10 - 180	3	40
Chrysene	0.040		0.0567	0.07230		mg/Kg	☼	57	10 - 180	6	40
Dibenz(a,h)anthracene	0.0057		0.0567	0.05215		mg/Kg	☼	82	10 - 180	2	40
Fluoranthene	0.075		0.0567	0.09959		mg/Kg	☼	42	10 - 180	8	40
Fluorene	ND		0.0567	0.04861		mg/Kg	☼	77	10 - 168	0	40
Indeno[1,2,3-cd]pyrene	0.028		0.0567	0.07229		mg/Kg	☼	77	10 - 172	0	40
1-Methylnaphthalene	0.0070		0.0567	0.04947		mg/Kg	☼	75	13 - 143	7	40
2-Methylnaphthalene	0.011		0.0567	0.05270		mg/Kg	☼	74	26 - 144	7	40
Naphthalene	0.022		0.0567	0.07601		mg/Kg	☼	94	10 - 161	4	40
Phenanthrene	0.057		0.0567	0.08819		mg/Kg	☼	55	10 - 180	6	40
Pyrene	0.081		0.0567	0.1009		mg/Kg	☼	35	10 - 180	6	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*78*		*12 - 147*
Nitrobenzene-d5 (Surr)	*78*		*10 - 143*
p-Terphenyl-d14 (Surr)	*91*		*10 - 145*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 570-219567/5
Matrix: Solid
Analysis Batch: 219567

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.25		mg/Kg			03/15/22 12:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*50 - 150*		*03/15/22 12:09*	*1*

Lab Sample ID: LCS 570-219567/3
Matrix: Solid
Analysis Batch: 219567

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
TPH as Gasoline (C4-C13)			1.97	1.864		mg/Kg		95	77 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*50 - 150*

Lab Sample ID: LCSD 570-219567/4
Matrix: Solid
Analysis Batch: 219567

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
TPH as Gasoline (C4-C13)			1.96	1.948		mg/Kg		99	77 - 128	4	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*50 - 150*

Lab Sample ID: MB 570-221591/6
Matrix: Solid
Analysis Batch: 221591

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.25		mg/Kg			03/23/22 12:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*50 - 150*		*03/23/22 12:38*	*1*

Lab Sample ID: LCS 570-221591/4
Matrix: Solid
Analysis Batch: 221591

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
TPH as Gasoline (C4-C13)			1.96	2.139		mg/Kg		109	77 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*50 - 150*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCSD 570-221591/5
Matrix: Solid
Analysis Batch: 221591

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
TPH as Gasoline (C4-C13)			1.97	2.130		mg/Kg		108	77 - 128	0	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*50 - 150*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 570-221062/1-A
Matrix: Solid
Analysis Batch: 221689

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 221062

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	ND		5.0		mg/Kg		03/21/22 11:59	03/23/22 16:18	1
TPH as Motor Oil Range	ND		5.0		mg/Kg		03/21/22 11:59	03/23/22 16:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*104*		*50 - 150*	*03/21/22 11:59*	*03/23/22 16:18*	*1*

Lab Sample ID: LCS 570-221062/2-A
Matrix: Solid
Analysis Batch: 221689

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 221062

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
TPH as Diesel (C10-C28)			400	438.4		mg/Kg		110	76 - 126		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*108*		*50 - 150*

Lab Sample ID: LCS 570-221062/6-A
Matrix: Solid
Analysis Batch: 221689

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 221062

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
TPH as Motor Oil (C17-C44)			400	414.1		mg/Kg		104	71 - 139		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*111*		*50 - 150*

Lab Sample ID: LCSD 570-221062/3-A
Matrix: Solid
Analysis Batch: 221689

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 221062

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
TPH as Diesel (C10-C28)			400	443.5		mg/Kg		111	76 - 126	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*106*		*50 - 150*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCSD 570-221062/7-A
Matrix: Solid
Analysis Batch: 221689

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 221062

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
TPH as Motor Oil (C17-C44)			400	417.3		mg/Kg		104	71 - 139	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*107*		*50 - 150*

Lab Sample ID: 570-87790-1 MS
Matrix: Solid
Analysis Batch: 221689

Client Sample ID: TS11
Prep Type: Silica Gel Cleanup
Prep Batch: 221062

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
TPH as Diesel (C10-C28)	16		448	545.0		mg/Kg	☼	118	37 - 175

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
n-Octacosane (Surr)	*110*		*50 - 150*

Lab Sample ID: 570-87790-1 MS
Matrix: Solid
Analysis Batch: 221689

Client Sample ID: TS11
Prep Type: Silica Gel Cleanup
Prep Batch: 221062

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
TPH as Motor Oil (C17-C44)	43		454	570.5		mg/Kg	☼	116	71 - 174

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
n-Octacosane (Surr)	*125*		*50 - 150*

Lab Sample ID: 570-87790-1 MSD
Matrix: Solid
Analysis Batch: 221689

Client Sample ID: TS11
Prep Type: Silica Gel Cleanup
Prep Batch: 221062

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
TPH as Diesel (C10-C28)	16		453	555.4		mg/Kg	☼	119	37 - 175	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
n-Octacosane (Surr)	*107*		*50 - 150*

Lab Sample ID: 570-87790-1 MSD
Matrix: Solid
Analysis Batch: 221689

Client Sample ID: TS11
Prep Type: Silica Gel Cleanup
Prep Batch: 221062

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
TPH as Motor Oil (C17-C44)	43		462	592.8		mg/Kg	☼	119	71 - 174	4	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
n-Octacosane (Surr)	*121*		*50 - 150*

QC Sample Results

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447-Everett - Soil

Job ID: 570-87790-1

Method: Moisture - Percent Moisture

Lab Sample ID: MB 570-219475/1
Matrix: Solid
Analysis Batch: 219475

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	0.0		0.1		%			03/14/22 21:24	1
Percent Solids			0.1		%			03/14/22 21:24	1

Lab Sample ID: 570-87790-1 DU
Matrix: Solid
Analysis Batch: 219475

Client Sample ID: TS11
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	12.6			12.6		%				0.4	10
Percent Solids	87.4			87.4		%				0.05	10

Lab Sample ID: 570-87515-A-3 DU
Matrix: Solid
Analysis Batch: 219931

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	1.2			1.4	F3	%				11	10
Percent Solids	98.8			98.6		%				0.1	10

GC/MS VOA

Prep Batch: 219196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-87790-1	TS11	Total/NA	Solid	5035	
570-87790-2	TS12	Total/NA	Solid	5035	
570-87790-3	TS13	Total/NA	Solid	5035	

Analysis Batch: 220554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-87790-1	TS11	Total/NA	Solid	8260C	219196
570-87790-2	TS12	Total/NA	Solid	8260C	219196
570-87790-3	TS13	Total/NA	Solid	8260C	219196
MB 570-220554/7	Method Blank	Total/NA	Solid	8260C	
LCS 570-220554/4	Lab Control Sample	Total/NA	Solid	8260C	
LCSD 570-220554/5	Lab Control Sample Dup	Total/NA	Solid	8260C	

GC/MS Semi VOA

Prep Batch: 219980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-87790-1	TS11	Total/NA	Solid	3546	
570-87790-2	TS12	Total/NA	Solid	3546	
570-87790-3	TS13	Total/NA	Solid	3546	
MB 570-219980/1-A	Method Blank	Total/NA	Solid	3546	
LCS 570-219980/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 570-219980/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
570-87790-1 MS	TS11	Total/NA	Solid	3546	
570-87790-1 MSD	TS11	Total/NA	Solid	3546	

Analysis Batch: 220555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-87790-1	TS11	Total/NA	Solid	8270C SIM	219980
570-87790-2	TS12	Total/NA	Solid	8270C SIM	219980
570-87790-3	TS13	Total/NA	Solid	8270C SIM	219980
MB 570-219980/1-A	Method Blank	Total/NA	Solid	8270C SIM	219980
LCS 570-219980/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	219980
LCSD 570-219980/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM	219980
570-87790-1 MS	TS11	Total/NA	Solid	8270C SIM	219980
570-87790-1 MSD	TS11	Total/NA	Solid	8270C SIM	219980

GC VOA

Prep Batch: 219196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-87790-1	TS11	Total/NA	Solid	5035	
570-87790-2	TS12	Total/NA	Solid	5035	
570-87790-3	TS13	Total/NA	Solid	5035	

Analysis Batch: 219567

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-87790-1	TS11	Total/NA	Solid	NWTPH-Gx	219196
570-87790-2	TS12	Total/NA	Solid	NWTPH-Gx	219196
MB 570-219567/5	Method Blank	Total/NA	Solid	NWTPH-Gx	
LCS 570-219567/3	Lab Control Sample	Total/NA	Solid	NWTPH-Gx	
LCSD 570-219567/4	Lab Control Sample Dup	Total/NA	Solid	NWTPH-Gx	

QC Association Summary

Client: Cardno, Inc
Job ID: 570-87790-1
Project/Site: Mobil/ADC/031447-Everett - Soil

GC VOA

Analysis Batch: 221591

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-87790-3	TS13	Total/NA	Solid	NWTPH-Gx	219196
MB 570-221591/6	Method Blank	Total/NA	Solid	NWTPH-Gx	
LCS 570-221591/4	Lab Control Sample	Total/NA	Solid	NWTPH-Gx	
LCSD 570-221591/5	Lab Control Sample Dup	Total/NA	Solid	NWTPH-Gx	

GC Semi VOA

Prep Batch: 221062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-87790-1	TS11	Silica Gel Cleanup	Solid	3550C SGC	
570-87790-2	TS12	Silica Gel Cleanup	Solid	3550C SGC	
570-87790-3	TS13	Silica Gel Cleanup	Solid	3550C SGC	
MB 570-221062/1-A	Method Blank	Silica Gel Cleanup	Solid	3550C SGC	
LCS 570-221062/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3550C SGC	
LCS 570-221062/6-A	Lab Control Sample	Silica Gel Cleanup	Solid	3550C SGC	
LCSD 570-221062/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3550C SGC	
LCSD 570-221062/7-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3550C SGC	
570-87790-1 MS	TS11	Silica Gel Cleanup	Solid	3550C SGC	
570-87790-1 MS	TS11	Silica Gel Cleanup	Solid	3550C SGC	
570-87790-1 MSD	TS11	Silica Gel Cleanup	Solid	3550C SGC	
570-87790-1 MSD	TS11	Silica Gel Cleanup	Solid	3550C SGC	

Analysis Batch: 221689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-87790-1	TS11	Silica Gel Cleanup	Solid	NWTPH-Dx	221062
570-87790-2	TS12	Silica Gel Cleanup	Solid	NWTPH-Dx	221062
570-87790-3	TS13	Silica Gel Cleanup	Solid	NWTPH-Dx	221062
MB 570-221062/1-A	Method Blank	Silica Gel Cleanup	Solid	NWTPH-Dx	221062
LCS 570-221062/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	NWTPH-Dx	221062
LCS 570-221062/6-A	Lab Control Sample	Silica Gel Cleanup	Solid	NWTPH-Dx	221062
LCSD 570-221062/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	NWTPH-Dx	221062
LCSD 570-221062/7-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	NWTPH-Dx	221062
570-87790-1 MS	TS11	Silica Gel Cleanup	Solid	NWTPH-Dx	221062
570-87790-1 MS	TS11	Silica Gel Cleanup	Solid	NWTPH-Dx	221062
570-87790-1 MSD	TS11	Silica Gel Cleanup	Solid	NWTPH-Dx	221062
570-87790-1 MSD	TS11	Silica Gel Cleanup	Solid	NWTPH-Dx	221062

General Chemistry

Analysis Batch: 219475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-87790-1	TS11	Total/NA	Solid	Moisture	
570-87790-2	TS12	Total/NA	Solid	Moisture	
MB 570-219475/1	Method Blank	Total/NA	Solid	Moisture	
570-87790-1 DU	TS11	Total/NA	Solid	Moisture	

Analysis Batch: 219931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-87790-3	TS13	Total/NA	Solid	Moisture	
570-87515-A-3 DU	Duplicate	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447-Everett - Soil

Job ID: 570-87790-1

Client Sample ID: TS11

Date Collected: 03/07/22 08:05
Date Received: 03/11/22 14:59

Lab Sample ID: 570-87790-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.054 g	5 mL	219196	03/13/22 09:58	UQTR	ECL 4
Total/NA	Analysis	8260C		1	5 g	5 mL	220554	03/18/22 18:32	OH1	ECL 4
	Instrument ID: GCMSGGG									
Total/NA	Prep	3546			20.12 g	1 mL	219980	03/16/22 12:51	USUL	ECL 4
Total/NA	Analysis	8270C SIM		1			220555	03/18/22 16:23	ULLI	ECL 4
	Instrument ID: GCMSAAA									
Total/NA	Prep	5035			5.935 g	5 mL	219196	03/13/22 09:58	UQTR	ECL 4
Total/NA	Analysis	NWTPH-Gx		1	5 g	5 mL	219567	03/15/22 17:15	A9VE	ECL 2
	Instrument ID: GC1									
Silica Gel Cleanup	Prep	3550C SGC			10.31 g	10 mL	221062	03/21/22 11:59	KG5J	ECL 4
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			221689	03/23/22 20:51	A1W	ECL 4
	Instrument ID: GC48									
Total/NA	Analysis	Moisture		1			219475	03/14/22 21:24	ZL7L	ECL 4
	Instrument ID: BAL62									

Client Sample ID: TS12

Date Collected: 03/07/22 13:35
Date Received: 03/11/22 14:59

Lab Sample ID: 570-87790-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.618 g	5 mL	219196	03/13/22 09:58	UQTR	ECL 4
Total/NA	Analysis	8260C		1	5 g	5 mL	220554	03/18/22 18:57	OH1	ECL 4
	Instrument ID: GCMSGGG									
Total/NA	Prep	3546			20.07 g	1 mL	219980	03/16/22 12:51	USUL	ECL 4
Total/NA	Analysis	8270C SIM		1			220555	03/18/22 16:43	ULLI	ECL 4
	Instrument ID: GCMSAAA									
Total/NA	Prep	5035			5.727 g	5 mL	219196	03/13/22 09:58	UQTR	ECL 4
Total/NA	Analysis	NWTPH-Gx		1	5 g	5 mL	219567	03/15/22 17:38	A9VE	ECL 2
	Instrument ID: GC1									
Silica Gel Cleanup	Prep	3550C SGC			10.11 g	10 mL	221062	03/21/22 11:59	KG5J	ECL 4
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			221689	03/23/22 21:13	A1W	ECL 4
	Instrument ID: GC48									
Total/NA	Analysis	Moisture		1			219475	03/14/22 21:24	ZL7L	ECL 4
	Instrument ID: BAL62									

Client Sample ID: TS13

Date Collected: 03/09/22 10:55
Date Received: 03/11/22 14:59

Lab Sample ID: 570-87790-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.562 g	5 mL	219196	03/13/22 09:58	UQTR	ECL 4
Total/NA	Analysis	8260C		1	5 g	5 mL	220554	03/18/22 19:21	OH1	ECL 4
	Instrument ID: GCMSGGG									
Total/NA	Prep	3546			20.09 g	1 mL	219980	03/16/22 12:51	USUL	ECL 4
Total/NA	Analysis	8270C SIM		1			220555	03/18/22 17:02	ULLI	ECL 4
	Instrument ID: GCMSAAA									

Lab Chronicle

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447-Everett - Soil

Job ID: 570-87790-1

Client Sample ID: TS13

Date Collected: 03/09/22 10:55
Date Received: 03/11/22 14:59

Lab Sample ID: 570-87790-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.36 g	5 mL	219196	03/13/22 09:58	UQTR	ECL 4
Total/NA	Analysis	NWTPH-Gx		1	5 g	5 mL	221591	03/23/22 13:02	P1R	ECL 4
	Instrument ID: GC53									
Silica Gel Cleanup	Prep	3550C SGC			10.05 g	10 mL	221062	03/21/22 11:59	KG5J	ECL 4
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			221689	03/23/22 21:36	A1W	ECL 4
	Instrument ID: GC48									
Total/NA	Analysis	Moisture		1			219931	03/16/22 10:26	FRT7	ECL 4
	Instrument ID: BAL62									

Laboratory References:

ECL 2 = Eurofins Calscience Lampson, 7445 Lampson Ave, Garden Grove, CA 92841, TEL (714)895-5494

ECL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Accreditation/Certification Summary

Client: Cardno, Inc
Job ID: 570-87790-1
Project/Site: Mobil/ADC/031447-Everett - Soil

Laboratory: Eurofins Calscience

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Washington	State	C916-18	10-12-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447-Everett - Soil

Job ID: 570-87790-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	ECL 4
8270C SIM	Semivolatile Organic Compound (GC/MS SIM LL)	SW846	ECL 4
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC)	NWTPH	ECL 2
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	ECL 4
Moisture	Percent Moisture	EPA	ECL 4
3546	Microwave Extraction (Low Level)	SW846	ECL 4
3550C SGC	Ultrasonic Extraction	SW846	ECL 4
5035	Closed System Purge and Trap	SW846	ECL 4

Protocol References:

EPA = US Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ECL 2 = Eurofins Calscience Lampson, 7445 Lampson Ave, Garden Grove, CA 92841, TEL (714)895-5494

ECL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

eurofins | Calscience
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
TEL (714) 895-5494 FAX (714) 894-7501

Site Name	Everett Bulk Plant
Provide MRN for retail or AFE for major projects	
Retail Project (MRN)	
Major Project (AFE)	
Project Name	MobilADC/031447

CHAIN OF CUSTODY RECOF

DATE 3/10/2022
PAGE 1 OF 1

ExxonMobil Engr: Ken Drake

LABORATORY CLIENT: Cardno
ADDRESS: 309 South Cloverdale Street Unit A13
CITY: Seattle, WA 98108
TEL: 206-510-5855 FAX: N/A robert.thompson@cardno com

GLOBAL ID #/ COELT LOG CODE.
PROJECT CONTACT: Robert Thompson
SAMPLER(S): John Considine

P O 0314476040 Agreement# A2604415
LAB USE ONLY
COOLER RECEIPT Temp = ____ °C

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☑ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ____/____/____

SPECIAL INSTRUCTIONS:
Required EIM and Cardno EDDs. Please perform Silica Gel Cleanup for NWTPH-DX - % moisture for dry weight correction

Report to: laina.cole@cardno.com, robert.thompson@cardno.com, and cameron.penner-ash@cardno.com

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	Field Point Name	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT	TPHg by Ecology Method NWTPH-GX	TPHd and TPHmo by Ecology Method NWTPH-DX	BTEX by EPA Method 8260C	1-Methylnaphalene by EPA Method 8260C	PAHs by EPA Method 8270C SIM	CO.
	TS11	TS11	03/07/22	8 05	S	8	X	X	X	X		4 Sodium Bisulfate VOAs, 2 Methanol VOA, 2 4oz un-preserved glass jar
	TS12	TS12	03/07/22	13 35	S	8	X	X	X	X		4 Sodium Bisulfate VOAs, 2 Methanol VOA, 2 4oz un-preserved glass jar
	TS13	TS13	03/09/22	10 55	S	8	X	X	X	X		4 Sodium Bisulfate VOAs, 2 Methanol VOA, 2 4oz un-preserved glass jar

570-87790 Chain of Custody

Relinquished by: (Signature)	Received by: (Signature)	Date & Time:
	FedEx	
Relinquished by: (Signature)	Received by: (Signature) EC	Date & Time: 3/11/22 950
Relinquished by: (Signature)	Received by: (Signature)	Date & Time:

2.0/0 $ (CS) 1540 9115 2036

570-87790 Waybill

#224621B 03/1(56DJS/EB02/FE4A
92 DTHA
92780
SNA
CA-US
FedEx
TRK# 0221 1540 4115 2036
FRI - 11 MAR 10:30A
PRIORITY OVERNIGHT
RMA:
FedEx
Express
(949) 261-1022
TUSTIN CA 927807211
SHIPPING
EUROFINS CALSCIENCE IRVINE
2841 DOW AVE STE 100
ORIGIN ID:DTHA (817) 965 6081
CAMERON PENNER-ASH
CARDNO INC
309 S CLOVERDALE ST
SEATTLE, WA 98108
UNITED STATES US
SHIP DATE: 19JAN22
ACTWGT: 10.00 LB MAN
CAD: 0835128/CAFE3509

Login Sample Receipt Checklist

Client: Cardno, Inc

Job Number: 570-87790-1

Login Number: 87790
List Number: 1
Creator: Rodriguez, Estevan

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin, CA 92780
Tel: (714)895-5494

Laboratory Job ID: 570-88472-1
Client Project/Site: Mobil/ADC/031447

For:
Cardno, Inc
309 South Cloverdale Street
Unit A13
Seattle, Washington 98108

Attn: Bobby Thompson

Cecile de Guia

Authorized for release by:
4/5/2022 11:08:39 PM

Cecile de Guia, Project Manager I
(714)895-5494
Cecile.deGuia@et.eurofinsus.com

Table of Contents

Sample Summary

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-88472-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-88472-1	TS14	Solid	03/15/22 08:10	03/18/22 10:35
570-88472-2	TS15	Solid	03/15/22 12:35	03/18/22 10:35
570-88472-3	TS16	Solid	03/16/22 08:10	03/18/22 10:35

Definitions/Glossary

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-88472-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-88472-1

Job ID: 570-88472-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative
570-88472-1

Comments
No additional comments.

Receipt
The samples were received on 3/18/2022 10:35 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.3º C.

GC/MS VOA
Method 8260C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-221808. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC VOA
Method NWTPH-Gx: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-221591. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-88472-1

Client Sample ID: TS14 — Lab Sample ID: 570-88472-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
TPH as Diesel Range	14		6.1		mg/Kg	1	☼	NWTPH-Dx	Silica Gel Cleanup
TPH as Motor Oil Range	24		6.1		mg/Kg	1	☼	NWTPH-Dx	Silica Gel Cleanup

Client Sample ID: TS15 — Lab Sample ID: 570-88472-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	0.051		0.0064		mg/Kg	1	☼	8270C SIM	Total/NA
2-Methylnaphthalene	0.017		0.0064		mg/Kg	1	☼	8270C SIM	Total/NA
Naphthalene	0.044		0.0064		mg/Kg	1	☼	8270C SIM	Total/NA
Phenanthrene	0.010		0.0064		mg/Kg	1	☼	8270C SIM	Total/NA
TPH as Gasoline (C4-C13)	0.83		0.26		mg/Kg	1	☼	NWTPH-Gx	Total/NA
TPH as Diesel Range	14		6.2		mg/Kg	1	☼	NWTPH-Dx	Silica Gel Cleanup
TPH as Motor Oil Range	21		6.2		mg/Kg	1	☼	NWTPH-Dx	Silica Gel Cleanup

Client Sample ID: TS16 — Lab Sample ID: 570-88472-3

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Fluorene	0.012		0.0061		mg/Kg	1	☼	8270C SIM	Total/NA
1-Methylnaphthalene	0.023		0.0061		mg/Kg	1	☼	8270C SIM	Total/NA
2-Methylnaphthalene	0.039		0.0061		mg/Kg	1	☼	8270C SIM	Total/NA
Naphthalene	0.0061		0.0061		mg/Kg	1	☼	8270C SIM	Total/NA
Phenanthrene	0.0065		0.0061		mg/Kg	1	☼	8270C SIM	Total/NA
TPH as Diesel Range	6.6		6.0		mg/Kg	1	☼	NWTPH-Dx	Silica Gel Cleanup
TPH as Motor Oil Range	15		6.0		mg/Kg	1	☼	NWTPH-Dx	Silica Gel Cleanup

This Detection Summary does not include radiochemical test results.

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-88472-1

Client Sample ID: TS14
Date Collected: 03/15/22 08:10
Date Received: 03/18/22 10:35

Lab Sample ID: 570-88472-1
Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00085		mg/Kg	☼	03/21/22 11:36	03/24/22 11:22	1
Ethylbenzene	ND		0.00085		mg/Kg	☼	03/21/22 11:36	03/24/22 11:22	1
Toluene	ND		0.00085		mg/Kg	☼	03/21/22 11:36	03/24/22 11:22	1
m,p-Xylene	ND		0.0017		mg/Kg	☼	03/21/22 11:36	03/24/22 11:22	1
o-Xylene	ND		0.00085		mg/Kg	☼	03/21/22 11:36	03/24/22 11:22	1
Xylenes, Total	ND		0.0017		mg/Kg	☼	03/21/22 11:36	03/24/22 11:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*80 - 142*	*03/21/22 11:36*	*03/24/22 11:22*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*	*03/21/22 11:36*	*03/24/22 11:22*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 123*	*03/21/22 11:36*	*03/24/22 11:22*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*	*03/21/22 11:36*	*03/24/22 11:22*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0059		mg/Kg	☼	03/23/22 13:29	03/28/22 18:04	1
Acenaphthylene	ND		0.0059		mg/Kg	☼	03/23/22 13:29	03/28/22 18:04	1
Anthracene	ND		0.0059		mg/Kg	☼	03/23/22 13:29	03/28/22 18:04	1
Benzo[a]anthracene	ND		0.0059		mg/Kg	☼	03/23/22 13:29	03/28/22 18:04	1
Benzo[a]pyrene	ND		0.0059		mg/Kg	☼	03/23/22 13:29	03/28/22 18:04	1
Benzo[b]fluoranthene	ND		0.0059		mg/Kg	☼	03/23/22 13:29	03/28/22 18:04	1
Benzo[g,h,i]perylene	ND		0.0059		mg/Kg	☼	03/23/22 13:29	03/28/22 18:04	1
Benzo[k]fluoranthene	ND		0.0059		mg/Kg	☼	03/23/22 13:29	03/28/22 18:04	1
Chrysene	ND		0.0059		mg/Kg	☼	03/23/22 13:29	03/28/22 18:04	1
Dibenz(a,h)anthracene	ND		0.0059		mg/Kg	☼	03/23/22 13:29	03/28/22 18:04	1
Fluoranthene	ND		0.0059		mg/Kg	☼	03/23/22 13:29	03/28/22 18:04	1
Fluorene	ND		0.0059		mg/Kg	☼	03/23/22 13:29	03/28/22 18:04	1
Indeno[1,2,3-cd]pyrene	ND		0.0059		mg/Kg	☼	03/23/22 13:29	03/28/22 18:04	1
1-Methylnaphthalene	ND		0.0059		mg/Kg	☼	03/23/22 13:29	03/28/22 18:04	1
2-Methylnaphthalene	ND		0.0059		mg/Kg	☼	03/23/22 13:29	03/28/22 18:04	1
Naphthalene	ND		0.0059		mg/Kg	☼	03/23/22 13:29	03/28/22 18:04	1
Phenanthrene	ND		0.0059		mg/Kg	☼	03/23/22 13:29	03/28/22 18:04	1
Pyrene	ND		0.0059		mg/Kg	☼	03/23/22 13:29	03/28/22 18:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*83*		*12 - 147*	*03/23/22 13:29*	*03/28/22 18:04*	*1*
Nitrobenzene-d5 (Surr)	*85*		*10 - 143*	*03/23/22 13:29*	*03/28/22 18:04*	*1*
p-Terphenyl-d14 (Surr)	*97*		*10 - 145*	*03/23/22 13:29*	*03/28/22 18:04*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.21		mg/Kg	☼	03/21/22 11:36	03/23/22 13:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*50 - 150*	*03/21/22 11:36*	*03/23/22 13:50*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	**14**		6.1		mg/Kg	☼	03/21/22 11:59	03/23/22 21:59	1
TPH as Motor Oil Range	**24**		6.1		mg/Kg	☼	03/21/22 11:59	03/23/22 21:59	1

Client Sample ID: TS14

Date Collected: 03/15/22 08:10
Date Received: 03/18/22 10:35

Lab Sample ID: 570-88472-1

Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*112*		*50 - 150*	*03/21/22 11:59*	*03/23/22 21:59*	*1*

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**15.0**		0.1		%			03/22/22 15:11	1
Percent Solids	**85.0**		0.1		%			03/22/22 15:11	1

Client Sample ID: TS15

Date Collected: 03/15/22 12:35
Date Received: 03/18/22 10:35

Lab Sample ID: 570-88472-2

Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00099		mg/Kg	☼	03/21/22 11:36	03/24/22 11:47	1
Ethylbenzene	ND		0.00099		mg/Kg	☼	03/21/22 11:36	03/24/22 11:47	1
Toluene	ND		0.00099		mg/Kg	☼	03/21/22 11:36	03/24/22 11:47	1
m,p-Xylene	ND		0.0020		mg/Kg	☼	03/21/22 11:36	03/24/22 11:47	1
o-Xylene	ND		0.00099		mg/Kg	☼	03/21/22 11:36	03/24/22 11:47	1
Xylenes, Total	ND		0.0020		mg/Kg	☼	03/21/22 11:36	03/24/22 11:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*80 - 142*	*03/21/22 11:36*	*03/24/22 11:47*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*	*03/21/22 11:36*	*03/24/22 11:47*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 123*	*03/21/22 11:36*	*03/24/22 11:47*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*	*03/21/22 11:36*	*03/24/22 11:47*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0064		mg/Kg	☼	03/23/22 13:29	03/28/22 18:23	1
Acenaphthylene	ND		0.0064		mg/Kg	☼	03/23/22 13:29	03/28/22 18:23	1
Anthracene	ND		0.0064		mg/Kg	☼	03/23/22 13:29	03/28/22 18:23	1
Benzo[a]anthracene	ND		0.0064		mg/Kg	☼	03/23/22 13:29	03/28/22 18:23	1
Benzo[a]pyrene	ND		0.0064		mg/Kg	☼	03/23/22 13:29	03/28/22 18:23	1
Benzo[b]fluoranthene	ND		0.0064		mg/Kg	☼	03/23/22 13:29	03/28/22 18:23	1
Benzo[g,h,i]perylene	ND		0.0064		mg/Kg	☼	03/23/22 13:29	03/28/22 18:23	1
Benzo[k]fluoranthene	ND		0.0064		mg/Kg	☼	03/23/22 13:29	03/28/22 18:23	1
Chrysene	ND		0.0064		mg/Kg	☼	03/23/22 13:29	03/28/22 18:23	1
Dibenz(a,h)anthracene	ND		0.0064		mg/Kg	☼	03/23/22 13:29	03/28/22 18:23	1
Fluoranthene	ND		0.0064		mg/Kg	☼	03/23/22 13:29	03/28/22 18:23	1
Fluorene	ND		0.0064		mg/Kg	☼	03/23/22 13:29	03/28/22 18:23	1
Indeno[1,2,3-cd]pyrene	ND		0.0064		mg/Kg	☼	03/23/22 13:29	03/28/22 18:23	1
1-Methylnaphthalene	**0.051**		0.0064		mg/Kg	☼	03/23/22 13:29	03/28/22 18:23	1
2-Methylnaphthalene	**0.017**		0.0064		mg/Kg	☼	03/23/22 13:29	03/28/22 18:23	1
Naphthalene	**0.044**		0.0064		mg/Kg	☼	03/23/22 13:29	03/28/22 18:23	1
Phenanthrene	**0.010**		0.0064		mg/Kg	☼	03/23/22 13:29	03/28/22 18:23	1
Pyrene	ND		0.0064		mg/Kg	☼	03/23/22 13:29	03/28/22 18:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*82*		*12 - 147*	*03/23/22 13:29*	*03/28/22 18:23*	*1*
Nitrobenzene-d5 (Surr)	*72*		*10 - 143*	*03/23/22 13:29*	*03/28/22 18:23*	*1*
p-Terphenyl-d14 (Surr)	*104*		*10 - 145*	*03/23/22 13:29*	*03/28/22 18:23*	*1*

Client Sample ID: TS15

Date Collected: 03/15/22 12:35
Date Received: 03/18/22 10:35

Lab Sample ID: 570-88472-2

Matrix: Solid

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	0.83		0.26		mg/Kg	☼	03/21/22 11:36	03/23/22 14:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*50 - 150*	*03/21/22 11:36*	*03/23/22 14:15*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	14		6.2		mg/Kg	☼	03/21/22 11:59	03/23/22 22:22	1
TPH as Motor Oil Range	21		6.2		mg/Kg	☼	03/21/22 11:59	03/23/22 22:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*116*		*50 - 150*	*03/21/22 11:59*	*03/23/22 22:22*	*1*

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	22.0		0.1		%			03/22/22 15:11	1
Percent Solids	78.0		0.1		%			03/22/22 15:11	1

Client Sample ID: TS16

Date Collected: 03/16/22 08:10
Date Received: 03/18/22 10:35

Lab Sample ID: 570-88472-3

Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0012		mg/Kg	☼	03/21/22 11:36	03/24/22 12:11	1
Ethylbenzene	ND		0.0012		mg/Kg	☼	03/21/22 11:36	03/24/22 12:11	1
Toluene	ND		0.0012		mg/Kg	☼	03/21/22 11:36	03/24/22 12:11	1
m,p-Xylene	ND		0.0024		mg/Kg	☼	03/21/22 11:36	03/24/22 12:11	1
o-Xylene	ND		0.0012		mg/Kg	☼	03/21/22 11:36	03/24/22 12:11	1
Xylenes, Total	ND		0.0024		mg/Kg	☼	03/21/22 11:36	03/24/22 12:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 142*	*03/21/22 11:36*	*03/24/22 12:11*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*	*03/21/22 11:36*	*03/24/22 12:11*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 123*	*03/21/22 11:36*	*03/24/22 12:11*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*	*03/21/22 11:36*	*03/24/22 12:11*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0061		mg/Kg	☼	03/23/22 13:29	03/28/22 18:42	1
Acenaphthylene	ND		0.0061		mg/Kg	☼	03/23/22 13:29	03/28/22 18:42	1
Anthracene	ND		0.0061		mg/Kg	☼	03/23/22 13:29	03/28/22 18:42	1
Benzo[a]anthracene	ND		0.0061		mg/Kg	☼	03/23/22 13:29	03/28/22 18:42	1
Benzo[a]pyrene	ND		0.0061		mg/Kg	☼	03/23/22 13:29	03/28/22 18:42	1
Benzo[b]fluoranthene	ND		0.0061		mg/Kg	☼	03/23/22 13:29	03/28/22 18:42	1
Benzo[g,h,i]perylene	ND		0.0061		mg/Kg	☼	03/23/22 13:29	03/28/22 18:42	1
Benzo[k]fluoranthene	ND		0.0061		mg/Kg	☼	03/23/22 13:29	03/28/22 18:42	1
Chrysene	ND		0.0061		mg/Kg	☼	03/23/22 13:29	03/28/22 18:42	1
Dibenz(a,h)anthracene	ND		0.0061		mg/Kg	☼	03/23/22 13:29	03/28/22 18:42	1
Fluoranthene	ND		0.0061		mg/Kg	☼	03/23/22 13:29	03/28/22 18:42	1
Fluorene	0.012		0.0061		mg/Kg	☼	03/23/22 13:29	03/28/22 18:42	1

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-88472-1

Client Sample ID: TS16
Date Collected: 03/16/22 08:10
Date Received: 03/18/22 10:35

Lab Sample ID: 570-88472-3
Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	ND		0.0061		mg/Kg	☼	03/23/22 13:29	03/28/22 18:42	1
1-Methylnaphthalene	**0.023**		0.0061		mg/Kg	☼	03/23/22 13:29	03/28/22 18:42	1
2-Methylnaphthalene	**0.039**		0.0061		mg/Kg	☼	03/23/22 13:29	03/28/22 18:42	1
Naphthalene	**0.0061**		0.0061		mg/Kg	☼	03/23/22 13:29	03/28/22 18:42	1
Phenanthrene	**0.0065**		0.0061		mg/Kg	☼	03/23/22 13:29	03/28/22 18:42	1
Pyrene	ND		0.0061		mg/Kg	☼	03/23/22 13:29	03/28/22 18:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*88*		*12 - 147*	*03/23/22 13:29*	*03/28/22 18:42*	*1*
Nitrobenzene-d5 (Surr)	*87*		*10 - 143*	*03/23/22 13:29*	*03/28/22 18:42*	*1*
p-Terphenyl-d14 (Surr)	*92*		*10 - 145*	*03/23/22 13:29*	*03/28/22 18:42*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.27		mg/Kg	☼	03/21/22 11:36	03/23/22 14:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*50 - 150*	*03/21/22 11:36*	*03/23/22 14:39*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	**6.6**		6.0		mg/Kg	☼	03/21/22 11:59	03/23/22 22:44	1
TPH as Motor Oil Range	**15**		6.0		mg/Kg	☼	03/21/22 11:59	03/23/22 22:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*115*		*50 - 150*	*03/21/22 11:59*	*03/23/22 22:44*	*1*

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**18.2**		0.1		%			03/22/22 15:11	1
Percent Solids	**81.8**		0.1		%			03/22/22 15:11	1

Surrogate Summary

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-88472-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-142)	(80-120)	(80-123)	(80-120)
570-88472-1	TS14	112	94	102	99
570-88472-2	TS15	111	96	100	104
570-88472-3	TS16	109	94	98	98
LCS 570-221808/3	Lab Control Sample	94	101	98	100
LCSD 570-221808/4	Lab Control Sample Dup	94	101	98	100
MB 570-221808/6	Method Blank	97	92	96	98

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHd14
Lab Sample ID	Client Sample ID	(12-147)	(10-143)	(10-145)
570-88472-1	TS14	83	85	97
570-88472-1 MS	TS14	89	94	99
570-88472-1 MSD	TS14	105	110	117
570-88472-2	TS15	82	72	104
570-88472-3	TS16	88	87	92
LCS 570-221646/2-A	Lab Control Sample	107	106	123
LCSD 570-221646/3-A	Lab Control Sample Dup	98	103	104
MB 570-221646/1-A	Method Blank	108	117	121

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		BFB1
Lab Sample ID	Client Sample ID	(50-150)
570-88472-1	TS14	118
570-88472-2	TS15	110
570-88472-3	TS16	113
LCS 570-221591/4	Lab Control Sample	104
LCSD 570-221591/5	Lab Control Sample Dup	102
MB 570-221591/6	Method Blank	84

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Surrogate Summary

Client: Cardno, Inc
Job ID: 570-88472-1
Project/Site: Mobil/ADC/031447

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Matrix: Solid **Prep Type: Silica Gel Cleanup**

		Percent Surrogate Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	OTCSN (50-150)						
570-87790-A-1-D MS	Matrix Spike	110						
570-87790-A-1-E MSD	Matrix Spike Duplicate	107						
570-87790-A-1-F MS	Matrix Spike	125						
570-87790-A-1-G MSD	Matrix Spike Duplicate	121						
570-88472-1	TS14	112						
570-88472-2	TS15	116						
570-88472-3	TS16	115						
LCS 570-221062/2-A	Lab Control Sample	108						
LCS 570-221062/6-A	Lab Control Sample	111						
LCSD 570-221062/3-A	Lab Control Sample Dup	106						
LCSD 570-221062/7-A	Lab Control Sample Dup	107						
MB 570-221062/1-A	Method Blank	104						

Surrogate Legend

OTCSN = n-Octacosane (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 570-221808/6
Matrix: Solid
Analysis Batch: 221808

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0010		mg/Kg			03/24/22 10:33	1
Ethylbenzene	ND		0.0010		mg/Kg			03/24/22 10:33	1
Toluene	ND		0.0010		mg/Kg			03/24/22 10:33	1
m,p-Xylene	ND		0.0020		mg/Kg			03/24/22 10:33	1
o-Xylene	ND		0.0010		mg/Kg			03/24/22 10:33	1
Xylenes, Total	ND		0.0020		mg/Kg			03/24/22 10:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 142*		*03/24/22 10:33*	*1*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*03/24/22 10:33*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 123*		*03/24/22 10:33*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*03/24/22 10:33*	*1*

Lab Sample ID: LCS 570-221808/3
Matrix: Solid
Analysis Batch: 221808

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.0500	0.04699		mg/Kg		94	79 - 120		
Ethylbenzene			0.0500	0.05019		mg/Kg		100	80 - 120		
Toluene			0.0500	0.04712		mg/Kg		94	80 - 120		
m,p-Xylene			0.100	0.1021		mg/Kg		102	79 - 120		
o-Xylene			0.0500	0.05296		mg/Kg		106	79 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*80 - 142*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*98*		*80 - 123*
Toluene-d8 (Surr)	*100*		*80 - 120*

Lab Sample ID: LCSD 570-221808/4
Matrix: Solid
Analysis Batch: 221808

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.0500	0.04699		mg/Kg		94	79 - 120	0	20
Ethylbenzene			0.0500	0.05065		mg/Kg		101	80 - 120	1	20
Toluene			0.0500	0.04720		mg/Kg		94	80 - 120	0	20
m,p-Xylene			0.100	0.1026		mg/Kg		103	79 - 120	1	20
o-Xylene			0.0500	0.05316		mg/Kg		106	79 - 120	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*80 - 142*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*98*		*80 - 123*
Toluene-d8 (Surr)	*100*		*80 - 120*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Lab Sample ID: MB 570-221646/1-A
Matrix: Solid
Analysis Batch: 222547

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221646

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		03/23/22 13:29	03/28/22 16:27	1
Acenaphthylene	ND		0.0050		mg/Kg		03/23/22 13:29	03/28/22 16:27	1
Anthracene	ND		0.0050		mg/Kg		03/23/22 13:29	03/28/22 16:27	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		03/23/22 13:29	03/28/22 16:27	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		03/23/22 13:29	03/28/22 16:27	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		03/23/22 13:29	03/28/22 16:27	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		03/23/22 13:29	03/28/22 16:27	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		03/23/22 13:29	03/28/22 16:27	1
Chrysene	ND		0.0050		mg/Kg		03/23/22 13:29	03/28/22 16:27	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		03/23/22 13:29	03/28/22 16:27	1
Fluoranthene	ND		0.0050		mg/Kg		03/23/22 13:29	03/28/22 16:27	1
Fluorene	ND		0.0050		mg/Kg		03/23/22 13:29	03/28/22 16:27	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		03/23/22 13:29	03/28/22 16:27	1
1-Methylnaphthalene	ND		0.0050		mg/Kg		03/23/22 13:29	03/28/22 16:27	1
2-Methylnaphthalene	ND		0.0050		mg/Kg		03/23/22 13:29	03/28/22 16:27	1
Naphthalene	ND		0.0050		mg/Kg		03/23/22 13:29	03/28/22 16:27	1
Phenanthrene	ND		0.0050		mg/Kg		03/23/22 13:29	03/28/22 16:27	1
Pyrene	ND		0.0050		mg/Kg		03/23/22 13:29	03/28/22 16:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*108*		*12 - 147*	*03/23/22 13:29*	*03/28/22 16:27*	*1*
Nitrobenzene-d5 (Surr)	*117*		*10 - 143*	*03/23/22 13:29*	*03/28/22 16:27*	*1*
p-Terphenyl-d14 (Surr)	*121*		*10 - 145*	*03/23/22 13:29*	*03/28/22 16:27*	*1*

Lab Sample ID: LCS 570-221646/2-A
Matrix: Solid
Analysis Batch: 222547

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221646

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	0.0500	0.05184		mg/Kg		104	45 - 134
Acenaphthylene	0.0500	0.05778		mg/Kg		116	45 - 147
Anthracene	0.0500	0.05241		mg/Kg		105	45 - 139
Benzo[a]anthracene	0.0500	0.05874		mg/Kg		117	51 - 136
Benzo[a]pyrene	0.0500	0.05585		mg/Kg		112	44 - 145
Benzo[b]fluoranthene	0.0500	0.05224		mg/Kg		104	41 - 156
Benzo[g,h,i]perylene	0.0500	0.05521		mg/Kg		110	41 - 154
Benzo[k]fluoranthene	0.0500	0.05300		mg/Kg		106	50 - 145
Chrysene	0.0500	0.05152		mg/Kg		103	48 - 134
Dibenz(a,h)anthracene	0.0500	0.05612		mg/Kg		112	45 - 153
Fluoranthene	0.0500	0.05208		mg/Kg		104	45 - 137
Fluorene	0.0500	0.05453		mg/Kg		109	49 - 134
Indeno[1,2,3-cd]pyrene	0.0500	0.05103		mg/Kg		102	41 - 152
1-Methylnaphthalene	0.0500	0.05372		mg/Kg		107	52 - 138
2-Methylnaphthalene	0.0500	0.05023		mg/Kg		100	43 - 151
Naphthalene	0.0500	0.04952		mg/Kg		99	45 - 135
Phenanthrene	0.0500	0.04959		mg/Kg		99	45 - 133
Pyrene	0.0500	0.05798		mg/Kg		116	47 - 138

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCS 570-221646/2-A
Matrix: Solid
Analysis Batch: 222547

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221646

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	107		12 - 147
Nitrobenzene-d5 (Surr)	106		10 - 143
p-Terphenyl-d14 (Surr)	123		10 - 145

Lab Sample ID: LCSD 570-221646/3-A
Matrix: Solid
Analysis Batch: 222547

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 221646

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene			0.0500	0.04748		mg/Kg		95	45 - 134	9	25
Acenaphthylene			0.0500	0.05298		mg/Kg		106	45 - 147	9	28
Anthracene			0.0500	0.04721		mg/Kg		94	45 - 139	10	24
Benzo[a]anthracene			0.0500	0.05376		mg/Kg		108	51 - 136	9	24
Benzo[a]pyrene			0.0500	0.05187		mg/Kg		104	44 - 145	7	25
Benzo[b]fluoranthene			0.0500	0.04946		mg/Kg		99	41 - 156	5	25
Benzo[g,h,i]perylene			0.0500	0.05092		mg/Kg		102	41 - 154	8	30
Benzo[k]fluoranthene			0.0500	0.05077		mg/Kg		102	50 - 145	4	25
Chrysene			0.0500	0.04754		mg/Kg		95	48 - 134	8	22
Dibenz(a,h)anthracene			0.0500	0.05141		mg/Kg		103	45 - 153	9	26
Fluoranthene			0.0500	0.04688		mg/Kg		94	45 - 137	11	24
Fluorene			0.0500	0.05030		mg/Kg		101	49 - 134	8	27
Indeno[1,2,3-cd]pyrene			0.0500	0.04763		mg/Kg		95	41 - 152	7	27
1-Methylnaphthalene			0.0500	0.05011		mg/Kg		100	52 - 138	7	26
2-Methylnaphthalene			0.0500	0.04765		mg/Kg		95	43 - 151	5	27
Naphthalene			0.0500	0.04697		mg/Kg		94	45 - 135	5	26
Phenanthrene			0.0500	0.04530		mg/Kg		91	45 - 133	9	27
Pyrene			0.0500	0.05109		mg/Kg		102	47 - 138	13	27

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	98		12 - 147
Nitrobenzene-d5 (Surr)	103		10 - 143
p-Terphenyl-d14 (Surr)	104		10 - 145

Lab Sample ID: 570-88472-1 MS
Matrix: Solid
Analysis Batch: 222547

Client Sample ID: TS14
Prep Type: Total/NA
Prep Batch: 221646

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	ND		0.0588	0.05137		mg/Kg	☼	87	10 - 175
Acenaphthylene	ND		0.0588	0.05781		mg/Kg	☼	98	10 - 180
Anthracene	ND		0.0588	0.04927		mg/Kg	☼	84	10 - 158
Benzo[a]anthracene	ND		0.0588	0.05971		mg/Kg	☼	96	10 - 180
Benzo[a]pyrene	ND		0.0588	0.05777		mg/Kg	☼	98	10 - 180
Benzo[b]fluoranthene	ND		0.0588	0.05441		mg/Kg	☼	93	10 - 180
Benzo[g,h,i]perylene	ND		0.0588	0.05558		mg/Kg	☼	94	10 - 180
Benzo[k]fluoranthene	ND		0.0588	0.05451		mg/Kg	☼	93	10 - 180
Chrysene	ND		0.0588	0.05366		mg/Kg	☼	86	10 - 180
Dibenz(a,h)anthracene	ND		0.0588	0.05549		mg/Kg	☼	94	10 - 180

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 570-88472-1 MS
Matrix: Solid
Analysis Batch: 222547

Client Sample ID: TS14
Prep Type: Total/NA
Prep Batch: 221646

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoranthene	ND		0.0588	0.05360		mg/Kg	☼	85	10 - 180
Fluorene	ND		0.0588	0.05426		mg/Kg	☼	92	10 - 168
Indeno[1,2,3-cd]pyrene	ND		0.0588	0.05101		mg/Kg	☼	87	10 - 172
1-Methylnaphthalene	ND		0.0588	0.05769		mg/Kg	☼	98	13 - 143
2-Methylnaphthalene	ND		0.0588	0.05401		mg/Kg	☼	92	26 - 144
Naphthalene	ND		0.0588	0.05335		mg/Kg	☼	91	10 - 161
Phenanthrene	ND		0.0588	0.04989		mg/Kg	☼	85	10 - 180
Pyrene	ND		0.0588	0.05898		mg/Kg	☼	91	10 - 180

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*89*		*12 - 147*
Nitrobenzene-d5 (Surr)	*94*		*10 - 143*
p-Terphenyl-d14 (Surr)	*99*		*10 - 145*

Lab Sample ID: 570-88472-1 MSD
Matrix: Solid
Analysis Batch: 222547

Client Sample ID: TS14
Prep Type: Total/NA
Prep Batch: 221646

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene	ND		0.0587	0.06213		mg/Kg	☼	106	10 - 175	19	40
Acenaphthylene	ND		0.0587	0.06878		mg/Kg	☼	117	10 - 180	17	40
Anthracene	ND		0.0587	0.05805		mg/Kg	☼	99	10 - 158	16	40
Benzo[a]anthracene	ND		0.0587	0.07164		mg/Kg	☼	117	10 - 180	18	40
Benzo[a]pyrene	ND		0.0587	0.06887		mg/Kg	☼	117	10 - 180	18	40
Benzo[b]fluoranthene	ND		0.0587	0.06433		mg/Kg	☼	110	10 - 180	17	40
Benzo[g,h,i]perylene	ND		0.0587	0.06568		mg/Kg	☼	112	10 - 180	17	40
Benzo[k]fluoranthene	ND		0.0587	0.06439		mg/Kg	☼	110	10 - 180	17	40
Chrysene	ND		0.0587	0.06457		mg/Kg	☼	105	10 - 180	18	40
Dibenz(a,h)anthracene	ND		0.0587	0.06492		mg/Kg	☼	111	10 - 180	16	40
Fluoranthene	ND		0.0587	0.06574		mg/Kg	☼	106	10 - 180	20	40
Fluorene	ND		0.0587	0.06446		mg/Kg	☼	110	10 - 168	17	40
Indeno[1,2,3-cd]pyrene	ND		0.0587	0.06202		mg/Kg	☼	106	10 - 172	19	40
1-Methylnaphthalene	ND		0.0587	0.06454		mg/Kg	☼	110	13 - 143	11	40
2-Methylnaphthalene	ND		0.0587	0.06153		mg/Kg	☼	105	26 - 144	13	40
Naphthalene	ND		0.0587	0.06108		mg/Kg	☼	104	10 - 161	13	40
Phenanthrene	ND		0.0587	0.06097		mg/Kg	☼	104	10 - 180	20	40
Pyrene	ND		0.0587	0.07347		mg/Kg	☼	116	10 - 180	22	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*105*		*12 - 147*
Nitrobenzene-d5 (Surr)	*110*		*10 - 143*
p-Terphenyl-d14 (Surr)	*117*		*10 - 145*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 570-221591/6
Matrix: Solid
Analysis Batch: 221591

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.25		mg/Kg			03/23/22 12:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*50 - 150*		*03/23/22 12:38*	*1*

Lab Sample ID: LCS 570-221591/4
Matrix: Solid
Analysis Batch: 221591

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Gasoline (C4-C13)			1.96	2.139		mg/Kg		109	77 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*50 - 150*

Lab Sample ID: LCSD 570-221591/5
Matrix: Solid
Analysis Batch: 221591

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Gasoline (C4-C13)			1.97	2.130		mg/Kg		108	77 - 128	0	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*50 - 150*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 570-221062/1-A
Matrix: Solid
Analysis Batch: 221689

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 221062

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	ND		5.0		mg/Kg		03/21/22 11:59	03/23/22 16:18	1
TPH as Motor Oil Range	ND		5.0		mg/Kg		03/21/22 11:59	03/23/22 16:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*104*		*50 - 150*	*03/21/22 11:59*	*03/23/22 16:18*	*1*

Lab Sample ID: LCS 570-221062/2-A
Matrix: Solid
Analysis Batch: 221689

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 221062

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Diesel (C10-C28)			400	438.4		mg/Kg		110	76 - 126		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*108*		*50 - 150*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 570-221062/6-A
Matrix: Solid
Analysis Batch: 221689

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 221062

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Motor Oil (C17-C44)			400	414.1		mg/Kg		104	71 - 139		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*111*		*50 - 150*

Lab Sample ID: LCSD 570-221062/3-A
Matrix: Solid
Analysis Batch: 221689

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 221062

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Diesel (C10-C28)			400	443.5		mg/Kg		111	76 - 126	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*106*		*50 - 150*

Lab Sample ID: LCSD 570-221062/7-A
Matrix: Solid
Analysis Batch: 221689

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 221062

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Motor Oil (C17-C44)			400	417.3		mg/Kg		104	71 - 139	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*107*		*50 - 150*

Lab Sample ID: 570-87790-A-1-D MS
Matrix: Solid
Analysis Batch: 221689

Client Sample ID: Matrix Spike
Prep Type: Silica Gel Cleanup
Prep Batch: 221062

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Diesel (C10-C28)	16		448	545.0		mg/Kg	☼	118	37 - 175		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
n-Octacosane (Surr)	*110*		*50 - 150*

Lab Sample ID: 570-87790-A-1-E MSD
Matrix: Solid
Analysis Batch: 221689

Client Sample ID: Matrix Spike Duplicate
Prep Type: Silica Gel Cleanup
Prep Batch: 221062

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Diesel (C10-C28)	16		453	555.4		mg/Kg	☼	119	37 - 175	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
n-Octacosane (Surr)	*107*		*50 - 150*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: 570-87790-A-1-F MS
Matrix: Solid
Analysis Batch: 221689

Client Sample ID: Matrix Spike
Prep Type: Silica Gel Cleanup
Prep Batch: 221062

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Motor Oil (C17-C44)	43		454	570.5		mg/Kg	☼	116	71 - 174		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
n-Octacosane (Surr)	*125*		*50 - 150*

Lab Sample ID: 570-87790-A-1-G MSD
Matrix: Solid
Analysis Batch: 221689

Client Sample ID: Matrix Spike Duplicate
Prep Type: Silica Gel Cleanup
Prep Batch: 221062

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Motor Oil (C17-C44)	43		462	592.8		mg/Kg	☼	119	71 - 174	4	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
n-Octacosane (Surr)	*121*		*50 - 150*

Method: Moisture - Percent Moisture

Lab Sample ID: 570-88115-A-1 DU
Matrix: Solid
Analysis Batch: 221676

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	7.6			7.5		%				2	10
Percent Solids	92.4			92.5		%				0.1	10

GC/MS VOA

Prep Batch: 221056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-88472-1	TS14	Total/NA	Solid	5035	
570-88472-2	TS15	Total/NA	Solid	5035	
570-88472-3	TS16	Total/NA	Solid	5035	

Analysis Batch: 221808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-88472-1	TS14	Total/NA	Solid	8260C	221056
570-88472-2	TS15	Total/NA	Solid	8260C	221056
570-88472-3	TS16	Total/NA	Solid	8260C	221056
MB 570-221808/6	Method Blank	Total/NA	Solid	8260C	
LCS 570-221808/3	Lab Control Sample	Total/NA	Solid	8260C	
LCSD 570-221808/4	Lab Control Sample Dup	Total/NA	Solid	8260C	

GC/MS Semi VOA

Prep Batch: 221646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-88472-1	TS14	Total/NA	Solid	3546	
570-88472-2	TS15	Total/NA	Solid	3546	
570-88472-3	TS16	Total/NA	Solid	3546	
MB 570-221646/1-A	Method Blank	Total/NA	Solid	3546	
LCS 570-221646/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 570-221646/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
570-88472-1 MS	TS14	Total/NA	Solid	3546	
570-88472-1 MSD	TS14	Total/NA	Solid	3546	

Analysis Batch: 222547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-88472-1	TS14	Total/NA	Solid	8270C SIM	221646
570-88472-2	TS15	Total/NA	Solid	8270C SIM	221646
570-88472-3	TS16	Total/NA	Solid	8270C SIM	221646
MB 570-221646/1-A	Method Blank	Total/NA	Solid	8270C SIM	221646
LCS 570-221646/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	221646
LCSD 570-221646/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM	221646
570-88472-1 MS	TS14	Total/NA	Solid	8270C SIM	221646
570-88472-1 MSD	TS14	Total/NA	Solid	8270C SIM	221646

GC VOA

Prep Batch: 221056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-88472-1	TS14	Total/NA	Solid	5035	
570-88472-2	TS15	Total/NA	Solid	5035	
570-88472-3	TS16	Total/NA	Solid	5035	

Analysis Batch: 221591

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-88472-1	TS14	Total/NA	Solid	NWTPH-Gx	221056
570-88472-2	TS15	Total/NA	Solid	NWTPH-Gx	221056
570-88472-3	TS16	Total/NA	Solid	NWTPH-Gx	221056
MB 570-221591/6	Method Blank	Total/NA	Solid	NWTPH-Gx	
LCS 570-221591/4	Lab Control Sample	Total/NA	Solid	NWTPH-Gx	

GC VOA (Continued)

Analysis Batch: 221591 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 570-221591/5	Lab Control Sample Dup	Total/NA	Solid	NWTPH-Gx	

GC Semi VOA

Prep Batch: 221062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-88472-1	TS14	Silica Gel Cleanup	Solid	3550C SGC	
570-88472-2	TS15	Silica Gel Cleanup	Solid	3550C SGC	
570-88472-3	TS16	Silica Gel Cleanup	Solid	3550C SGC	
MB 570-221062/1-A	Method Blank	Silica Gel Cleanup	Solid	3550C SGC	
LCS 570-221062/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3550C SGC	
LCS 570-221062/6-A	Lab Control Sample	Silica Gel Cleanup	Solid	3550C SGC	
LCSD 570-221062/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3550C SGC	
LCSD 570-221062/7-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3550C SGC	
570-87790-A-1-D MS	Matrix Spike	Silica Gel Cleanup	Solid	3550C SGC	
570-87790-A-1-E MSD	Matrix Spike Duplicate	Silica Gel Cleanup	Solid	3550C SGC	
570-87790-A-1-F MS	Matrix Spike	Silica Gel Cleanup	Solid	3550C SGC	
570-87790-A-1-G MSD	Matrix Spike Duplicate	Silica Gel Cleanup	Solid	3550C SGC	

Analysis Batch: 221689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-88472-1	TS14	Silica Gel Cleanup	Solid	NWTPH-Dx	221062
570-88472-2	TS15	Silica Gel Cleanup	Solid	NWTPH-Dx	221062
570-88472-3	TS16	Silica Gel Cleanup	Solid	NWTPH-Dx	221062
MB 570-221062/1-A	Method Blank	Silica Gel Cleanup	Solid	NWTPH-Dx	221062
LCS 570-221062/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	NWTPH-Dx	221062
LCS 570-221062/6-A	Lab Control Sample	Silica Gel Cleanup	Solid	NWTPH-Dx	221062
LCSD 570-221062/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	NWTPH-Dx	221062
LCSD 570-221062/7-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	NWTPH-Dx	221062
570-87790-A-1-D MS	Matrix Spike	Silica Gel Cleanup	Solid	NWTPH-Dx	221062
570-87790-A-1-E MSD	Matrix Spike Duplicate	Silica Gel Cleanup	Solid	NWTPH-Dx	221062
570-87790-A-1-F MS	Matrix Spike	Silica Gel Cleanup	Solid	NWTPH-Dx	221062
570-87790-A-1-G MSD	Matrix Spike Duplicate	Silica Gel Cleanup	Solid	NWTPH-Dx	221062

General Chemistry

Analysis Batch: 221676

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-88472-1	TS14	Total/NA	Solid	Moisture	
570-88472-2	TS15	Total/NA	Solid	Moisture	
570-88472-3	TS16	Total/NA	Solid	Moisture	
570-88115-A-1 DU	Duplicate	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-88472-1

Client Sample ID: TS14

Lab Sample ID: 570-88472-1

Date Collected: 03/15/22 08:10

Matrix: Solid

Date Received: 03/18/22 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.944 g	5 mL	221056	03/21/22 11:36	UQTR	ECL 4
Total/NA	Analysis	8260C		1	5 mL	5 mL	221808	03/24/22 11:22	AH8S	ECL 4
	Instrument ID: GCMSGGG									
Total/NA	Prep	3546			19.99 g	1 mL	221646	03/23/22 13:29	SP9M	ECL 4
Total/NA	Analysis	8270C SIM		1			222547	03/28/22 18:04	ULLI	ECL 4
	Instrument ID: GCMSAAA									
Total/NA	Prep	5035			6.911 g	5 mL	221056	03/21/22 11:36	UQTR	ECL 4
Total/NA	Analysis	NWTPH-Gx		1	5 g	5 mL	221591	03/23/22 13:50	P1R	ECL 4
	Instrument ID: GC53									
Silica Gel Cleanup	Prep	3550C SGC			9.65 g	10 mL	221062	03/21/22 11:59	KG5J	ECL 4
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			221689	03/23/22 21:59	A1W	ECL 4
	Instrument ID: GC48									
Total/NA	Analysis	Moisture		1			221676	03/22/22 15:11	FRT7	ECL 4
	Instrument ID: BAL62									

Client Sample ID: TS15

Lab Sample ID: 570-88472-2

Date Collected: 03/15/22 12:35

Matrix: Solid

Date Received: 03/18/22 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.458 g	5 mL	221056	03/21/22 11:36	UQTR	ECL 4
Total/NA	Analysis	8260C		1	5 mL	5 mL	221808	03/24/22 11:47	AH8S	ECL 4
	Instrument ID: GCMSGGG									
Total/NA	Prep	3546			20.08 g	1 mL	221646	03/23/22 13:29	SP9M	ECL 4
Total/NA	Analysis	8270C SIM		1			222547	03/28/22 18:23	ULLI	ECL 4
	Instrument ID: GCMSAAA									
Total/NA	Prep	5035			6.264 g	5 mL	221056	03/21/22 11:36	UQTR	ECL 4
Total/NA	Analysis	NWTPH-Gx		1	5 g	5 mL	221591	03/23/22 14:15	P1R	ECL 4
	Instrument ID: GC53									
Silica Gel Cleanup	Prep	3550C SGC			10.30 g	10 mL	221062	03/21/22 11:59	KG5J	ECL 4
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			221689	03/23/22 22:22	A1W	ECL 4
	Instrument ID: GC48									
Total/NA	Analysis	Moisture		1			221676	03/22/22 15:11	FRT7	ECL 4
	Instrument ID: BAL62									

Client Sample ID: TS16

Lab Sample ID: 570-88472-3

Date Collected: 03/16/22 08:10

Matrix: Solid

Date Received: 03/18/22 10:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.169 g	5 mL	221056	03/21/22 11:36	UQTR	ECL 4
Total/NA	Analysis	8260C		1	5 mL	5 mL	221808	03/24/22 12:11	AH8S	ECL 4
	Instrument ID: GCMSGGG									
Total/NA	Prep	3546			19.92 g	1 mL	221646	03/23/22 13:29	SP9M	ECL 4
Total/NA	Analysis	8270C SIM		1			222547	03/28/22 18:42	ULLI	ECL 4
	Instrument ID: GCMSAAA									

Lab Chronicle

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-88472-1

Client Sample ID: TS16

Date Collected: 03/16/22 08:10
Date Received: 03/18/22 10:35

Lab Sample ID: 570-88472-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.597 g	5 mL	221056	03/21/22 11:36	UQTR	ECL 4
Total/NA	Analysis	NWTPH-Gx		1	5 g	5 mL	221591	03/23/22 14:39	P1R	ECL 4
	Instrument ID: GC53									
Silica Gel Cleanup	Prep	3550C SGC			10.24 g	10 mL	221062	03/21/22 11:59	KG5J	ECL 4
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			221689	03/23/22 22:44	A1W	ECL 4
	Instrument ID: GC48									
Total/NA	Analysis	Moisture		1			221676	03/22/22 15:11	FRT7	ECL 4
	Instrument ID: BAL62									

Laboratory References:

ECL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Accreditation/Certification Summary

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-88472-1

Laboratory: Eurofins Calscience

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Washington	State	C916-18	10-12-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-88472-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	ECL 4
8270C SIM	Semivolatile Organic Compound (GC/MS SIM LL)	SW846	ECL 4
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC)	NWTPH	ECL 4
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	ECL 4
Moisture	Percent Moisture	EPA	ECL 4
3546	Microwave Extraction (Low Level)	SW846	ECL 4
3550C SGC	Ultrasonic Extraction	SW846	ECL 4
5035	Closed System Purge and Trap	SW846	ECL 4

Protocol References:

EPA = US Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ECL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

de Guia, Cecile

From: Laina Cole <laina.cole@cardno.com>
Sent: Monday, March 21, 2022 9:51 AM
To: de Guia, Cecile; Cam Penner-Ash; Bobby Thompson
Subject: RE: Eurofins Calscience sample confirmation files from 570-88472-1 Mobil/ADC/031447

EXTERNAL EMAIL*

Hi Cecile,

Please analyze all samples for 1-methylnaphthalene and PAHs using 8270C SIM.

Thank you,

Laina Cole
SENIOR PROGRAM COORDINATOR | BRANCH SAFETY OFFICER
CARDNO

Direct +1 206 394 7225 Office +1 800 499 8950
Address 309 South Cloverdale Street, Unit A13, Seattle, Washington 98108
Email laina.cole@cardno.com Web www.cardno.com

From: Cecile de Guia <Cecile.deGuia@eurofinset.com>
Sent: Monday, March 21, 2022 07:21
To: Cam Penner-Ash <cameron.penner-ash@cardno.com>; Laina Cole <laina.cole@cardno.com>; Bobby Thompson <robert.thompson@cardno.com>
Subject: Eurofins Calscience sample confirmation files from 570-88472-1 Mobil/ADC/031447
Importance: High

Hello,

Attached please find the sample confirmation files for job 570-88472-1; Mobil/ADC/031447

Please confirm if you need 8270C analyzed for the attached COC? 1-Methylnaphthalene is by 8270C and n ot by 8260B.

Thank you.

Cecile de Guia
Project Manager

Eurofins Calscience
Phone: 714-895-5494

E-mail: Cecile.deGuia@eurofinset.com
www.eurofinsus.com/env

Reference: [570-300719]
Attachments: 2

> > Bank information has changed, please refer to remittance information on invoice. < <

88472

eurofins | Calscience

7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
TEL. (714) 895-5494 FAX. (714) 894-7501

Site Name	Everett Bulk Plant
Provide MRN for retail or AFE for major projects	
Retail Project (MRN)	
Major Project (AFE)	
Project Name	MobilADC/031447

CHAIN OF CUSTODY RECORD

DATE. 3/17/2022

PAGE. 1 OF 1

ExxonMobil Engr: Ken Drake

LABORATORY CLIENT: Cardno

ADDRESS: 309 South Cloverdale Street Unit A13

CITY: Seattle, WA 98108

TEL: 206-510-5855 FAX: N/A robert.thompson@cardno com

GLOBAL ID # / COELT LOG CODE:

PROJECT CONTACT: Robert Thompson

SAMPLER(S): John Considine

P O 0314476040, Agreement# A2604415

LAB USE ONLY

COOLER RECEIPT Temp = °C

TURNAROUND TIME

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☑ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)

☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL _____/_____/_____

SPECIAL INSTRUCTIONS:

Required EIM and Cardno EDDs. Please perform Silica Gel Cleanup for NWTPH-DX - % moisture for dry weight correction

Report to: laina.cole@cardno.com, robert.thompson@cardno.com, and cameron.penner-ash@cardno.com

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	Field Point Name	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT	TPHg by Ecology Method NWTPH-GX	TPHd and TPHmo by Ecology Method NWTPH-DX	BTEX by EPA Method 8260C	1-Methylnapthalene by EPA Method 8260C	PAHs by EPA Method 8270C SIM	CONTAINER TYPE
	TS14	TS14	03/15/22	8 10	S	8	X	X	X	X		4 Sodium Bisulfate VOAs, 2 Methanol VOA, 2 4oz un-preserved glass jar
	TS15	TS15	03/15/22	12 35	S	8	X	X	X	X		4 Sodium Bisulfate VOAs, 2 Methanol VOA, 2 4oz un-preserved glass jar
	TS16	TS16	0316/22	8 10	S	8	X	X	X	X		4 Sodium Bisulfate VOAs, 2 Methanol VOA, 2 4oz un-preserved glass jar

Relinquished by: (Signature)	Received by: (Signature) FedEx	Date, & Time: 3/17/2022
Relinquished by: (Signature)	Received by: (Signature)	Date, & Time: 3/18/22 10 35
Relinquished by: (Signature)	Received by: (Signature)	Date, & Time:

570-88472 Chain of Custody

COC\031447 - SOIL COC Trenching 3.14 - 3.16.22

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4/5/2022

570-88472 Waybill

ORIGIN ID:DTHA (817) 965-6081
CAMERON PENNER-ASH
CARDNO INC
309 S CLOVERDALE ST

SEATTLE, WA 98108
UNITED STATES US

SHIP DATE: 19JAN22
ACTWGT: 10.00 LB MAN
CAD: 0835128/CAFE3509

TO SHIPPING
EUROFINS CALSCIENCE IRVINE
2841 DOW AVE STE 100

TUSTIN CA 927807211
(949) 261-1022 REF:
INV:
PO: DEPT:

RMA:

FedEx
Express

FRI - 18 MAR 10:30A
PRIORITY OVERNIGHT

TRK# 0221 1540 4115 2047

92 DTHA

92780
CA-US SNA

570-88472 Waybill

Login Sample Receipt Checklist

Client: Cardno, Inc

Job Number: 570-88472-1

Login Number: 88472
List Number: 1
Creator: Lagunas, Jorge L

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin, CA 92780
Tel: (714)895-5494

Laboratory Job ID: 570-89804-1
Client Project/Site: ExxonMobil/ADC/031447

For:
Cardno, Inc
309 South Cloverdale Street
Unit A13
Seattle, Washington 98108

Attn: Bobby Thompson

Cecile de Guia

Authorized for release by:
4/11/2022 1:51:15 PM

Cecile de Guia, Project Manager I
(714)895-5494
Cecile.deGuia@et.eurofinsus.com

Table of Contents

Sample Summary

Client: Cardno, Inc
Project/Site: ExxonMobil/ADC/031447

Job ID: 570-89804-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-89804-1	TS17	Solid	03/25/22 10:50	03/28/22 10:00

Definitions/Glossary

Client: Cardno, Inc
Project/Site: ExxonMobil/ADC/031447

Job ID: 570-89804-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high biased.

GC Semi VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 570-89804-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative
570-89804-1

Comments
No additional comments.

Receipt
The sample was received on 3/28/2022 10:00 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.1º C.

GC/MS VOA
Method 8260C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-223514. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

Method 8260C: The following sample was diluted due to the abundance of non-target hydrocarbons: TS17 (570-89804-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270C SIM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 570-222939 and analytical batch 570-223836 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8270C SIM: Surrogate recovery for the following samples were outside control limits: TS17 (570-89804-1), (570-89804-G-1-A MS) and (570-89804-G-1-B MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8270C SIM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 570-222939 and analytical batch 570-223836 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC VOA
Method NWTPH-Gx: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-224728. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method NWTPH-Dx: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 570-225312 and analytical batch 570-225353 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

Job ID: 570-89804-1 (Continued)

Laboratory: Eurofins Calscience (Continued)

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Cardno, Inc
Project/Site: ExxonMobil/ADC/031447

Job ID: 570-89804-1

Client Sample ID: TS17

Lab Sample ID: 570-89804-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Acenaphthene - DL	0.43		0.026		mg/Kg	5	☼	8270C SIM	Total/NA
Benzo[a]anthracene - DL	0.049		0.026		mg/Kg	5	☼	8270C SIM	Total/NA
Chrysene - DL	0.084	F1	0.026		mg/Kg	5	☼	8270C SIM	Total/NA
Fluoranthene - DL	0.37		0.026		mg/Kg	5	☼	8270C SIM	Total/NA
Fluorene - DL	0.50		0.026		mg/Kg	5	☼	8270C SIM	Total/NA
1-Methylnaphthalene - DL	0.035	F2	0.026		mg/Kg	5	☼	8270C SIM	Total/NA
2-Methylnaphthalene - DL	0.040	F1	0.026		mg/Kg	5	☼	8270C SIM	Total/NA
Naphthalene - DL	0.029		0.026		mg/Kg	5	☼	8270C SIM	Total/NA
Pyrene - DL	0.32		0.026		mg/Kg	5	☼	8270C SIM	Total/NA
TPH as Gasoline (C4-C13)	860		27		mg/Kg	100	☼	NWTPH-Gx	Total/NA
TPH as Diesel Range	3600		53		mg/Kg	10	☼	NWTPH-Dx	Silica Gel Cleanup
TPH as Motor Oil Range	220		53		mg/Kg	10	☼	NWTPH-Dx	Silica Gel Cleanup

This Detection Summary does not include radiochemical test results.

Client Sample ID: TS17
Date Collected: 03/25/22 10:50
Date Received: 03/28/22 10:00

Lab Sample ID: 570-89804-1
Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.54		mg/Kg	☼	03/29/22 10:34	03/31/22 19:38	500
Ethylbenzene	ND		0.54		mg/Kg	☼	03/29/22 10:34	03/31/22 19:38	500
Toluene	ND		0.54		mg/Kg	☼	03/29/22 10:34	03/31/22 19:38	500
m,p-Xylene	ND		1.1		mg/Kg	☼	03/29/22 10:34	03/31/22 19:38	500
o-Xylene	ND		0.54		mg/Kg	☼	03/29/22 10:34	03/31/22 19:38	500
Xylenes, Total	ND		1.1		mg/Kg	☼	03/29/22 10:34	03/31/22 19:38	500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*87*		*80 - 142*	*03/29/22 10:34*	*03/31/22 19:38*	*500*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*	*03/29/22 10:34*	*03/31/22 19:38*	*500*
Dibromofluoromethane (Surr)	*96*		*80 - 123*	*03/29/22 10:34*	*03/31/22 19:38*	*500*
Toluene-d8 (Surr)	*110*		*80 - 120*	*03/29/22 10:34*	*03/31/22 19:38*	*500*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) - DL

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**0.43**		0.026		mg/Kg	☼	03/29/22 12:51	04/01/22 17:38	5
Acenaphthylene	ND	F1	0.026		mg/Kg	☼	03/29/22 12:51	04/01/22 17:38	5
Anthracene	ND	F1	0.026		mg/Kg	☼	03/29/22 12:51	04/01/22 17:38	5
Benzo[a]anthracene	**0.049**		0.026		mg/Kg	☼	03/29/22 12:51	04/01/22 17:38	5
Benzo[a]pyrene	ND	F2	0.026		mg/Kg	☼	03/29/22 12:51	04/01/22 17:38	5
Benzo[b]fluoranthene	ND		0.026		mg/Kg	☼	03/29/22 12:51	04/01/22 17:38	5
Benzo[g,h,i]perylene	ND		0.026		mg/Kg	☼	03/29/22 12:51	04/01/22 17:38	5
Benzo[k]fluoranthene	ND		0.026		mg/Kg	☼	03/29/22 12:51	04/01/22 17:38	5
Chrysene	**0.084**	**F1**	0.026		mg/Kg	☼	03/29/22 12:51	04/01/22 17:38	5
Dibenz(a,h)anthracene	ND		0.026		mg/Kg	☼	03/29/22 12:51	04/01/22 17:38	5
Fluoranthene	**0.37**		0.026		mg/Kg	☼	03/29/22 12:51	04/01/22 17:38	5
Fluorene	**0.50**		0.026		mg/Kg	☼	03/29/22 12:51	04/01/22 17:38	5
Indeno[1,2,3-cd]pyrene	ND		0.026		mg/Kg	☼	03/29/22 12:51	04/01/22 17:38	5
1-Methylnaphthalene	**0.035**	**F2**	0.026		mg/Kg	☼	03/29/22 12:51	04/01/22 17:38	5
2-Methylnaphthalene	**0.040**	**F1**	0.026		mg/Kg	☼	03/29/22 12:51	04/01/22 17:38	5
Naphthalene	**0.029**		0.026		mg/Kg	☼	03/29/22 12:51	04/01/22 17:38	5
Phenanthrene	ND	F1	0.026		mg/Kg	☼	03/29/22 12:51	04/01/22 17:38	5
Pyrene	**0.32**		0.026		mg/Kg	☼	03/29/22 12:51	04/01/22 17:38	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*87*		*12 - 147*	*03/29/22 12:51*	*04/01/22 17:38*	*5*
Nitrobenzene-d5 (Surr)	*1576*	*S1+*	*10 - 143*	*03/29/22 12:51*	*04/01/22 17:38*	*5*
p-Terphenyl-d14 (Surr)	*109*		*10 - 145*	*03/29/22 12:51*	*04/01/22 17:38*	*5*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	**860**		27		mg/Kg	☼	03/29/22 10:34	04/06/22 17:05	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*71*		*50 - 150*	*03/29/22 10:34*	*04/06/22 17:05*	*100*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	**3600**		53		mg/Kg	☼	04/08/22 10:59	04/08/22 15:47	10
TPH as Motor Oil Range	**220**		53		mg/Kg	☼	04/08/22 10:59	04/08/22 15:47	10

Client: Cardno, Inc
Project/Site: ExxonMobil/ADC/031447

Job ID: 570-89804-1

Client Sample ID: TS17

Date Collected: 03/25/22 10:50
Date Received: 03/28/22 10:00

Lab Sample ID: 570-89804-1

Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*78*		*50 - 150*	*04/08/22 10:59*	*04/08/22 15:47*	*10*

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**6.2**		0.1		%			03/29/22 13:20	1
Percent Solids	**93.8**		0.1		%			03/29/22 13:20	1

Surrogate Summary

Client: Cardno, Inc
Project/Site: ExxonMobil/ADC/031447

Job ID: 570-89804-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-142)	(80-120)	(80-123)	(80-120)
570-89804-1	TS17	87	99	96	110
LCS 570-223514/3	Lab Control Sample	91	96	98	100
LCSD 570-223514/4	Lab Control Sample Dup	88	96	97	99
MB 570-223514/7	Method Blank	89	101	98	104

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHd14
Lab Sample ID	Client Sample ID	(12-147)	(10-143)	(10-145)
570-89804-1 - DL	TS17	87	1576 S1+	109
570-89804-1 MS - DL	TS17	114	506 S1+	115
570-89804-1 MSD - DL	TS17	72	655 S1+	94
LCS 570-222939/2-A	Lab Control Sample	94	90	91
LCSD 570-222939/3-A	Lab Control Sample Dup	87	85	89
MB 570-222939/1-A	Method Blank	65	68	66

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		BFB1
Lab Sample ID	Client Sample ID	(50-150)
570-89804-1	TS17	71
LCS 570-224728/3	Lab Control Sample	97
LCSD 570-224728/4	Lab Control Sample Dup	89
MB 570-224728/6	Method Blank	78

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Matrix: Solid — **Prep Type: Silica Gel Cleanup**

		Percent Surrogate Recovery (Acceptance Limits)
		OTCSN
Lab Sample ID	Client Sample ID	(50-150)
570-89804-1	TS17	78
570-89804-1 MS	TS17	113
570-89804-1 MS	TS17	92

Surrogate Summary

Client: Cardno, Inc
Job ID: 570-89804-1
Project/Site: ExxonMobil/ADC/031447

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Matrix: Solid **Prep Type: Silica Gel Cleanup**

		Percent Surrogate Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	OTCSN (50-150)						
570-89804-1 MSD	TS17	92						
570-89804-1 MSD	TS17	72						
LCS 570-225312/2-A	Lab Control Sample	99						
LCS 570-225312/6-A	Lab Control Sample	109						
LCSD 570-225312/3-A	Lab Control Sample Dup	109						
LCSD 570-225312/7-A	Lab Control Sample Dup	101						
MB 570-225312/1-A	Method Blank	98						

Surrogate Legend

OTCSN = n-Octacosane (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 570-223514/7
Matrix: Solid
Analysis Batch: 223514

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.050		mg/Kg			03/31/22 11:02	50
Ethylbenzene	ND		0.050		mg/Kg			03/31/22 11:02	50
Toluene	ND		0.050		mg/Kg			03/31/22 11:02	50
m,p-Xylene	ND		0.10		mg/Kg			03/31/22 11:02	50
o-Xylene	ND		0.050		mg/Kg			03/31/22 11:02	50
Xylenes, Total	ND		0.10		mg/Kg			03/31/22 11:02	50

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*80 - 142*		*03/31/22 11:02*	*50*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*03/31/22 11:02*	*50*
Dibromofluoromethane (Surr)	*98*		*80 - 123*		*03/31/22 11:02*	*50*
Toluene-d8 (Surr)	*104*		*80 - 120*		*03/31/22 11:02*	*50*

Lab Sample ID: LCS 570-223514/3
Matrix: Solid
Analysis Batch: 223514

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.0500	0.05306		mg/Kg		106	80 - 120		
Ethylbenzene			0.0500	0.05117		mg/Kg		102	80 - 120		
Toluene			0.0500	0.05105		mg/Kg		102	80 - 120		
m,p-Xylene			0.100	0.1027		mg/Kg		103	80 - 120		
o-Xylene			0.0500	0.05060		mg/Kg		101	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*91*		*80 - 142*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*98*		*80 - 123*
Toluene-d8 (Surr)	*100*		*80 - 120*

Lab Sample ID: LCSD 570-223514/4
Matrix: Solid
Analysis Batch: 223514

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.0500	0.05377		mg/Kg		108	80 - 120	1	20
Ethylbenzene			0.0500	0.05198		mg/Kg		104	80 - 120	2	20
Toluene			0.0500	0.05232		mg/Kg		105	80 - 120	2	20
m,p-Xylene			0.100	0.1035		mg/Kg		103	80 - 120	1	20
o-Xylene			0.0500	0.05110		mg/Kg		102	80 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*88*		*80 - 142*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*80 - 123*
Toluene-d8 (Surr)	*99*		*80 - 120*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Lab Sample ID: MB 570-222939/1-A
Matrix: Solid
Analysis Batch: 223232

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 222939

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		03/29/22 12:51	03/31/22 13:18	1
Acenaphthylene	ND		0.0050		mg/Kg		03/29/22 12:51	03/31/22 13:18	1
Anthracene	ND		0.0050		mg/Kg		03/29/22 12:51	03/31/22 13:18	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		03/29/22 12:51	03/31/22 13:18	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		03/29/22 12:51	03/31/22 13:18	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		03/29/22 12:51	03/31/22 13:18	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		03/29/22 12:51	03/31/22 13:18	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		03/29/22 12:51	03/31/22 13:18	1
Chrysene	ND		0.0050		mg/Kg		03/29/22 12:51	03/31/22 13:18	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		03/29/22 12:51	03/31/22 13:18	1
Fluoranthene	ND		0.0050		mg/Kg		03/29/22 12:51	03/31/22 13:18	1
Fluorene	ND		0.0050		mg/Kg		03/29/22 12:51	03/31/22 13:18	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		03/29/22 12:51	03/31/22 13:18	1
1-Methylnaphthalene	ND		0.0050		mg/Kg		03/29/22 12:51	03/31/22 13:18	1
2-Methylnaphthalene	ND		0.0050		mg/Kg		03/29/22 12:51	03/31/22 13:18	1
Naphthalene	ND		0.0050		mg/Kg		03/29/22 12:51	03/31/22 13:18	1
Phenanthrene	ND		0.0050		mg/Kg		03/29/22 12:51	03/31/22 13:18	1
Pyrene	ND		0.0050		mg/Kg		03/29/22 12:51	03/31/22 13:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*65*		*12 - 147*	*03/29/22 12:51*	*03/31/22 13:18*	*1*
Nitrobenzene-d5 (Surr)	*68*		*10 - 143*	*03/29/22 12:51*	*03/31/22 13:18*	*1*
p-Terphenyl-d14 (Surr)	*66*		*10 - 145*	*03/29/22 12:51*	*03/31/22 13:18*	*1*

Lab Sample ID: LCS 570-222939/2-A
Matrix: Solid
Analysis Batch: 223232

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 222939

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	0.0500	0.04416		mg/Kg		88	45 - 134
Acenaphthylene	0.0500	0.04760		mg/Kg		95	45 - 147
Anthracene	0.0500	0.04309		mg/Kg		86	45 - 139
Benzo[a]anthracene	0.0500	0.04754		mg/Kg		95	51 - 136
Benzo[a]pyrene	0.0500	0.04813		mg/Kg		96	44 - 145
Benzo[b]fluoranthene	0.0500	0.04360		mg/Kg		87	41 - 156
Benzo[g,h,i]perylene	0.0500	0.04479		mg/Kg		90	41 - 154
Benzo[k]fluoranthene	0.0500	0.04687		mg/Kg		94	50 - 145
Chrysene	0.0500	0.04218		mg/Kg		84	48 - 134
Dibenz(a,h)anthracene	0.0500	0.04445		mg/Kg		89	45 - 153
Fluoranthene	0.0500	0.04454		mg/Kg		89	45 - 137
Fluorene	0.0500	0.04549		mg/Kg		91	49 - 134
Indeno[1,2,3-cd]pyrene	0.0500	0.04142		mg/Kg		83	41 - 152
1-Methylnaphthalene	0.0500	0.04718		mg/Kg		94	52 - 138
2-Methylnaphthalene	0.0500	0.04790		mg/Kg		96	43 - 151
Naphthalene	0.0500	0.04327		mg/Kg		87	45 - 135
Phenanthrene	0.0500	0.04087		mg/Kg		82	45 - 133
Pyrene	0.0500	0.04231		mg/Kg		85	47 - 138

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCS 570-222939/2-A
Matrix: Solid
Analysis Batch: 223232

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 222939

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	94		12 - 147
Nitrobenzene-d5 (Surr)	90		10 - 143
p-Terphenyl-d14 (Surr)	91		10 - 145

Lab Sample ID: LCSD 570-222939/3-A
Matrix: Solid
Analysis Batch: 223232

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 222939

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene			0.0500	0.04499		mg/Kg		90	45 - 134	2	25
Acenaphthylene			0.0500	0.05023		mg/Kg		100	45 - 147	5	28
Anthracene			0.0500	0.04629		mg/Kg		93	45 - 139	7	24
Benzo[a]anthracene			0.0500	0.04941		mg/Kg		99	51 - 136	4	24
Benzo[a]pyrene			0.0500	0.05013		mg/Kg		100	44 - 145	4	25
Benzo[b]fluoranthene			0.0500	0.04573		mg/Kg		91	41 - 156	5	25
Benzo[g,h,i]perylene			0.0500	0.04733		mg/Kg		95	41 - 154	6	30
Benzo[k]fluoranthene			0.0500	0.04855		mg/Kg		97	50 - 145	4	25
Chrysene			0.0500	0.04381		mg/Kg		88	48 - 134	4	22
Dibenz(a,h)anthracene			0.0500	0.04776		mg/Kg		96	45 - 153	7	26
Fluoranthene			0.0500	0.04511		mg/Kg		90	45 - 137	1	24
Fluorene			0.0500	0.04792		mg/Kg		96	49 - 134	5	27
Indeno[1,2,3-cd]pyrene			0.0500	0.04322		mg/Kg		86	41 - 152	4	27
1-Methylnaphthalene			0.0500	0.04555		mg/Kg		91	52 - 138	4	26
2-Methylnaphthalene			0.0500	0.04797		mg/Kg		96	43 - 151	0	27
Naphthalene			0.0500	0.04282		mg/Kg		86	45 - 135	1	26
Phenanthrene			0.0500	0.04148		mg/Kg		83	45 - 133	1	27
Pyrene			0.0500	0.04441		mg/Kg		89	47 - 138	5	27

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	87		12 - 147
Nitrobenzene-d5 (Surr)	85		10 - 143
p-Terphenyl-d14 (Surr)	89		10 - 145

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) - DL

Lab Sample ID: 570-89804-1 MS
Matrix: Solid
Analysis Batch: 223836

Client Sample ID: TS17
Prep Type: Total/NA
Prep Batch: 222939

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene - DL	0.43		0.0530	0.4890	4	mg/Kg	☼	105	10 - 175
Acenaphthylene - DL	ND	F1	0.0530	0.2553	F1	mg/Kg	☼	482	10 - 180
Anthracene - DL	ND	F1	0.0530	ND	F1	mg/Kg	☼	0	10 - 158
Benzo[a]anthracene - DL	0.049		0.0530	0.1192		mg/Kg	☼	132	10 - 180
Benzo[a]pyrene - DL	ND	F2	0.0530	0.08832		mg/Kg	☼	130	10 - 180
Benzo[b]fluoranthene - DL	ND		0.0530	0.08307		mg/Kg	☼	157	10 - 180
Benzo[g,h,i]perylene - DL	ND		0.0530	0.06474		mg/Kg	☼	122	10 - 180
Benzo[k]fluoranthene - DL	ND		0.0530	0.06644		mg/Kg	☼	125	10 - 180

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) - DL (Continued)

Lab Sample ID: 570-89804-1 MS
Matrix: Solid
Analysis Batch: 223836

Client Sample ID: TS17
Prep Type: Total/NA
Prep Batch: 222939

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chrysene - DL	0.084	F1	0.0530	0.1955	F1	mg/Kg	☼	210	10 - 180
Dibenz(a,h)anthracene - DL	ND		0.0530	0.05669		mg/Kg	☼	107	10 - 180
Fluoranthene - DL	0.37		0.0530	0.5066	4	mg/Kg	☼	254	10 - 180
Fluorene - DL	0.50		0.0530	0.6048	4	mg/Kg	☼	191	10 - 168
Indeno[1,2,3-cd]pyrene - DL	ND		0.0530	0.07101		mg/Kg	☼	134	10 - 172
1-Methylnaphthalene - DL	0.035	F2	0.0530	0.04716		mg/Kg	☼	22	13 - 143
2-Methylnaphthalene - DL	0.040	F1	0.0530	0.04357	F1	mg/Kg	☼	8	26 - 144
Naphthalene - DL	0.029		0.0530	0.08368		mg/Kg	☼	103	10 - 161
Phenanthrene - DL	ND	F1	0.0530	0.4386	F1	mg/Kg	☼	828	10 - 180
Pyrene - DL	0.32		0.0530	0.4967	4	mg/Kg	☼	335	10 - 180

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr) - DL	*114*		*12 - 147*
Nitrobenzene-d5 (Surr) - DL	*506*	*S1+*	*10 - 143*
p-Terphenyl-d14 (Surr) - DL	*115*		*10 - 145*

Lab Sample ID: 570-89804-1 MSD
Matrix: Solid
Analysis Batch: 223836

Client Sample ID: TS17
Prep Type: Total/NA
Prep Batch: 222939

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene - DL	0.43		0.0528	0.4526	4	mg/Kg	☼	36	10 - 175	8	40
Acenaphthylene - DL	ND	F1	0.0528	0.1723	F1	mg/Kg	☼	326	10 - 180	39	40
Anthracene - DL	ND	F1	0.0528	0.5669	F1	mg/Kg	☼	1073	10 - 158	NC	40
Benzo[a]anthracene - DL	0.049		0.0528	0.08485		mg/Kg	☼	67	10 - 180	34	40
Benzo[a]pyrene - DL	ND	F2	0.0528	0.05757	F2	mg/Kg	☼	72	10 - 180	42	40
Benzo[b]fluoranthene - DL	ND		0.0528	0.05535		mg/Kg	☼	105	10 - 180	40	40
Benzo[g,h,i]perylene - DL	ND		0.0528	0.04299		mg/Kg	☼	81	10 - 180	40	40
Benzo[k]fluoranthene - DL	ND		0.0528	0.04742		mg/Kg	☼	90	10 - 180	33	40
Chrysene - DL	0.084	F1	0.0528	0.1435		mg/Kg	☼	113	10 - 180	31	40
Dibenz(a,h)anthracene - DL	ND		0.0528	0.03865		mg/Kg	☼	73	10 - 180	38	40
Fluoranthene - DL	0.37		0.0528	0.3668	4	mg/Kg	☼	-10	10 - 180	32	40
Fluorene - DL	0.50		0.0528	0.4548	4	mg/Kg	☼	-92	10 - 168	28	40
Indeno[1,2,3-cd]pyrene - DL	ND		0.0528	0.05025		mg/Kg	☼	95	10 - 172	34	40
1-Methylnaphthalene - DL	0.035	F2	0.0528	0.08580	F2	mg/Kg	☼	95	13 - 143	58	40
2-Methylnaphthalene - DL	0.040	F1	0.0528	0.03958	F1	mg/Kg	☼	-0.02	26 - 144	10	40
Naphthalene - DL	0.029		0.0528	0.06033		mg/Kg	☼	59	10 - 161	32	40
Phenanthrene - DL	ND	F1	0.0528	0.3262	F1	mg/Kg	☼	617	10 - 180	29	40
Pyrene - DL	0.32		0.0528	0.3846	4	mg/Kg	☼	124	10 - 180	25	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr) - DL	*72*		*12 - 147*
Nitrobenzene-d5 (Surr) - DL	*655*	*S1+*	*10 - 143*
p-Terphenyl-d14 (Surr) - DL	*94*		*10 - 145*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 570-224728/6
Matrix: Solid
Analysis Batch: 224728

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		5.0		mg/Kg			04/06/22 13:04	20

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*50 - 150*		*04/06/22 13:04*	*20*

Lab Sample ID: LCS 570-224728/3
Matrix: Solid
Analysis Batch: 224728

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Gasoline (C4-C13)			1.97	2.039		mg/Kg		103	77 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*50 - 150*

Lab Sample ID: LCSD 570-224728/4
Matrix: Solid
Analysis Batch: 224728

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Gasoline (C4-C13)			1.97	2.078		mg/Kg		105	77 - 128	2	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*50 - 150*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 570-225312/1-A
Matrix: Solid
Analysis Batch: 225353

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 225312

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	ND		5.0		mg/Kg		04/08/22 10:59	04/08/22 12:51	1
TPH as Motor Oil Range	ND		5.0		mg/Kg		04/08/22 10:59	04/08/22 12:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*98*		*50 - 150*	*04/08/22 10:59*	*04/08/22 12:51*	*1*

Lab Sample ID: LCS 570-225312/2-A
Matrix: Solid
Analysis Batch: 225353

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 225312

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Diesel (C10-C28)			400	421.6		mg/Kg		105	76 - 126		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*99*		*50 - 150*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 570-225312/6-A
Matrix: Solid
Analysis Batch: 225353

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 225312

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Motor Oil (C17-C44)			400	380.3		mg/Kg		95	71 - 139		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*109*		*50 - 150*

Lab Sample ID: LCSD 570-225312/3-A
Matrix: Solid
Analysis Batch: 225353

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 225312

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Diesel (C10-C28)			400	455.2		mg/Kg		114	76 - 126	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*109*		*50 - 150*

Lab Sample ID: LCSD 570-225312/7-A
Matrix: Solid
Analysis Batch: 225353

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 225312

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Motor Oil (C17-C44)			400	372.5		mg/Kg		93	71 - 139	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*101*		*50 - 150*

Lab Sample ID: 570-89804-1 MS
Matrix: Solid
Analysis Batch: 225353

Client Sample ID: TS17
Prep Type: Silica Gel Cleanup
Prep Batch: 225312

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Diesel (C10-C28)	3700	F2	407	4828	E 4	mg/Kg	☼	280	37 - 175		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
n-Octacosane (Surr)	*113*		*50 - 150*

Lab Sample ID: 570-89804-1 MS
Matrix: Solid
Analysis Batch: 225353

Client Sample ID: TS17
Prep Type: Silica Gel Cleanup
Prep Batch: 225312

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Motor Oil (C17-C44)	1600	F1 F2	423	2975	F1	mg/Kg	☼	315	71 - 174		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
n-Octacosane (Surr)	*92*		*50 - 150*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: 570-89804-1 MSD
Matrix: Solid
Analysis Batch: 225353

Client Sample ID: TS17
Prep Type: Silica Gel Cleanup
Prep Batch: 225312

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Diesel (C10-C28)	3700	F2	436	3046	E 4 F2	mg/Kg	☼	-147	37 - 175	45	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
n-Octacosane (Surr)	*92*		*50 - 150*

Lab Sample ID: 570-89804-1 MSD
Matrix: Solid
Analysis Batch: 225353

Client Sample ID: TS17
Prep Type: Silica Gel Cleanup
Prep Batch: 225312

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Motor Oil (C17-C44)	1600	F1 F2	410	2298	F2	mg/Kg	☼	160	71 - 174	26	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
n-Octacosane (Surr)	*72*		*50 - 150*

Method: Moisture - Percent Moisture

Lab Sample ID: 570-89859-A-1 DU
Matrix: Solid
Analysis Batch: 222945

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	58.8			58.1		%				1	10
Percent Solids	41.2			41.9		%				2	10

GC/MS VOA

Prep Batch: 222868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-89804-1	TS17	Total/NA	Solid	5035	

Analysis Batch: 223514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-89804-1	TS17	Total/NA	Solid	8260C	222868
MB 570-223514/7	Method Blank	Total/NA	Solid	8260C	
LCS 570-223514/3	Lab Control Sample	Total/NA	Solid	8260C	
LCSD 570-223514/4	Lab Control Sample Dup	Total/NA	Solid	8260C	

GC/MS Semi VOA

Prep Batch: 222939

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-89804-1 - DL	TS17	Total/NA	Solid	3546	
MB 570-222939/1-A	Method Blank	Total/NA	Solid	3546	
LCS 570-222939/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 570-222939/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
570-89804-1 MS - DL	TS17	Total/NA	Solid	3546	
570-89804-1 MSD - DL	TS17	Total/NA	Solid	3546	

Analysis Batch: 223232

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-222939/1-A	Method Blank	Total/NA	Solid	8270C SIM	222939
LCS 570-222939/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	222939
LCSD 570-222939/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM	222939

Analysis Batch: 223836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-89804-1 - DL	TS17	Total/NA	Solid	8270C SIM	222939
570-89804-1 MS - DL	TS17	Total/NA	Solid	8270C SIM	222939
570-89804-1 MSD - DL	TS17	Total/NA	Solid	8270C SIM	222939

GC VOA

Prep Batch: 222868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-89804-1	TS17	Total/NA	Solid	5035	

Analysis Batch: 224728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-89804-1	TS17	Total/NA	Solid	NWTPH-Gx	222868
MB 570-224728/6	Method Blank	Total/NA	Solid	NWTPH-Gx	
LCS 570-224728/3	Lab Control Sample	Total/NA	Solid	NWTPH-Gx	
LCSD 570-224728/4	Lab Control Sample Dup	Total/NA	Solid	NWTPH-Gx	

GC Semi VOA

Prep Batch: 225312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-89804-1	TS17	Silica Gel Cleanup	Solid	3550C SGC	
MB 570-225312/1-A	Method Blank	Silica Gel Cleanup	Solid	3550C SGC	
LCS 570-225312/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3550C SGC	

GC Semi VOA (Continued)

Prep Batch: 225312 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 570-225312/6-A	Lab Control Sample	Silica Gel Cleanup	Solid	3550C SGC	
LCSD 570-225312/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3550C SGC	
LCSD 570-225312/7-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3550C SGC	
570-89804-1 MS	TS17	Silica Gel Cleanup	Solid	3550C SGC	
570-89804-1 MS	TS17	Silica Gel Cleanup	Solid	3550C SGC	
570-89804-1 MSD	TS17	Silica Gel Cleanup	Solid	3550C SGC	
570-89804-1 MSD	TS17	Silica Gel Cleanup	Solid	3550C SGC	

Analysis Batch: 225353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-89804-1	TS17	Silica Gel Cleanup	Solid	NWTPH-Dx	225312
MB 570-225312/1-A	Method Blank	Silica Gel Cleanup	Solid	NWTPH-Dx	225312
LCS 570-225312/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	NWTPH-Dx	225312
LCS 570-225312/6-A	Lab Control Sample	Silica Gel Cleanup	Solid	NWTPH-Dx	225312
LCSD 570-225312/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	NWTPH-Dx	225312
LCSD 570-225312/7-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	NWTPH-Dx	225312
570-89804-1 MS	TS17	Silica Gel Cleanup	Solid	NWTPH-Dx	225312
570-89804-1 MS	TS17	Silica Gel Cleanup	Solid	NWTPH-Dx	225312
570-89804-1 MSD	TS17	Silica Gel Cleanup	Solid	NWTPH-Dx	225312
570-89804-1 MSD	TS17	Silica Gel Cleanup	Solid	NWTPH-Dx	225312

General Chemistry

Analysis Batch: 222945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-89804-1	TS17	Total/NA	Solid	Moisture	
570-89859-A-1 DU	Duplicate	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Cardno, Inc
Project/Site: ExxonMobil/ADC/031447

Job ID: 570-89804-1

Client Sample ID: TS17

Date Collected: 03/25/22 10:50
Date Received: 03/28/22 10:00

Lab Sample ID: 570-89804-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.893 g	5 mL	222868	03/29/22 10:34	UQTR	ECL 4
Total/NA	Analysis	8260C		500	5 mL	5 mL	223514	03/31/22 19:38	OH1	ECL 4
	Instrument ID: GCMSLL									
Total/NA	Prep	3546	DL		20.14 g	1 mL	222939	03/29/22 12:51	SP9M	ECL 4
Total/NA	Analysis	8270C SIM	DL	5			223836	04/01/22 17:38	ULLI	ECL 4
	Instrument ID: GCMSAAA									
Total/NA	Prep	5035			4.893 g	5 mL	222868	03/29/22 10:34	UQTR	ECL 4
Total/NA	Analysis	NWTPH-Gx		100	5 mL	5 mL	224728	04/06/22 17:05	P1R	ECL 4
	Instrument ID: GC53									
Silica Gel Cleanup	Prep	3550C SGC			10.15 g	10 mL	225312	04/08/22 10:59	KG5J	ECL 4
Silica Gel Cleanup	Analysis	NWTPH-Dx		10			225353	04/08/22 15:47	N5Y3	ECL 4
	Instrument ID: GC48									
Total/NA	Analysis	Moisture		1			222945	03/29/22 13:20	FRT7	ECL 4
	Instrument ID: NOEQUIP									

Laboratory References:

ECL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Accreditation/Certification Summary

Client: Cardno, Inc
Job ID: 570-89804-1
Project/Site: ExxonMobil/ADC/031447

Laboratory: Eurofins Calscience

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Washington	State	C916-18	10-12-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: Cardno, Inc
Project/Site: ExxonMobil/ADC/031447

Job ID: 570-89804-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	ECL 4
8270C SIM	Semivolatile Organic Compound (GC/MS SIM LL)	SW846	ECL 4
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC)	NWTPH	ECL 4
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	ECL 4
Moisture	Percent Moisture	EPA	ECL 4
3546	Microwave Extraction (Low Level)	SW846	ECL 4
3550C SGC	Ultrasonic Extraction	SW846	ECL 4
5035	Closed System Purge and Trap	SW846	ECL 4

Protocol References:

EPA = US Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ECL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

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7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
TEL. (714) 895-5494 FAX. (714) 894-7501

Site Name	Everett Bulk Plant
Provide MRN for retail or AFE for major projects	
Retail Project (MRN)	
Major Project (AFE)	
Project Name	ExxonMobil ADC/031447

CHAIN OF CUSTODY RECORD

DATE. 3/25/2022

ExxonMobil Engr: Ken Drake

LABORATORY CLIENT: Cardno

ADDRESS: 309 South Cloverdale Street Unit A13

CITY: Seattle, WA 98108

TEL: 206-510-5855 FAX: N/A robert.thompson@cardno.com

GLOBAL ID # / COELT LOG CODE:

P O 0314476022, Agreement# A2604415

PROJECT CONTACT: Robert Thompson

SAMPLER(S): John Considine

LAB USE ONLY

COOLER RECEIPT Temp = °C

TURNAROUND TIME

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☑ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)

☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL _____/_____/_____

SPECIAL INSTRUCTIONS:

Required EIM and Cardno EDDs. Please perform Silica Gel Cleanup for NWTPH-DX - % moisture for dry weight correction

Report to: laina.cole@cardno.com, robert.thompson@cardno.com, and cameron.penner-ash@cardno.com

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	Field Point Name	SAMPLING DATE	SAMPLING TIME	MAT-RIX	NO. OF CONT	TPHg by Ecology Method NWTPH-GX	TPHd and TPHmo by Ecology Method NWTPH-DX	BTEX by EPA Method 8260C	1-Methylnaphthalene and PAHs by EPA Method 8270C SIM	CONTAINER TYPE
	TS17	TS17	03/25/22	10 50	S	8	X	X	X	X	4 Sodium Bisulfate VOAs, 2 Methanol VOA, 2 4oz un-preserved glass jar

Relinquished by: (Signature)	Received by: (Signature)	Date, & Time:
	FedEx	
Relinquished by: (Signature)	Received by: (Signature)	Date, & Time: 4/26/22 1000
Relinquished by: (Signature)	Received by: (Signature)	Date, & Time:

5.6/41 IRSCB

COC\031447 - SOIL COC Trenching 3.25.22

570-89804 Chain of Custody

Part # 159469-434 RIT2 EXP 12/21

ORIGIN ID: (503) 869-1196
CAMERON PENNER-ASH
CARDNO, INC
309 SOUTH CLOVERDALE STREET
UNIT A13
SEATTLE, WA 98108
UNITED STATES US

SHIP DATE: 07FEB22
ACTWGT: 10.00 LB MAN
CAD: 0343492/CAFE3510

570C2/027C/6F4D

TO SHIPPING
EUROFINS CALSCIENCE IRVINE
2841 DOW AVE STE 100

TUSTIN CA 927807211
(949) 261-1022
REF: S570-45799

RMA:

FedEx
Express
E

J211020121101uv

570-89804 Waybill

FedEx
TRK# 0221 5648 2374 2735

SATURDAY 12:00P
PRIORITY OVERNIGHT

W0 DTHA

92780
CA-US SNA

EXP 10/22

Login Sample Receipt Checklist

Client: Cardno, Inc

Job Number: 570-89804-1

Login Number: 89804
List Number: 1
Creator: Skinner, Alma D

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin, CA 92780
Tel: (714)895-5494

Laboratory Job ID: 570-94150-1
Client Project/Site: Mobil/ADC/031447
Revision: 1

For:
Cardno, Inc
309 South Cloverdale Street
Unit A13
Seattle, Washington 98108

Attn: Bobby Thompson

Authorized for release by:
5/17/2022 2:08:15 PM

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Sample Summary

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-94150-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-94150-1	TS18	Solid	04/25/22 12:05	04/28/22 09:45
570-94150-2	TS19	Solid	04/26/22 09:50	04/28/22 09:45
570-94150-3	TS20	Solid	04/26/22 15:30	04/28/22 09:45
570-94150-4	TS21	Solid	04/27/22 09:15	04/28/22 09:45
570-94150-5	TS22	Solid	04/27/22 11:10	04/28/22 09:45

Definitions/Glossary

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-94150-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 570-94150-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative
570-94150-1

Comments
Please note that the report has been revised to include the missing revised COC and other client instructions.
No additional comments.

Receipt
The samples were received on 4/28/2022 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.7º C.

GC/MS VOA
Method 8260C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-230932. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270C SIM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 570-231252 and analytical batch 570-233083 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8270C SIM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 570-231252 and analytical batch 570-233083 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC VOA
Method NWTPH-Gx: Surrogate recovery for the following sample was outside control limits: TS22 (570-94150-5). Re-extraction and/or re-analysis was performed and surrogate recovery was below control limits. These analytical runs were not reportable. There was no more TerraCore left for re-extraction/re-analysis and therefore, sample aliquot for re-analysis was taken from a soil jar. Please refer to the attached authorization email.

Method NWTPH-Gx: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-231228.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Job ID: 570-94150-2

Laboratory: Eurofins Calscience

Job ID: 570-94150-2 (Continued)

Laboratory: Eurofins Calscience (Continued)

Narrative

Job Narrative
570-94150-2

Comments
No additional comments.

Receipt
The samples were received on 4/28/2022 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.7º C.

GC VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-94150-1

Client Sample ID: TS18 — Lab Sample ID: 570-94150-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.015		0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Acenaphthylene	0.022		0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Anthracene	0.052		0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[a]anthracene	0.063	F1 F2	0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[a]pyrene	0.10	F1 F2	0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[b]fluoranthene	0.11	F1 F2	0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[g,h,i]perylene	0.074	F1 F2	0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[k]fluoranthene	0.077	F1 F2	0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Chrysene	0.088	F1 F2	0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Dibenz(a,h)anthracene	0.017		0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Fluoranthene	0.15	F1 F2	0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Fluorene	0.016		0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	0.082	F1 F2	0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
1-Methylnaphthalene	0.021		0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
2-Methylnaphthalene	0.047		0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Naphthalene	0.082		0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Phenanthrene	0.11	F1	0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
Pyrene	0.18	F1 F2	0.0058		mg/Kg	1	☼	8270C SIM	Total/NA
TPH as Diesel Range	6.9		5.7		mg/Kg	1	☼	NWTPH-Dx	Silica Gel Cleanup
TPH as Motor Oil Range	14		5.7		mg/Kg	1	☼	NWTPH-Dx	Silica Gel Cleanup

Client Sample ID: TS19 — Lab Sample ID: 570-94150-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	0.0064		0.0060		mg/Kg	1	☼	8270C SIM	Total/NA
Chrysene	0.0064		0.0060		mg/Kg	1	☼	8270C SIM	Total/NA
Fluoranthene	0.0096		0.0060		mg/Kg	1	☼	8270C SIM	Total/NA
Phenanthrene	0.0063		0.0060		mg/Kg	1	☼	8270C SIM	Total/NA
Pyrene	0.012		0.0060		mg/Kg	1	☼	8270C SIM	Total/NA

Client Sample ID: TS20 — Lab Sample ID: 570-94150-3

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	0.0087		0.0065		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[a]pyrene	0.010		0.0065		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[b]fluoranthene	0.015		0.0065		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[g,h,i]perylene	0.0096		0.0065		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[k]fluoranthene	0.0087		0.0065		mg/Kg	1	☼	8270C SIM	Total/NA
Chrysene	0.014		0.0065		mg/Kg	1	☼	8270C SIM	Total/NA
Fluoranthene	0.017		0.0065		mg/Kg	1	☼	8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	0.0098		0.0065		mg/Kg	1	☼	8270C SIM	Total/NA
Phenanthrene	0.017		0.0065		mg/Kg	1	☼	8270C SIM	Total/NA
Pyrene	0.020		0.0065		mg/Kg	1	☼	8270C SIM	Total/NA
TPH as Motor Oil Range	77		6.3		mg/Kg	1	☼	NWTPH-Dx	Silica Gel Cleanup

Client Sample ID: TS21 — Lab Sample ID: 570-94150-4

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Anthracene	0.011		0.0063		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[a]anthracene	0.0084		0.0063		mg/Kg	1	☼	8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

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Client Sample ID: TS21 (Continued) — Lab Sample ID: 570-94150-4

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	0.011		0.0063		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[b]fluoranthene	0.0087		0.0063		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[g,h,i]perylene	0.011		0.0063		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[k]fluoranthene	0.0077		0.0063		mg/Kg	1	☼	8270C SIM	Total/NA
Chrysene	0.010		0.0063		mg/Kg	1	☼	8270C SIM	Total/NA
Fluoranthene	0.014		0.0063		mg/Kg	1	☼	8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	0.011		0.0063		mg/Kg	1	☼	8270C SIM	Total/NA
Naphthalene	0.0077		0.0063		mg/Kg	1	☼	8270C SIM	Total/NA
Phenanthrene	0.011		0.0063		mg/Kg	1	☼	8270C SIM	Total/NA
Pyrene	0.018		0.0063		mg/Kg	1	☼	8270C SIM	Total/NA
TPH as Motor Oil Range	11		6.7		mg/Kg	1	☼	NWTPH-Dx	Silica Gel Cleanup

Client Sample ID: TS22 — Lab Sample ID: 570-94150-5

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
TPH as Motor Oil Range	9.3		5.9		mg/Kg	1	☼	NWTPH-Dx	Silica Gel Cleanup

This Detection Summary does not include radiochemical test results.

Client Sample ID: TS18

Date Collected: 04/25/22 12:05
Date Received: 04/28/22 09:45

Lab Sample ID: 570-94150-1

Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00082		mg/Kg	☼	04/29/22 16:58	05/02/22 12:11	1
Ethylbenzene	ND		0.00082		mg/Kg	☼	04/29/22 16:58	05/02/22 12:11	1
Toluene	ND		0.00082		mg/Kg	☼	04/29/22 16:58	05/02/22 12:11	1
m,p-Xylene	ND		0.0016		mg/Kg	☼	04/29/22 16:58	05/02/22 12:11	1
o-Xylene	ND		0.00082		mg/Kg	☼	04/29/22 16:58	05/02/22 12:11	1
Xylenes, Total	ND		0.0016		mg/Kg	☼	04/29/22 16:58	05/02/22 12:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*117*		*80 - 142*	*04/29/22 16:58*	*05/02/22 12:11*	*1*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*	*04/29/22 16:58*	*05/02/22 12:11*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 123*	*04/29/22 16:58*	*05/02/22 12:11*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*	*04/29/22 16:58*	*05/02/22 12:11*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**0.015**		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 03:58	1
Acenaphthylene	**0.022**		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 03:58	1
Anthracene	**0.052**		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 03:58	1
Benzo[a]anthracene	**0.063**	**F1 F2**	0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 03:58	1
Benzo[a]pyrene	**0.10**	**F1 F2**	0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 03:58	1
Benzo[b]fluoranthene	**0.11**	**F1 F2**	0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 03:58	1
Benzo[g,h,i]perylene	**0.074**	**F1 F2**	0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 03:58	1
Benzo[k]fluoranthene	**0.077**	**F1 F2**	0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 03:58	1
Chrysene	**0.088**	**F1 F2**	0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 03:58	1
Dibenz(a,h)anthracene	**0.017**		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 03:58	1
Fluoranthene	**0.15**	**F1 F2**	0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 03:58	1
Fluorene	**0.016**		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 03:58	1
Indeno[1,2,3-cd]pyrene	**0.082**	**F1 F2**	0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 03:58	1
1-Methylnaphthalene	**0.021**		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 03:58	1
2-Methylnaphthalene	**0.047**		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 03:58	1
Naphthalene	**0.082**		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 03:58	1
Phenanthrene	**0.11**	**F1**	0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 03:58	1
Pyrene	**0.18**	**F1 F2**	0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 03:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*63*		*12 - 147*	*05/03/22 10:21*	*05/11/22 03:58*	*1*
Nitrobenzene-d5 (Surr)	*54*		*10 - 143*	*05/03/22 10:21*	*05/11/22 03:58*	*1*
p-Terphenyl-d14 (Surr)	*60*		*10 - 145*	*05/03/22 10:21*	*05/11/22 03:58*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.19		mg/Kg	☼	04/29/22 16:58	05/02/22 16:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*50 - 150*	*04/29/22 16:58*	*05/02/22 16:49*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	**6.9**		5.7		mg/Kg	☼	05/02/22 10:10	05/03/22 22:18	1
TPH as Motor Oil Range	**14**		5.7		mg/Kg	☼	05/02/22 10:10	05/03/22 22:18	1

Client Sample ID: TS18

Date Collected: 04/25/22 12:05
Date Received: 04/28/22 09:45

Lab Sample ID: 570-94150-1
Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*96*		*50 - 150*	*05/02/22 10:10*	*05/03/22 22:18*	*1*

Client Sample ID: TS19

Date Collected: 04/26/22 09:50
Date Received: 04/28/22 09:45

Lab Sample ID: 570-94150-2
Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0012		mg/Kg	☼	04/29/22 16:58	05/02/22 12:35	1
Ethylbenzene	ND		0.0012		mg/Kg	☼	04/29/22 16:58	05/02/22 12:35	1
Toluene	ND		0.0012		mg/Kg	☼	04/29/22 16:58	05/02/22 12:35	1
m,p-Xylene	ND		0.0023		mg/Kg	☼	04/29/22 16:58	05/02/22 12:35	1
o-Xylene	ND		0.0012		mg/Kg	☼	04/29/22 16:58	05/02/22 12:35	1
Xylenes, Total	ND		0.0023		mg/Kg	☼	04/29/22 16:58	05/02/22 12:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*117*		*80 - 142*	*04/29/22 16:58*	*05/02/22 12:35*	*1*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*	*04/29/22 16:58*	*05/02/22 12:35*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 123*	*04/29/22 16:58*	*05/02/22 12:35*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*	*04/29/22 16:58*	*05/02/22 12:35*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0060		mg/Kg	☼	05/03/22 10:21	05/11/22 04:19	1
Acenaphthylene	ND		0.0060		mg/Kg	☼	05/03/22 10:21	05/11/22 04:19	1
Anthracene	ND		0.0060		mg/Kg	☼	05/03/22 10:21	05/11/22 04:19	1
Benzo[a]anthracene	ND		0.0060		mg/Kg	☼	05/03/22 10:21	05/11/22 04:19	1
Benzo[a]pyrene	**0.0064**		0.0060		mg/Kg	☼	05/03/22 10:21	05/11/22 04:19	1
Benzo[b]fluoranthene	ND		0.0060		mg/Kg	☼	05/03/22 10:21	05/11/22 04:19	1
Benzo[g,h,i]perylene	ND		0.0060		mg/Kg	☼	05/03/22 10:21	05/11/22 04:19	1
Benzo[k]fluoranthene	ND		0.0060		mg/Kg	☼	05/03/22 10:21	05/11/22 04:19	1
Chrysene	**0.0064**		0.0060		mg/Kg	☼	05/03/22 10:21	05/11/22 04:19	1
Dibenz(a,h)anthracene	ND		0.0060		mg/Kg	☼	05/03/22 10:21	05/11/22 04:19	1
Fluoranthene	**0.0096**		0.0060		mg/Kg	☼	05/03/22 10:21	05/11/22 04:19	1
Fluorene	ND		0.0060		mg/Kg	☼	05/03/22 10:21	05/11/22 04:19	1
Indeno[1,2,3-cd]pyrene	ND		0.0060		mg/Kg	☼	05/03/22 10:21	05/11/22 04:19	1
1-Methylnaphthalene	ND		0.0060		mg/Kg	☼	05/03/22 10:21	05/11/22 04:19	1
2-Methylnaphthalene	ND		0.0060		mg/Kg	☼	05/03/22 10:21	05/11/22 04:19	1
Naphthalene	ND		0.0060		mg/Kg	☼	05/03/22 10:21	05/11/22 04:19	1
Phenanthrene	**0.0063**		0.0060		mg/Kg	☼	05/03/22 10:21	05/11/22 04:19	1
Pyrene	**0.012**		0.0060		mg/Kg	☼	05/03/22 10:21	05/11/22 04:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*57*		*12 - 147*	*05/03/22 10:21*	*05/11/22 04:19*	*1*
Nitrobenzene-d5 (Surr)	*53*		*10 - 143*	*05/03/22 10:21*	*05/11/22 04:19*	*1*
p-Terphenyl-d14 (Surr)	*56*		*10 - 145*	*05/03/22 10:21*	*05/11/22 04:19*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.22		mg/Kg	☼	04/29/22 16:58	05/02/22 17:15	1

Client Sample ID: TS19

Date Collected: 04/26/22 09:50
Date Received: 04/28/22 09:45

Lab Sample ID: 570-94150-2
Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*69*		*50 - 150*	*04/29/22 16:58*	*05/02/22 17:15*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	ND		6.1	mg/Kg	☼	05/02/22 10:10	05/03/22 22:39	1
TPH as Motor Oil Range	ND		6.1	mg/Kg	☼	05/02/22 10:10	05/03/22 22:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*95*		*50 - 150*	*05/02/22 10:10*	*05/03/22 22:39*	*1*

Client Sample ID: TS20

Date Collected: 04/26/22 15:30
Date Received: 04/28/22 09:45

Lab Sample ID: 570-94150-3
Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0012	mg/Kg	☼	04/29/22 16:58	05/02/22 13:00	1
Ethylbenzene	ND		0.0012	mg/Kg	☼	04/29/22 16:58	05/02/22 13:00	1
Toluene	ND		0.0012	mg/Kg	☼	04/29/22 16:58	05/02/22 13:00	1
m,p-Xylene	ND		0.0025	mg/Kg	☼	04/29/22 16:58	05/02/22 13:00	1
o-Xylene	ND		0.0012	mg/Kg	☼	04/29/22 16:58	05/02/22 13:00	1
Xylenes, Total	ND		0.0025	mg/Kg	☼	04/29/22 16:58	05/02/22 13:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*115*		*80 - 142*	*04/29/22 16:58*	*05/02/22 13:00*	*1*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*	*04/29/22 16:58*	*05/02/22 13:00*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 123*	*04/29/22 16:58*	*05/02/22 13:00*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*	*04/29/22 16:58*	*05/02/22 13:00*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0065	mg/Kg	☼	05/03/22 10:21	05/11/22 04:39	1
Acenaphthylene	ND		0.0065	mg/Kg	☼	05/03/22 10:21	05/11/22 04:39	1
Anthracene	ND		0.0065	mg/Kg	☼	05/03/22 10:21	05/11/22 04:39	1
Benzo[a]anthracene	**0.0087**		0.0065	mg/Kg	☼	05/03/22 10:21	05/11/22 04:39	1
Benzo[a]pyrene	**0.010**		0.0065	mg/Kg	☼	05/03/22 10:21	05/11/22 04:39	1
Benzo[b]fluoranthene	**0.015**		0.0065	mg/Kg	☼	05/03/22 10:21	05/11/22 04:39	1
Benzo[g,h,i]perylene	**0.0096**		0.0065	mg/Kg	☼	05/03/22 10:21	05/11/22 04:39	1
Benzo[k]fluoranthene	**0.0087**		0.0065	mg/Kg	☼	05/03/22 10:21	05/11/22 04:39	1
Chrysene	**0.014**		0.0065	mg/Kg	☼	05/03/22 10:21	05/11/22 04:39	1
Dibenz(a,h)anthracene	ND		0.0065	mg/Kg	☼	05/03/22 10:21	05/11/22 04:39	1
Fluoranthene	**0.017**		0.0065	mg/Kg	☼	05/03/22 10:21	05/11/22 04:39	1
Fluorene	ND		0.0065	mg/Kg	☼	05/03/22 10:21	05/11/22 04:39	1
Indeno[1,2,3-cd]pyrene	**0.0098**		0.0065	mg/Kg	☼	05/03/22 10:21	05/11/22 04:39	1
1-Methylnaphthalene	ND		0.0065	mg/Kg	☼	05/03/22 10:21	05/11/22 04:39	1
2-Methylnaphthalene	ND		0.0065	mg/Kg	☼	05/03/22 10:21	05/11/22 04:39	1
Naphthalene	ND		0.0065	mg/Kg	☼	05/03/22 10:21	05/11/22 04:39	1
Phenanthrene	**0.017**		0.0065	mg/Kg	☼	05/03/22 10:21	05/11/22 04:39	1
Pyrene	**0.020**		0.0065	mg/Kg	☼	05/03/22 10:21	05/11/22 04:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*54*		*12 - 147*	*05/03/22 10:21*	*05/11/22 04:39*	*1*

Client Sample ID: TS20

Date Collected: 04/26/22 15:30
Date Received: 04/28/22 09:45

Lab Sample ID: 570-94150-3

Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5 (Surr)	*27*		*10 - 143*	*05/03/22 10:21*	*05/11/22 04:39*	*1*
p-Terphenyl-d14 (Surr)	*65*		*10 - 145*	*05/03/22 10:21*	*05/11/22 04:39*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.34	mg/Kg	☼	04/29/22 16:58	05/02/22 17:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*50 - 150*	*04/29/22 16:58*	*05/02/22 17:40*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	ND		6.3	mg/Kg	☼	05/02/22 10:10	05/03/22 23:00	1
TPH as Motor Oil Range	**77**		6.3	mg/Kg	☼	05/02/22 10:10	05/03/22 23:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*93*		*50 - 150*	*05/02/22 10:10*	*05/03/22 23:00*	*1*

Client Sample ID: TS21

Date Collected: 04/27/22 09:15
Date Received: 04/28/22 09:45

Lab Sample ID: 570-94150-4

Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0013	mg/Kg	☼	04/29/22 16:58	05/02/22 13:24	1
Ethylbenzene	ND		0.0013	mg/Kg	☼	04/29/22 16:58	05/02/22 13:24	1
Toluene	ND		0.0013	mg/Kg	☼	04/29/22 16:58	05/02/22 13:24	1
m,p-Xylene	ND		0.0026	mg/Kg	☼	04/29/22 16:58	05/02/22 13:24	1
o-Xylene	ND		0.0013	mg/Kg	☼	04/29/22 16:58	05/02/22 13:24	1
Xylenes, Total	ND		0.0026	mg/Kg	☼	04/29/22 16:58	05/02/22 13:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*118*		*80 - 142*	*04/29/22 16:58*	*05/02/22 13:24*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*	*04/29/22 16:58*	*05/02/22 13:24*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 123*	*04/29/22 16:58*	*05/02/22 13:24*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*	*04/29/22 16:58*	*05/02/22 13:24*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0063	mg/Kg	☼	05/03/22 10:21	05/11/22 05:00	1
Acenaphthylene	ND		0.0063	mg/Kg	☼	05/03/22 10:21	05/11/22 05:00	1
Anthracene	**0.011**		0.0063	mg/Kg	☼	05/03/22 10:21	05/11/22 05:00	1
Benzo[a]anthracene	**0.0084**		0.0063	mg/Kg	☼	05/03/22 10:21	05/11/22 05:00	1
Benzo[a]pyrene	**0.011**		0.0063	mg/Kg	☼	05/03/22 10:21	05/11/22 05:00	1
Benzo[b]fluoranthene	**0.0087**		0.0063	mg/Kg	☼	05/03/22 10:21	05/11/22 05:00	1
Benzo[g,h,i]perylene	**0.011**		0.0063	mg/Kg	☼	05/03/22 10:21	05/11/22 05:00	1
Benzo[k]fluoranthene	**0.0077**		0.0063	mg/Kg	☼	05/03/22 10:21	05/11/22 05:00	1
Chrysene	**0.010**		0.0063	mg/Kg	☼	05/03/22 10:21	05/11/22 05:00	1
Dibenz(a,h)anthracene	ND		0.0063	mg/Kg	☼	05/03/22 10:21	05/11/22 05:00	1
Fluoranthene	**0.014**		0.0063	mg/Kg	☼	05/03/22 10:21	05/11/22 05:00	1
Fluorene	ND		0.0063	mg/Kg	☼	05/03/22 10:21	05/11/22 05:00	1

Client Sample ID: TS21

Date Collected: 04/27/22 09:15
Date Received: 04/28/22 09:45

Lab Sample ID: 570-94150-4

Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	**0.011**		0.0063		mg/Kg	☼	05/03/22 10:21	05/11/22 05:00	1
1-Methylnaphthalene	ND		0.0063		mg/Kg	☼	05/03/22 10:21	05/11/22 05:00	1
2-Methylnaphthalene	ND		0.0063		mg/Kg	☼	05/03/22 10:21	05/11/22 05:00	1
Naphthalene	**0.0077**		0.0063		mg/Kg	☼	05/03/22 10:21	05/11/22 05:00	1
Phenanthrene	**0.011**		0.0063		mg/Kg	☼	05/03/22 10:21	05/11/22 05:00	1
Pyrene	**0.018**		0.0063		mg/Kg	☼	05/03/22 10:21	05/11/22 05:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*63*		*12 - 147*	*05/03/22 10:21*	*05/11/22 05:00*	*1*
Nitrobenzene-d5 (Surr)	*59*		*10 - 143*	*05/03/22 10:21*	*05/11/22 05:00*	*1*
p-Terphenyl-d14 (Surr)	*63*		*10 - 145*	*05/03/22 10:21*	*05/11/22 05:00*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.30		mg/Kg	☼	04/29/22 16:58	05/03/22 13:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*50 - 150*	*04/29/22 16:58*	*05/03/22 13:20*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	ND		6.7		mg/Kg	☼	05/02/22 10:10	05/03/22 23:20	1
TPH as Motor Oil Range	**11**		6.7		mg/Kg	☼	05/02/22 10:10	05/03/22 23:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*90*		*50 - 150*	*05/02/22 10:10*	*05/03/22 23:20*	*1*

Client Sample ID: TS22

Date Collected: 04/27/22 11:10
Date Received: 04/28/22 09:45

Lab Sample ID: 570-94150-5

Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00093		mg/Kg	☼	04/29/22 16:58	05/02/22 13:48	1
Ethylbenzene	ND		0.00093		mg/Kg	☼	04/29/22 16:58	05/02/22 13:48	1
Toluene	ND		0.00093		mg/Kg	☼	04/29/22 16:58	05/02/22 13:48	1
m,p-Xylene	ND		0.0019		mg/Kg	☼	04/29/22 16:58	05/02/22 13:48	1
o-Xylene	ND		0.00093		mg/Kg	☼	04/29/22 16:58	05/02/22 13:48	1
Xylenes, Total	ND		0.0019		mg/Kg	☼	04/29/22 16:58	05/02/22 13:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*117*		*80 - 142*	*04/29/22 16:58*	*05/02/22 13:48*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*	*04/29/22 16:58*	*05/02/22 13:48*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 123*	*04/29/22 16:58*	*05/02/22 13:48*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*	*04/29/22 16:58*	*05/02/22 13:48*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 05:20	1
Acenaphthylene	ND		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 05:20	1
Anthracene	ND		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 05:20	1
Benzo[a]anthracene	ND		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 05:20	1

Client Sample ID: TS22
Date Collected: 04/27/22 11:10
Date Received: 04/28/22 09:45

Lab Sample ID: 570-94150-5
Matrix: Solid

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 05:20	1
Benzo[b]fluoranthene	ND		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 05:20	1
Benzo[g,h,i]perylene	ND		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 05:20	1
Benzo[k]fluoranthene	ND		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 05:20	1
Chrysene	ND		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 05:20	1
Dibenz(a,h)anthracene	ND		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 05:20	1
Fluoranthene	ND		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 05:20	1
Fluorene	ND		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 05:20	1
Indeno[1,2,3-cd]pyrene	ND		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 05:20	1
1-Methylnaphthalene	ND		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 05:20	1
2-Methylnaphthalene	ND		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 05:20	1
Naphthalene	ND		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 05:20	1
Phenanthrene	ND		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 05:20	1
Pyrene	ND		0.0058		mg/Kg	☼	05/03/22 10:21	05/11/22 05:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*60*		*12 - 147*	*05/03/22 10:21*	*05/11/22 05:20*	*1*
Nitrobenzene-d5 (Surr)	*48*		*10 - 143*	*05/03/22 10:21*	*05/11/22 05:20*	*1*
p-Terphenyl-d14 (Surr)	*54*		*10 - 145*	*05/03/22 10:21*	*05/11/22 05:20*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.29		mg/Kg	☼	05/09/22 11:12	05/09/22 11:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*65*		*50 - 150*	*05/09/22 11:12*	*05/09/22 11:54*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	ND		5.9		mg/Kg	☼	05/02/22 10:10	05/03/22 23:41	1
TPH as Motor Oil Range	**9.3**		5.9		mg/Kg	☼	05/02/22 10:10	05/03/22 23:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*94*		*50 - 150*	*05/02/22 10:10*	*05/03/22 23:41*	*1*

Surrogate Summary

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-94150-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-142)	(80-120)	(80-123)	(80-120)
570-94150-1	TS18	117	89	101	97
570-94150-2	TS19	117	91	102	98
570-94150-3	TS20	115	92	99	97
570-94150-4	TS21	118	94	103	98
570-94150-5	TS22	117	94	104	98
LCS 570-230932/4	Lab Control Sample	99	101	103	101
LCSD 570-230932/5	Lab Control Sample Dup	99	102	102	101
MB 570-230932/7	Method Blank	102	94	96	98

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHd14
Lab Sample ID	Client Sample ID	(12-147)	(10-143)	(10-145)
570-94150-1	TS18	63	54	60
570-94150-1 MS	TS18	56	51	56
570-94150-1 MSD	TS18	61	56	63
570-94150-2	TS19	57	53	56
570-94150-3	TS20	54	27	65
570-94150-4	TS21	63	59	63
570-94150-5	TS22	60	48	54
LCS 570-231252/2-A	Lab Control Sample	68	65	69
LCSD 570-231252/3-A	Lab Control Sample Dup	71	67	71
MB 570-231252/1-A	Method Blank	60	56	58

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		BFB1
Lab Sample ID	Client Sample ID	(50-150)
570-94150-1	TS18	85
570-94150-2	TS19	69
570-94150-3	TS20	82
570-94150-4	TS21	102
570-94150-5	TS22	65
570-94150-5 MS	TS22	98
570-94150-5 MSD	TS22	97
LCS 570-230897/4	Lab Control Sample	100

Surrogate Summary

Client: Cardno, Inc
Job ID: 570-94150-1
Project/Site: Mobil/ADC/031447

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	BFB1 (50-150)
LCS 570-231228/3	Lab Control Sample	104
LCS 570-232719/1-A	Lab Control Sample	104
LCSD 570-230897/6	Lab Control Sample Dup	100
LCSD 570-231228/4	Lab Control Sample Dup	113
LCSD 570-232719/2-A	Lab Control Sample Dup	84
MB 570-230897/5	Method Blank	82
MB 570-231228/5	Method Blank	92
MB 570-232719/3-A	Method Blank	75

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Matrix: Solid **Prep Type: Silica Gel Cleanup**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	OTCSN (50-150)
570-94150-1	TS18	96
570-94150-1 MS	TS18	94
570-94150-1 MS	TS18	93
570-94150-1 MSD	TS18	95
570-94150-1 MSD	TS18	93
570-94150-2	TS19	95
570-94150-3	TS20	93
570-94150-4	TS21	90
570-94150-5	TS22	94
LCS 570-230926/2-A	Lab Control Sample	96
LCS 570-230926/6-A	Lab Control Sample	95
LCSD 570-230926/3-A	Lab Control Sample Dup	94
LCSD 570-230926/7-A	Lab Control Sample Dup	96
MB 570-230926/1-A	Method Blank	97

Surrogate Legend

OTCSN = n-Octacosane (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 570-230932/7
Matrix: Solid
Analysis Batch: 230932

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0010		mg/Kg			05/02/22 10:34	1
Ethylbenzene	ND		0.0010		mg/Kg			05/02/22 10:34	1
Toluene	ND		0.0010		mg/Kg			05/02/22 10:34	1
m,p-Xylene	ND		0.0020		mg/Kg			05/02/22 10:34	1
o-Xylene	ND		0.0010		mg/Kg			05/02/22 10:34	1
Xylenes, Total	ND		0.0020		mg/Kg			05/02/22 10:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 142*		*05/02/22 10:34*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*05/02/22 10:34*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 123*		*05/02/22 10:34*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*05/02/22 10:34*	*1*

Lab Sample ID: LCS 570-230932/4
Matrix: Solid
Analysis Batch: 230932

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.0500	0.05584		mg/Kg		112	80 - 120		
Ethylbenzene			0.0500	0.05546		mg/Kg		111	80 - 120		
Toluene			0.0500	0.05503		mg/Kg		110	80 - 120		
m,p-Xylene			0.100	0.1157		mg/Kg		116	80 - 120		
o-Xylene			0.0500	0.05729		mg/Kg		115	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 142*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*80 - 123*
Toluene-d8 (Surr)	*101*		*80 - 120*

Lab Sample ID: LCSD 570-230932/5
Matrix: Solid
Analysis Batch: 230932

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.0500	0.05440		mg/Kg		109	80 - 120	3	20
Ethylbenzene			0.0500	0.05397		mg/Kg		108	80 - 120	3	20
Toluene			0.0500	0.05362		mg/Kg		107	80 - 120	3	20
m,p-Xylene			0.100	0.1126		mg/Kg		113	80 - 120	3	20
o-Xylene			0.0500	0.05611		mg/Kg		112	80 - 120	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 142*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*80 - 123*
Toluene-d8 (Surr)	*101*		*80 - 120*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Lab Sample ID: MB 570-231252/1-A
Matrix: Solid
Analysis Batch: 233337

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 231252

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		05/03/22 10:21	05/11/22 10:55	1
Acenaphthylene	ND		0.0050		mg/Kg		05/03/22 10:21	05/11/22 10:55	1
Anthracene	ND		0.0050		mg/Kg		05/03/22 10:21	05/11/22 10:55	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		05/03/22 10:21	05/11/22 10:55	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		05/03/22 10:21	05/11/22 10:55	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		05/03/22 10:21	05/11/22 10:55	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		05/03/22 10:21	05/11/22 10:55	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		05/03/22 10:21	05/11/22 10:55	1
Chrysene	ND		0.0050		mg/Kg		05/03/22 10:21	05/11/22 10:55	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		05/03/22 10:21	05/11/22 10:55	1
Fluoranthene	ND		0.0050		mg/Kg		05/03/22 10:21	05/11/22 10:55	1
Fluorene	ND		0.0050		mg/Kg		05/03/22 10:21	05/11/22 10:55	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		05/03/22 10:21	05/11/22 10:55	1
1-Methylnaphthalene	ND		0.0050		mg/Kg		05/03/22 10:21	05/11/22 10:55	1
2-Methylnaphthalene	ND		0.0050		mg/Kg		05/03/22 10:21	05/11/22 10:55	1
Naphthalene	ND		0.0050		mg/Kg		05/03/22 10:21	05/11/22 10:55	1
Phenanthrene	ND		0.0050		mg/Kg		05/03/22 10:21	05/11/22 10:55	1
Pyrene	ND		0.0050		mg/Kg		05/03/22 10:21	05/11/22 10:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*60*		*12 - 147*	*05/03/22 10:21*	*05/11/22 10:55*	*1*
Nitrobenzene-d5 (Surr)	*56*		*10 - 143*	*05/03/22 10:21*	*05/11/22 10:55*	*1*
p-Terphenyl-d14 (Surr)	*58*		*10 - 145*	*05/03/22 10:21*	*05/11/22 10:55*	*1*

Lab Sample ID: LCS 570-231252/2-A
Matrix: Solid
Analysis Batch: 233083

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 231252

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	0.0500	0.03713		mg/Kg		74	45 - 134
Acenaphthylene	0.0500	0.04302		mg/Kg		86	45 - 147
Anthracene	0.0500	0.04725		mg/Kg		94	45 - 139
Benzo[a]anthracene	0.0500	0.03835		mg/Kg		77	51 - 136
Benzo[a]pyrene	0.0500	0.03733		mg/Kg		75	44 - 145
Benzo[b]fluoranthene	0.0500	0.03726		mg/Kg		75	41 - 156
Benzo[g,h,i]perylene	0.0500	0.03775		mg/Kg		76	41 - 154
Benzo[k]fluoranthene	0.0500	0.03619		mg/Kg		72	50 - 145
Chrysene	0.0500	0.03553		mg/Kg		71	48 - 134
Dibenz(a,h)anthracene	0.0500	0.03956		mg/Kg		79	45 - 153
Fluoranthene	0.0500	0.03459		mg/Kg		69	45 - 137
Fluorene	0.0500	0.03747		mg/Kg		75	49 - 134
Indeno[1,2,3-cd]pyrene	0.0500	0.03708		mg/Kg		74	41 - 152
1-Methylnaphthalene	0.0500	0.04128		mg/Kg		83	52 - 138
2-Methylnaphthalene	0.0500	0.04256		mg/Kg		85	43 - 151
Naphthalene	0.0500	0.03860		mg/Kg		77	45 - 135
Phenanthrene	0.0500	0.03604		mg/Kg		72	45 - 133
Pyrene	0.0500	0.03601		mg/Kg		72	47 - 138

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCS 570-231252/2-A
Matrix: Solid
Analysis Batch: 233083

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 231252

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	68		12 - 147
Nitrobenzene-d5 (Surr)	65		10 - 143
p-Terphenyl-d14 (Surr)	69		10 - 145

Lab Sample ID: LCSD 570-231252/3-A
Matrix: Solid
Analysis Batch: 233083

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 231252

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene			0.0500	0.03850		mg/Kg		77	45 - 134	4	25
Acenaphthylene			0.0500	0.04436		mg/Kg		89	45 - 147	3	28
Anthracene			0.0500	0.04965		mg/Kg		99	45 - 139	5	24
Benzo[a]anthracene			0.0500	0.03967		mg/Kg		79	51 - 136	3	24
Benzo[a]pyrene			0.0500	0.03900		mg/Kg		78	44 - 145	4	25
Benzo[b]fluoranthene			0.0500	0.03776		mg/Kg		76	41 - 156	1	25
Benzo[g,h,i]perylene			0.0500	0.03927		mg/Kg		79	41 - 154	4	30
Benzo[k]fluoranthene			0.0500	0.03822		mg/Kg		76	50 - 145	5	25
Chrysene			0.0500	0.03641		mg/Kg		73	48 - 134	2	22
Dibenz(a,h)anthracene			0.0500	0.04095		mg/Kg		82	45 - 153	3	26
Fluoranthene			0.0500	0.03559		mg/Kg		71	45 - 137	3	24
Fluorene			0.0500	0.03785		mg/Kg		76	49 - 134	1	27
Indeno[1,2,3-cd]pyrene			0.0500	0.03848		mg/Kg		77	41 - 152	4	27
1-Methylnaphthalene			0.0500	0.04051		mg/Kg		81	52 - 138	2	26
2-Methylnaphthalene			0.0500	0.04373		mg/Kg		87	43 - 151	3	27
Naphthalene			0.0500	0.03882		mg/Kg		78	45 - 135	1	26
Phenanthrene			0.0500	0.03729		mg/Kg		75	45 - 133	3	27
Pyrene			0.0500	0.03850		mg/Kg		77	47 - 138	7	27

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	71		12 - 147
Nitrobenzene-d5 (Surr)	67		10 - 143
p-Terphenyl-d14 (Surr)	71		10 - 145

Lab Sample ID: 570-94150-1 MS
Matrix: Solid
Analysis Batch: 233083

Client Sample ID: TS18
Prep Type: Total/NA
Prep Batch: 231252

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	0.015		0.0582	0.04604		mg/Kg	☼	53	10 - 175
Acenaphthylene	0.022		0.0582	0.07298		mg/Kg	☼	87	10 - 180
Anthracene	0.052		0.0582	0.09282		mg/Kg	☼	71	10 - 158
Benzo[a]anthracene	0.063	F1 F2	0.0582	0.1095		mg/Kg	☼	81	10 - 180
Benzo[a]pyrene	0.10	F1 F2	0.0582	0.1562		mg/Kg	☼	89	10 - 180
Benzo[b]fluoranthene	0.11	F1 F2	0.0582	0.1680		mg/Kg	☼	107	10 - 180
Benzo[g,h,i]perylene	0.074	F1 F2	0.0582	0.1177		mg/Kg	☼	75	10 - 180
Benzo[k]fluoranthene	0.077	F1 F2	0.0582	0.1100		mg/Kg	☼	56	10 - 180
Chrysene	0.088	F1 F2	0.0582	0.1398		mg/Kg	☼	88	10 - 180
Dibenz(a,h)anthracene	0.017		0.0582	0.04935		mg/Kg	☼	56	10 - 180

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 570-94150-1 MS
Matrix: Solid
Analysis Batch: 233083

Client Sample ID: TS18
Prep Type: Total/NA
Prep Batch: 231252

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoranthene	0.15	F1 F2	0.0582	0.2062		mg/Kg	☼	94	10 - 180
Fluorene	0.016		0.0582	0.04993		mg/Kg	☼	58	10 - 168
Indeno[1,2,3-cd]pyrene	0.082	F1 F2	0.0582	0.1161		mg/Kg	☼	59	10 - 172
1-Methylnaphthalene	0.021		0.0582	0.05096		mg/Kg	☼	51	13 - 143
2-Methylnaphthalene	0.047		0.0582	0.06805		mg/Kg	☼	37	26 - 144
Naphthalene	0.082		0.0582	0.1009		mg/Kg	☼	32	10 - 161
Phenanthrene	0.11	F1	0.0582	0.1555		mg/Kg	☼	82	10 - 180
Pyrene	0.18	F1 F2	0.0582	0.2445		mg/Kg	☼	104	10 - 180

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*56*		*12 - 147*
Nitrobenzene-d5 (Surr)	*51*		*10 - 143*
p-Terphenyl-d14 (Surr)	*56*		*10 - 145*

Lab Sample ID: 570-94150-1 MSD
Matrix: Solid
Analysis Batch: 233083

Client Sample ID: TS18
Prep Type: Total/NA
Prep Batch: 231252

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene	0.015		0.0583	0.05552		mg/Kg	☼	69	10 - 175	19	40
Acenaphthylene	0.022		0.0583	0.08389		mg/Kg	☼	106	10 - 180	14	40
Anthracene	0.052		0.0583	0.1380		mg/Kg	☼	148	10 - 158	39	40
Benzo[a]anthracene	0.063	F1 F2	0.0583	0.2045	F1 F2	mg/Kg	☼	244	10 - 180	61	40
Benzo[a]pyrene	0.10	F1 F2	0.0583	0.2887	F1 F2	mg/Kg	☼	316	10 - 180	60	40
Benzo[b]fluoranthene	0.11	F1 F2	0.0583	0.2596	F1 F2	mg/Kg	☼	264	10 - 180	43	40
Benzo[g,h,i]perylene	0.074	F1 F2	0.0583	0.1813	F1 F2	mg/Kg	☼	184	10 - 180	43	40
Benzo[k]fluoranthene	0.077	F1 F2	0.0583	0.2028	F1 F2	mg/Kg	☼	215	10 - 180	59	40
Chrysene	0.088	F1 F2	0.0583	0.2495	F1 F2	mg/Kg	☼	277	10 - 180	56	40
Dibenz(a,h)anthracene	0.017		0.0583	0.07151		mg/Kg	☼	94	10 - 180	37	40
Fluoranthene	0.15	F1 F2	0.0583	0.3626	F1 F2	mg/Kg	☼	362	10 - 180	55	40
Fluorene	0.016		0.0583	0.06125		mg/Kg	☼	77	10 - 168	20	40
Indeno[1,2,3-cd]pyrene	0.082	F1 F2	0.0583	0.1923	F1 F2	mg/Kg	☼	190	10 - 172	49	40
1-Methylnaphthalene	0.021		0.0583	0.05976		mg/Kg	☼	66	13 - 143	16	40
2-Methylnaphthalene	0.047		0.0583	0.08048		mg/Kg	☼	58	26 - 144	17	40
Naphthalene	0.082		0.0583	0.1159		mg/Kg	☼	57	10 - 161	14	40
Phenanthrene	0.11	F1	0.0583	0.2193	F1	mg/Kg	☼	191	10 - 180	34	40
Pyrene	0.18	F1 F2	0.0583	0.4230	F1 F2	mg/Kg	☼	410	10 - 180	53	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*61*		*12 - 147*
Nitrobenzene-d5 (Surr)	*56*		*10 - 143*
p-Terphenyl-d14 (Surr)	*63*		*10 - 145*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 570-230897/5
Matrix: Solid
Analysis Batch: 230897

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.25		mg/Kg			05/02/22 11:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*50 - 150*		*05/02/22 11:45*	*1*

Lab Sample ID: LCS 570-230897/4
Matrix: Solid
Analysis Batch: 230897

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Gasoline (C4-C13)			1.96	1.847		mg/Kg		94	77 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*50 - 150*

Lab Sample ID: LCSD 570-230897/6
Matrix: Solid
Analysis Batch: 230897

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Gasoline (C4-C13)			1.97	1.880		mg/Kg		95	77 - 128	2	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*50 - 150*

Lab Sample ID: MB 570-231228/5
Matrix: Solid
Analysis Batch: 231228

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.25		mg/Kg			05/03/22 12:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*50 - 150*		*05/03/22 12:28*	*1*

Lab Sample ID: LCS 570-231228/3
Matrix: Solid
Analysis Batch: 231228

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Gasoline (C4-C13)			1.95	2.115		mg/Kg		108	77 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*50 - 150*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCSD 570-231228/4
Matrix: Solid
Analysis Batch: 231228

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Gasoline (C4-C13)			1.96	2.035		mg/Kg		104	77 - 128	4	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*50 - 150*

Lab Sample ID: MB 570-232719/3-A
Matrix: Solid
Analysis Batch: 232683

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 232719

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.25		mg/Kg		05/09/22 09:59	05/09/22 11:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*75*		*50 - 150*	*05/09/22 09:59*	*05/09/22 11:20*	*1*

Lab Sample ID: LCS 570-232719/1-A
Matrix: Solid
Analysis Batch: 232683

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 232719

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Gasoline (C4-C13)			1.96	2.145		mg/Kg		109	77 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*50 - 150*

Lab Sample ID: LCSD 570-232719/2-A
Matrix: Solid
Analysis Batch: 232683

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 232719

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Gasoline (C4-C13)			1.97	2.110		mg/Kg		107	77 - 128	2	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*84*		*50 - 150*

Lab Sample ID: 570-94150-5 MS
Matrix: Solid
Analysis Batch: 232683

Client Sample ID: TS22
Prep Type: Total/NA
Prep Batch: 232719

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Gasoline (C4-C13)	ND		2.28	2.348		mg/Kg	☼	103	48 - 114		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*50 - 150*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: 570-94150-5 MSD
Matrix: Solid
Analysis Batch: 232683

Client Sample ID: TS22
Prep Type: Total/NA
Prep Batch: 232719

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Gasoline (C4-C13)	ND		2.27	2.324		mg/Kg	☼	102	48 - 114	1	23

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*50 - 150*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 570-230926/1-A
Matrix: Solid
Analysis Batch: 231402

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 230926

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	ND		5.0		mg/Kg		05/02/22 10:10	05/03/22 18:12	1
TPH as Motor Oil Range	ND		5.0		mg/Kg		05/02/22 10:10	05/03/22 18:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*97*		*50 - 150*	*05/02/22 10:10*	*05/03/22 18:12*	*1*

Lab Sample ID: LCS 570-230926/2-A
Matrix: Solid
Analysis Batch: 231402

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 230926

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Diesel (C10-C28)			400	460.5		mg/Kg		115	76 - 126		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*96*		*50 - 150*

Lab Sample ID: LCS 570-230926/6-A
Matrix: Solid
Analysis Batch: 231402

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 230926

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Motor Oil (C17-C44)			400	433.0		mg/Kg		108	71 - 139		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*95*		*50 - 150*

Lab Sample ID: LCSD 570-230926/3-A
Matrix: Solid
Analysis Batch: 231402

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 230926

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Diesel (C10-C28)			400	462.5		mg/Kg		116	76 - 126	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*94*		*50 - 150*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCSD 570-230926/7-A
Matrix: Solid
Analysis Batch: 231402

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 230926

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Motor Oil (C17-C44)			400	424.3		mg/Kg		106	71 - 139	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*96*		*50 - 150*

Lab Sample ID: 570-94150-1 MS
Matrix: Solid
Analysis Batch: 231402

Client Sample ID: TS18
Prep Type: Silica Gel Cleanup
Prep Batch: 230926

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Diesel (C10-C28)	11		461	522.9		mg/Kg	☼	111	37 - 175		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
n-Octacosane (Surr)	*94*		*50 - 150*

Lab Sample ID: 570-94150-1 MS
Matrix: Solid
Analysis Batch: 231402

Client Sample ID: TS18
Prep Type: Silica Gel Cleanup
Prep Batch: 230926

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Motor Oil (C17-C44)	ND		445	477.6		mg/Kg	☼	103	71 - 174		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
n-Octacosane (Surr)	*93*		*50 - 150*

Lab Sample ID: 570-94150-1 MSD
Matrix: Solid
Analysis Batch: 231402

Client Sample ID: TS18
Prep Type: Silica Gel Cleanup
Prep Batch: 230926

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Diesel (C10-C28)	11		452	525.6		mg/Kg	☼	114	37 - 175	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
n-Octacosane (Surr)	*95*		*50 - 150*

Lab Sample ID: 570-94150-1 MSD
Matrix: Solid
Analysis Batch: 231402

Client Sample ID: TS18
Prep Type: Silica Gel Cleanup
Prep Batch: 230926

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Motor Oil (C17-C44)	ND		461	509.8		mg/Kg	☼	106	71 - 174	7	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
n-Octacosane (Surr)	*93*		*50 - 150*

QC Association Summary

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-94150-1

GC/MS VOA

Prep Batch: 230575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-94150-1	TS18	Total/NA	Solid	5035	
570-94150-2	TS19	Total/NA	Solid	5035	
570-94150-3	TS20	Total/NA	Solid	5035	
570-94150-4	TS21	Total/NA	Solid	5035	
570-94150-5	TS22	Total/NA	Solid	5035	

Analysis Batch: 230932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-94150-1	TS18	Total/NA	Solid	8260C	230575
570-94150-2	TS19	Total/NA	Solid	8260C	230575
570-94150-3	TS20	Total/NA	Solid	8260C	230575
570-94150-4	TS21	Total/NA	Solid	8260C	230575
570-94150-5	TS22	Total/NA	Solid	8260C	230575
MB 570-230932/7	Method Blank	Total/NA	Solid	8260C	
LCS 570-230932/4	Lab Control Sample	Total/NA	Solid	8260C	
LCSD 570-230932/5	Lab Control Sample Dup	Total/NA	Solid	8260C	

GC/MS Semi VOA

Prep Batch: 231252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-94150-1	TS18	Total/NA	Solid	3546	
570-94150-2	TS19	Total/NA	Solid	3546	
570-94150-3	TS20	Total/NA	Solid	3546	
570-94150-4	TS21	Total/NA	Solid	3546	
570-94150-5	TS22	Total/NA	Solid	3546	
MB 570-231252/1-A	Method Blank	Total/NA	Solid	3546	
LCS 570-231252/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 570-231252/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
570-94150-1 MS	TS18	Total/NA	Solid	3546	
570-94150-1 MSD	TS18	Total/NA	Solid	3546	

Analysis Batch: 233083

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-94150-1	TS18	Total/NA	Solid	8270C SIM	231252
570-94150-2	TS19	Total/NA	Solid	8270C SIM	231252
570-94150-3	TS20	Total/NA	Solid	8270C SIM	231252
570-94150-4	TS21	Total/NA	Solid	8270C SIM	231252
570-94150-5	TS22	Total/NA	Solid	8270C SIM	231252
LCS 570-231252/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	231252
LCSD 570-231252/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM	231252
570-94150-1 MS	TS18	Total/NA	Solid	8270C SIM	231252
570-94150-1 MSD	TS18	Total/NA	Solid	8270C SIM	231252

Analysis Batch: 233337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-231252/1-A	Method Blank	Total/NA	Solid	8270C SIM	231252

GC VOA

Prep Batch: 230575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-94150-1	TS18	Total/NA	Solid	5035	
570-94150-2	TS19	Total/NA	Solid	5035	
570-94150-3	TS20	Total/NA	Solid	5035	
570-94150-4	TS21	Total/NA	Solid	5035	

Analysis Batch: 230897

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-94150-1	TS18	Total/NA	Solid	NWTPH-Gx	230575
570-94150-2	TS19	Total/NA	Solid	NWTPH-Gx	230575
570-94150-3	TS20	Total/NA	Solid	NWTPH-Gx	230575
MB 570-230897/5	Method Blank	Total/NA	Solid	NWTPH-Gx	
LCS 570-230897/4	Lab Control Sample	Total/NA	Solid	NWTPH-Gx	
LCSD 570-230897/6	Lab Control Sample Dup	Total/NA	Solid	NWTPH-Gx	

Analysis Batch: 231228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-94150-4	TS21	Total/NA	Solid	NWTPH-Gx	230575
MB 570-231228/5	Method Blank	Total/NA	Solid	NWTPH-Gx	
LCS 570-231228/3	Lab Control Sample	Total/NA	Solid	NWTPH-Gx	
LCSD 570-231228/4	Lab Control Sample Dup	Total/NA	Solid	NWTPH-Gx	

Analysis Batch: 232683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-94150-5	TS22	Total/NA	Solid	NWTPH-Gx	232719
MB 570-232719/3-A	Method Blank	Total/NA	Solid	NWTPH-Gx	232719
LCS 570-232719/1-A	Lab Control Sample	Total/NA	Solid	NWTPH-Gx	232719
LCSD 570-232719/2-A	Lab Control Sample Dup	Total/NA	Solid	NWTPH-Gx	232719
570-94150-5 MS	TS22	Total/NA	Solid	NWTPH-Gx	232719
570-94150-5 MSD	TS22	Total/NA	Solid	NWTPH-Gx	232719

Prep Batch: 232719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-94150-5	TS22	Total/NA	Solid	5030C	
MB 570-232719/3-A	Method Blank	Total/NA	Solid	5030C	
LCS 570-232719/1-A	Lab Control Sample	Total/NA	Solid	5030C	
LCSD 570-232719/2-A	Lab Control Sample Dup	Total/NA	Solid	5030C	
570-94150-5 MS	TS22	Total/NA	Solid	5030C	
570-94150-5 MSD	TS22	Total/NA	Solid	5030C	

GC Semi VOA

Prep Batch: 230926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-94150-1	TS18	Silica Gel Cleanup	Solid	3550C SGC	
570-94150-2	TS19	Silica Gel Cleanup	Solid	3550C SGC	
570-94150-3	TS20	Silica Gel Cleanup	Solid	3550C SGC	
570-94150-4	TS21	Silica Gel Cleanup	Solid	3550C SGC	
570-94150-5	TS22	Silica Gel Cleanup	Solid	3550C SGC	
MB 570-230926/1-A	Method Blank	Silica Gel Cleanup	Solid	3550C SGC	
LCS 570-230926/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3550C SGC	
LCS 570-230926/6-A	Lab Control Sample	Silica Gel Cleanup	Solid	3550C SGC	

GC Semi VOA (Continued)

Prep Batch: 230926 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 570-230926/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3550C SGC	
LCSD 570-230926/7-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3550C SGC	
570-94150-1 MS	TS18	Silica Gel Cleanup	Solid	3550C SGC	
570-94150-1 MS	TS18	Silica Gel Cleanup	Solid	3550C SGC	
570-94150-1 MSD	TS18	Silica Gel Cleanup	Solid	3550C SGC	
570-94150-1 MSD	TS18	Silica Gel Cleanup	Solid	3550C SGC	

Analysis Batch: 231402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-94150-1	TS18	Silica Gel Cleanup	Solid	NWTPH-Dx	230926
570-94150-2	TS19	Silica Gel Cleanup	Solid	NWTPH-Dx	230926
570-94150-3	TS20	Silica Gel Cleanup	Solid	NWTPH-Dx	230926
570-94150-4	TS21	Silica Gel Cleanup	Solid	NWTPH-Dx	230926
570-94150-5	TS22	Silica Gel Cleanup	Solid	NWTPH-Dx	230926
MB 570-230926/1-A	Method Blank	Silica Gel Cleanup	Solid	NWTPH-Dx	230926
LCS 570-230926/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	NWTPH-Dx	230926
LCS 570-230926/6-A	Lab Control Sample	Silica Gel Cleanup	Solid	NWTPH-Dx	230926
LCSD 570-230926/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	NWTPH-Dx	230926
LCSD 570-230926/7-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	NWTPH-Dx	230926
570-94150-1 MS	TS18	Silica Gel Cleanup	Solid	NWTPH-Dx	230926
570-94150-1 MS	TS18	Silica Gel Cleanup	Solid	NWTPH-Dx	230926
570-94150-1 MSD	TS18	Silica Gel Cleanup	Solid	NWTPH-Dx	230926
570-94150-1 MSD	TS18	Silica Gel Cleanup	Solid	NWTPH-Dx	230926

Lab Chronicle

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-94150-1

Client Sample ID: TS18

Lab Sample ID: 570-94150-1

Date Collected: 04/25/22 12:05

Matrix: Solid

Date Received: 04/28/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			7.077 g	5 mL	230575	04/29/22 16:58	UQTR	ECL 4
Total/NA	Analysis	8260C		1	5 mL	5 mL	230932	05/02/22 12:11	OH1	ECL 4
	Instrument ID: GCMSGGG									
Total/NA	Prep	3546			19.99 g	1 mL	231252	05/03/22 10:21	SP9M	ECL 4
Total/NA	Analysis	8270C SIM		1			233083	05/11/22 03:58	ULLI	ECL 4
	Instrument ID: GCMSAAA									
Total/NA	Prep	5035			7.623 g	5 mL	230575	04/29/22 16:58	UQTR	ECL 4
Total/NA	Analysis	NWTPH-Gx		1	5 g	5 mL	230897	05/02/22 16:49	P1R	ECL 4
	Instrument ID: GC24									
Silica Gel Cleanup	Prep	3550C SGC			10.19 g	10 mL	230926	05/02/22 10:10	KG5J	ECL 4
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			231402	05/03/22 22:18	A1W	ECL 4
	Instrument ID: GC48									

Client Sample ID: TS19

Lab Sample ID: 570-94150-2

Date Collected: 04/26/22 09:50

Matrix: Solid

Date Received: 04/28/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.156 g	5 mL	230575	04/29/22 16:58	UQTR	ECL 4
Total/NA	Analysis	8260C		1	5 mL	5 mL	230932	05/02/22 12:35	OH1	ECL 4
	Instrument ID: GCMSGGG									
Total/NA	Prep	3546			20.04 g	1 mL	231252	05/03/22 10:21	SP9M	ECL 4
Total/NA	Analysis	8270C SIM		1			233083	05/11/22 04:19	ULLI	ECL 4
	Instrument ID: GCMSAAA									
Total/NA	Prep	5035			6.799 g	5 mL	230575	04/29/22 16:58	UQTR	ECL 4
Total/NA	Analysis	NWTPH-Gx		1	5 g	5 mL	230897	05/02/22 17:15	P1R	ECL 4
	Instrument ID: GC24									
Silica Gel Cleanup	Prep	3550C SGC			9.91 g	10 mL	230926	05/02/22 10:10	KG5J	ECL 4
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			231402	05/03/22 22:39	A1W	ECL 4
	Instrument ID: GC48									

Client Sample ID: TS20

Lab Sample ID: 570-94150-3

Date Collected: 04/26/22 15:30

Matrix: Solid

Date Received: 04/28/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.258 g	5 mL	230575	04/29/22 16:58	UQTR	ECL 4
Total/NA	Analysis	8260C		1	5 mL	5 mL	230932	05/02/22 13:00	OH1	ECL 4
	Instrument ID: GCMSGGG									
Total/NA	Prep	3546			19.97 g	1 mL	231252	05/03/22 10:21	SP9M	ECL 4
Total/NA	Analysis	8270C SIM		1			233083	05/11/22 04:39	ULLI	ECL 4
	Instrument ID: GCMSAAA									
Total/NA	Prep	5035			4.834 g	5 mL	230575	04/29/22 16:58	UQTR	ECL 4
Total/NA	Analysis	NWTPH-Gx		1	5 g	5 mL	230897	05/02/22 17:40	P1R	ECL 4
	Instrument ID: GC24									

Lab Chronicle

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-94150-1

Client Sample ID: TS20

Date Collected: 04/26/22 15:30
Date Received: 04/28/22 09:45

Lab Sample ID: 570-94150-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Silica Gel Cleanup	Prep	3550C SGC			10.33 g	10 mL	230926	05/02/22 10:10	KG5J	ECL 4
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			231402	05/03/22 23:00	A1W	ECL 4
	Instrument ID: GC48									

Client Sample ID: TS21

Date Collected: 04/27/22 09:15
Date Received: 04/28/22 09:45

Lab Sample ID: 570-94150-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.839 g	5 mL	230575	04/29/22 16:58	UQTR	ECL 4
Total/NA	Analysis	8260C		1	5 mL	5 mL	230932	05/02/22 13:24	OH1	ECL 4
	Instrument ID: GCMSGGG									
Total/NA	Prep	3546			20.07 g	1 mL	231252	05/03/22 10:21	SP9M	ECL 4
Total/NA	Analysis	8270C SIM		1			233083	05/11/22 05:00	ULLI	ECL 4
	Instrument ID: GCMSAAA									
Total/NA	Prep	5035			5.344 g	5 mL	230575	04/29/22 16:58	UQTR	ECL 4
Total/NA	Analysis	NWTPH-Gx		1	5 g	5 mL	231228	05/03/22 13:20	P1R	ECL 4
	Instrument ID: GC53									
Silica Gel Cleanup	Prep	3550C SGC			9.52 g	10 mL	230926	05/02/22 10:10	KG5J	ECL 4
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			231402	05/03/22 23:20	A1W	ECL 4
	Instrument ID: GC48									

Client Sample ID: TS22

Date Collected: 04/27/22 11:10
Date Received: 04/28/22 09:45

Lab Sample ID: 570-94150-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.234 g	5 mL	230575	04/29/22 16:58	UQTR	ECL 4
Total/NA	Analysis	8260C		1	5 mL	5 mL	230932	05/02/22 13:48	OH1	ECL 4
	Instrument ID: GCMSGGG									
Total/NA	Prep	3546			20.01 g	1 mL	231252	05/03/22 10:21	SP9M	ECL 4
Total/NA	Analysis	8270C SIM		1			233083	05/11/22 05:20	ULLI	ECL 4
	Instrument ID: GCMSAAA									
Total/NA	Prep	5030C			5.03 g	5 mL	232719	05/09/22 11:12	U1MC	ECL 4
Total/NA	Analysis	NWTPH-Gx		1	5 g	5 mL	232683	05/09/22 11:54	P1R	ECL 4
	Instrument ID: GC25									
Silica Gel Cleanup	Prep	3550C SGC			9.91 g	10 mL	230926	05/02/22 10:10	KG5J	ECL 4
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			231402	05/03/22 23:41	A1W	ECL 4
	Instrument ID: GC48									

Laboratory References:

ECL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Accreditation/Certification Summary

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-94150-1

Laboratory: Eurofins Calscience

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Washington	State	C916-18	10-12-22

Method Summary

Client: Cardno, Inc
Project/Site: Mobil/ADC/031447

Job ID: 570-94150-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	ECL 4
8270C SIM	Semivolatile Organic Compound (GC/MS SIM LL)	SW846	ECL 4
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC)	NWTPH	ECL 4
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	ECL 4
3546	Microwave Extraction (Low Level)	SW846	ECL 4
3550C SGC	Ultrasonic Extraction	SW846	ECL 4
5030C	Purge and Trap	SW846	ECL 4
5035	Closed System Purge and Trap	SW846	ECL 4

Protocol References:

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ECL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

de Guia, Cecile

From: Cam Penner-Ash <cameron.penner-ash@cardno.com>
Sent: Friday, April 29, 2022 9:26 AM
To: de Guia, Cecile; Laina Cole; Bobby Thompson
Subject: RE: Eurofins Calscience sample confirmation files from 570-94150-1 Mobil/ADC/031447
Attachments: 031447 - SOIL COC Trenching 4.29.22.pdf

EXTERNAL EMAIL*

Hi Cecile,

Updated COC Attached.

- Please also run TPH(mo) for NWTPH-Dx (added to COC)
- Please do not run MTBE for 8260C (crossed off)

Let me know if you have any questions,

Cam Penner-Ash
PROJECT MANAGER
CARDNO

Mobile +1 503 869 1196
Address 309 South Cloverdale Street Unit A13, Seattle, Washington 98108
Email cameron.penner-ash@cardno.com Web www.cardno.com

From: Cecile de Guia <Cecile.deGuia@et.eurofinsus.com>
Sent: Friday, April 29, 2022 8:51 AM
To: Cam Penner-Ash <cameron.penner-ash@cardno.com>; Laina Cole <laina.cole@cardno.com>; Bobby Thompson <robert.thompson@cardno.com>
Subject: Eurofins Calscience sample confirmation files from 570-94150-1 Mobil/ADC/031447
Importance: High

Hello,

Attached please find the sample confirmation files for job 570-94150-1; Mobil/ADC/031447

Please confirm if the request for 8260C is only for BTEX. MTBE wasn't crossed off on the COC. In addition, do you want me to include Motor Oil for NWTPH-Dx method?
Please update the attached COC and email back to me the revised.

Thank you.

Cecile de Guia
Project Manager

Eurofins Calscience
Phone: 714-895-5494

E-mail: Cecile.deGuia@et.eurofinsus.com
www.eurofinsus.com/env

Reference: [570-315468]
Attachments: 2

> > Bank information has changed, please refer to remittance information on invoice. < <

de Guia, Cecile

From: Bobby Thompson <robert.thompson@cardno.com>
Sent: Saturday, May 7, 2022 6:10 AM
To: de Guia, Cecile
Cc: Cam Penner-Ash; Laina Cole
Subject: Re: Eurofins Calscience sample confirmation files from 570-94150-1 Mobil/ADC/031447

Follow Up Flag: Follow up
Flag Status: Flagged

EXTERNAL EMAIL*

Hello Cecile,

Yes, please take the aliquot from the soil jar.

Thank you,

Bobby

Sent from my iPhone

> On May 7, 2022, at 12:31 AM, de Guia, Cecile <Cecile.deGuia@et.eurofinsus.com> wrote:
>
> Hello,
> The lab has no more TerraCore left for reanalysis of NWTPH-Gx for TPH as Gasoline for sample TS22 (570-94150-5). The first run was not useable due to the failing QC and low surrogate recovery for the second run. Insufficient sample for reanalysis
> for the failing surrogate. Can we take the aliquot from the soil jar to analyze TPH-g? Let me know.
> Thank you.
>
> Best regards,
> Cecile de Guia
> Project Manager
>
> <image003.png>
>
> Eurofins Calscience
> 2841 Dow Avenue, Suite 100
> Tustin, Ca 92780
> USA
>
> Main: 714 895 5494
> Direct: 657 210 6423

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570-94150 Chain of Custody

CHAIN-OF-CUSTODY RECORD

Date 4/27/22

Page 1 of 1

LABORATORY CLIENT: Cardno

ADDRESS: 309 South Cloverdale Street, Unit A13

CITY: Seattle STATE: WA ZIP: 98108

TEL. 206-510-5855 E-MAIL: robert.thompson@cardno.com

CLIENT PROJECT NAME / NO: ExxonMobil ADC/031447

PO NO.: 0314476022; Agreement #A2604415

PROJECT CONTACT: Robert Thompson

LAB CONTACT OR QUOTE NO:

GLOBAL ID: LOG CODE:

SAMPLER(S): (PRINT): Will Lamb

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☑ STANDARD

EDD

☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:

Required EIM and Cardno EDDs. Please perform Gel Cleanup for NWTPH-Dx - % moisture for dry weight correction.

Report to: laina.cole@cardno.com
robert.thompson@cardno.com
cameron.penner-ash@cardno.com

REQUESTED ANALYSES

Please check box or fill in blank as needed

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT	Unpreserved	Preserved	Field Filtered	TPH(g) ☐ GRO by Ecology Method NWTPH-Gx	TPH(d) /TPH(mo) ☐ by Ecology Method NWTPH-Dx	TPH ☐ C6-C36 ☐ C6-C44	TPH	BTEX / ~~MTBE~~ by 8260 ☐	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	1-methylnaphthalene and PAHs by EPA Method 8270C SIM			
	TS18	4/25/22	1205	S	8				X	X			X										X			
	TS19	4/26/22	0950	S	8				X	X			X										X			
	TS20	4/26/22	1530	S	8				X	X			X										X			
	TS21	4/27/22	0915	S	8				X	X			X										X			
	TS22	4/27/22	1110	S	8				X	X			X										X			

Relinquished by: (Signature)	Received by: (Signature/Affiliation) FedEx	Date: 4/27/22	Time: 1500
Relinquished by: (Signature) (FedEx)	Received by: (Signature/Affiliation)	Date: 4/28/22	Time: 0945
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

* C-S. 2-0/3-7 IR-96 2016-04-01-Revision

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570-94150 Chain of Custody

CHAIN-OF-CUSTODY RECORD

Date 4/27/22

Page 1 of 1

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For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

LABORATORY CLIENT: Cardno	CLIENT PROJECT NAME / NO: ExxonMobil ADC/031447
ADDRESS: 309 South Cloverdale Street, Unit A13	P O NO.: 031447 6022; Agreement #A2604415
CITY: Seattle STATE: WA ZIP: 98108	PROJECT CONTACT: Robert Thompson
	LAB CONTACT OR QUOTE NO:
TEL: 206-510-5855	E-MAIL: robert.thompson@cardno.com
GLOBAL ID:	LOG CODE:
SAMPLER(S): (PRINT) Will Lamb	

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☑ STANDARD

EDD
☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:
Required EIM and Cardno EDDs. Please perform Gel Cleanup for NWTPH-DX - % moisture for dry weight correction.
Report to: laina.cole@cardno.com
robert.thompson@cardno.com
cameron.penner-ash@cardno.com

REQUESTED ANALYSES
Please check box or fill in blank as needed

LAB USE ONLY	SAMPLE ID	DATE	TIME	MATRIX	NO. OF CONT	Unpreserved	Preserved	Field Filtered	☒ TPH(g) ☐ GRO by Ecology Method NWTPH-Gx	☒ TPH(d) ☐ DRO by Ecology Method NWTPH-DX	TPH ☐ C6-C36 ☐ C6-C44	TPH	BTEX / MTBE ☒ 8260 ☐	VOCs (8260)	Oxygenates (8260)	Prep (5035) ☐ En Core ☐ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs ☐ 8270 ☐ 8270 SIM	T22 Metals ☐ 6010/747X ☐ 6020/747X	Cr(VI) ☐ 7196 ☐ 7199 ☐ 218.6	1-methylnapthalene and PAHs by EPA Method 8270C SIM			
	TS18	4/25/22	1205	S	8				X	X			X										X			
	TS19	4/26/22	0950	S	8				X	X			X										X			
	TS20	4/26/22	1530	S	8				X	X			X										X			
	TS21	4/27/22	0915	S	8				X	X			X										X			
	TS22	4/27/22	1110	S	8				X	X			X										X			

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date	Time
[signature]	FedEx	4/27/22	1500
(FedEx)	[signature]	4/28/22	0945

* C-S - 2-0/3-7 [initials] 2016-04-01-Revision

2/22

ORIGIN ID: (817) 965-6081
PAUL PREVOU
CARDNO, INC
309 SOUTH CLOVERDALE STREET
UNIT A13
SEATTLE, WA 98108
UNITED STATES US

SHIP DATE: 06APR22
ACTWGT: 10.00 LB MAN
CAD: 0343492/CAFE3512

570C1/1E3B/6F4D

TO SHIPPING
EUROFINS CALSCIENCE
2841 DOW AVE STE 100

TUSTIN CA 927807211
(949) 261-1022
REF: S570-49660

RMA:

FedEx Express

211020121101uv

FedEx
TRK# 0221 5739 4183 1299

THU - 28 APR 10:30A
PRIORITY OVERNIGH

92 DTHA

92780
CA-US SNA

EXP 01/23

570-94150 Waybill

#4347659 04/27 577J2/BDF9/FF46

Login Sample Receipt Checklist

Client: Cardno, Inc

Job Number: 570-94150-1

Login Number: 94150
List Number: 1
Creator: Lagunas, Jorge L

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin, CA 92780
Tel: (714)895-5494

Laboratory Job ID: 570-98455-1
Client Project/Site: ExxonMobil ADC/031447

For:
Cardno, Inc
309 South Cloverdale Street
Unit A13
Seattle, Washington 98108

Attn: Bobby Thompson

Authorized for release by:
6/17/2022 10:59:45 AM

Cecile de Guia, Project Manager I
(714)895-5494
Cecile.deGuia@et.eurofinsus.com

Table of Contents

Sample Summary

Client: Cardno, Inc
Project/Site: ExxonMobil ADC/031447

Job ID: 570-98455-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-98455-1	TS23	Solid	06/02/22 11:45	06/03/22 10:30

Definitions/Glossary

Client: Cardno, Inc
Project/Site: ExxonMobil ADC/031447

Job ID: 570-98455-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Cardno, Inc
Project/Site: ExxonMobil ADC/031447

Job ID: 570-98455-1

Job ID: 570-98455-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative
570-98455-1

Comments
No additional comments.

Receipt
The sample was received on 6/3/2022 10:30 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.2º C.

GC/MS VOA
Method 8260C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-239906. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270C SIM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 570-239351 and analytical batch 570-240170 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC VOA
Method NWTPH-Gx: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-239564. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Cardno, Inc
Project/Site: ExxonMobil ADC/031447

Job ID: 570-98455-1

Client Sample ID: TS23

Lab Sample ID: 570-98455-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.016		0.0062		mg/Kg	1	☼	8270C SIM	Total/NA
Anthracene	0.0075		0.0062		mg/Kg	1	☼	8270C SIM	Total/NA
Benzo[b]fluoranthene	0.015		0.0062		mg/Kg	1	☼	8270C SIM	Total/NA
Fluoranthene	0.010		0.0062		mg/Kg	1	☼	8270C SIM	Total/NA
Fluorene	0.031		0.0062		mg/Kg	1	☼	8270C SIM	Total/NA
1-Methylnaphthalene	0.050	F1	0.0062		mg/Kg	1	☼	8270C SIM	Total/NA
2-Methylnaphthalene	0.025		0.0062		mg/Kg	1	☼	8270C SIM	Total/NA
Naphthalene	0.017		0.0062		mg/Kg	1	☼	8270C SIM	Total/NA
Phenanthrene	0.037		0.0062		mg/Kg	1	☼	8270C SIM	Total/NA
Pyrene	0.014		0.0062		mg/Kg	1	☼	8270C SIM	Total/NA
TPH as Gasoline (C4-C13)	0.36		0.23		mg/Kg	1	☼	NWTPH-Gx	Total/NA
TPH as Diesel Range	59		6.1		mg/Kg	1	☼	NWTPH-Dx	Silica Gel Cleanup
TPH as Motor Oil Range	17		6.1		mg/Kg	1	☼	NWTPH-Dx	Silica Gel Cleanup

This Detection Summary does not include radiochemical test results.

Client Sample ID: TS23
Date Collected: 06/02/22 11:45
Date Received: 06/03/22 10:30

Lab Sample ID: 570-98455-1
Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0010		mg/Kg	☼	06/06/22 19:23	06/08/22 18:16	1
Ethylbenzene	ND		0.0010		mg/Kg	☼	06/06/22 19:23	06/08/22 18:16	1
Toluene	ND		0.0010		mg/Kg	☼	06/06/22 19:23	06/08/22 18:16	1
m,p-Xylene	ND		0.0020		mg/Kg	☼	06/06/22 19:23	06/08/22 18:16	1
o-Xylene	ND		0.0010		mg/Kg	☼	06/06/22 19:23	06/08/22 18:16	1
Xylenes, Total	ND		0.0020		mg/Kg	☼	06/06/22 19:23	06/08/22 18:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*124*		*80 - 142*	*06/06/22 19:23*	*06/08/22 18:16*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*	*06/06/22 19:23*	*06/08/22 18:16*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 123*	*06/06/22 19:23*	*06/08/22 18:16*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*	*06/06/22 19:23*	*06/08/22 18:16*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**0.016**		0.0062		mg/Kg	☼	06/06/22 14:32	06/09/22 14:52	1
Acenaphthylene	ND		0.0062		mg/Kg	☼	06/06/22 14:32	06/09/22 14:52	1
Anthracene	**0.0075**		0.0062		mg/Kg	☼	06/06/22 14:32	06/09/22 14:52	1
Benzo[a]anthracene	ND		0.0062		mg/Kg	☼	06/06/22 14:32	06/09/22 14:52	1
Benzo[a]pyrene	ND		0.0062		mg/Kg	☼	06/06/22 14:32	06/09/22 14:52	1
Benzo[b]fluoranthene	**0.015**		0.0062		mg/Kg	☼	06/06/22 14:32	06/09/22 14:52	1
Benzo[g,h,i]perylene	ND		0.0062		mg/Kg	☼	06/06/22 14:32	06/09/22 14:52	1
Benzo[k]fluoranthene	ND		0.0062		mg/Kg	☼	06/06/22 14:32	06/09/22 14:52	1
Chrysene	ND		0.0062		mg/Kg	☼	06/06/22 14:32	06/09/22 14:52	1
Dibenz(a,h)anthracene	ND		0.0062		mg/Kg	☼	06/06/22 14:32	06/09/22 14:52	1
Fluoranthene	**0.010**		0.0062		mg/Kg	☼	06/06/22 14:32	06/09/22 14:52	1
Fluorene	**0.031**		0.0062		mg/Kg	☼	06/06/22 14:32	06/09/22 14:52	1
Indeno[1,2,3-cd]pyrene	ND		0.0062		mg/Kg	☼	06/06/22 14:32	06/09/22 14:52	1
1-Methylnaphthalene	**0.050**	**F1**	0.0062		mg/Kg	☼	06/06/22 14:32	06/09/22 14:52	1
2-Methylnaphthalene	**0.025**		0.0062		mg/Kg	☼	06/06/22 14:32	06/09/22 14:52	1
Naphthalene	**0.017**		0.0062		mg/Kg	☼	06/06/22 14:32	06/09/22 14:52	1
Phenanthrene	**0.037**		0.0062		mg/Kg	☼	06/06/22 14:32	06/09/22 14:52	1
Pyrene	**0.014**		0.0062		mg/Kg	☼	06/06/22 14:32	06/09/22 14:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*59*		*12 - 147*	*06/06/22 14:32*	*06/09/22 14:52*	*1*
Nitrobenzene-d5 (Surr)	*65*		*10 - 143*	*06/06/22 14:32*	*06/09/22 14:52*	*1*
p-Terphenyl-d14 (Surr)	*55*		*10 - 145*	*06/06/22 14:32*	*06/09/22 14:52*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	**0.36**		0.23		mg/Kg	☼	06/06/22 19:23	06/07/22 16:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*50 - 150*	*06/06/22 19:23*	*06/07/22 16:00*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	**59**		6.1		mg/Kg	☼	06/14/22 15:03	06/15/22 20:56	1
TPH as Motor Oil Range	**17**		6.1		mg/Kg	☼	06/14/22 15:03	06/15/22 20:56	1

Client: Cardno, Inc
Project/Site: ExxonMobil ADC/031447

Job ID: 570-98455-1

Client Sample ID: TS23
Date Collected: 06/02/22 11:45
Date Received: 06/03/22 10:30

Lab Sample ID: 570-98455-1
Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	91		50 - 150	06/14/22 15:03	06/15/22 20:56	1

Surrogate Summary

Client: Cardno, Inc
Project/Site: ExxonMobil ADC/031447

Job ID: 570-98455-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-142)	(80-120)	(80-123)	(80-120)
570-98455-1	TS23	124	102	108	99
LCS 570-239906/4	Lab Control Sample	110	101	103	98
LCSD 570-239906/5	Lab Control Sample Dup	110	103	102	99
MB 570-239906/9	Method Blank	111	99	103	97

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHd14
Lab Sample ID	Client Sample ID	(12-147)	(10-143)	(10-145)
570-98455-1	TS23	59	65	55
570-98455-1 MS	TS23	57	57	54
570-98455-1 MSD	TS23	60	56	55
LCS 570-239351/2-A	Lab Control Sample	63	63	55
LCSD 570-239351/3-A	Lab Control Sample Dup	62	64	56
MB 570-239351/1-A	Method Blank	35	40	33

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		BFB1
Lab Sample ID	Client Sample ID	(50-150)
570-98455-1	TS23	89
LCS 570-239564/3	Lab Control Sample	105
LCSD 570-239564/4	Lab Control Sample Dup	105
MB 570-239564/5	Method Blank	88

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Matrix: Solid — **Prep Type: Silica Gel Cleanup**

		Percent Surrogate Recovery (Acceptance Limits)
		OTCSN
Lab Sample ID	Client Sample ID	(50-150)
570-98455-1	TS23	91
570-98455-1 MS	TS23	102
570-98455-1 MS	TS23	102

Surrogate Summary

Client: Cardno, Inc
Job ID: 570-98455-1
Project/Site: ExxonMobil ADC/031447

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Matrix: Solid **Prep Type: Silica Gel Cleanup**

		Percent Surrogate Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	OTCSN (50-150)						
570-98455-1 MSD	TS23	95						
570-98455-1 MSD	TS23	102						
LCS 570-241422/2-A	Lab Control Sample	98						
LCS 570-241422/6-A	Lab Control Sample	95						
LCSD 570-241422/3-A	Lab Control Sample Dup	101						
LCSD 570-241422/7-A	Lab Control Sample Dup	99						
MB 570-241422/1-A	Method Blank	100						

Surrogate Legend

OTCSN = n-Octacosane (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 570-239906/9
Matrix: Solid
Analysis Batch: 239906

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0010		mg/Kg			06/08/22 10:55	1
Ethylbenzene	ND		0.0010		mg/Kg			06/08/22 10:55	1
Toluene	ND		0.0010		mg/Kg			06/08/22 10:55	1
m,p-Xylene	ND		0.0020		mg/Kg			06/08/22 10:55	1
o-Xylene	ND		0.0010		mg/Kg			06/08/22 10:55	1
Xylenes, Total	ND		0.0020		mg/Kg			06/08/22 10:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*80 - 142*		*06/08/22 10:55*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*06/08/22 10:55*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 123*		*06/08/22 10:55*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*06/08/22 10:55*	*1*

Lab Sample ID: LCS 570-239906/4
Matrix: Solid
Analysis Batch: 239906

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.0500	0.05047		mg/Kg		101	80 - 120		
Ethylbenzene			0.0500	0.05414		mg/Kg		108	80 - 120		
Toluene			0.0500	0.05206		mg/Kg		104	80 - 120		
m,p-Xylene			0.100	0.1119		mg/Kg		112	80 - 120		
o-Xylene			0.0500	0.05614		mg/Kg		112	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*110*		*80 - 142*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*80 - 123*
Toluene-d8 (Surr)	*98*		*80 - 120*

Lab Sample ID: LCSD 570-239906/5
Matrix: Solid
Analysis Batch: 239906

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.0500	0.04979		mg/Kg		100	80 - 120	1	20
Ethylbenzene			0.0500	0.05119		mg/Kg		102	80 - 120	6	20
Toluene			0.0500	0.05128		mg/Kg		103	80 - 120	2	20
m,p-Xylene			0.100	0.1055		mg/Kg		105	80 - 120	6	20
o-Xylene			0.0500	0.05266		mg/Kg		105	80 - 120	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*110*		*80 - 142*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*80 - 123*
Toluene-d8 (Surr)	*99*		*80 - 120*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Lab Sample ID: MB 570-239351/1-A
Matrix: Solid
Analysis Batch: 240170

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 239351

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		06/06/22 14:32	06/09/22 13:10	1
Acenaphthylene	ND		0.0050		mg/Kg		06/06/22 14:32	06/09/22 13:10	1
Anthracene	ND		0.0050		mg/Kg		06/06/22 14:32	06/09/22 13:10	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		06/06/22 14:32	06/09/22 13:10	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		06/06/22 14:32	06/09/22 13:10	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		06/06/22 14:32	06/09/22 13:10	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		06/06/22 14:32	06/09/22 13:10	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		06/06/22 14:32	06/09/22 13:10	1
Chrysene	ND		0.0050		mg/Kg		06/06/22 14:32	06/09/22 13:10	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		06/06/22 14:32	06/09/22 13:10	1
Fluoranthene	ND		0.0050		mg/Kg		06/06/22 14:32	06/09/22 13:10	1
Fluorene	ND		0.0050		mg/Kg		06/06/22 14:32	06/09/22 13:10	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		06/06/22 14:32	06/09/22 13:10	1
1-Methylnaphthalene	ND		0.0050		mg/Kg		06/06/22 14:32	06/09/22 13:10	1
2-Methylnaphthalene	ND		0.0050		mg/Kg		06/06/22 14:32	06/09/22 13:10	1
Naphthalene	ND		0.0050		mg/Kg		06/06/22 14:32	06/09/22 13:10	1
Phenanthrene	ND		0.0050		mg/Kg		06/06/22 14:32	06/09/22 13:10	1
Pyrene	ND		0.0050		mg/Kg		06/06/22 14:32	06/09/22 13:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*35*		*12 - 147*	*06/06/22 14:32*	*06/09/22 13:10*	*1*
Nitrobenzene-d5 (Surr)	*40*		*10 - 143*	*06/06/22 14:32*	*06/09/22 13:10*	*1*
p-Terphenyl-d14 (Surr)	*33*		*10 - 145*	*06/06/22 14:32*	*06/09/22 13:10*	*1*

Lab Sample ID: LCS 570-239351/2-A
Matrix: Solid
Analysis Batch: 240170

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239351

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	0.0500	0.03799		mg/Kg		76	45 - 134
Acenaphthylene	0.0500	0.04094		mg/Kg		82	45 - 147
Anthracene	0.0500	0.03926		mg/Kg		79	45 - 139
Benzo[a]anthracene	0.0500	0.03959		mg/Kg		79	51 - 136
Benzo[a]pyrene	0.0500	0.03839		mg/Kg		77	44 - 145
Benzo[b]fluoranthene	0.0500	0.03833		mg/Kg		77	41 - 156
Benzo[g,h,i]perylene	0.0500	0.04101		mg/Kg		82	41 - 154
Benzo[k]fluoranthene	0.0500	0.04071		mg/Kg		81	50 - 145
Chrysene	0.0500	0.03909		mg/Kg		78	48 - 134
Dibenz(a,h)anthracene	0.0500	0.03974		mg/Kg		79	45 - 153
Fluoranthene	0.0500	0.03553		mg/Kg		71	45 - 137
Fluorene	0.0500	0.04044		mg/Kg		81	49 - 134
Indeno[1,2,3-cd]pyrene	0.0500	0.04783		mg/Kg		96	41 - 152
1-Methylnaphthalene	0.0500	0.04114		mg/Kg		82	52 - 138
2-Methylnaphthalene	0.0500	0.04150		mg/Kg		83	43 - 151
Naphthalene	0.0500	0.03888		mg/Kg		78	45 - 135
Phenanthrene	0.0500	0.03623		mg/Kg		72	45 - 133
Pyrene	0.0500	0.03552		mg/Kg		71	47 - 138

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCS 570-239351/2-A
Matrix: Solid
Analysis Batch: 240170

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 239351

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	63		12 - 147
Nitrobenzene-d5 (Surr)	63		10 - 143
p-Terphenyl-d14 (Surr)	55		10 - 145

Lab Sample ID: LCSD 570-239351/3-A
Matrix: Solid
Analysis Batch: 240170

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 239351

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene			0.0500	0.03732		mg/Kg		75	45 - 134	2	25
Acenaphthylene			0.0500	0.04056		mg/Kg		81	45 - 147	1	28
Anthracene			0.0500	0.03825		mg/Kg		76	45 - 139	3	24
Benzo[a]anthracene			0.0500	0.03865		mg/Kg		77	51 - 136	2	24
Benzo[a]pyrene			0.0500	0.04003		mg/Kg		80	44 - 145	4	25
Benzo[b]fluoranthene			0.0500	0.03922		mg/Kg		78	41 - 156	2	25
Benzo[g,h,i]perylene			0.0500	0.04028		mg/Kg		81	41 - 154	2	30
Benzo[k]fluoranthene			0.0500	0.04105		mg/Kg		82	50 - 145	1	25
Chrysene			0.0500	0.04054		mg/Kg		81	48 - 134	4	22
Dibenz(a,h)anthracene			0.0500	0.03866		mg/Kg		77	45 - 153	3	26
Fluoranthene			0.0500	0.03447		mg/Kg		69	45 - 137	3	24
Fluorene			0.0500	0.03904		mg/Kg		78	49 - 134	4	27
Indeno[1,2,3-cd]pyrene			0.0500	0.04750		mg/Kg		95	41 - 152	1	27
1-Methylnaphthalene			0.0500	0.03938		mg/Kg		79	52 - 138	4	26
2-Methylnaphthalene			0.0500	0.04113		mg/Kg		82	43 - 151	1	27
Naphthalene			0.0500	0.03840		mg/Kg		77	45 - 135	1	26
Phenanthrene			0.0500	0.03594		mg/Kg		72	45 - 133	1	27
Pyrene			0.0500	0.03571		mg/Kg		71	47 - 138	1	27

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	62		12 - 147
Nitrobenzene-d5 (Surr)	64		10 - 143
p-Terphenyl-d14 (Surr)	56		10 - 145

Lab Sample ID: 570-98455-1 MS
Matrix: Solid
Analysis Batch: 240170

Client Sample ID: TS23
Prep Type: Total/NA
Prep Batch: 239351

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	0.016		0.0621	0.04822		mg/Kg	☼	52	10 - 175
Acenaphthylene	ND		0.0621	0.04707		mg/Kg	☼	76	10 - 180
Anthracene	0.0075		0.0621	0.04227		mg/Kg	☼	56	10 - 158
Benzo[a]anthracene	ND		0.0621	0.04286		mg/Kg	☼	62	10 - 180
Benzo[a]pyrene	ND		0.0621	0.04135		mg/Kg	☼	61	10 - 180
Benzo[b]fluoranthene	0.015		0.0621	0.04149		mg/Kg	☼	43	10 - 180
Benzo[g,h,i]perylene	ND		0.0621	0.04292		mg/Kg	☼	69	10 - 180
Benzo[k]fluoranthene	ND		0.0621	0.04276		mg/Kg	☼	69	10 - 180
Chrysene	ND		0.0621	0.04314		mg/Kg	☼	60	10 - 180
Dibenz(a,h)anthracene	ND		0.0621	0.04074		mg/Kg	☼	66	10 - 180

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 570-98455-1 MS
Matrix: Solid
Analysis Batch: 240170

Client Sample ID: TS23
Prep Type: Total/NA
Prep Batch: 239351

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoranthene	0.010		0.0621	0.04343		mg/Kg	☼	54	10 - 180
Fluorene	0.031		0.0621	0.04773		mg/Kg	☼	26	10 - 168
Indeno[1,2,3-cd]pyrene	ND		0.0621	0.05136		mg/Kg	☼	83	10 - 172
1-Methylnaphthalene	0.050	F1	0.0621	0.05531	F1	mg/Kg	☼	9	13 - 143
2-Methylnaphthalene	0.025		0.0621	0.04525		mg/Kg	☼	33	26 - 144
Naphthalene	0.017		0.0621	0.04313		mg/Kg	☼	42	10 - 161
Phenanthrene	0.037		0.0621	0.05601		mg/Kg	☼	31	10 - 180
Pyrene	0.014		0.0621	0.04704		mg/Kg	☼	54	10 - 180

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*57*		*12 - 147*
Nitrobenzene-d5 (Surr)	*57*		*10 - 143*
p-Terphenyl-d14 (Surr)	*54*		*10 - 145*

Lab Sample ID: 570-98455-1 MSD
Matrix: Solid
Analysis Batch: 240170

Client Sample ID: TS23
Prep Type: Total/NA
Prep Batch: 239351

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene	0.016		0.0620	0.04834		mg/Kg	☼	52	10 - 175	0	40
Acenaphthylene	ND		0.0620	0.04504		mg/Kg	☼	73	10 - 180	4	40
Anthracene	0.0075		0.0620	0.04226		mg/Kg	☼	56	10 - 158	0	40
Benzo[a]anthracene	ND		0.0620	0.04282		mg/Kg	☼	62	10 - 180	0	40
Benzo[a]pyrene	ND		0.0620	0.04122		mg/Kg	☼	61	10 - 180	0	40
Benzo[b]fluoranthene	0.015		0.0620	0.04122		mg/Kg	☼	43	10 - 180	1	40
Benzo[g,h,i]perylene	ND		0.0620	0.04230		mg/Kg	☼	68	10 - 180	1	40
Benzo[k]fluoranthene	ND		0.0620	0.04298		mg/Kg	☼	69	10 - 180	1	40
Chrysene	ND		0.0620	0.04323		mg/Kg	☼	61	10 - 180	0	40
Dibenz(a,h)anthracene	ND		0.0620	0.03941		mg/Kg	☼	64	10 - 180	3	40
Fluoranthene	0.010		0.0620	0.04398		mg/Kg	☼	55	10 - 180	1	40
Fluorene	0.031		0.0620	0.04926		mg/Kg	☼	29	10 - 168	3	40
Indeno[1,2,3-cd]pyrene	ND		0.0620	0.04914		mg/Kg	☼	79	10 - 172	4	40
1-Methylnaphthalene	0.050	F1	0.0620	0.05453	F1	mg/Kg	☼	8	13 - 143	1	40
2-Methylnaphthalene	0.025		0.0620	0.04563		mg/Kg	☼	33	26 - 144	1	40
Naphthalene	0.017		0.0620	0.04293		mg/Kg	☼	42	10 - 161	0	40
Phenanthrene	0.037		0.0620	0.05648		mg/Kg	☼	32	10 - 180	1	40
Pyrene	0.014		0.0620	0.04676		mg/Kg	☼	53	10 - 180	1	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*60*		*12 - 147*
Nitrobenzene-d5 (Surr)	*56*		*10 - 143*
p-Terphenyl-d14 (Surr)	*55*		*10 - 145*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 570-239564/5
Matrix: Solid
Analysis Batch: 239564

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Gasoline (C4-C13)	ND		0.25		mg/Kg			06/07/22 12:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*50 - 150*		*06/07/22 12:07*	*1*

Lab Sample ID: LCS 570-239564/3
Matrix: Solid
Analysis Batch: 239564

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Gasoline (C4-C13)			1.98	2.260		mg/Kg		114	77 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*50 - 150*

Lab Sample ID: LCSD 570-239564/4
Matrix: Solid
Analysis Batch: 239564

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Gasoline (C4-C13)			1.98	2.208		mg/Kg		111	77 - 128	2	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*50 - 150*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 570-241422/1-A
Matrix: Solid
Analysis Batch: 241682

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 241422

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
TPH as Diesel Range	ND		5.0		mg/Kg		06/14/22 15:02	06/15/22 15:00	1
TPH as Motor Oil Range	ND		5.0		mg/Kg		06/14/22 15:02	06/15/22 15:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*100*		*50 - 150*	*06/14/22 15:02*	*06/15/22 15:00*	*1*

Lab Sample ID: LCS 570-241422/2-A
Matrix: Solid
Analysis Batch: 241682

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 241422

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Diesel (C10-C28)			400	459.3		mg/Kg		115	76 - 126		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*98*		*50 - 150*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 570-241422/6-A
Matrix: Solid
Analysis Batch: 241682

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 241422

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Motor Oil (C17-C44)			400	384.2		mg/Kg		96	71 - 139		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*95*		*50 - 150*

Lab Sample ID: LCSD 570-241422/3-A
Matrix: Solid
Analysis Batch: 241682

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 241422

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Diesel (C10-C28)			400	479.8		mg/Kg		120	76 - 126	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*101*		*50 - 150*

Lab Sample ID: LCSD 570-241422/7-A
Matrix: Solid
Analysis Batch: 241682

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 241422

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Motor Oil (C17-C44)			400	405.2		mg/Kg		101	71 - 139	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*99*		*50 - 150*

Lab Sample ID: 570-98455-1 MS
Matrix: Solid
Analysis Batch: 241682

Client Sample ID: TS23
Prep Type: Silica Gel Cleanup
Prep Batch: 241422

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Diesel (C10-C28)	63		495	630.6		mg/Kg	☼	115	37 - 175		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
n-Octacosane (Surr)	*102*		*50 - 150*

Lab Sample ID: 570-98455-1 MS
Matrix: Solid
Analysis Batch: 241682

Client Sample ID: TS23
Prep Type: Silica Gel Cleanup
Prep Batch: 241422

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Motor Oil (C17-C44)	46		494	540.7		mg/Kg	☼	100	71 - 174		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
n-Octacosane (Surr)	*102*		*50 - 150*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: 570-98455-1 MSD
Matrix: Solid
Analysis Batch: 241682

Client Sample ID: TS23
Prep Type: Silica Gel Cleanup
Prep Batch: 241422

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Diesel (C10-C28)	63		497	633.9		mg/Kg	☼	115	37 - 175	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
n-Octacosane (Surr)	*95*		*50 - 150*

Lab Sample ID: 570-98455-1 MSD
Matrix: Solid
Analysis Batch: 241682

Client Sample ID: TS23
Prep Type: Silica Gel Cleanup
Prep Batch: 241422

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Motor Oil (C17-C44)	46		499	544.4		mg/Kg	☼	100	71 - 174	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
n-Octacosane (Surr)	*102*		*50 - 150*

QC Association Summary

Client: Cardno, Inc
Project/Site: ExxonMobil ADC/031447

Job ID: 570-98455-1

GC/MS VOA

Prep Batch: 239422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-98455-1	TS23	Total/NA	Solid	5035	

Analysis Batch: 239906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-98455-1	TS23	Total/NA	Solid	8260C	239422
MB 570-239906/9	Method Blank	Total/NA	Solid	8260C	
LCS 570-239906/4	Lab Control Sample	Total/NA	Solid	8260C	
LCSD 570-239906/5	Lab Control Sample Dup	Total/NA	Solid	8260C	

GC/MS Semi VOA

Prep Batch: 239351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-98455-1	TS23	Total/NA	Solid	3546	
MB 570-239351/1-A	Method Blank	Total/NA	Solid	3546	
LCS 570-239351/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 570-239351/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
570-98455-1 MS	TS23	Total/NA	Solid	3546	
570-98455-1 MSD	TS23	Total/NA	Solid	3546	

Analysis Batch: 240170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-98455-1	TS23	Total/NA	Solid	8270C SIM	239351
MB 570-239351/1-A	Method Blank	Total/NA	Solid	8270C SIM	239351
LCS 570-239351/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	239351
LCSD 570-239351/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM	239351
570-98455-1 MS	TS23	Total/NA	Solid	8270C SIM	239351
570-98455-1 MSD	TS23	Total/NA	Solid	8270C SIM	239351

GC VOA

Prep Batch: 239422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-98455-1	TS23	Total/NA	Solid	5035	

Analysis Batch: 239564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-98455-1	TS23	Total/NA	Solid	NWTPH-Gx	239422
MB 570-239564/5	Method Blank	Total/NA	Solid	NWTPH-Gx	
LCS 570-239564/3	Lab Control Sample	Total/NA	Solid	NWTPH-Gx	
LCSD 570-239564/4	Lab Control Sample Dup	Total/NA	Solid	NWTPH-Gx	

GC Semi VOA

Prep Batch: 241422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-98455-1	TS23	Silica Gel Cleanup	Solid	3550C SGC	
MB 570-241422/1-A	Method Blank	Silica Gel Cleanup	Solid	3550C SGC	
LCS 570-241422/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3550C SGC	
LCS 570-241422/6-A	Lab Control Sample	Silica Gel Cleanup	Solid	3550C SGC	
LCSD 570-241422/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3550C SGC	
LCSD 570-241422/7-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3550C SGC	

GC Semi VOA (Continued)

Prep Batch: 241422 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-98455-1 MS	TS23	Silica Gel Cleanup	Solid	3550C SGC	
570-98455-1 MS	TS23	Silica Gel Cleanup	Solid	3550C SGC	
570-98455-1 MSD	TS23	Silica Gel Cleanup	Solid	3550C SGC	
570-98455-1 MSD	TS23	Silica Gel Cleanup	Solid	3550C SGC	

Analysis Batch: 241682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-98455-1	TS23	Silica Gel Cleanup	Solid	NWTPH-Dx	241422
MB 570-241422/1-A	Method Blank	Silica Gel Cleanup	Solid	NWTPH-Dx	241422
LCS 570-241422/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	NWTPH-Dx	241422
LCS 570-241422/6-A	Lab Control Sample	Silica Gel Cleanup	Solid	NWTPH-Dx	241422
LCSD 570-241422/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	NWTPH-Dx	241422
LCSD 570-241422/7-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	NWTPH-Dx	241422
570-98455-1 MS	TS23	Silica Gel Cleanup	Solid	NWTPH-Dx	241422
570-98455-1 MS	TS23	Silica Gel Cleanup	Solid	NWTPH-Dx	241422
570-98455-1 MSD	TS23	Silica Gel Cleanup	Solid	NWTPH-Dx	241422
570-98455-1 MSD	TS23	Silica Gel Cleanup	Solid	NWTPH-Dx	241422

Lab Chronicle

Client: Cardno, Inc
Project/Site: ExxonMobil ADC/031447

Job ID: 570-98455-1

Client Sample ID: TS23

Date Collected: 06/02/22 11:45
Date Received: 06/03/22 10:30

Lab Sample ID: 570-98455-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.126 g	5 mL	239422	06/06/22 19:23	UQTR	ECL 4
Total/NA	Analysis	8260C		1	5 mL	5 mL	239906	06/08/22 18:16	AH8S	ECL 4
	Instrument ID: GCMSCC									
Total/NA	Prep	3546			20.13 g	1 mL	239351	06/06/22 14:32	USUL	ECL 4
Total/NA	Analysis	8270C SIM		1			240170	06/09/22 14:52	ULLI	ECL 4
	Instrument ID: GCMSAAA									
Total/NA	Prep	5035			6.916 g	5 mL	239422	06/06/22 19:23	UQTR	ECL 4
Total/NA	Analysis	NWTPH-Gx		1	5 g	5 mL	239564	06/07/22 16:00	P1R	ECL 4
	Instrument ID: GC56									
Silica Gel Cleanup	Prep	3550C SGC			10.18 g	10 mL	241422	06/14/22 15:03	USUL	ECL 4
Silica Gel Cleanup	Analysis	NWTPH-Dx		1			241682	06/15/22 20:56	A1W	ECL 4
	Instrument ID: GC48									

Laboratory References:

ECL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Accreditation/Certification Summary

Client: Cardno, Inc
Job ID: 570-98455-1
Project/Site: ExxonMobil ADC/031447

Laboratory: Eurofins Calscience

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Washington	State	C916-18	10-12-22

Method Summary

Client: Cardno, Inc
Project/Site: ExxonMobil ADC/031447

Job ID: 570-98455-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	ECL 4
8270C SIM	Semivolatile Organic Compound (GC/MS SIM LL)	SW846	ECL 4
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC)	NWTPH	ECL 4
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	ECL 4
3546	Microwave Extraction (Low Level)	SW846	ECL 4
3550C SGC	Ultrasonic Extraction	SW846	ECL 4
5035	Closed System Purge and Trap	SW846	ECL 4

Protocol References:

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ECL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

98455

eurofins | Calscience
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
TEL. (714) 895-5494 FAX. (714) 894-7501

Site Name	Everett Bulk Plant
Provide MRN for retail or AFE for major projects	
Retail Project (MRN)	
Major Project (AFE)	
Project Name	ExxonMobil ADC/031447

CHAIN OF CUSTODY RECORD

DATE. 6/2/2022

PAGE. 1 OF 1

ExxonMobil Engr: Jeff Johnson

LABORATORY CLIENT: Cardno

ADDRESS: 309 South Cloverdale Street Unit A13

CITY: Seattle, WA 98108

TEL: 206-510-5855 FAX: N/A robert.thompson@cardno com

PROJECT CONTACT: Robert Thompson

SAMPLER(S): Karlo Peralta, Cameron Penner-Ash

GLOBAL ID # / COELT LOG CODE:

P O 0314476022 Agreement# A2604415

LAB USE ONLY

COOLER RECEIPT Temp = ____ °C

TURNAROUND TIME

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☑ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)

☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ____/____/____

SPECIAL INSTRUCTIONS:

Required EIM and Cardno EDDs. Please perform Silica Gel Cleanup for NWTPH-DX - % moisture for dry weight correction

Report to: laina.cole@cardno.com, robert.thompson@cardno.com, and cameron.penner-ash@cardno.com

REQUESTED ANALYSIS

570-98455 Chain of Custody

LAB USE ONLY	SAMPLE ID	Field Point Name	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT	TPHg by Ecology Method NWTPH-GX	TPHd and TPHmo by Ecology Method NWTPH-DX	BTEX by EPA Method 8260C	1-Methylnaphalene and PAHs by EPA Method 8270C SIM	CONTAINER TYPE
	TS23	TS23	06/02/22	11 45	S	8	X	X	X	X	4 Sodium Bisulfate VOAs, 2 Methanol VOA, 2 4oz un-preserved glass jar

Relinquished by: (Signature)	Received by: (Signature)	Date & Time.
Karlo Peralta	FedEx	6/2/22 17 30
Relinquished by: (Signature)	Received by: (Signature)	Date, & Time: 6/3/22 1030
Relinquished by: (Signature)	Received by: (Signature)	Date, & Time:

2.5/ 4-C
IR-9C

Login Sample Receipt Checklist

Client: Cardno, Inc

Job Number: 570-98455-1

Login Number: 98455
List Number: 1
Creator: Ortiz-Luis, Michael

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TOGETHER we can do great things

Community

When we say community, we don't just mean the neighborhoods that people call home. We mean everyone and everything with a stake in the work that we do—from our Stantec and industry colleagues to the clients we collaborate with and the people and places we impact.

Whether creating, sustaining, or revitalizing a community, we help diverse cultures and perspectives work together toward shared successes.

Although our work helps to create physical communities, our ultimate goal is to create something far more meaningful—a sense of community.

Creativity

For us, creativity is driven by purpose. Knowing that transformation is truly possible inspires us to approach every situation with a fresh perspective.

Our inventive and collaborative approach to problem-solving helps bring big ideas to life through creative solutions.

Whether our contribution is a design that strikes the perfect balance between function and aesthetics, a feat of engineering that redefines what's possible, or a project management approach that delivers results, we strive for outcomes that transcend the challenges they solve and shape the communities we serve for the better.

Client Relationships

We're better together. This belief shapes how we collaborate with our clients, our partners, and our communities.

We listen so we can deeply understand our clients' needs, communicate with purpose so we maintain alignment, and remain open and flexible so we never miss an opportunity to strengthen a project and positively transform a community.

Cardno

now

Stantec

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