LABORATORY DATA CONSULTANTS, INC.
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Anchor
1201 3rd Ave Suite 2600
Seattle, WA 98101
ATTN: Ms. Delaney Peterson

September 27, 2023

SUBJECT: Carson Cleaners - Data Validation

Dear Ms. Peterson,

Enclosed are the final validation reports for the fraction listed below. These SDGs were received on August 25, 2023. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #57369:

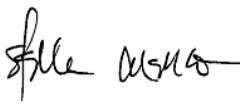
SDG #	**Fraction**
308147	Volatiles
308148	
308175	

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

- Quality Assurance Project Plan for Carson Cleaners Site, Seattle, Washington (October 2021)
- USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020)
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

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

Sincerely,



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

59 pages-ADV

Attachment 1

Stage 2B EDD

LDC# 57369 (Anchor Environmental - Seattle, WA / Carson Cleaners)

LDC	SDG#	DATE REC'D	(3) DATE DUE	(5) VOA (TO-15)		(5) VOA (8260D)																															
Matrix:	Air/Water/Soil			A	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	308147	08/25/23	09/18/23	8	0	-	-																														
B	308148	08/25/23	09/18/23	-	-	6	0																														
C	308175	08/25/23	09/18/23	-	-	14	0																														
Total	TR/SC			8	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS, MSD, or DUP's.

L:\Anchor\Carson Cleaners\57369ST.wpd

LDC Report# 57369A48a

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Carson Cleaners

LDC Report Date: September 25, 2023

Parameters: Volatiles

Validation Level: Stage 2B

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

Sample Delivery Group (SDG): 308147

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
CC-IA-01-20230808	308147-01	Air	08/08/23
CC-SS-01-20230808	308147-02	Air	08/08/23
CC-AA-01-20230808	308147-03	Air	08/08/23
CC-IA-02-20230808	308147-04	Air	08/08/23
CC-SS-02-20230808	308147-05	Air	08/08/23
CC-IA-03B-20230808	308147-06	Air	08/08/23
CC-SS-03B-20230808	308147-07	Air	08/08/23
CC-IA-04-20230808	308147-08	Air	08/08/23

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Quality Assurance Project Plan for Carson Cleaners Site, Seattle, Washington (October 2021) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

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

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

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

J (Estimated): The analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The analyte was analyzed for and positively identified by the laboratory; however the analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

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

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

I. Sample Receipt and Technical Holding Times

The canisters were properly pressurized and handled.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A bromofluorobenzene (BFB) tune was performed at 24 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 30.0% for all analytes.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 30.0% for all analytes.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 30.0% for all analytes.

V. Laboratory Blanks

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

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

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

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

VIII. Duplicate Sample Analysis

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

IX. Laboratory Control Samples

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

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2B validation.

XIII. Target Analyte Identification

Raw data were not reviewed for Stage 2B validation.

XIV. Overall Assessment of Data

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

Carson Cleaners
Volatiles - Data Qualification Summary - SDG 308147

No Sample Data Qualified in this SDG

Carson Cleaners
Volatiles - Laboratory Blank Data Qualification Summary - SDG 308147

No Sample Data Qualified in this SDG

LDC #: 57369A48a **VALIDATION COMPLETENESS WORKSHEET** Date: 09/21/23
SDG #: 308147 Stage 2B Page: 1 of 1
Laboratory: Friedman & Bruya, Inc., Seattle, WA Reviewer: JVG
2nd Reviewer: ~~A~~

METHOD: GC/MS Volatiles (EPA Method TO-15)

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

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A, A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A, A	RSD ≤ 30% ICV ≤ 30%
IV.	Continuing calibration	A	%D ≤ 30%
V.	Laboratory Blanks / canister	A / A	(per sample)
VI.	Field blanks	N	
VII.	Surrogate spikes	A	
VIII.	Duplicate sample analysis	N	
IX.	Laboratory control samples	A	LCS
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Target analyte quantitation	N	
XIII.	Target analyte identification	N	
XIV.	~~Leak Check Compounds~~	-	
XV	Overall assessment of data	A	

Note: A = Acceptable ND = No compounds detected D = Duplicate SB=Source blank
N = Not provided/applicable R = Rinsate TB = Trip blank OTHER:
SW = See worksheet FB = Field blank EB = Equipment blank

	Client ID	Lab ID	Matrix	Date
~~1~~	CC-IA-01-20230808	308147-01	Air	08/08/23
~~2~~	CC-SS-01-20230808	308147-02	Air	08/08/23
~~3~~	CC-AA-01-20230808	308147-03	Air	08/08/23
~~4~~	CC-IA-02-20230808	308147-04	Air	08/08/23
~~5~~	CC-SS-02-20230808	308147-05	Air	08/08/23
~~6~~	CC-IA-03B-20230808	308147-06	Air	08/08/23
~~7~~	CC-SS-03B-20230808	308147-07	Air	08/08/23
~~8~~	CC-IA-04-20230808	308147-08	Air	08/08/23
9				
10				

Notes:

-	03-1809 MB						

(C, PPP, QQQ, S, AA only)

LDC Report# 57369B1a

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Carson Cleaners

LDC Report Date: September 25, 2023

Parameters: Volatiles

Validation Level: Stage 2B

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

Sample Delivery Group (SDG): 308148

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
CC-MW-01-GW-20230808	308148-01	Water	08/08/23
CC-MW-4D-GW-20230808	308148-02	Water	08/08/23
CC-MW-03-GW-20230808	308148-03	Water	08/08/23
BP-MW08-GW-20230808	308148-04	Water	08/08/23
BP-MW1008-GW-20230808	308148-05	Water	08/08/23
TB-20230808	308148-06	Water	08/08/23

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Quality Assurance Project Plan for Carson Cleaners Site, Seattle, Washington (October 2021) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

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

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

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

J (Estimated): The analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The analyte was analyzed for and positively identified by the laboratory; however the analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

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

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

I. Sample Receipt and Technical Holding Times

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

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A bromofluorobenzene (BFB) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

For analytes where average relative response factors (RRFs) were utilized, the percent relative standard deviations (%RSD) were less than or equal to 20.0%

In the case where the laboratory used a calibration curve to evaluate the analytes, all coefficients of determination (r2) were greater than or equal to 0.990.

Average relative response factors (RRF) for all analytes were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 30.0% for all analytes.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all analytes.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

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

VI. Field Blanks

Sample TB-20230808 was identified as a trip blank. No contaminants were found.

VII. Surrogates

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

VIII. Matrix Spike/Matrix Spike Duplicates

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

IX. Laboratory Control Samples

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

X. Field Duplicates

Samples BP-MW08-GW-20230808 and BP-MW1008-GW-20230808 were identified as field duplicates. No results were detected in any of the samples with the following exceptions:

Analyte	Concentration (ug/L)		RPD
	BP-MW08-GW-20230808	BP-MW1008-GW-20230808	
Trichloroethene	0.25	0.24	4
Tetrachloroethene	22	21	5

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2B validation.

XIII. Target Analyte Identification

Raw data were not reviewed for Stage 2B validation.

XIV. Overall Assessment of Data

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

Carson Cleaners
Volatiles - Data Qualification Summary - SDG 308148

No Sample Data Qualified in this SDG

Carson Cleaners
Volatiles - Laboratory Blank Data Qualification Summary - SDG 308148

No Sample Data Qualified in this SDG

LDC #: 57369B1a

SDG #: 308148

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

VALIDATION COMPLETENESS WORKSHEET

Stage 2B

Date: 09/21/23

Page: 1 of 1

Reviewer: JVG

2nd Reviewer: MC

METHOD: GC/MS Volatiles (EPA SW-846 Method 8260D)

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

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	RSD ≤ 20% r² ICV ≤ 30%
IV.	Continuing calibration	A	%D ≤ 20%
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	TB = 6
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	N	(non related sample)
IX.	Laboratory control samples	A	LCS
X.	Field duplicates	SW	D = 4/5
XI.	Internal standards	A	
XII.	Target analyte quantitation	N	
XIII.	Target analyte identification	N	
XIV	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID		Lab ID	Matrix	Date
1	CC-MW-01-GW-20230808		308148-01	Water	08/08/23
2	CC-MW-4D-GW-20230808		308148-02	Water	08/08/23
3	CC-MW-03-GW-20230808		308148-03	Water	08/08/23
4	BP-MW08-GW-20230808	D	308148-04	Water	08/08/23
5	BP-MW1008-GW-20230808	D	308148-05	Water	08/08/23
6	TB-20230808		308148-06	Water	08/08/23
7					
8					
9					
10					

Notes:

-	03-1811 MB						

(C, PPP, QQQ, S, AA)

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	AA. Tetrachloroethene	AAA. 1,3,5-Trimethylbenzene	AAAA. Ethyl tert-butyl ether	A1. 1,3-Butadiene	A2. 1,2,4,5-Tetramethylbenzene
B. Bromomethane	BB. 1,1,2,2-Tetrachloroethane	BBB. 4-Chlorotoluene	BBBB. tert-Amyl methyl ether	B1. Hexane	B2. n-Octane
C. Vinyl choride	CC. Toluene	CCC. tert-Butylbenzene	CCCC. 1-Chlorohexane	C1. Heptane	C2. n-Propyl alcohol
D. Chloroethane	DD. Chlorobenzene	DDD. 1,2,4-Trimethylbenzene	DDDD. Isopropyl alcohol	D1. Propylene	D2. n-Pentane
E. Methylene chloride	EE. Ethylbenzene	EEE. sec-Butylbenzene	EEEE. Acetonitrile	E1. Freon 11	E2. n-Decane
F. Acetone	FF. Styrene	FFF. 1,3-Dichlorobenzene	FFFF. Acrolein	F1. Freon 12	F2. Chlorodifluoromethane
G. Carbon disulfide	GG. Xylenes, total	GGG. p-Isopropyltoluene	GGGG. Acrylonitrile	G1. Freon 113	G2. cis-decahydronaphthalene
H. 1,1-Dichloroethene	HH. Vinyl acetate	HHH. 1,4-Dichlorobenzene	HHHH. 1,4-Dioxane	H1. Freon 114	H2. trans-decahydronaphthalene
I. 1,1-Dichloroethane	II. 2-Chloroethylvinyl ether	III. n-Butylbenzene	IIII. Isobutyl alcohol	I1. 2-Nitropropane	I2. n–Nonane
J. 1,2-Dichloroethene, total	JJ. Dichlorodifluoromethane	JJJ. 1,2-Dichlorobenzene	JJJJ. Methacrylonitrile	J1. Dimethyl disulfide	J2. n-Undecane
K. Chloroform	KK. Trichlorofluoromethane	KKK. 1,2,4-Trichlorobenzene	KKKK. Propionitrile	K1. 2,3-Dimethyl pentane	K2. Chloroprene
L. 1,2-Dichloroethane	LL. Methyl-tert-butyl ether	LLL. Hexachlorobutadiene	LLLL. Ethyl ether	L1. 2,4-Dimethyl pentane	L2. n-Butanol
M. 2-Butanone	MM. 1,2-Dibromo-3-chloropropane	MMM. Naphthalene	MMMM. Benzyl chloride	M1. 3,3-Dimethyl pentane	M2. n-Butyl acetate
N. 1,1,1-Trichloroethane	NN. Methyl ethyl ketone	NNN. 1,2,3-Trichlorobenzene	NNNN. Iodomethane	N1. 2-Methylpentane	N2. Nitrobenzene
O. Carbon tetrachloride	OO. 2,2-Dichloropropane	OOO. 1,3,5-Trichlorobenzene	OOOO. 1,1-Difluoroethane	O1. 3-Methylpentane	O2.
P. Bromodichloromethane	PP. Bromochloromethane	PPP. trans-1,2-Dichloroethene	PPPP. Tetrahydrofuran	P1. 3-Ethylpentane	P2.
Q. 1,2-Dichloropropane	QQ. 1,1-Dichloropropene	QQQ. cis-1,2-Dichloroethene	QQQQ. Methyl acetate	Q1. 2,2-Dimethylpentane	Q2.
R. cis-1,3-Dichloropropene	RR. Dibromomethane	RRR. m,p-Xylenes	RRRR. Ethyl acetate	R1. 2,2,3- Trimethylbutane	R2.
S. Trichloroethene	SS. 1,3-Dichloropropane	SSS. o-Xylene	SSSS. Cyclohexane	S1. 2,2,4-Trimethylpentane	S2.
T. Dibromochloromethane	TT. 1,2-Dibromoethane	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	TTTT. Methylcyclohexane	T1. 2-Methylhexane	T2.
U. 1,1,2-Trichloroethane	UU. 1,1,1,2-Tetrachloroethane	UUU. 1,2-Dichlorotetrafluoroethane	UUUU. Allyl chloride	U1. Nonanal	U2.
V. Benzene	VV. Isopropylbenzene	VVV. 4-Ethyltoluene	VVVV. Methyl methacrylate	V1. 2-Methylnaphthalene	V2.
W. trans-1,3-Dichloropropene	WW. Bromobenzene	WWW. Ethanol	WWWW. Ethyl methacrylate	W1. Methanol	W2.
X. Bromoform	XX. 1,2,3-Trichloropropane	XXX. Di-isopropyl ether	XXXX. cis-1,4-Dichloro-2-butene	X1. 1,2,3-Trimethylbenzene	X2.
Y. 4-Methyl-2-pentanone	YY. n-Propylbenzene	YYY. tert-Butanol	YYYY. trans-1,4-Dichloro-2-butene	Y1. 2-Propanol	Y2.
Z. 2-Hexanone	ZZ. 2-Chlorotoluene	ZZZ. tert-Butyl alcohol	ZZZZ. Pentachloroethane	Z1. p-Diethylbenzene	Z2.

LDC#: 57369B1a

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: JVG

METHOD: GCMS VOA (EPA SW 846 Method 8260D)

Compound	Concentration (ug/L)		RPD
	4	5	
S	0.25	0.24	4
AA	22	21	5

V:\Josephine\FIELD DUPLICATES\57369B1a anchor carson cleaners nq.wpd

LDC Report# 57369C1a

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Carson Cleaners

LDC Report Date: September 25, 2023

Parameters: Volatiles

Validation Level: Stage 2B

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

Sample Delivery Group (SDG): 308175

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
MW-20-GW-20230809	308175-01	Water	08/09/23
MW-22-GW-20230809	308175-02	Water	08/09/23
MW-28-GW-20230809	308175-03	Water	08/09/23
CC-MW-06-GW-20230809	308175-04	Water	08/09/23
BP-MW-28-GW-20230809	308175-05	Water	08/09/23
BP-MW-27-GW-20230809	308175-06	Water	08/09/23
MW-23-GW-20230809	308175-07	Water	08/09/23
MW-27-GW-20230809	308175-08	Water	08/09/23
MW-25-GW-20230809	308175-09	Water	08/09/23
MW-18-GW-20230809	308175-10	Water	08/09/23
CC-MW-2S-GW-20230809	308175-11	Water	08/09/23
BP-MW-29-GW-20230809	308175-12	Water	08/09/23
CC-MW-2D-GW-20230809	308175-13	Water	08/09/23
TB-20230809	308175-14	Water	08/09/23
BP-MW-28-GW-20230809MS	308175-05MS	Water	08/09/23
BP-MW-28-GW-20230809MSD	308175-05MSD	Water	08/09/23

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Quality Assurance Project Plan for Carson Cleaners Site, Seattle, Washington (October 2021) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

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

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

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

J (Estimated): The analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The analyte was analyzed for and positively identified by the laboratory; however the analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

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

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

I. Sample Receipt and Technical Holding Times

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

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A bromofluorobenzene (BFB) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

For analytes where average relative response factors (RRFs) were utilized, the percent relative standard deviations (%RSD) were less than or equal to 20.0%

In the case where the laboratory used a calibration curve to evaluate the analytes, all coefficients of determination (r2) were greater than or equal to 0.990.

Average relative response factors (RRF) for all analytes were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 30.0% for all analytes.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all analytes.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

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

VI. Field Blanks

Sample TB-20230809 was identified as a trip blank. No contaminants were found.

VII. Surrogates

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

VIII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Laboratory Control Samples

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

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2B validation.

XIII. Target Analyte Identification

Raw data were not reviewed for Stage 2B validation.

XIV. Overall Assessment of Data

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

Carson Cleaners
Volatiles - Data Qualification Summary - SDG 308175

No Sample Data Qualified in this SDG

Carson Cleaners
Volatiles - Laboratory Blank Data Qualification Summary - SDG 308175

No Sample Data Qualified in this SDG

LDC #: 57369C1a **VALIDATION COMPLETENESS WORKSHEET** Date: 09/21/23
SDG #: 308175 Stage 2B Page: 1 of 2
Laboratory: Friedman & Bruya, Inc., Seattle, WA Reviewer: JVG
2nd Reviewer: AC

METHOD: GC/MS Volatiles (EPA SW-846 Method 8260D)

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

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A / A	RSD ≤ 20% r ICV ≤ 30%
IV.	Continuing calibration	A	%D ≤ 20%
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	TB = 14
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	A	
IX.	Laboratory control samples	A	LCSD
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Target analyte quantitation	N	
XIII.	Target analyte identification	N	
XIV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	MW-20-GW-20230809	308175-01	Water	08/09/23
2	MW-22-GW-20230809	308175-02	Water	08/09/23
3	MW-28-GW-20230809	308175-03	Water	08/09/23
4	CC-MW-06-GW-20230809	308175-04	Water	08/09/23
5	BP-MW-28-GW-20230809	308175-05	Water	08/09/23
6	BP-MW-27-GW-20230809	308175-06	Water	08/09/23
7	MW-23-GW-20230809	308175-07	Water	08/09/23
8	MW-27-GW-20230809	308175-08	Water	08/09/23
9	MW-25-GW-20230809	308175-09	Water	08/09/23
10	MW-18-GW-20230809	308175-10	Water	08/09/23
11	CC-MW-2S-GW-20230809	308175-11	Water	08/09/23
12	BP-MW-29-GW-20230809	308175-12	Water	08/09/23
13	CC-MW-2D-GW-20230809	308175-13	Water	08/09/23
14	TB-20230809	308175-14	Water	08/09/23
15	BP-MW-28-GW-20230809MS	308175-05MS	Water	08/09/23

LDC #: 57369C1a **VALIDATION COMPLETENESS WORKSHEET** Date: 09/29/23
SDG #: 308175 Stage 2B Page: 2 of 2
Laboratory: Friedman & Bruya, Inc., Seattle, WA Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: GC/MS Volatiles (EPA SW-846 Method 8260D)

	Client ID	Lab ID	Matrix	Date
16	BP-MW-28-GW-20230809MSD	308175-05MSD	Water	08/09/23
17				
18				
19				

Notes:

	03-1819 MB						

(C, PPP, QQQ, S, AA)