



a member of **The GEL Group** INC



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February 03, 2021

Mr. Scot Fitzgerald
Central Plateau Cleanup Company
MSIN R3-50
PO Box 1600
Richland, Washington 99352

Re: SAF F20-024
Work Order: 533557
SDG: GEL533557

Dear Mr. Fitzgerald:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on January 29, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4505.

Sincerely,

A handwritten signature in black ink, appearing to read "Clare Drennen".

Clare Drennen for
Heather Shaffer
Project Manager

Purchase Order: 304901
Chain of Custody: F20-024-097
Enclosures



Heather Shaffer

From: Cutsforth, Erika C <erika_c_cutsforth@rl.gov>
Sent: Monday, January 27, 2020 4:22 PM
To: Heather Shaffer; 'team.shaffer@gel.com'; Lynch, Sherry A; Sumner, Laine C; Medley, Heather A; Fitzgerald, Scot L; Hey, Bruce E; ^CPP Sample Management; Cutsforth, Erika C
Subject: TAT Modification for SAF F20-016

Importance: High

Flag Status: Flagged

Hello Heather,

The project has requested a modification to the required TAT to 30 days for SAF number F20-016. This change does not include the 3-day TAT required for the preliminary data for carbon tetrachloride. Please use this email in lieu of a SIR as the formal change and include a copy in each SDG.

Let us know if you have questions.

Thank you,

Erika Cutsforth

CH2M Hill Plateau Remediation Company
Sample Management and Reporting
200 East / MO-277 /A-108
509-373-5869
Erika_C_Cutsforth@rl.gov

Table of Contents

Case Narrative.....	3
Chain of Custody and Supporting Documentation.....	7
Data Review Qualifier Definitions.....	10
Laboratory Certifications.....	12
Volatile Analysis.....	14
Case Narrative.....	15
Sample Data Summary.....	18
Quality Control Summary.....	20

Case Narrative

**General Narrative
for
Central Plateau Cleanup Company (74393)
SAF F20-024
SDG: GEL533557**

February 03, 2021

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt

The sample(s) arrived at GEL Laboratories, LLC, Charleston, South Carolina on January 29, 2021, for analysis. The sample was delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Items of Note All efforts were made by the lab to meet any short hold times. Samples that were analyzed outside of the initial hold time but still within 2X hold time will be noted in the lab case narrative.

Sample Identification

The laboratory received the following sample:

Laboratory Identification	Sample Description
533557001	B3W6P8

Case Narrative

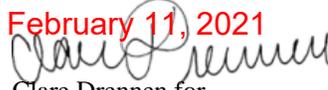
Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: General Narrative, Chain of Custody and Supporting Documentation, and data from the following fractions: GC/MS Volatile.

We certify that this package is in compliance with the Analytical Laboratory Services for CH2M Hill Plateau Remediation Company Statement of Work, both technically and for completeness, including a full description of, explanation of, and corrective actions for, any and all deviations, from either the analyses requested or the case narrative requested. Release of the data contained in this data package deliverable has been authorized by the Laboratory Analytical Manager (or designee) and the laboratory's client services representative as verified by their signatures on this report.

February 11, 2021



Clare Drennen for
Heather Shaffer
Project Manager

**GC/MS Volatile
Technical Case Narrative
Central Plateau Cleanup Company
SDG #: GEL533557
Work Order #: 533557**

Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Chain of Custody and Supporting Documentation

COMPANY ipany	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F20-024-097	PAGE 1 OF 1
COLLECTOR Tim Callaway CPCC	PROJECT COORDINATOR SUMNER, LC	PRIORITY TAT 3 Days	REQUIRED TAT 15 Days
SAMPLING LOCATION 00082, I-004	TELEPHONE NO. 376-3922	METHOD OF SHIPMENT FEDERAL EXPRESS	
ICE CHEST NO. GWS-171	ACTUAL SAMPLE DEPTH 344.83	ORIGINAL	
SHIPMENT TO GEL Laboratories, LLC	PURCHASE ORDER/CHARGE CODE 304901-900405	BILL OF LADING/AIR BILL NO. 7727 6131 0616	

MATRIX* W=Water L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation WI=Wipe X=Other	FIELD LOGBOOK NO. HNF-N-645 10-18	ACTUAL SAMPLE DEPTH 344.83	OFFSITE PROPERTY NO. N/A
PROJECT DESIGNATION 200-ZP-1 Monitoring Wells Sampling and Analysis - Water	PRESERVATION HCl or H2SO4 to pH <2/Cool <=6C	HOLDING TIME 14 Days	TYPE OF CONTAINER aGs*
COMPANY CONTACT SUMNER, LC	NO. OF CONTAINER(S) 5	VOLUME 40ml	SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS
SPECIAL HANDLING AND/OR STORAGE N/A	SAMPLE DATE JAN 28 2021	SAMPLE TIME 1115	DATE/TIME JAN 28 2021 12:15

CHAIN OF POSSESSION RELINQUISHED BY/REMOVED FROM Tim Callaway CPCC Lestly Wall CPCC	DATE/TIME JAN 28 2021 02:05	SIGN/PRINT NAMES RECEIVED BY/STORED IN Lestly Wall CPCC FEDEX	DATE/TIME JAN 28 2021 14:00
SPECIAL INSTRUCTIONS TRVL-20-092 (1) 8260_VOA_GCMS: COMMON {Carbon tetrachloride, Chloroform, Methylene chloride, Trichloroethene, Vinyl chloride}; 8260_VOA_GCMS: CH 01 {Chloromethane}; 8260_VOA_GCMS: COMMON (Add-on) {cis-1,2-Dichloroethylene};	SPECIAL INSTRUCTIONS TRVL-20-092 (1) 8260_VOA_GCMS: COMMON {Carbon tetrachloride, Chloroform, Methylene chloride, Trichloroethene, Vinyl chloride}; 8260_VOA_GCMS: CH 01 {Chloromethane}; 8260_VOA_GCMS: COMMON (Add-on) {cis-1,2-Dichloroethylene};		
FINAL SAMPLE DISPOSITION PRINTED ON 11/10/2020	DISPOSAL METHOD	DISPOSED BY Stacy Boone GEL Laboratories	DATE/TIME JAN 29 2021 9:10
FRS ID = FSR91852		TRVL NUM = TRVL-20-092	
A-6003-618 (REV 3)		A-6003-618 (REV 3)	



SAMPLE RECEIPT & REVIEW FORM

Client: **CPRC** SDG/AR/COC/Work Order: **533557** **533549** **NRC**
Received By: **Stacy Boone** Date Received: **January 29, 2021** **2/1/21**

Carrier and Tracking Number
FedEx Express FedEx Ground UPS Field Services Courier Other
7727 5541 7000 i c
7727 6227 0410 i c **7727 5949 5850 i c**

Suspected Hazard Information Yes No *If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.

A) Shipped as a DOT Hazardous? Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___

B) Did the client designate the samples are to be received as radioactive? COC notation or radioactive stickers on containers equal client designation.

C) Did the RSO classify the samples as radioactive? Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM / mR/hr
Classified as: Rad 1 Rad 2 Rad 3

D) Did the client designate samples are hazardous? COC notation or hazard labels on containers equal client designation.

E) Did the RSO identify possible hazards? If D or E is yes, select Hazards below.
PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

Sample Receipt Criteria Yes NA No Comments/Qualifiers (Required for Non-Conforming Items)

1 Shipping containers received intact and sealed? Circle Applicable: Seals broken Damaged container Leaking container Other (describe)

2 Chain of custody documents included with shipment? Circle Applicable: Client contacted and provided COC COC created upon receipt

3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?* Preservation Method: Wet Ice Ice Packs Dry ice None Other:
*all temperatures are recorded in Celsius TEMP: _____

4 Daily check performed and passed on IR temperature gun? Temperature Device Serial #: **IR1-20**
Secondary Temperature Device Serial# (if Applicable):

5 Sample containers intact and sealed? Circle Applicable: Seals broken Damaged container Leaking container Other (describe)

6 Samples requiring chemical preservation at proper pH? Sample ID's and Containers Affected:
If Preservation added, Lot#:

7 Do any samples require Volatile Analysis? If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)

Do liquid VOA vials contain acid preservation? Yes No ___ NA ___ (If unknown, select No)

Are liquid VOA vials free of headspace? Yes No ___ NA ___
Sample ID's and containers affected:

8 Samples received within holding time? ID's and tests affected:

9 Sample ID's on COC match ID's on bottles? ID's and containers affected:

10 Date & time on COC match date & time on bottles? Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)

11 Number of containers received match number indicated on COC? Circle Applicable: No container count on COC Other (describe)

12 Are sample containers identifiable as GEL provided by use of GEL labels?

13 COC form is properly signed in relinquished/received sections? Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):
7727 6131 0616 i c **7727 5518 8472 i c**

7727 5551 2847 i c **7727 4267 5215 i c**

PM (or PMA) review: Initials **NRC** Date **2/1/21** Page **1** of **1**

Data Review Qualifier Definitions

Project Specific Qualifier Definitions for GEL Client Code: CPRC

Qualifier	Qualifier Definition	Department	Fraction
U	Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.		
J	The analyte was detected at a value less than the contract required detection limit (RDL), but greater than or equal to the IDL/MDL (as appropriate). Value is estimated	Organics	
P	Aroclor target analyte with greater than 25% difference between column analyses.	Organics	
C	Analyte has been confirmed by GC/MS analysis	Organics	Pesticide
B	The analyte was detected in both the associated QC blank and in the sample.	Organics	
E	Concentration exceeds the calibration range of the instrument	Organics	
A	The TIC is a suspected aldol-condensation product	Organics	Semi-Volatile
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier		
N	Spike Sample recovery is outside control limits.		
*	Duplicate analysis not within control limits	Inorganics	
>	Result greater than quantifiable range or greater than upper limit of the analysis range	General Chemistry	
Z	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier		
B	The analyte was detected at a value less than the contract required detection limit (RDL), but greater than or equal to the IDL/MDL (as appropriate).	Inorganics	Metals
D	Results are reported from a diluted aliquot of sample.		
E	Reported value is estimated due to interferences. See comment in narrative.		
M	Duplicate precision not met.	Inorganics	Metals
o	Analyte failed to recover within LCS limits (Organics only)	Organics	
S	Reported value determined by the Method of Standard Additions (MSA)	Inorganics	
T	Spike and/or spike duplicate sample recovery is outside control limits.	Organics	
W	Post-digestion spike recovery for GFAA out of control limit. Sample absorbency < 50% of spike absorbency.	Inorganics	
B	The analyte was detected in the associated method blank \geq MDC or $>$ 5% sample activity.	Radiological	
Y	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier		
+	Correlation coefficient for Method of Standard Additions (MSA) is < 0.995	Inorganics	
B	The analyte was detected at a value less than the contract required detection limit (RDL), but greater than or equal to the IDL/MDL (as appropriate).	General Chemistry	
C	Target analyte was detected in the sample and the associated blank. The associated blank concentration is \geq EQL or is $>$ 5% of the measured concentration and/or decision level for associated samples.	Inorganics	Metals
C	Target analyte was detected in the sample and the associated blank. The associated blank concentration is \geq EQL or is $>$ 5% of the measured concentration and/or decision level for associated samples.	General Chemistry	
<	Sample is below the EPA guidance level for Reactive Releasable Cyanide and/or Reactive Releasable Sulfide	General Chemistry	
UX	Gamma Spectroscopy--Uncertain identification	Radiological	
o	Analyte failed to recover within LCS limits	Radiological	Rad

Laboratory Certifications

List of current GEL Certifications as of 03 February 2021

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122021-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019-165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-21-18
Utah NELAP	SC000122020-34
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Volatile Analysis

Case Narrative

**GC/MS Volatile
Technical Case Narrative
Central Plateau Cleanup Company
SDG #: GEL533557
Work Order #: 533557**

Product: Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer

Preparation Method: SW846 8260D

Preparation Procedure: GL-OA-E-038 REV# 28

Preparation Batch: 2087899

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
533557001	B3W6P8
1204745189	Method Blank (MB)
1204745190	Laboratory Control Sample (LCS)
1204745191	532882005(NonSDG) Post Spike (PS)
1204745192	532882005(NonSDG) Post Spike Duplicate (PSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

**Qualifier Definition Report
for**

CPRC002 Central Plateau Cleanup Company (74393)

Client SDG: GEL533557 GEL Work Order: 533557

The Qualifiers in this report are defined as follows:

J The analyte was detected at a value less than the contract required detection limit (RDL), but greater than or equal to the IDL/MDL (as appropriate). Value is estimated

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.

DL Indicates that sample is diluted.

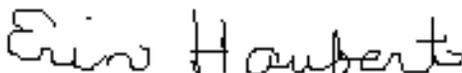
RA Indicates that sample is re-analyzed without re-extraction.

RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: 

Name: Erin Haubert

Date: 08 FEB 2021

Title: Data Validator

Sample Data Summary

Volatiles
 Certificate of Analysis
 Sample Summary

SDG Number: GEL533557	Date Collected: 01/28/2021 11:15	Matrix: WATER
Lab Sample ID: 533557001	Date Received: 01/29/2021 09:10	
Client ID: B3W6P8	Client: CPRC002	Project: CPRC0F20024
Batch ID: 2087899	Method: SW846 8260D	SOP Ref: GL-OA-E-038
Run Date: 02/02/2021 15:49	Inst: VOA9.I	Dilution: 1
Prep Date: 02/02/2021 15:49	Analyst: WD1	Purge Vol: 5 mL
Data File: 020221V9\9D216.D	Column: DB-624	

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	RDL
74-87-3	Chloromethane	U	0.333	ug/L	0.333	1.00	10.0
75-01-4	Vinyl chloride	U	0.333	ug/L	0.333	1.00	10.0
75-09-2	Methylene chloride	U	1.67	ug/L	1.67	5.00	5.00
156-59-2	cis-1,2-Dichloroethylene	U	0.333	ug/L	0.333	1.00	5.00
67-66-3	Chloroform	J	2.91	ug/L	0.333	1.00	5.00
56-23-5	Carbon tetrachloride		80.7	ug/L	0.333	1.00	5.00
79-01-6	Trichloroethylene	U	0.333	ug/L	0.333	1.00	5.00

Quality Control Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: February 8, 2021

Page 1 of 4

Central Plateau Cleanup Company

MSIN R3-50

PO Box 1600

Richland, Washington

Contact: Mr. Scot Fitzgerald

Workorder: 533557

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	2087899										
QC1204745190	LCS										
Carbon tetrachloride	50.0			49.5	ug/L		99	(73%-140%)	WD1	02/02/21	10:16
Chloroform	50.0			51.0	ug/L		102	(77%-126%)			
Chloromethane	50.0			43.7	ug/L		87	(60%-139%)			
Methylene chloride	50.0			46.2	ug/L		92	(69%-120%)			
Trichloroethylene	50.0			53.3	ug/L		107	(76%-124%)			
Vinyl chloride	50.0			45.2	ug/L		90	(67%-134%)			
cis-1,2-Dichloroethylene	50.0			50.7	ug/L		101	(73%-119%)			
**1,2-Dichloroethane-d4	50.0			50.5	ug/L		101	(73%-129%)			
**Bromofluorobenzene	50.0			52.0	ug/L		104	(72%-125%)			
**Toluene-d8	50.0			51.7	ug/L		103	(75%-123%)			
QC1204745189	MB										
Carbon tetrachloride			U	0.333	ug/L					02/02/21	11:33
Chloroform			U	0.333	ug/L						
Chloromethane			U	0.333	ug/L						

GEL LABORATORIES LLC

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QC Summary

Workorder: 533557

Page 2 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	2087899										
Methylene chloride			U	1.67	ug/L				WD1	02/02/21	11:33
Trichloroethylene			U	0.333	ug/L						
Vinyl chloride			U	0.333	ug/L						
cis-1,2-Dichloroethylene			U	0.333	ug/L						
**1,2-Dichloroethane-d4	50.0			50.5	ug/L		101	(73%-129%)			
**Bromofluorobenzene	50.0			51.2	ug/L		102	(72%-125%)			
**Toluene-d8	50.0			52.1	ug/L		104	(75%-123%)			
QC1204745191 532882005 PS											
Carbon tetrachloride	50.0	J	0.740	46.6	ug/L		92	(63%-144%)		02/02/21	17:58
Chloroform	50.0	J	0.410	49.7	ug/L		98	(69%-133%)			
Chloromethane	50.0	U	0.000	45.3	ug/L		91	(45%-142%)			
Methylene chloride	50.0	U	0.000	45.3	ug/L		91	(62%-125%)			
Trichloroethylene	50.0	U	0.000	50.7	ug/L		101	(66%-126%)			
Vinyl chloride	50.0	U	0.000	45.8	ug/L		92	(58%-139%)			
cis-1,2-Dichloroethylene	50.0	U	0.000	48.7	ug/L		97	(63%-131%)			
**1,2-Dichloroethane-d4	50.0		49.9	49.2	ug/L		98	(73%-129%)			

GEL LABORATORIES LLC

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QC Summary

Workorder: 533557

Page 3 of 4

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Volatile-GC/MS											
Batch	2087899										
**Bromofluorobenzene	50.0	52.2		51.1	ug/L		102	(72%-125%)	WD1	02/02/21	17:58
**Toluene-d8	50.0	51.5		51.4	ug/L		103	(75%-123%)			
QC1204745192 532882005 PSD											
Carbon tetrachloride	50.0	J	0.740	46.0	ug/L	1	91	(0%-20%)		02/02/21	18:23
Chloroform	50.0	J	0.410	49.0	ug/L	1	97	(0%-20%)			
Chloromethane	50.0	U	0.000	43.4	ug/L	4	87	(0%-20%)			
Methylene chloride	50.0	U	0.000	44.6	ug/L	2	89	(0%-20%)			
Trichloroethylene	50.0	U	0.000	50.0	ug/L	1	100	(0%-20%)			
Vinyl chloride	50.0	U	0.000	44.4	ug/L	3	89	(0%-20%)			
cis-1,2-Dichloroethylene	50.0	U	0.000	48.4	ug/L	1	97	(0%-20%)			
**1,2-Dichloroethane-d4	50.0		49.9	50.4	ug/L		101	(73%-129%)			
**Bromofluorobenzene	50.0		52.2	51.8	ug/L		104	(72%-125%)			
**Toluene-d8	50.0		51.5	52.2	ug/L		104	(75%-123%)			

Notes:

The Qualifiers in this report are defined as follows:

- A The TIC is a suspected aldol-condensation product
- B The analyte was detected in both the associated QC blank and in the sample.
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of sample.

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 533557

Page 4 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
E	Concentration exceeds the calibration range of the instrument										
E	Reported value is estimated due to interferences. See comment in narrative.										
J	The analyte was detected at a value less than the contract required detection limit (RDL), but greater than or equal to the IDL/MDL (as appropriate). Value is estimated										
N	Spike Sample recovery is outside control limits.										
P	Aroclor target analyte with greater than 25% difference between column analyses.										
T	Spike and/or spike duplicate sample recovery is outside control limits.										
U	Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.										
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
Y	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
Z	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
o	Analyte failed to recover within LCS limits (Organics only)										

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Surrogate Recovery Report

SDG Number: GEL533557

Matrix Type: LIQUID

Sample ID	Client ID	DCED4 %REC	TOL %REC	BFB %REC
1204745190	LCS for batch 2087899	101	103	104
1204745189	MB for batch 2087899	101	104	102
533557001	B3W6P8	102	107	104
1204745191	B3YR95PS	98	103	102
1204745192	B3YR95PSD	101	104	104

Surrogate	Parmname	Acceptance Limits
DCED4	= 1,2-Dichloroethane-d4	(73%-129%)
TOL	= Toluene-d8	(75%-123%)
BFB	= Bromofluorobenzene	(72%-125%)

* Recovery outside Acceptance Limits
 # Column to be used to flag recovery values
 D Sample Diluted