SDG NARRATIVE

LAB NAME: CHEMTECH CONSULTING GROUP
CASE: 49797
SDG: BGLW8
CONTRACT: 68HERH20D0011
LAB CODE: CHM
CHEMTECH PROJECT: N1169
MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	pH
N1169-01	BGLW7	
N1169-01DL	BGLW7DL	
N1169-01ME	BGLW7ME	
N1169-01MEDL	BGLW7MEDL	
N1169-02	BGLW8	
N1169-03	BGLW9	
N1169-04	BGLX0	
N1169-05	BGLX1	
N1169-06	BGLX2	
N1169-07	BGLX3	
N1169-08	BGLX4	
N1169-09	BGLX5	
N1169-10	BGLX6	
N1169-11	BGLX8	
N1169-12	BGLX9	
N1169-13	BGLY0	
N1169-14	BGLY1	
N1169-15	BGLY2	
N1169-16	BGLY3	
N1169-17	BGLY4	
N1169-18	BGLY5	
N1169-19	BGLY6	
N1169-20	BGLX7	

19 Soil samples were delivered to the laboratory intact on 01/15/2022.
1 Water samples were delivered to the laboratory intact on 01/15/2022.

Test requested on the Chain of Custody was Semivolatile Organic by Method SFAM01.1.

Sample Tags were not received with the samples.

The temperature of the samples was measured using an I R Gun. The samples temperature was 2.1, 2.3 degree Celsius for the samples received on 01/15/2022.

Shipping Discrepancies and/or QC issues:
Issue 1: Sample tags were not received with samples at the laboratory. Sample tag numbers may or may not be listed on the TR/COC.

Resolutions 1: The laboratory will note the samples with the missing tags in the SDG Narrative and proceed with the analysis of the samples. The resolution will be applied to all samples received for this Case.

Issue 2: The laboratory received samples for VOA and SVOA analysis. PRs are not listed on the COC for water samples, but PRs are scheduled. The laboratory would like to confirm they should proceed with PRs for the water samples.

Resolution 2: Per Region 2, please note the issue in the SDG Narrative and proceed with the analysis of the samples as scheduled.

Semivolatiles :

The samples were analyzed on instrument BNA_G using GC Column ZB-GR Semi Volatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGA.

Semis volatile Organic sample for Soil were extracted by Method SFAM01.1 on 01/15/2022, and 01/19/2022, Water were extracted by Method SFAM01.1 on 01/17/2022, the analysis of SVOC-SFAM was based on method SFAM01.1.

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria except for
BGLW7DL [1,4-Dioxane-d8 - 0%, 4,6-Dinitro-2-methylphenol-d2 - 0%, 4-Nitrophenol-d4 - 0%,]
BGLX3 [4-Chloroaniline-d4 - 0%,], As per method four surrogates are allowed to fail. Therefore no further corrective action was taken.

The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.

The Blank Spike for {PB142057BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB142062BS} recoveries met the requirements for all compounds.
The Blank Spike for {PB142138BS} recoveries met the requirements for all compounds.
The Blank analysis did not indicate the presence of lab contamination.
The Tuning criteria met requirements.
The Initial Calibration met the acceptable requirements.

The Sample BGLW7 was diluted at 30X due to high concentration of target compounds. After 30X analysis samples were still found with high concentration. Therefore as per method

requirement these samples were extracted and analyzed at 1 GM at Medium analysis. Undiluted 30X analysis and medium level analysis all three analysis are reported in the Hard copy.

Samples BGLW7, BGLW7DL and BGLW7ME were diluted due to high concentrations.

The Sample BGLW7, BGLW8, BGLW9, BGLX2, BGLX4, and BGLY4, have the concentration of target compound below method detection limits; therefore it is not reported as Hit in Form1.

See **Manual Integration report** for the manual integration information at the end of the case narrative.

Concentration of Water Sample:

$$\text{Concentration ug/L} = \frac{(Ax)\,(Is)\,(Vt)\,(DF)\,(GPC)}{(Ais)\,(\overline{RRF})\,(Vo)\,(Vi)}$$

Where,
Ax = Area of the characteristic ion for the compound to be measured.
Ais = Area of the characteristic ion for the internal standard.
Is = Amount of internal standard injected in ng.
Vo = Volume of water extracted in mL.
Vi = Volume of extract injected in uL.
Vt = Volume of the concentrated extract in uL
RRF = Mean Relative Response Factor determined from the initial calibration standard.
GPC = Vin = GPC factor (If no GPC is performed, GPC=1)
Vout = Volume of extract collected after GPC cleanup.

Concentration of SOIL Sample:

$$\text{Concentration ug/Kg, (dry weight basis)} = \frac{(Ax)\,(Is)\,(Vt)\,(DF)\,(GPC)}{(Ais)\,(\overline{RRF})\,(Vi)\,(Wt)\,(D)}$$

Where,
Ax = Area of the characteristic ion for the compound to be measured.
Ais = Area of the characteristic ion for the internal standard.
Is = Amount of internal standard injected in ng.
Vi = Volume of extract injected in microliters (uL)
Vt = Volume of concentrated extract in microliters (uL)
Wt = Weight of the original sample extracted in g
Df = Dilution factor

$\overline{RRF}$ = Mean Relative Response Factor determined from the initial calibration standard.
GPC = Vin = GPC factor (If no GPC is performed, GPC=1)
Vout = Volume of extract collected after GPC cleanup.

D = % dry weight or $\frac{100 - \%Moisture}{100}$

Example calculation of BGLX0 for Phenol:

Ax = 3451
Ais = 25036
Is = 20
Vi = 1
Vt = 500
Wt = 30.1
Df = 1
RRF = 1.998
GPC = 2
D= 0.831

Concentration

(dry weight basis) ug/Kg = $\frac{(3451)\ (20)\ (500)\ (1)\ (2)}{(25036)\ (1.998\ (1)\ (30.1)\ (0.831)}$

= 55 ug/Kg

RRF Calculation of standard 20 ppb for Naphthalene with G instrument for method 01/06/2022.

RRF= Area of compound / Area of Internal Standard X Conc. of Internal Standard / Conc. of Compound

= 122178/110517 X 20/20

= 1.106 (Reported RRF)

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature _____ Name: Nimisha Pandya.

Date: _____ Title: Document Control Officer.