

SDG NARRATIVE

LAB NAME: CHEMTECH CONSULTING GROUP CASE: 50632 SDG: C11C1 CONTRACT: 68HERH20D0011 LAB CODE: CHM CHEMTECH PROJECT: O2150 MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	pН
O2150-01	C11C1	
O2150-02	C11C2	
O2150-03	C11C3	1.0

02 Soil sample was delivered to the laboratory intact on 03/31/2023. 01 Water sample was delivered to the laboratory intact on 03/31/2023.

Test requested on the Chain of Custody was Trace- Volatile Organic and Volatile Organic by Method SFAM01.1.

The temperature of the samples was measured using an I R Gun. The samples temperature was 2.3 degree Celsius for the samples received on 03/31/2023.

Shipping Discrepancies and/or QC issues:

Issue: The water samples are listed on the COC for VOA analysis; however, water samples are scheduled for TVOA analysis. The laboratory would like to confirm they can proceed as scheduled.

Resolution: Per Region 3, the laboratory can proceed with the TVOA analysis of the water samples as scheduled. Please note the issue in the SDG Narrative and proceed with the analysis of the samples.

Trace Volatiles:

The analysis performed on instrument MSVOA_V were done using GC column DB-624UI 20m 0.18mm 1.0 um. Cat#121-1324UI.

The analysis of VOC-TRACE-SFAM was based on method SFAM01.1_Trace.

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Internal Standards Areas met the acceptable requirements.

Instrument Performance Check met requirements.

The Retention Times met requirements.

The Tuning criteria met requirements.

The initial Calibration met the requirements.

The Continuing Calibration met the requirements.

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The Blank analysis indicated presence of Methylene chloride [0.55ug/L] FileID: VV030374.D {VV0331WBL01} (VBLK321) due to possible lab contamination. As per method, less than the 2 times respective CRQL is allowed to fail for Methylene chloride. Therefore no further corrective action was taken.

The storage blank analysis indicated presence of Methylene chloride [0.42ug/L] FileID: VV030389.D {VHBLK001} due to possible lab contamination. As per method, less than the 2 times respective CRQL is allowed to fail for Methylene chloride. Therefore no further corrective action was taken.

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

Calculation:

Concentration in ug/L = (Ax) (Is) (DF)(Ais) (RRF) (Vo)

Where,

Ax = Area of the characteristic ion (EICP) for the compound to be measured. Ais = Area of the characteristic ion (EICP) for the internal standard. Is = Amount of internal standard added in ng. RRF = Mean Relative Response Factor from the initial calibration standard. Vo = Total volume of water purged, in mL. DF = Dilution Factor.

Example Calculation for sample C11C3 for Chloromethane:

Ax = 4492Is = 125 RRF= 0.802 DF = 1 Ais = 130846 Vo. = 25

Concentration in ug/L = (4492)(125)(1)(130846) (0.802) (25)

Reported Result = 0.21 ug/L

Relative Response Factor = Dichlorodifluoromethane: RUN VV032323 for 0.5 ppb

RRF = Area of compound
Area of Internal StandardXConc. of Internal Standard
Conc. of Compound

 $RRF = \frac{7179}{126187} X \frac{5.0}{0.5}$

RRF= 0.569

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Low Volatiles:

The analysis performed on instrument MSVOA_D were done using GC column RTX-VMS which is 20 meters, 0.18 mm id, 1.0 um df, Restek Cat. #49914. The Trap was supplied by SUPELCO, K (VOACARB 3000), TEKMAR LSC-2000 Concentrator. The analysis of VOC-SFAM was based on method SFAM01.1_LOW.

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria. The Internal Standards Areas met the acceptable requirements. Instrument Performance Check met requirements. The Retention Times were met for all samples. The Tuning criteria met requirements.

The %RSD met requirement for initial Calibration except for Chloromethane (23.2%) for the initial calibration dated 03/31/2023 with D instrument, As per method, the %RSD up to two Compounds are allowed to fail to meet the minimum criteria as long as the compound meets the maximum of 40% RSD. No further corrective action was taken.

The Continuing Calibration (VSTD025119) file ID VD075563.D met the requirements except for Bromoform (-26.6 %). As per method, up to two target analyte in opening and closing CCV are allowed to exceed the %D values. Therefore no further corrective action was taken.

The Blank analysis indicated presence of Methylene chloride [4.1ug/Kg] FileID: VD075558.D (VBLK115) {VD0331SBL01} due to possible lab contamination. As per method, less than 2 times the respective CRQL is allowed to fail for Methylene chloride. Therefore no further corrective action was taken.

The Blank analysis indicated presence of Methylene chloride [3.0ug/Kg] FileID: VD075564.D (VBLK116) {VD0403SBL01} due to possible lab contamination. As per method, less than 2 times the respective CRQL is allowed to fail for Methylene chloride. Therefore no further corrective action was taken.

The storage blank analysis indicated presence of Chloroform [0.080ug/Kg] and Methylene chloride [5.0ug/Kg] FileID: VD075565.D {VHBLK002} due to lab contamination. As per method, less than the respective CRQL is allowed to fail for Chloroform and less than 2 times the respective CRQL is allowed to fail for Methylene chloride. Therefore no further corrective action was taken.

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

Calculation:

Low/Med Level Soil/Sediment Calculation

Concentration in ug/Kg dry Weight basis) = (Ax)(Is)(Df)(Ais)(RRF)(Ws)(D)

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Where,

Ax = Area for the compound to be measured Ais = Area for the specific internal standard Is = Amount of internal standard added in Nano grams (ng) RRF = Relative response factor of the calibration standard. Df = Dilution factor Ws= Weight of sample

 $D = \frac{100 - \% \text{ moisture}}{100}$

Example Calculation for sample: C11C2 for Tetrachloroethene:

Ax= 1398 Is= 250 RRF= 0.282 DF=1 Ais= 396427 Ws= 5.69 D= 0.862

Concentration in ug/KG = (1398)(250)(1)(396427) (0.282) (5.69) (0.862)

= 0.64 ug//Kg

Reported Results = 0.64 ug/Kg

Relative Response Factor = Dichlorodifluoromethane: RUN VW010323 for 5.0 ppb

 RRF=
 Area of compound
 X
 Conc. of Internal Standard

 Area of Internal Standard
 Conc. of Compound
 Conc. of Compound

 $RRF = \frac{12057}{604497} X \frac{25}{2.5}$

RRF= 0.199

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.