# SDG NARRATIVE

**LAB NAME: CHEMTECH CONSULTING GROUP**
**CASE: 49716**
**SDG: BG206**
**CONTRACT: 68HERH20D0011**
**LAB CODE: CHM**
**CHEMTECH PROJECT: M4617**
**MODIFICATION REF. NUMBER: NA**

| Sample ID | EPA Sample ID | pH |
|---|---|---|
| M4617-01 | BG206 | 1.0 |
| M4617-02 | BG223 | 1.0 |
| M4617-03 | BG224 | 1.0 |
| M4617-04 | BG225 | 1.0 |
| M4617-04DL | BG225DL | 1.0 |
| M4617-05 | BG226 | 1.0 |
| M4617-05DL | BG226DL | 1.0 |
| M4617-06 | BG227 | 1.0 |
| M4617-06DL | BG227DL | 1.0 |
| M4617-08 | BFXR5 | 1.0 |
| M4617-09 | BG207 | 1.0 |
| M4617-09DL | BG207DL | 1.0 |
| M4617-10 | BG208 | 1.0 |
| M4617-10DL | BG208DL | 1.0 |
| M4617-11 | BG209 | 1.0 |
| M4617-12 | BG210 | 1.0 |
| M4617-13 | BG217 | 1.0 |
| M4617-13DL | BG217DL | 1.0 |
| M4617-14 | BG218 | 1.0 |
| M4617-14DL | BG218DL | 1.0 |
| M4617-15 | BG219 | 1.0 |
| M4617-16 | BG220 | 1.0 |
| M4617-17 | BG221 | 1.0 |
| M4617-18 | BG222 | 1.0 |

6 Water samples were delivered to the laboratory intact on 11/10/2021.
11 Water samples were delivered to the laboratory intact on 11/12/2021.

Test requested on the Chain of Custody was Trace-volatile 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 2.5 degree Celsius for the samples received on 11/10/2021, 2.4, 2.0 degree Celsius for the samples received on 11/12/2021.

**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.

## 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 Trap was supplied by OI Analytical, OI #10 Trap, OI Eclipse 4660 Concentrator.
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 except for
BG218DL [1,1-Dichloroethene-d2 - 60%].As per method, up to three surrogates are allowed to fail. No corrective action was taken.

The Retention Times met requirements.
The Internal Standards Areas met the acceptable requirements.
Instrument Performance Check met requirements.
The Tuning criteria met requirements.
The Initial Calibration met requirements.

The Continuing Calibration met requirements.
The closing Continuing Calibration (VSTD005361) file ID VV023591.D met the requirements except for Bromomethane (-56.7 %). As per method, up to two target analyte in CCV are allowed to exceed the %D values. Therefore no further corrective action was taken.

The Blank analysis indicated presence of Methylene chloride [0.39ug/L] FileID:VV023566.D (VBLK257) {VV1117WBL01} due to possible lab contamination.
The Blank analysis indicated presence of Methylene chloride [0.49ug/L] FileID:VV023594.D (VBLK258) {VV1118WBL01} due to possible lab contamination. As per method, less than the respective CRQL is allowed to fail for Methylene chloride. Therefore no further corrective action was taken.

The storage blank did not indicate the presence of lab contamination.

Samples BG225, BG226, BG227, BG207, BG208, BG217 and BG218 were diluted due to high concentrations.

The samples BG225, BG226 and BG227 were analyzed back to back in a continuous analytical sequence and samples had common hit of compound with concentration above calibration levels for Trichloroethene. Samples were reanalyzed at a diluted. As per method, no instrument blank was required and not analyzed.

The sample BG208 was analyzed following the analysis of BG207. Both samples had common hit of compound with concentration above calibration levels for Trichlorofluoromethane, It was reanalyzed at a diluted. As per method, no instrument blank was required and not analyzed.

The sample BG209 was analyzed following the analysis of BG208. Sample BG208 had hit of compound Trichlorofluoromethane with concentration above calibration levels. Sample BG209 had concentration of this compound which is below CRQL. Therefore, as per method no instrument blank was required.

The sample BG218 was analyzed following the analysis of BG217. Both samples had common hit of compound with concentration above calibration levels for Trichlorofluoromethane, It was reanalyzed at a diluted. As per method, no instrument blank was required and not analyzed.

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

**Calculation:**

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

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 **BG206** for **Tetrachloroethene**:

Ax = 15575
Is = 125
RRF=0.322
DF = 1
Ais = 117383
Vo. = 25

$$\text{Concentration in ug/L} = \frac{(15575)\,(125)\,(1)}{(117383)\,(0.322)\,(25)}$$

Reported Result = 2.1ug/L

Relative Response Factor = **Dichlorodifluoromethane**: RUN **VV110421** for **0.5** ppb

$$RRF = \frac{\text{Area of compound}}{\text{Area of Internal Standard}} \times \frac{\text{Conc. of Internal Standard}}{\text{Conc. of Compound}}$$

$$RRF = \frac{6336}{135179} \times \frac{5.0}{0.5}$$

RRF=0.469

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.