# CERTIFICATE OF ANALYSIS

| | | | |
|---|---|---|---|
| **Work Order** | : **ES2343680** | Page | : 1 of 11 |
| Client | : **GOLDER ASSOCIATES** | Laboratory | : Environmental Division Sydney |
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| Project | : 117623088 (PS134467) | Date Samples Received | : 15-Dec-2023 14:30 |
| Order number | : 117623088 | Date Analysis Commenced | : 16-Dec-2023 |
| C-O-C number | : ---- | Issue Date | : 22-Dec-2023 11:04 |
| Sampler | : GRACE BENDALL-PEASE | | |
| Site | : WETHERILL PARK | | |
| Quote number | : EN/000 | | |
| No. of samples received | : 7 | | |
| No. of samples analysed | : 6 | | |

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.**

## *Signatories*

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

| *Signatories* | *Position* | *Accreditation Category* |
|---|---|---|
| Ankit Joshi | Senior Chemist - Inorganics | Sydney Inorganics, Smithfield, NSW |
| Edwandy Fadjar | Organic Coordinator | Sydney Organics, Smithfield, NSW |
| Ivan Taylor | Analyst | Sydney Inorganics, Smithfield, NSW |
| Wisam Marassa | Inorganics Coordinator | Sydney Inorganics, Smithfield, NSW |

## General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP074: Where reported, Total Trihalomethanes is the sum of the reported concentrations of all Trihalomethanes at or above the LOR.
- EP074: Where reported, Total Trimethylbenzenes is the sum of the reported concentrations of 1.2.3-Trimethylbenzene, 1.2.4-Trimethylbenzene and 1.3.5-Trimethylbenzene at or above the LOR.
- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO2 and Fluoride to the Anions.
- EP074: Result for ES2343680-03 has been confirmed by re-analysis.
- EN055: Ionic Balance out of acceptable limits for sample ES2343680-#004 due to analytes not quantified in this report.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

## Analytical Results

| Sub-Matrix: GROUNDWATER (Matrix: WATER) | | | Sample ID | GW1 | GW3 | GW4 | QC100 | ---- |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 15-Dec-2023 00:00 | 15-Dec-2023 00:00 | 15-Dec-2023 00:00 | 15-Dec-2023 00:00 | ---- |
| Compound | CAS Number | LOR | Unit | ES2343680-001 | ES2343680-002 | ES2343680-003 | ES2343680-006 | -------- |
| | | | | Result | Result | Result | Result | ---- |
| **EA025: Total Suspended Solids dried at 104 ± 2°C** | | | | | | | | |
| Suspended Solids (SS) | ---- | 5 | mg/L | ---- | ---- | ---- | 37 | ---- |
| **ED037P: Alkalinity by PC Titrator** | | | | | | | | |
| Hydroxide Alkalinity as CaCO3 | DMO-210-001 | 1 | mg/L | <1 | <1 | <1 | <1 | ---- |
| Carbonate Alkalinity as CaCO3 | 3812-32-6 | 1 | mg/L | <1 | <1 | <1 | <1 | ---- |
| Bicarbonate Alkalinity as CaCO3 | 71-52-3 | 1 | mg/L | 508 | 653 | 768 | 42 | ---- |
| Total Alkalinity as CaCO3 | ---- | 1 | mg/L | 508 | 653 | 768 | 42 | ---- |
| **ED041G: Sulfate (Turbidimetric) as SO4 2- by DA** | | | | | | | | |
| Sulfate as SO4 - Turbidimetric | 14808-79-8 | 1 | mg/L | 47 | 184 | 404 | 15 | ---- |
| **ED045G: Chloride by Discrete Analyser** | | | | | | | | |
| Chloride | 16887-00-6 | 1 | mg/L | 164 | 801 | 1960 | 22 | ---- |
| **ED093F: Dissolved Major Cations** | | | | | | | | |
| Calcium | 7440-70-2 | 1 | mg/L | 108 | 21 | 13 | 10 | ---- |
| Magnesium | 7439-95-4 | 1 | mg/L | 39 | 55 | 220 | 3 | ---- |
| Sodium | 7440-23-5 | 1 | mg/L | 116 | 714 | 1770 | 18 | ---- |
| Potassium | 7440-09-7 | 1 | mg/L | 14 | 3 | 16 | 2 | ---- |
| **EG020F: Dissolved Metals by ICP-MS** | | | | | | | | |
| Manganese | 7439-96-5 | 0.001 | mg/L | 0.409 | 0.165 | 2.44 | 0.105 | ---- |
| Iron | 7439-89-6 | 0.05 | mg/L | 0.10 | <0.05 | <0.05 | 1.18 | ---- |
| **EG020T: Total Metals by ICP-MS** | | | | | | | | |
| Manganese | 7439-96-5 | 0.001 | mg/L | 0.666 | 0.600 | 3.78 | 0.111 | ---- |
| Iron | 7439-89-6 | 0.05 | mg/L | 9.15 | 81.0 | 1.15 | 2.03 | ---- |
| **EK040P: Fluoride by PC Titrator** | | | | | | | | |
| Fluoride | 16984-48-8 | 0.1 | mg/L | 0.4 | 0.6 | 0.6 | 0.2 | ---- |
| **EK055G: Ammonia as N by Discrete Analyser** | | | | | | | | |
| Ammonia as N | 7664-41-7 | 0.01 | mg/L | 1.36 | 0.16 | 0.18 | <0.01 | ---- |
| **EK057G: Nitrite as N by Discrete Analyser** | | | | | | | | |
| Nitrite as N | 14797-65-0 | 0.01 | mg/L | 0.01 | <0.01 | 0.03 | <0.01 | ---- |
| **EK058G: Nitrate as N by Discrete Analyser** | | | | | | | | |

## Analytical Results

| Sub-Matrix: GROUNDWATER (Matrix: WATER) | | | Sample ID | GW1 | GW3 | GW4 | QC100 | ---- |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 15-Dec-2023 00:00 | 15-Dec-2023 00:00 | 15-Dec-2023 00:00 | 15-Dec-2023 00:00 | ---- |
| Compound | CAS Number | LOR | Unit | ES2343680-001 | ES2343680-002 | ES2343680-003 | ES2343680-006 | -------- |
| | | | | Result | Result | Result | Result | ---- |
| **EK058G: Nitrate as N by Discrete Analyser - Continued** | | | | | | | | |
| Nitrate as N | 14797-55-8 | 0.01 | mg/L | **0.06** | <0.01 | **0.45** | <0.01 | ---- |
| **EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser** | | | | | | | | |
| Nitrite + Nitrate as N | ---- | 0.01 | mg/L | **0.07** | <0.01 | **0.48** | <0.01 | ---- |
| **EN055: Ionic Balance** | | | | | | | | |
| ø Total Anions | ---- | 0.01 | meq/L | **15.8** | **39.5** | **79.0** | **1.77** | ---- |
| ø Total Cations | ---- | 0.01 | meq/L | **14.0** | **36.7** | **96.2** | **1.58** | ---- |
| ø Ionic Balance | ---- | 0.01 | % | **5.89** | **3.63** | **9.76** | ---- | ---- |
| **EP005: Total Organic Carbon (TOC)** | | | | | | | | |
| Total Organic Carbon | ---- | 1 | mg/L | **29** | **24** | **15** | **25** | ---- |
| **EP020: Oil and Grease (O&G)** | | | | | | | | |
| Oil & Grease | ---- | 5 | mg/L | ---- | ---- | ---- | **7** | ---- |
| **EP074D: Fumigants** | | | | | | | | |
| 2.2-Dichloropropane | 594-20-7 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| 1.2-Dichloropropane | 78-87-5 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| cis-1.3-Dichloropropylene | 10061-01-5 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| trans-1.3-Dichloropropylene | 10061-02-6 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| 1.2-Dibromoethane (EDB) | 106-93-4 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| **EP074E: Halogenated Aliphatic Compounds** | | | | | | | | |
| Dichlorodifluoromethane | 75-71-8 | 50 | µg/L | <50 | <50 | <50 | <50 | ---- |
| Chloromethane | 74-87-3 | 50 | µg/L | <50 | <50 | <50 | <50 | ---- |
| Vinyl chloride | 75-01-4 | 50 | µg/L | <50 | <50 | <50 | <50 | ---- |
| Bromomethane | 74-83-9 | 50 | µg/L | <50 | <50 | <50 | <50 | ---- |
| Chloroethane | 75-00-3 | 50 | µg/L | <50 | <50 | <50 | <50 | ---- |
| Trichlorofluoromethane | 75-69-4 | 50 | µg/L | <50 | <50 | <50 | <50 | ---- |
| 1.1-Dichloroethene | 75-35-4 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| Iodomethane | 74-88-4 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| trans-1.2-Dichloroethene | 156-60-5 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |

## Analytical Results

| Sub-Matrix: GROUNDWATER (Matrix: WATER) | | | Sample ID | GW1 | GW3 | GW4 | QC100 | ---- |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 15-Dec-2023 00:00 | 15-Dec-2023 00:00 | 15-Dec-2023 00:00 | 15-Dec-2023 00:00 | ---- |
| Compound | CAS Number | LOR | Unit | ES2343680-001 | ES2343680-002 | ES2343680-003 | ES2343680-006 | -------- |
| | | | | Result | Result | Result | Result | ---- |
| **EP074E: Halogenated Aliphatic Compounds - Continued** | | | | | | | | |
| 1.1-Dichloroethane | 75-34-3 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| cis-1.2-Dichloroethene | 156-59-2 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| 1.1.1-Trichloroethane | 71-55-6 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| 1.1-Dichloropropylene | 563-58-6 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| Carbon Tetrachloride | 56-23-5 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| 1.2-Dichloroethane | 107-06-2 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| Trichloroethene | 79-01-6 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| Dibromomethane | 74-95-3 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| 1.1.2-Trichloroethane | 79-00-5 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| 1.3-Dichloropropane | 142-28-9 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| Tetrachloroethene | 127-18-4 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| 1.1.1.2-Tetrachloroethane | 630-20-6 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| trans-1.4-Dichloro-2-butene | 110-57-6 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| cis-1.4-Dichloro-2-butene | 1476-11-5 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| 1.1.2.2-Tetrachloroethane | 79-34-5 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| 1.2.3-Trichloropropane | 96-18-4 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| Pentachloroethane | 76-01-7 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| 1.2-Dibromo-3-chloropropane | 96-12-8 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| Hexachlorobutadiene | 87-68-3 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| **EP074F: Halogenated Aromatic Compounds** | | | | | | | | |
| Chlorobenzene | 108-90-7 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| Bromobenzene | 108-86-1 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| 2-Chlorotoluene | 95-49-8 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| 4-Chlorotoluene | 106-43-4 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| 1.3-Dichlorobenzene | 541-73-1 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| 1.4-Dichlorobenzene | 106-46-7 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| 1.2-Dichlorobenzene | 95-50-1 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |

## Analytical Results

| Sub-Matrix: GROUNDWATER (Matrix: WATER) | | | Sample ID | GW1 | GW3 | GW4 | QC100 | ---- |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 15-Dec-2023 00:00 | 15-Dec-2023 00:00 | 15-Dec-2023 00:00 | 15-Dec-2023 00:00 | ---- |
| Compound | CAS Number | LOR | Unit | ES2343680-001 | ES2343680-002 | ES2343680-003 | ES2343680-006 | -------- |
| | | | | Result | Result | Result | Result | ---- |
| **EP074F: Halogenated Aromatic Compounds - Continued** | | | | | | | | |
| **1.2.4-Trichlorobenzene** | 120-82-1 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| **1.2.3-Trichlorobenzene** | 87-61-6 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| **EP074G: Trihalomethanes** | | | | | | | | |
| **Chloroform** | 67-66-3 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| **Bromodichloromethane** | 75-27-4 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| **Dibromochloromethane** | 124-48-1 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| **Bromoform** | 75-25-2 | 5 | µg/L | <5 | <5 | <5 | <5 | ---- |
| **EP074S: VOC Surrogates** | | | | | | | | |
| **1.2-Dichloroethane-D4** | 17060-07-0 | 5 | % | **100.0** | **103** | **97.3** | **78.6** | ---- |
| **Toluene-D8** | 2037-26-5 | 5 | % | **98.1** | **107** | **96.8** | **85.8** | ---- |
| **4-Bromofluorobenzene** | 460-00-4 | 5 | % | **97.8** | **102** | **88.8** | **81.4** | ---- |

## Analytical Results

| Sub-Matrix: SURFACE WATER (Matrix: WATER) | | | Sample ID | SW1 | SW2 | ---- | ---- | ---- |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 15-Dec-2023 00:00 | 15-Dec-2023 00:00 | ---- | ---- | ---- |
| Compound | CAS Number | LOR | Unit | ES2343680-004 | ES2343680-005 | -------- | -------- | -------- |
| | | | | Result | Result | ---- | ---- | ---- |
| **EA025: Total Suspended Solids dried at 104 ± 2°C** | | | | | | | | |
| Suspended Solids (SS) | ---- | 5 | mg/L | **6** | **36** | ---- | ---- | ---- |
| **ED037P: Alkalinity by PC Titrator** | | | | | | | | |
| Hydroxide Alkalinity as CaCO3 | DMO-210-001 | 1 | mg/L | <1 | <1 | ---- | ---- | ---- |
| Carbonate Alkalinity as CaCO3 | 3812-32-6 | 1 | mg/L | <1 | <1 | ---- | ---- | ---- |
| Bicarbonate Alkalinity as CaCO3 | 71-52-3 | 1 | mg/L | **135** | **44** | ---- | ---- | ---- |
| Total Alkalinity as CaCO3 | ---- | 1 | mg/L | **135** | **44** | ---- | ---- | ---- |
| **ED041G: Sulfate (Turbidimetric) as SO4 2- by DA** | | | | | | | | |
| Sulfate as SO4 - Turbidimetric | 14808-79-8 | 1 | mg/L | **31** | **11** | ---- | ---- | ---- |
| **ED045G: Chloride by Discrete Analyser** | | | | | | | | |
| Chloride | 16887-00-6 | 1 | mg/L | **109** | **22** | ---- | ---- | ---- |
| **ED093F: Dissolved Major Cations** | | | | | | | | |
| Calcium | 7440-70-2 | 1 | mg/L | **26** | **9** | ---- | ---- | ---- |
| Magnesium | 7439-95-4 | 1 | mg/L | **15** | **3** | ---- | ---- | ---- |
| Sodium | 7440-23-5 | 1 | mg/L | **66** | **17** | ---- | ---- | ---- |
| Potassium | 7440-09-7 | 1 | mg/L | **5** | **3** | ---- | ---- | ---- |
| **EG020F: Dissolved Metals by ICP-MS** | | | | | | | | |
| Manganese | 7439-96-5 | 0.001 | mg/L | **0.003** | **0.105** | ---- | ---- | ---- |
| Iron | 7439-89-6 | 0.05 | mg/L | **0.16** | **1.14** | ---- | ---- | ---- |
| **EG020T: Total Metals by ICP-MS** | | | | | | | | |
| Manganese | 7439-96-5 | 0.001 | mg/L | **0.103** | **0.115** | ---- | ---- | ---- |
| Iron | 7439-89-6 | 0.05 | mg/L | **0.49** | **2.01** | ---- | ---- | ---- |
| **EK040P: Fluoride by PC Titrator** | | | | | | | | |
| Fluoride | 16984-48-8 | 0.1 | mg/L | <0.1 | **0.6** | ---- | ---- | ---- |
| **EK055G: Ammonia as N by Discrete Analyser** | | | | | | | | |
| Ammonia as N | 7664-41-7 | 0.01 | mg/L | **2.13** | **0.02** | ---- | ---- | ---- |
| **EK057G: Nitrite as N by Discrete Analyser** | | | | | | | | |
| Nitrite as N | 14797-65-0 | 0.01 | mg/L | **0.06** | <0.01 | ---- | ---- | ---- |
| **EK058G: Nitrate as N by Discrete Analyser** | | | | | | | | |

## Analytical Results

| Sub-Matrix: SURFACE WATER (Matrix: WATER) | | | Sample ID | SW1 | SW2 | ---- | ---- | ---- |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 15-Dec-2023 00:00 | 15-Dec-2023 00:00 | ---- | ---- | ---- |
| Compound | CAS Number | LOR | Unit | ES2343680-004 | ES2343680-005 | -------- | -------- | -------- |
| | | | | Result | Result | ---- | ---- | ---- |
| **EK058G: Nitrate as N by Discrete Analyser - Continued** | | | | | | | | |
| Nitrate as N | 14797-55-8 | 0.01 | mg/L | **0.11** | <0.01 | ---- | ---- | ---- |
| **EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser** | | | | | | | | |
| Nitrite + Nitrate as N | ---- | 0.01 | mg/L | **0.17** | <0.01 | ---- | ---- | ---- |
| **EN055: Ionic Balance** | | | | | | | | |
| ø Total Anions | ---- | 0.01 | meq/L | **6.42** | **1.73** | ---- | ---- | ---- |
| ø Total Cations | ---- | 0.01 | meq/L | **5.68** | ---- | ---- | ---- | ---- |
| ø Total Cations | ---- | 0.01 | meq/L | ---- | **1.51** | ---- | ---- | ---- |
| ø Ionic Balance | ---- | 0.01 | % | **6.09** | ---- | ---- | ---- | ---- |
| **EP005: Total Organic Carbon (TOC)** | | | | | | | | |
| Total Organic Carbon | ---- | 1 | mg/L | **12** | **25** | ---- | ---- | ---- |
| **EP020: Oil and Grease (O&G)** | | | | | | | | |
| Oil & Grease | ---- | 5 | mg/L | <5 | **6** | ---- | ---- | ---- |
| **EP074D: Fumigants** | | | | | | | | |
| 2.2-Dichloropropane | 594-20-7 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| 1.2-Dichloropropane | 78-87-5 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| cis-1.3-Dichloropropylene | 10061-01-5 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| trans-1.3-Dichloropropylene | 10061-02-6 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| 1.2-Dibromoethane (EDB) | 106-93-4 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| **EP074E: Halogenated Aliphatic Compounds** | | | | | | | | |
| Dichlorodifluoromethane | 75-71-8 | 50 | µg/L | <50 | <50 | ---- | ---- | ---- |
| Chloromethane | 74-87-3 | 50 | µg/L | <50 | <50 | ---- | ---- | ---- |
| Vinyl chloride | 75-01-4 | 50 | µg/L | <50 | <50 | ---- | ---- | ---- |
| Bromomethane | 74-83-9 | 50 | µg/L | <50 | <50 | ---- | ---- | ---- |
| Chloroethane | 75-00-3 | 50 | µg/L | <50 | <50 | ---- | ---- | ---- |
| Trichlorofluoromethane | 75-69-4 | 50 | µg/L | <50 | <50 | ---- | ---- | ---- |
| 1.1-Dichloroethene | 75-35-4 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| Iodomethane | 74-88-4 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |

## Analytical Results

| Sub-Matrix: SURFACE WATER (Matrix: WATER) | | | Sample ID | SW1 | SW2 | ---- | ---- | ---- |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 15-Dec-2023 00:00 | 15-Dec-2023 00:00 | ---- | ---- | ---- |
| Compound | CAS Number | LOR | Unit | ES2343680-004 | ES2343680-005 | -------- | -------- | -------- |
| | | | | Result | Result | ---- | ---- | ---- |
| **EP074E: Halogenated Aliphatic Compounds - Continued** | | | | | | | | |
| trans-1.2-Dichloroethene | 156-60-5 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| 1.1-Dichloroethane | 75-34-3 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| cis-1.2-Dichloroethene | 156-59-2 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| 1.1.1-Trichloroethane | 71-55-6 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| 1.1-Dichloropropylene | 563-58-6 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| Carbon Tetrachloride | 56-23-5 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| 1.2-Dichloroethane | 107-06-2 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| Trichloroethene | 79-01-6 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| Dibromomethane | 74-95-3 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| 1.1.2-Trichloroethane | 79-00-5 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| 1.3-Dichloropropane | 142-28-9 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| Tetrachloroethene | 127-18-4 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| 1.1.1.2-Tetrachloroethane | 630-20-6 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| trans-1.4-Dichloro-2-butene | 110-57-6 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| cis-1.4-Dichloro-2-butene | 1476-11-5 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| 1.1.2.2-Tetrachloroethane | 79-34-5 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| 1.2.3-Trichloropropane | 96-18-4 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| Pentachloroethane | 76-01-7 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| 1.2-Dibromo-3-chloropropane | 96-12-8 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| Hexachlorobutadiene | 87-68-3 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| **EP074F: Halogenated Aromatic Compounds** | | | | | | | | |
| Chlorobenzene | 108-90-7 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| Bromobenzene | 108-86-1 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| 2-Chlorotoluene | 95-49-8 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| 4-Chlorotoluene | 106-43-4 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| 1.3-Dichlorobenzene | 541-73-1 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| 1.4-Dichlorobenzene | 106-46-7 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |

## Analytical Results

| Sub-Matrix: SURFACE WATER (Matrix: WATER) | | | Sample ID | SW1 | SW2 | ---- | ---- | ---- |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 15-Dec-2023 00:00 | 15-Dec-2023 00:00 | ---- | ---- | ---- |
| Compound | CAS Number | LOR | Unit | ES2343680-004 | ES2343680-005 | -------- | -------- | -------- |
| | | | | Result | Result | ---- | ---- | ---- |
| **EP074F: Halogenated Aromatic Compounds - Continued** | | | | | | | | |
| 1.2-Dichlorobenzene | 95-50-1 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| 1.2.4-Trichlorobenzene | 120-82-1 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| 1.2.3-Trichlorobenzene | 87-61-6 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| **EP074G: Trihalomethanes** | | | | | | | | |
| Chloroform | 67-66-3 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| Bromodichloromethane | 75-27-4 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| Dibromochloromethane | 124-48-1 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| Bromoform | 75-25-2 | 5 | µg/L | <5 | <5 | ---- | ---- | ---- |
| **EP074S: VOC Surrogates** | | | | | | | | |
| 1.2-Dichloroethane-D4 | 17060-07-0 | 5 | % | **79.6** | **107** | ---- | ---- | ---- |
| Toluene-D8 | 2037-26-5 | 5 | % | **99.7** | **114** | ---- | ---- | ---- |
| 4-Bromofluorobenzene | 460-00-4 | 5 | % | **97.8** | **111** | ---- | ---- | ---- |

## Surrogate Control Limits

| Sub-Matrix: GROUNDWATER | | Recovery Limits (%) | |
|---|---|---|---|
| Compound | CAS Number | Low | High |
| **EP074S: VOC Surrogates** | | | |
| 1.2-Dichloroethane-D4 | 17060-07-0 | 78 | 133 |
| Toluene-D8 | 2037-26-5 | 79 | 129 |
| 4-Bromofluorobenzene | 460-00-4 | 81 | 124 |

| Sub-Matrix: SURFACE WATER | | Recovery Limits (%) | |
|---|---|---|---|
| Compound | CAS Number | Low | High |
| **EP074S: VOC Surrogates** | | | |
| 1.2-Dichloroethane-D4 | 17060-07-0 | 78 | 133 |
| Toluene-D8 | 2037-26-5 | 79 | 129 |
| 4-Bromofluorobenzene | 460-00-4 | 81 | 124 |