

Isle of Man Government Department of Infrastructure

# Point of Ayre Landfill

2022 Annual Monitoring Report

355250-AR04

MARCH 2023

**RSK**



## RSK GENERAL NOTES

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**Client:** Isle of Man Government Department of Infrastructure

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### Revision control sheet

| Revision reference | Date          | Reason for revision |
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| Rev 00             | 28 March 2023 | First issue         |

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Where any data supplied by the client or from other sources have been used, it has been assumed that the information is correct. No responsibility can be accepted by RSK for inaccuracies in the data supplied by any other party. The conclusions and recommendations in this report are based on the assumption that all relevant information has been supplied by those bodies from whom it was requested.

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Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

This work has been undertaken in accordance with the quality management system of RSK Environment Ltd.

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# 1 INTRODUCTION

## 1.1 Commissioning

RSK Environment Limited (RSK) was commissioned by the Isle of Man Government (IOMG) Department of Infrastructure (DOI) to carry out a review of groundwater monitoring data collected between 2019 and 2022 from the Point of Ayre Landfill sites (POALS) located on the Isle of Man. The site location is shown on Figure 1.

The project was carried out to an agreed brief as set out in RSK’s proposal (Ref. 355250\_TL01(01), dated 6 September 2019). RSK was appointed under the IOMG DOI ‘Agreement for Mixed Wastes Landfill Consultancy Services’ (IOMG DOI purchase order reference: 791938, dated 9 January 2020) to enable a review of data collected over a two year period between 2019 and 2021. The contract was extended under a variation agreement dated 31<sup>st</sup> March 2002 to enable a review of data collected during 2022 (IOMG DOI purchase order reference: 964434’, dated 5 April 2022).

This report provides a review of annual groundwater and leachate data collected as part of two separate monitoring events at the POALS undertaken on 12 September 2022 and 5 to 6 December 2022. Consideration of the wider data set has also been undertaken.

This report is subject to the RSK service constraints given in Appendix A and limitations that may be described in various sections throughout this document.

## 1.2 Background

The POALS comprise five landfills located in the northern tip of the Island on the Point of Ayre headland owned and operated by IOMG DOI. It is understood that the POALS historically comprised sand and gravel mineral extraction sites which were then used for landfilling of wastes, with tipping beginning around 1975. Part of the gravel workings has been restored to a large lake (the Western Lake) to the west of the POALS. A summary of the five landfills is provided in Table 1 and the site layout is presented in Figure 2.

**Table 1. POALS – Landfill Details**

| Site                     | Waste Types Received  | No. of Cells | Approx. Area (ha) | Date Open | Date Closed                    | Restoration   | Underlying geology |
|--------------------------|---|--------------|-------------------|-----------|--------------------------------|---|--------------------|
| <b>Wrights Pit North</b> | Inert construction, demolition and civic amenity waste, ‘problematic waste’ – asbestos. | 2            | 3.5               | 2002      | Still open (western cell only) | Eastern cell – to Gallic Heath<br><br>Western cell - active | Sand and gravel    |

| Site                    | Waste Types Received  | No. of Cells | Approx. Area (ha) | Date Open | Date Closed | Restoration                | Underlying geology |
|-------------------------|---|--------------|-------------------|-----------|-------------|----------------------------|--------------------|
| <b>Wrights Pit East</b> | Domestic refuse, commercial and industrial waste, civic amenity waste | 4            | 15                | 1997      | 2004        | 2005 to Gallic Heath       | Sand and gravel    |
| <b>Ballacallow 1</b>    | Domestic refuse   | 3            | 7                 | 1976      | 1991        | Complete – to Gallic Heath | Sand and gravel    |
| <b>Ballacallow 2</b>    | Domestic refuse   | 3            | 5.25              | 1991      | 1993        | Complete – to Gallic Heath | Sand and gravel    |
| <b>Ballacallow 3</b>    | Domestic refuse   | 2            | 13.5              | 1995      | 1997        | Complete – to Gallic Heath | Sand and gravel    |

All the landfill sites operate on a ‘dilute and disperse’ basis with no engineered low permeability liner or capping system having been installed. In addition it is understood that no leachate management system or extraction system has been installed. The landfill sites were used over a 15 year period for the disposal of mixed biodegradable household, commercial and demolition waste. Wrights Pit North (WPN) is the only active landfill site in the area, accepting construction and demolition waste and has been partly restored. The other four landfills are closed and have been restored. Table 1 provides a summary of the various landfills forming the POALS.

The POALS are underlain by glacial sands and gravels of the Point of Ayre Formation and are typically 7 – 15 m thick. These are underlain by the Orrisdale Formation of glacial till deposits comprising silts, sands and fine to medium gravel overlying stiff brown silty clay. The clay layer is present at depths of approximately 20 m bgl and has been proven to be at least 5 m thick. The underlying bedrock comprises strata of the Mercia Mudstone Formation.

Wrights Pit East/North operate under waste disposal licence WDL/05/2010/v1. A condition of the licence is that environmental monitoring shall be completed for landfill gas and groundwater with the Operator required to submit an annual interpretive report to the Regulator presenting and assessing all field and laboratory analysis data for the period. In order to undertake this, a network of gas and groundwater monitoring wells have been established at the site. In addition, data are also collected from the part of the former gravel workings that was restored to a large lake (known as ‘the Western Lake’). There is also a requirement to monitor coastal erosion as per the planning permissions for the site.

A total of 12 No. leachate monitoring and sampling rounds have previously been completed (by CTAS) and reported (by RSK) as part of this contract, as summarised in Table 2 below. It is noted that there was a break in monitoring between the June 2021 and September 2022 round due to the initial monitoring and sampling contract ending (June 2021) and awaiting the commissioning of a new one contract (September 2022).

**Table 2. Summary of previous monitoring activities and corresponding reports**

| Monitoring round reference | Dates of monitoring   | Quarterly report reference   | Annual report reference   |
|----------------------------|---|--|---|
| March 2019                 | 11 - 12 <sup>th</sup> March 2019  | -  | RSK, July 2020. <i>2019 Annual Monitoring Report: Point of Ayre Landfill</i> . Ref 355250-AR01(00)      |
| July 2019                  | 26 <sup>th</sup> - 28 <sup>th</sup> June and 3 <sup>rd</sup> July 2019        |  |   |
| September 2019             | 10 <sup>th</sup> September 2019   |  |   |
| December 2019              | 29 <sup>th</sup> November and 4 <sup>th</sup> - 6 <sup>th</sup> December 2019 |  |   |
| March 2020                 | 28 <sup>th</sup> February - 2 <sup>nd</sup> March 2020                        | RSK, August 2020. <i>2020 Quarterly Monitoring Report No. 1: Point of Ayre Landfill</i> . Ref 355250-QR01(00)      | RSK, March 2021. <i>2020 Annual Monitoring Report: Point of Ayre Landfill</i> . Ref 355250-AR02(00)     |
| June 2020                  | 1 <sup>st</sup> June 2020   | RSK, August 2020. <i>2020 Quarterly Monitoring Report No. 2: Point of Ayre Landfill</i> . Ref 355250-QR02(00)      |   |
| September 2020             | 9 <sup>th</sup> - 11 <sup>th</sup> September 2020                             | RSK, November 2020. <i>2020 Quarterly Monitoring Report No. 3: Point of Ayre Landfill</i> . Ref 355250-QR03(00)    |   |
| December 2020              | 9 <sup>th</sup> - 11 <sup>th</sup> December 2020                              | RSK, March 2021. <i>2020 Quarterly Monitoring Report No. 4: Point of Ayre Landfill</i> . Reference 355250-QR04(00) |   |
| March 2021                 | 1 <sup>st</sup> – 15 <sup>th</sup> March 2021                                 | RSK, April 2021. <i>2020 Quarterly Monitoring Report No. 5: Point of Ayre Landfill</i> . Ref 355250-QR05(00)       | RSK, September 2022. <i>2021 Annual Monitoring Report: Point of Ayre Landfill</i> . Ref 355250-AR03(00) |
| June 2021                  | 31 <sup>st</sup> May - 4 <sup>th</sup> June 2021                              | RSK, December 2021. <i>2021 Quarterly Monitoring Report No. 6: Point of Ayre Landfill</i> . Ref 355250-QR06(00)    |   |
| September 2022             | 12 <sup>th</sup> September 2022   | RSK, December 2022. <i>2022 Quarterly Monitoring Report No. 7: Point of Ayre Landfill</i> . Ref 355250-QR07(00)    | This report   |
| December 2022              | 5 <sup>th</sup> – 6 <sup>th</sup> December 2022                               | RSK, March 2023. <i>2022 Quarterly Monitoring Report No. 8: Point of Ayre Landfill</i> . Ref 355250-QR08(00)       |   |

### 1.3 Objectives

The objective of the work is to identify leachate and groundwater composition, model leachate migration, and advise IOMG on the development of a long-term landfill monitoring and management regime.

## 1.4 Legislation & Guidance

The Island has an independent government operating out of Tynwald which can set its own laws and regulations. However, in terms of environmental and waste regulatory regime and legislation it tends to mirror the approach in the UK with key pieces of legislation including The Control of Pollution (Special Waste) Regulations 1980, The Environmental Protection Act 1990 and The Waste Pollution Act (1993). Following discussions with Stephanie Gray of the IOMG DOI, it has been agreed that Scottish legislation and guidance will be considered when assessing the site.

The IOMG has prepared a draft Environmental Protection Strategy to address key environmental issues and is based on the principles of sustainable development. Land contamination and water pollution have been identified as issues where the Department is able to take direct action by using or developing statutory powers to control inputs to the environment.

A Waste Strategy for the Island was prepared in 2018 and is intended to be flexible, responsive and iterative. The strategy mirrors the approach adopted by UK jurisdictions, specifically that of Scotland. However, unlike the approaches adopted by the UK, which prioritise waste reduction reuse and recycling, the priority for the IOM needs, in the first instance, to be waste disposal as failure to ensure disposal capacity could be severely damaging to the Island's economy and environment. Landfill sites operate under a Waste Disposal Licence which include a schedule of conditions for the site to reduce impact to the environment.

## 1.5 Scope of work

The following scope of work has been completed under RSK's contract with IOMG:

- a) provide ad hoc advice to IOMG and their contractor on all sampling and analytical related issues for each round of sampling. Liaise with contract laboratories as necessary to ensure data quality and resolve any issues arising.
- b) establish standard reporting template using MS Excel.
- c) implement controls for key contaminants of concern.
- d) provide ammoniacal nitrogen contour plots to map development of leachate plumes after each round of monitoring.
- e) review and interpret data from data already obtained and advise on modifications to analytical schedule for subsequent rounds based on data review of the previous round.
- f) provide an interpretive report after each quarterly monitoring round and an annual summary report at the year end.
- g) provide method for screening anomalies and errors and their subsequent management.

## 1.6 Limitations

The comments given in this report and the opinions expressed are based entirely upon reports and data provided by third parties. However, there may be conditions pertaining to the site that have not been disclosed by previous investigations and monitoring and therefore could not be taken into account.





Assessment of landfill gas and coastal erosion effects required under the active WDL and planning permission for the site are outside the scope of this assessment and are not considered further.

This report is specific to the assessment of leachate/ groundwater only and has been produced on the basis of data collected by third parties on behalf of the IOMG DOI and subsequently provided to RSK for review. The assessments reported herein were undertaken on the assumption that data were collected by competent individuals in accordance with the relevant industry standards and recognised best practice. RSK cannot be held responsible for any potential liabilities that arise from our assessment as a result of inaccuracies in data collected by third parties that were not commissioned by RSK.

The site operates on the principles of dilute and disperse. The majority of water samples have been collected from monitoring wells installed within the superficial deposits beneath the waste mass, with boreholes installed in the waste mass often being recorded as dry or having insufficient water to enable sample retrieval. There is no engineered or geological barrier between the base of the waste mass and the underlying aquifer. It is therefore considered that leachate and groundwater are in hydraulic continuity and as such the water quality observed is considered to provide a reflection of leachate quality. Therefore, within this report any references made to leachate or groundwater quality should be considered interchangeable.

No borehole records are available for RMC boreholes BH89/10, BH89/11, BH90/17 and BH96/4. It is noted these are located up gradient of the POALs. It has been assumed that these boreholes have been installed within the sands and gravels of the Point of Ayre Formation.

While the boreholes have been surveyed into position by CC Geotechnical Ltd (CCG) and IOMG it is noted that the survey data includes some variations. It has been agreed with IOMG that the CCG survey should take preference as the elevation data provided is considered to represent ground level whereas the IOMG elevation data is from the top of the headworks. It is noted that CTAS measure groundwater level with reference to ground level. However, in some instances it is noted that the CCG data is of a lower elevations than the IOMG data which provides some uncertainty as to the accuracy of the data if it was surveyed to ground level.

## 2 GROUNDWATER MONITORING

### 2.1 Monitoring infrastructure

A number of new in-waste and peripheral groundwater and leachate monitoring boreholes have recently been installed at the site, with the headworks of historical monitoring wells refurbished by CC Geotechnical Limited (CCG, March 2019). The collection of samples from the boreholes has been awarded to a third party, Construction Testing & Advisory Services Ltd. (CTAS), under a separate contract.

There are 33 groundwater sampling points in total comprising 16 recently installed boreholes (BH101A, BH101B, BH102A, BH102B, BH103A, BH103B, BH104A, BH104B, BH105A, BH105B, BH106A, BH106B, BH107, BH108, BH109 and BH110) and 17 pre-existing boreholes (BH89/10, BH89/11, BH90/17, BH96/4, X/01, P2A, P2B, P3A, P3B, P4A, P4B, P6A, P6B, P6C, P7B, P8A and P9A) ranging in depth from 4.3 m below ground level (bgl) to 25 m bgl with an average depth of 11.5 m bgl. In addition, a surface water sample is collected from the Western Lake (LAKE). The monitoring points are included on Figure 3 and Table 3 presents details of the monitoring well network.

**Table 3. Monitoring infrastructure**

| Monitoring point reference | Easting   | Northing  | Ground Level (m AOD) | Location   | Top of Screen (m bgl) | Base of Screen (m bgl) | Unit Monitored  |
|----------------------------|-----------|-----------|----------------------|--|-----------------------|------------------------|-----------------|
| BH101A                     | 246223.01 | 504513.91 | 6.47                 | Centrally within Wrights Pit North               | 7                     | 12                     | Sand and gravel |
| BH101B                     | 246229.73 | 504507.01 | 6.66                 |  | 1                     | 6                      | Landfill waste  |
| BH102A                     | 246286.6  | 504259.06 | 6.93                 | Eastern section of Ballacallow 3                 | 7                     | 12                     | Sand and gravel |
| BH102B                     | 246287.07 | 504257.32 | 7.003                |  | 1                     | 5.1                    | Landfill waste  |
| BH103A                     | 246348.07 | 504061.89 | 9.433                | Eastern section of Ballacallow 2                 | 9                     | 12.9                   | Sand and gravel |
| BH103B                     | 246352.01 | 504045.21 | 9.369                |  | 2                     | 7.8                    | Landfill waste  |
| BH104A                     | 246364.38 | 503893.08 | 8.097                | Eastern section of Ballacallow 1                 | 6                     | 10.7                   | Sand and gravel |
| BH104B                     | 246369.14 | 503910.14 | 7.975                |  | 1                     | 4.3                    | Landfill waste  |
| BH105A                     | 246665.69 | 504528.12 | 8.981                | Northeast section of Wrights Pit East            | 6                     | 10.5                   | Sand and gravel |
| BH105B                     | 246667.75 | 504515.94 | 8.973                |  | 1.5                   | 4.6                    | Landfill waste  |
| BH106A                     | 246712.85 | 504143.04 | 9.577                | Southeast section of Wrights Pit East            | 6.5                   | 11.5                   | Sand and gravel |
| BH106B                     | 246712.47 | 504127.86 | 9.613                |  | 1                     | 6                      | Landfill waste  |
| BH107                      | 246548.2  | 504036.01 | 6.572 <sup>s</sup>   | Adjacent to southwest corner of Wrights Pit East | 2                     | 7.5                    | Sand and gravel |

| Monitoring point reference | Easting    | Northing   | Ground Level (m AOD) | Location  | Top of Screen (m bgl) | Base of Screen (m bgl) | Unit Monitored  |
|----------------------------|------------|------------|----------------------|---|-----------------------|------------------------|---|
| BH108                      | 246489.42  | 504292.99  | 6.793                | Adjacent to the central section of the western boundary of Wrights Pit East | 1                     | 6                      | Sand and gravel   |
| BH109                      | 246138.4   | 504402.7   | 7.63                 | Between Wrights Pit North (to the north) and Ballacallow 3 (to the south)   | 1                     | 6                      | Sand and gravel   |
| BH110                      | 246085.7   | 504532.62  | 5.573                | Western perimeter of Wrights Pit North                                      | 1                     | 6                      | Sand and gravel   |
| BH89/10*                   | 245736.42  | 504243.28  | 3.020#               | Adjacent to Western Lake. West of Ballacallow 3                             | -                     | -                      | Assumed sand and gravel as located outwith landfilling area |
| BH89/11*                   | 245769.28  | 504152.65  | 3.644#               | Adjacent to Western Lake. West of Ballacallow 2                             | -                     | -                      |   |
| BH90/17*                   | 246130.6   | 503741.1   | 3.877                | Adjacent to Western Lake. West of Ballacallow 2                             | -                     | -                      |   |
| BH96/4*                    | 246061.49  | 503849.06  | 3.277#               | Adjacent to Western Lake. West of Ballacallow 1                             | -                     | -                      |   |
| P2A                        | 246649.344 | 504026.757 | 8.383                | Immediately south of Wrights Pit East                                       | 13                    | 24                     | Sand and gravel   |
| P2B                        | 246652.049 | 504026.537 | 8.182                |   | 3                     | 9                      | Sand and gravel   |
| P3A                        | 246482.510 | 504113.710 | 6.952                | Between Ballacallow 2/3 and Wrights Pit East                                | 12                    | 21                     | Sand and gravel   |
| P3B                        | 246479.411 | 504113.793 | 6.738                |   | 6                     | 9                      | Sand and gravel   |
| P4A                        | 246776.700 | 504150.900 | 7.385                | Southeast of Wrights Pit East. Close to coast.                              | 15                    | 24                     | Sand and gravel   |
| P4B                        | 246775.100 | 504150.400 | 7.343                |   | 3                     | 9                      | Sand and gravel   |
| P6A                        | 246816.246 | 504478.446 | 7.671                | Northeast of Wrights Pit East. Close to coast.                              | 15                    | 18                     | Sand and gravel   |
| P6B                        | 246815.828 | 504418.215 | 7.820                |   | 9                     | 15                     | Sand and gravel   |
| P6C                        | 246814.536 | 504479.341 | 7.604                |   | 3                     | 9                      | Sand and gravel   |
| P7B                        | 246112.400 | 504641.300 | 7.274                | North of Wrights Pit North  | 6                     | 12                     | Sand and gravel   |

| Monitoring point reference  | Easting    | Northing   | Ground Level (m AOD) | Location  | Top of Screen (m bgl) | Base of Screen (m bgl) | Unit Monitored  |
|---|------------|------------|----------------------|---|-----------------------|------------------------|-----------------|
| P8A   | 246293.273 | 504629.175 | 7.060                | Northeast of Wrights Pit North                            | 15                    | 24                     | Sand and gravel |
| P9A   | 246641.719 | 504817.895 | 7.711                | North of Wrights Pit East                                 | 11                    | 20                     | Sand and gravel |
| LAKE  | 245883.821 | 504370.899 | -                    | Northern part of the Western Lake. West of Ballacallow 3. | -                     | -                      | Surface water   |
| <p>Notes:</p> <p>Survey data obtained from CCG report dated February 2019 for all boreholes except BH89/10, BH89/11 and BH96/4 which reference IOMG drawing WM/3481 S3.</p> <p>*No borehole logs available for BH89/10, BH89/11, BH90/17 and BH96/4. It has been assumed that they have been installed to monitor water quality within the superficial deposits as they are located outwith the area of landfilling.</p> <p># Elevation data on IOMG drawing WM/34581 S3 (May 2020) corrected for 'offset' between top of headworks and ground level.</p> <p>\$ Uncertainty in ground level elevation data obtained from CCG report as there is approximately 1.5 m difference in levels between the CCG survey and drawing WM/34581 S3 (May 2020) which cannot be explained.</p> |            |            |                      |   |                       |                        |                 |

## 2.2 Sampling programme

A total of 2 No. leachate monitoring and sampling rounds have been completed during 2022 by CTAS on behalf of the IOMG DOI as part of this contract on the following dates:

- 12<sup>th</sup> September (known as September 2022 round going forward)
- 5<sup>th</sup> – 6<sup>th</sup> December 2022 (known as December 2022 round going forward).

Leachate samples were collected by CTAS from each monitoring well using a peristaltic pump. We understand that the method for sample collection during this round allowed for dipping the wells for groundwater level and base of well then purging and obtaining field parameters every 2 litres (l) of water until parameters are observed to stabilise. As a minimum it is understood that a total of 6 litres is purged from each location prior to sampling with an additional 2 – 4 litres purged in the event that field parameters have not stabilised within that initial volume. On-site field measurements were obtained within a 2 litre jug, which is open to the atmosphere during the September 2022 round. During the December 2022 round the field measurements were obtained in the same way albeit at three time intervals. On-site field measurements include pH, electrical conductivity, dissolved oxygen, temperature and redox potential during both rounds with total dissolved solids also recorded during the September 2022 round.

Samples were then collected by CTAS into their requisite sample containers, placed within chilled cool boxes and transported to the analytical laboratory for chemical analysis under chain of custody procedures.

It is noted that during these rounds only 32 monitoring locations have been monitored with no data having been collected from boreholes X/01. It is unknown why this borehole hasn't been included in the monitoring programme but it is assumed that it may have become blocked/dysfunctional or lost.

Samples reportedly could not be collected from the following boreholes due to them being recorded as dry or having insufficient water:

- September 2022: BH96/4, BH90/17, BH101B, BH102B, BH103B, BH104B, BH105B, BH106B, BH108, BH109, P2B and P3B
- December 2022: BH101B, BH102B, BH103B, BH104B, BH105B, BH106B, BH109, and P2B.

On-site field records provided to RSK are presented in Appendix B.

## 2.3 Chemical testing

Chemical analysis was completed by ALS Life Sciences, an UKAS accredited laboratory under a subcontract with Concept Engineering Consultants Ltd. Table 4 presents the contaminant testing suite currently being undertaken at the site.

**Table 4. Chemical testing suite**

| Determinand   | Quarterly testing suite                                    | Annual testing suite # |
|---|--|------------------------|
| Groundwater level   | All boreholes and LAKE                                     | All boreholes and LAKE |
| Metals reduced suite - As, Ni, Zn, Mn, Fe   | All boreholes and LAKE                                     | -                      |
| Inorganics reduced suite - NH <sub>4</sub> _N, chloride, DOC  | All boreholes and LAKE                                     | -                      |
| Metals full suite – As, Cd, Cr, Cu, Pb, Mn, Ni, Zn, Na, Mg, K, Ca, Fe, Hg   | -  | All boreholes and LAKE |
| Inorganics full suite – suspended solids, alkalinity, BOD, DOC, NH <sub>4</sub> _N, sulphide, fluoride, COD, phosphorous, hardness, nitrite, phosphate, sulphate, chloride, nitrate, nitrogen   | -  | All boreholes and LAKE |
| TPH CWG   | BH103A, BH104A, BH105A*, BH106A, BH89/10*, P8A*            | All boreholes and LAKE |
| PAHs  | BH101A, BH102A, BH103A, BH104A, BH105A, BH106A, P8A*       | All boreholes and LAKE |
| PCBs  | -  | All boreholes and LAKE |
| SVOCs   | -  | All boreholes and LAKE |
| VOCs  | BH102A, BH104A, BH105A, BH89/10*, BH90/17*, P3A, P8A*, P9A | All boreholes and LAKE |
| <p><b>Notes:</b><br/>           * Contaminant detected at significantly higher concentrations than expected during either March 2021 or June 2021 sampling round. Recommend resampling during next round. If not detected or concentrations decline to within a more expected range over the next two rounds then it is recommended these boreholes be moved to the annual testing suite for this parameter.<br/>           # In the event sample results indicate an increasing trend and/or contaminants are significantly higher than expected during the annual monitoring round it would be recommended that these locations/determinands be resampled as part of the next two quarterly rounds.</p> |  |                        |



## 3 RESULTS

### 3.1 Groundwater level and flow

Table 5 and 6 provides a summary of groundwater levels and elevation recorded at the site during the period September – December 2022. In general boreholes installed to monitor water quality within the waste mass were recorded to be dry and/or had limited water within them which prevented samples being collected. Groundwater was encountered at all borehole locations installed within the superficial deposits. Appendix C includes time history plots showing the variation in groundwater level across the monitoring period.

It should be noted that groundwater levels might fluctuate for a number of reasons including seasonal variations. Further monitoring rounds are proposed in order to establish the full range of conditions and any trends in groundwater levels.

**Table 5. Groundwater levels (m bgl)**

| Monitoring point reference | Location        | September 2022 | December 2022 |
|----------------------------|-----------------|----------------|---------------|
| BH101B                     | Waste           | DRY            | DRY           |
| BH102B                     | Waste           | DRY            | DRY           |
| BH103B                     | Waste           | 7.20           | 7.26          |
| BH104B                     | Waste           | DRY            | 4.17          |
| BH105B                     | Waste           | 4.30           | DRY           |
| BH106B                     | Waste           | DRY            | 5.44          |
| BH101A                     | Sand and gravel | 5.12           | 4.51          |
| BH102A                     | Sand and gravel | 5.49           | 4.91          |
| BH103A                     | Sand and gravel | 7.92           | 7.60          |
| BH104A                     | Sand and gravel | 6.62           | 6.22          |
| BH105A                     | Sand and gravel | 7.37           | 6.60          |
| BH106A                     | Sand and gravel | 7.40           | 7.05          |
| BH107                      | Sand and gravel | 6.17           | 6.02          |
| BH108                      | Sand and gravel | 5.34           | 4.62          |
| BH109                      | Sand and gravel | DRY            | 5.60          |
| BH110                      | Sand and gravel | 4.27           | 3.75          |
| BH89/10                    | Sand and gravel | 1.92           | 1.10          |
| BH89/11                    | Sand and gravel | 2.00           | 1.59          |
| BH90/17                    | Sand and gravel | 2.22           | 1.92          |
| BH96/4                     | Sand and gravel | DRY            | 1.07          |
| P2A                        | Sand and gravel | 6.57           | 6.58          |
| P2B                        | Sand and gravel | DRY            | DRY           |
| P3A                        | Sand and gravel | 5.31           | 4.97          |
| P3B                        | Sand and gravel | 5.45           | 5.10          |
| P4A                        | Sand and gravel | 5.67           | 5.95          |
| P4B                        | Sand and gravel | 5.87           | 5.90          |
| P6A                        | Sand and gravel | 6.10           | 6.34          |

| Monitoring point reference | Location        | September 2022 | December 2022 |
|----------------------------|-----------------|----------------|---------------|
| P6B                        | Sand and gravel | 6.20           | 6.34          |
| P6C                        | Sand and gravel | 6.38           | 6.40          |
| P7B                        | Sand and gravel | 6.14           | 5.71          |
| P8A                        | Sand and gravel | 5.95           | 5.39          |
| P9A                        | Sand and gravel | 6.78           | 6.79          |

**Table 6. Groundwater elevation (m AOD)**

| Monitoring point reference | Location        | September 2022 | December 2022 |
|----------------------------|-----------------|----------------|---------------|
| BH101B                     | Waste           | DRY            | DRY           |
| BH102B                     | Waste           | DRY            | DRY           |
| BH103B                     | Waste           | 2.17           | 2.11          |
| BH104B                     | Waste           | DRY            | 3.93          |
| BH105B                     | Waste           | 3.67           | DRY           |
| BH106B                     | Waste           | DRY            | 3.17          |
| BH101A                     | Sand and gravel | 1.35           | 1.96          |
| BH102A                     | Sand and gravel | 1.44           | 2.02          |
| BH103A                     | Sand and gravel | 1.51           | 1.83          |
| BH104A                     | Sand and gravel | 1.36           | 1.76          |
| BH105A                     | Sand and gravel | 0.61           | 1.38          |
| BH106A                     | Sand and gravel | 1.18           | 1.53          |
| BH107                      | Sand and gravel | 0.40           | 0.55          |
| BH108                      | Sand and gravel | 1.45           | 2.17          |
| BH109                      | Sand and gravel | DRY            | 2.03          |
| BH110                      | Sand and gravel | 1.30           | 1.82          |
| BH89/10                    | Sand and gravel | 1.10           | 1.92          |
| BH89/11                    | Sand and gravel | 1.64           | 2.05          |
| BH90/17                    | Sand and gravel | 1.66           | 1.96          |
| BH96/4                     | Sand and gravel | DRY            | 2.21          |
| P2A                        | Sand and gravel | 1.81           | 1.80          |
| P2B                        | Sand and gravel | DRY            | DRY           |
| P3A                        | Sand and gravel | 1.64           | 1.98          |
| P3B                        | Sand and gravel | 1.29           | 1.64          |
| P4A                        | Sand and gravel | 1.72           | 1.44          |
| P4B                        | Sand and gravel | 1.47           | 1.44          |
| P6A                        | Sand and gravel | 1.57           | 1.33          |
| P6B                        | Sand and gravel | 1.62           | 1.48          |
| P6C                        | Sand and gravel | 1.22           | 1.20          |
| P7B                        | Sand and gravel | 1.13           | 1.56          |
| P8A                        | Sand and gravel | 1.11           | 1.67          |
| P9A                        | Sand and gravel | 0.93           | 0.92          |

| Monitoring point reference  | Location | September 2022 | December 2022 |
|---|----------|----------------|---------------|
| Notes: # Uncertainty in ground level elevation data at BH107 (see Table 2). As such groundwater level data presented above is indicative only and has not been used in the construction of groundwater contour plots or statistics. |          |                |               |

The monitoring data have been used to construct a piezometric surface for each round of monitoring and this is presented in Figures 4a – 4b.

During the September 2022 monitoring round groundwater levels within the sand and gravel deposits, excluding BH107, were recorded between 0.40 m AOD and 1.81 m AOD, with an average level of 1.37 m AOD. Groundwater levels are typically higher in the south with flow generally towards the east to north. It is noted that during this round groundwater levels at P6A/B/C and P4A/B were at a higher elevation than those observed within Wrights Pit East with a component of flow going away from the coast. It is possible that this may be due to tidal influence on groundwater. Localised disruptions to groundwater flow have been identified at BH104A/B in Ballacallow 1 and BH105A/B in Wrights Pit East where groundwater is locally at a lower elevation than which may be due to seasonal variation.

During the December 2022 monitoring round groundwater levels within the superficial deposits were generally recorded between 0.55 m AOD and 2.21 m AOD, with an average level of 1.64 m AOD. Groundwater levels are typically higher in the south-west of the site with flow underlying Ballacallow 1 – 3 and Wrights Pit East generally towards the east to north-east in the direction of the coast. Groundwater flow underlying Wrights Pit North has a more northerly component of flow.

It is however, noted that due to there being a degree of uncertainty in relation to the ground elevation data recorded as part of the CCG survey that the groundwater contour plots should be considered indicative only.

### 3.2 Field parameters

During groundwater sampling field measurements of temperature, pH, DO, redox and conductivity were recorded in the field at each borehole location prior to sampling. The results of the field testing are included in Appendix B. These parameters can provide an indication of the aquifer geochemistry. However, as a flow through cell was not used the DO and redox results are not considered to be reflective of aquifer conditions and as such are not considered further. In addition, a degree of caution needs to be taken when considering the remainder of the field parameters as it is unclear from the sampling methodology employed by CTAS as to whether these are stabilised conditions reflecting the aquifer geochemistry. Table 7 summarises the water quality parameters recorded during the monitoring period September – December 2022.

**Table 7: Water quality parameters**

| Borehole ref. | Response zone | Water Quality Parameters (September – December 2022) |    |                      |            |
|---------------|---------------|--|----|----------------------|------------|
|               |               | Temperature (°C)                                     | PH | Conductivity (µS/cm) | TDS (ppm)* |
| BH101B        | Waste         | -  | -  | -                    | -          |

| Borehole ref. | Response zone   | Water Quality Parameters (September – December 2022) |                      |                         |            |
|---------------|-----------------|--|----------------------|-------------------------|------------|
|               |                 | Temperature (°C)                                     | PH                   | Conductivity (µS/cm)    | TDS (ppm)* |
| BH102B        | Waste           | -  | -                    | -                       | -          |
| BH103B        | Waste           | -  | -                    | -                       | -          |
| BH104B        | Waste           | -  | -                    | -                       | -          |
| BH105B        | Waste           | -  | -                    | -                       | -          |
| BH106B        | Waste           | -  | -                    | -                       | -          |
| BH101A        | Sand and gravel | 14.5-12.7<br>(13.6)                                  | 8.90-9.42<br>(9.16)  | 9658-684<br>(2570)      | 702        |
| BH102A        | Sand and gravel | 14.3-11.8<br>(13.0)                                  | 8.41-8.17<br>(8.29)  | 1221-1139<br>(1179)     | 1225       |
| BH103A        | Sand and gravel | 14.6-11.4<br>(12.9)                                  | 9.05-8.92<br>(8.98)  | 941-994<br>(967)        | 948        |
| BH104A        | Sand and gravel | 13.9-11.2<br>(12.5)                                  | 7.73-8.49<br>(8.10)  | 753-871<br>(810)        | 758        |
| BH105A        | Sand and gravel | 15.1-13.4<br>(14.25)                                 | 6.16 – 8.02<br>(7.1) | 1340 – 1497<br>(1418.5) | 1499       |
| BH106A        | Sand and gravel | 14.2-12.3<br>(13.2)                                  | 7.80-8.54<br>(8.16)  | 1098-1404<br>(1242)     | 1100       |
| BH107         | Sand and gravel | 14.0-12.1<br>(13.0)                                  | 9.07-9.75<br>(9.40)  | 635-225<br>(378)        | 635        |
| BH108**       | Sand and gravel | 12.1   | 9.67                 | 288                     | -          |
| BH109         | Sand and gravel | -  | -                    | -                       | -          |
| BH110         | Sand and gravel | 14.7-12.2<br>(13.4)                                  | 9.61-9.62<br>(9.62)  | 471-547<br>(508)        | 472        |
| BH89/10       | Sand and gravel | 14.6-11.3<br>(12.8)                                  | 9.46-10.15<br>(9.80) | 300-3570<br>(1035)      | 302        |
| BH89/11       | Sand and gravel | 11.4-15.6<br>(13.3)                                  | 8.60-9.80<br>(9.18)  | 386-432<br>(409)        | 386        |
| BH90/17**     | Sand and gravel | 10.7   | 10.17                | 209                     | -          |
| BH96/4**      | Sand and gravel | 9.9  | 10.50                | 624                     | -          |
| P2A           | Sand and gravel | 15.0-12.1<br>(13.5)                                  | 8.22-8.65<br>(8.43)  | 3545-4250<br>(3882)     | 3567       |
| P2B           | Sand and gravel | -  | -                    | -                       | -          |
| P3A           | Sand and gravel | 14.5-11.5<br>(12.9)                                  | 8.43-8.96<br>(8.69)  | 931-930<br>(931)        | 932        |
| P3B**         | Sand and gravel | 11.4   | 9.34                 | 634                     | -          |

| Borehole ref.  | Response zone   | Water Quality Parameters (September – December 2022) |                        |                      |            |
|--|-----------------|--|------------------------|----------------------|------------|
|  |                 | Temperature (°C)                                     | PH                     | Conductivity (µS/cm) | TDS (ppm)* |
| P4A  | Sand and gravel | 13.7-11.6<br>(12.6)                                  | 8.47-8.86<br>(8.66)    | 883-658<br>(762)     | 886        |
| P4B  | Sand and gravel | 14.0-12.0<br>(13.0)                                  | 8.38-8.98<br>(8.67)    | 1003-1016<br>(1009)  | 886        |
| P6A  | Sand and gravel | 14.0-11.9<br>(12.9)                                  | 7.82-8.73<br>(8.26)    | 6100-6030<br>(6065)  | 6100       |
| P6B  | Sand and gravel | 13.7-11.8<br>(12.7)                                  | 7.73-8.78<br>(8.23)    | 4101-3713<br>(3902)  | 4101       |
| P6C  | Sand and gravel | 14.1-12.3<br>(13.2)                                  | 8.00-8.79<br>(8.39)    | 2349-2419<br>(2384)  | 2351       |
| P7B  | Sand and gravel | 13.8-11.0<br>(12.3)                                  | 9.20-9.58<br>(9.39)    | 381-411<br>(396)     | 391        |
| P8A  | Sand and gravel | 14.2-13.1<br>(13.6)                                  | 8.40-8.72<br>(8.56)    | 461-559<br>(507)     | 463        |
| P9A  | Sand and gravel | 12.9-10.9<br>(11.9)                                  | 9.52-9.42<br>(9.47)    | 552-449<br>(498)     | 553        |
| LAKE   | Surface water   | 17.3-7.2<br>(11.7)                                   | 10.82-11.09<br>(10.95) | 225-292<br>(257)     | 255.2      |
| Notes:<br>Table reflects range of results observed with geometric mean in (brackets)<br>* TDS recorded during September 2022 round only<br>** Data obtained from December 2022 round |                 |  |                        |                      |            |

A review of the water quality parameters indicates that:

- temperature is typical of UK groundwaters;
- groundwater pH is generally slightly alkaline across the site and the lake, BH89/10, BH90/17 and BH96/4 record moderately alkaline conditions;
- electrical conductivity and TDS concentrations are generally greatest at locations P2A, P6A, P6B and P6C located near Wrights Pit East and relatively near the coast. Electrical conductivity was observed to be greatly elevated at BH101A located in Wrights Pit North during the September 2022 round only. Elevated values can be indicative of a high contaminant load reflective of a leachate plume. They may also be reflective of a high degree of salinity.

### 3.3 Visual/olfactory evidence of groundwater contamination

Odours were noted by CTAS at the following locations during the September 2022 round: BH102B, BH103B, BH104B, and BH89/10. The smell was not recorded on the data sheets provided, although CTAS have indicated the smell was similar to 'methane' within subsequent correspondence.

Methane odours were noted by CTAS at the following locations during the December 2022 round: BH103A, BH104A, BH105A, BH106A, BH89/10, P2A, P3B, and P8A.



### 3.4 Chemical testing

The results of the chemical testing completed at the site are presented in Appendix D.

It is noted that during the September 2022 round the laboratory analysed ammoniacal nitrogen expressed as N. However, during the previous round ammoniacal nitrogen has been expressed as NH<sub>4</sub>. To ensure consistency within the data set the ammoniacal nitrogen concentrations have been converted from N to NH<sub>4</sub> and these calculations are included in Appendix D.

### 3.5 Data validation QA/QC

#### 3.5.1 Sample methodology

While samples were collected using a low-flow method it is noted water quality parameters were measured from the pump discharge into a separate 250 ml open-top container, at three time intervals, prior to sampling into bottles. Water quality measurements obtained from a vessel open to the atmosphere reduces the reliability of certain parameters e.g. DO and redox.

The sample methodology undertaken during the September and December 2022 round is not fully in compliance with the USEPA low flow methodology specified within the contract documentation. We would recommend that CTAS be contacted to highlight the non-compliance and to ensure that the correct sample method is followed during subsequent sampling rounds.

#### 3.5.2 Chemical analysis

Samples were submitted under chain of custody procedures to an UKAS accredited laboratory. Two QA/QC duplicate samples were collected by CTAS during the December 2022 round only.

A qualitative review of the September 2022 MCERTS and chemical testing results indicates the following potential QA/QC issues were identified by the laboratory:

- due to the low sample volume that could be collected from BH108 and P4B, not all of the scheduled testing could be completed;
- sample holding times for the majority of SVOCs was exceeded for sample BH108;
- Sample holding times for BOD testing on all samples were exceeded; and
- Incorrect sample containers provided for sulphide analysis for all samples.

Following a review of the initial chemical testing results provided RSK requested that ALS complete the following data check:

- arsenic in BH106A was detected at significantly higher concentration than has typically been recorded at this location
- chloride in P6A was detected at significantly higher concentration than has typically been recorded at this location
- manganese in P6A was detected at significantly lower concentration than has typically been recorded at this location

- toluene in P8A was detected at significantly higher concentrations than has been previously recorded at any location during any sampling round.

ALS reported that they reviewed the data and completed relevant data checks and found no issues with any of the results provided.

A qualitative review of the December 2022 MCERTS indicated the following sample deviations:

- container with headspace provided for volatile analysis at BH103A and BH106A resulting in deviation for TPH C5-C12 results.
- incorrect container received for ammoniacal nitrogen (BH105A, QAQC1, BH106A, P4B), VOC (P9A) and BTEX+MTBE (BH103A and BH106A).

To provide an indication of the repeatability of results between duplicate samples collected during the December 2022 round, the relative percentage difference (RPD) has been calculated for each analyte. In general, the following approach was taken when reviewing the RPD calculations:

- RPD <30% - good match between samples
- RPD 30-60% - it is considered that these samples are a good match, allowing for natural variability
- RPD >60% - poor match between samples. Greater variation may be due to a number of factors including sampling variability and/or laboratory error. Where the RPD is noted to be greater than 60%, RSK have contacted the laboratory for further clarification.

A quantitative review of the QA/QC samples data has been completed, available in Appendix D, and indicates:

- a suitable number of QA/QC samples are considered to have been obtained during the monitoring round, comprising two field duplicate samples from BH105A (QAQC1) and P8A (QAQC2).
- calculation of the relative percentage difference (RPD) was undertaken between all analyte concentrations recorded within the primary samples from BH105A and P8A, and that recorded within the respective duplicate samples QAQC1 and QAQC2.
  - BH105A: a resultant RPD percentage of 185.8 % was calculated for TPH (C5 to C35). This may be considered a poor match between samples. Percentage RPDs calculated for individual TPH fractions were good matches between the primary and duplicate samples except for the higher end aromatic fractions.
  - BH105A: a resultant RPD percentage of 176 % was calculated for zinc. This may be considered a poor match between samples.
  - BH105A: variation was noted between the primary and duplicate samples for arsenic, with a RPD of 55.6 % calculated between the primary and duplicate samples. It is therefore considered a good match allowing for natural variability.
  - BH105A: all remaining analytes were considered a good match.
  - P8A: a resultant RPD percentage >60% was calculated for the following PAHs – acenaphthene (100%), anthracene (62.1%), chrysene (80.2%) and benzo(g,h,i)perylene (99.0%). These are considered a poor match between samples.

- P8A: variation was noted between the primary and duplicate samples for the PAH phenanthrene, with a RPD of 47.3 % calculated between the primary and duplicate samples. It is therefore considered a generally good match allowing for natural variability.
- P8A: a resultant RPD percentage of 118.7 % was calculated for zinc. This may be considered a poor match between samples.
- P8A: all remaining analytes were considered a good match.

Regarding the RPDs >60%, the laboratory was contacted and provided the following response:

### **Zinc**

*“Raw data was checked, SSC passed so instrument was good to run, Calibration passed (R2 value for each element >0.999) and Independent Calibration Verification check sample passed (within 10% recovery), Calibration drift check samples before and after batch passed (within 5% recovery).*

*All results had >5ppb Rhodium signal (an internal check to ensure sample has been uptaken correctly by autosampler).*

*Previous sample checked and no possibility of carry over. Blank and AQC data all pass. Sample loading records checked, all properly signed and checked. Final result checked against initial run, no obvious sample with the same results, this tends to rule out the possibility of a sample mix up. In both cases the QC duplicate was checked for all elements both reported and not reported.*

*For both samples - As, Mn, Ni, Fe all reportable, confirmed on both samples, other non reportable positive elements, eg Co, P, Sr, Na, Mg, K, Ca also confirmed.*

*This therefore appears to be an issue only with the zinc. No analytical reason found for the higher results in the samples.”*

### **TPH**

*“All raw results, QCs, Blanks, etc have been checked and no issues found. Could not repeat samples.”*

### **PAH**

*“Data of the original results was checked and no issues found. The 4 components identified in sample QAQC2 were within 3 times the LOD and as such would be a match for our repeats policy at such a low level. As a result, we are happy with the results reported in this case. No issues found with raw data/transcriptions, etc”.*

As the laboratory have not identified quality issues and are happy with results provided, the most conservative concentration (highest) will be used when calculating statistics, contaminant time-history plots and trends going forward – ie. Total TPH concentration from QAQC1 will be used instead of the BH105A value. This will provide a conservative assessment of the data set for samples collected from BH105A and P8A.

## 4 WATER QUALITY ASSESSMENT

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### 4.1 Assessment criteria

#### 4.1.1 Water quality standards

Following discussions with the IOMG DOI, it was agreed that Scottish guidelines would be considered when selecting water quality standards with which to develop generic assessment criteria (GAC) for assessing risks to the water environment from the site.

Using the Scottish Environment Protection Agency (SEPA) classification, the Point of Ayre Formation and more granular deposits of the Orrisdale Formation are considered to represent a groundwater body with resource potential<sup>1</sup> and as such would constitute a groundwater receptor, although it is unlikely to ever be exploited as a groundwater resource due to potential for saline intrusion and the industrial heritage of the Point of Ayre headland. The lower clay layer of the Orrisdale Formation is not considered to meet the criteria of a groundwater body with resource potential and is likely to act as a confining layer between the overlying granular deposits and the bedrock aquifer. Using the SEPA classification system all bedrock would be considered as a groundwater body with resource potential.

The primary water environment receptor at the site is considered to be the Irish Sea which is located approximately 305 m to the north of Wrights Pit North at its closest point and 65 m to the east of Wrights Pit East at its closest point.

To assess potential risks to the water environment, the water quality data has preferentially been screened against environmental quality standards (EQS) for coastal/transitional waters. Where EQS (coastal/transitional) criteria do not exist, resource protection values (RPVs) have been selected. In the instance that a hazardous substance has been detected which has no EQS or RPV, then the limit of detection (LOD) has been used though this is considered to be a conservative approach.

Unionised (free) ammonia has not been analysed with which to compare against the EQS (coastal/transitional). Ammoniacal nitrogen ( $\text{NH}_4$ ) concentrations can be converted to unionised (free) ammonia using an understanding of water temperature and pH, following the methodology developed by Thurston et al. (1979). However, this methodology was developed for freshwater, and as such the unionised ammonia concentrations calculated would be conservative (i.e. precautionary). To take the conservative nature of the calculations into account and avoid the potential for error, risks from ammoniacal nitrogen as  $\text{NH}_4$  have been assessed against the RPV.

A summary of the assessment criteria used to assess leachate quality is presented in Appendix E.

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<sup>1</sup> For groundwaters encountered underlying the site to be considered a potential receptor it must meet the aquifer characteristic outlined in SEPA position statement WAT-PS-10-01. To be classified as an aquifer, groundwater “must be capable of supplying 10m<sup>3</sup>/day or 50 people (on a continuous basis) and that such aquifers have future resource value”. As per Annex 2 of SEPA WAT-PS-10, the deposits must as a minimum be of significant areal extent and contain more than 2 m thickness of continuous saturated sand or gravel (or coarser material) found in any one excavation.

#### 4.1.2 WMP26A leachate completion criteria

In order to provide an indication of the continued leachate generation potential of the waste mass the water quality data has been compared against the leachate completion criteria contained within WMP26A. It is noted that WMP26A defines completion as *“that point at which a landfill has stabilised physically, chemically and biologically to such a degree that the undisturbed contents of the site are unlikely to cause pollution of the environment or harm to human health (the Completion Condition)”*.

A copy of the WMP26A leachate completion criteria is presented in Appendix E.

## 4.2 Results

### 4.2.1 Threshold exceedances

Screening sheets are presented in Appendix F. The assessment shows that a number of metals, inorganics, TPHs, PAHs, SVOCs and VOCs have been detected within leachate samples at concentrations exceeding their GAC.

It is noted that concentrations within the water samples collected from LAKE, BH108, 89/10, 89/11, 90/17, and 96/4 P9A are low and do not typically exceed the GAC, indicating minimal risk to the water environment at these locations. Of these locations, LAKE, BH89/10, and BH89/11 are all in the west of the site, outwith the landfilled area, and may be considered to be reflective of up-gradient water quality. It is however, noted that elevated levels of ammoniacal nitrogen have been detected within the sample collected from BH89/10 from May 2021 to December 2022, although the reasons elevated concentrations have been detected at this location are unclear.

A comparison of the water quality data against the leachate completion criteria provided in WMP26A indicates that the POALS are currently generating leachate that could continue to cause pollution of the environment, particularly in relation to ammoniacal nitrogen, DOC, manganese and iron which have repeatedly been detected at elevated concentrations across the site area.

The following determinands have been selected for further focused discussion by virtue of their distribution, magnitude over the GAC and differing physical/chemical properties:

- ammoniacal nitrogen
- chloride
- iron
- manganese
- arsenic
- total TPH
- total PAH
- total VOC
- total PCB.



Appendix G includes the statistical analysis of the data set for key determinands. Appendix H provides a visual summary of contaminants exceeding their threshold criteria during the 2022 monitoring period.

Table 8 provides a summary of those key contaminants which have exceeded their assessment criteria.

**Table 8: Contaminants where exceedances were detected (Sep and Dec 2022)**

| Contaminant   | Location where exceedances observed  | Comment  |
|---|--|--|
| Ammoniacal nitrogen   | BH102A, BH103A, BH104A, BH105A, BH106A, BH107, BH89/10, P2A, P3A, P3B, P4A, P4B, P6A, P6B, P6C, P8A, P9A                     | Site wide exceedances.   |
| Chloride  | P2A, P6A, P6B, P6C   | Exceedances located in vicinity of Wrights Pit East and towards coast.   |
| Iron  | BH102A, BH103A, BH104A, BH105A, BH106A, P2A, P3A, P4A, P4B, P6A, P6B, P6C, P8A, P9A  | Exceedances located in the vicinity of Ballacallow 1-3, Wrights Pit East and towards the coast.  |
| Manganese   | BH101A, BH102A, BH103A, BH104A, BH105A, BH106A, BH107, BH110, BH89/10, P2A, P3A, P3B, P4A, P4B, P6A, P6B, P6C, P7B, P8A, P9A | Site wide exceedances.   |
| Arsenic   | BH102A, BH103A, BH105A, BH106A, P3A, P4A, P4B, P6B, P8A  | Exceedances located in the vicinity of Ballacallow 2-3, Wrights Pit East and Wrights Pit North.  |
| Total TPH   | BH101A, BH103A, BH104A, BH105A, P3A, P8A, BH89/10  | Localised exceedances observed in boreholes installed to monitor Ballacallow 1-2 and the north-east corner of Wrights Pit North. In addition, exceedance in up-gradient borehole observed. |
| Total PAH   | BH101A, BH102A, BH103A, BH104A, BH105A, BH106A   | Localised exceedances observed in boreholes installed to monitor Ballacallow 1-3, Wrights Pit East and Wrights Pit North.  |
| Total VOC   | BH101A, BH102A, BH104A, BH105A, P8A, P9A   | Localised exceedances observed in boreholes installed to monitor Ballacallow 1 & 3, NE corner of Wrights Pit East, Wrights Pit North, and at down-gradient locations to the north.         |
| Total PCB   | No exceedances observed.   |  |
| Notes:<br>Table presents exceedances based on maximum values from the September and December 2022 rounds. |  |  |

#### 4.2.2 Trend analysis

Time history plots for key determinands are presented in Appendix I to show how conditions have varied over the monitoring period. The three-point moving average of the data set is presented alongside the measured data, as this is considered to provide a more accurate representation of data trends, by limiting the effect of spuriously high or low results. The time history plots also show the contaminant detection limit and assessment criteria to clearly illustrate the performance of the data set at each location.

Appendix J provides a summary of the data and illustrates whether contaminants are stable or exhibiting a noticeable declining or increasing trend across the monitoring period.

Table 9 provides a summary of those contaminants and locations where an increasing trend has been identified across the monitoring period.

**Table 9: Trend analysis – locations where increasing and/or fluctuating trends identified**

| Contaminant  | Up-gradient        | Ballacallow 1 | Ballacallow 2 | Ballacallow 3  | Wrights Pit North             | Wrights Pit East   | Down-gradient             |
|--|--------------------|---------------|---------------|----------------|-------------------------------|--|---------------------------|
| Ammoniacal nitrogen  | -                  | <b>BH104A</b> | -             | -              | <b>P8A</b>                    | <b>BH105A#</b><br><b>BH107#</b>  | P6A#<br>P6C#<br>P9A#      |
| Chloride   | BH89/11<br>BH96/4# | -             | -             | -              | -                             | <b>P2A</b>   | <b>P6A</b><br><b>P6B#</b> |
| Iron   | -                  | -             | -             | -              | -                             | <b>BH106A#</b><br><b>BH107#</b>  | <b>P6B#</b><br><b>P6C</b> |
| Manganese  | <b>BH89/10</b>     | <b>BH104A</b> | -             | <b>BH102A#</b> | <b>P8A#</b>                   | <b>BH107#</b>  | <b>P6C</b><br><b>P9A</b>  |
| Arsenic  | -                  | -             | -             | <b>BH102A</b>  | <b>P8A#</b>                   | <b>BH106A</b><br><b>BH107</b><br><b>P2A#</b><br><b>P3A#</b><br><b>P4B#</b> | -                         |
| Total TPH  | -                  | -             | -             | -              | <b>BH101A</b>                 | <b>BH105A#</b><br><b>P3A</b>   | -                         |
| Total PAH  | -                  | -             | -             | <b>BH102A</b>  | <b>BH101A#</b><br><b>P8A#</b> | <b>BH105A#</b>   | -                         |
| Total VOC  | -                  | <b>BH104A</b> | -             | <b>BH102A</b>  | <b>P8A#</b>                   | <b>BH105A#</b>   | -                         |
| Total PCB  | -                  | -             | -             | -              | -                             | -  | -                         |
| Note:<br>Locations highlighted in <b>bold</b> are in excess of their assessment criteria.<br>Currently insufficient data to enable trend assessment at locations BH109 and BH103B.<br># Locations where fluctuating trends identified. |                    |               |               |                |                               |  |                           |

## 4.3 Discussion

### 4.3.1 Ammoniacal nitrogen

Site wide exceedances of ammoniacal nitrogen have been identified up to several orders of magnitude in excess of the assessment criteria. The greatest concentrations have been observed in boreholes BH105A, BH106A, P6A, P6B and P6A in the east of the site.

Contaminant contour plots have been created using GWSDAT to illustrate the development of the ammoniacal nitrogen plume over the monitoring period. The plume plots are included in Appendix K and clearly show two plumes are present, one centring on Ballacallow 2 - 3 and another on Wrights Pit East. The plume underlying the Ballacallow landfills appears to be largely constrained to this area. However, the plume underlying Wrights Pit East appears to be migrating off-site with elevated concentrations observed at P4A, P4B, P6A, P6B and P6C located along the coastline.

It is noted concentrations increased above the threshold value for the first time at upgradient location BH89/10 during the June 2021 monitoring round and have remained above the threshold during the September and December 2022 rounds, although the concentrations have decreased since June 2021. This suggests the potential for an off-site source of ammoniacal nitrogen.

In addition an overall increasing trend, with concentrations continually above the threshold value, has been observed at locations BH104A (Ballacallow 1) and P8A (Wrights Pit North). Concentrations at BH105A, BH107 (Wrights Pit East) and P6A, P6C and P9A (down gradient) are noted to be fluctuating, with concentrations above the threshold value, suggesting concentrations have yet to stabilise at these locations. At all other locations ammoniacal nitrogen concentrations were noted to be relatively stable and/or declining.

#### **4.3.2 Chloride**

The greatest chloride exceedances have been identified at boreholes P2A, P6A, P6B and P6C installed to monitor Wrights Pit East and exceed the threshold value. It is noted that these boreholes are located in close proximity to the coast and so may, in part, be influenced by saline intrusion. Chloride concentrations were noted to be relatively stable across the monitoring period, although an increase in concentrations was observed at P2A and P6A with fluctuating concentrations observed at P6B and a decline observed at P6C. It is noted that chloride concentrations have increased at BH89/11 and were fluctuating at BH96/4, both located up hydraulic gradient, although it is noted that the concentrations at these locations are well below the threshold level. At all other locations chloride concentrations were noted to be relatively stable and/or declining.

#### **4.3.3 Manganese**

Site wide exceedances of manganese have been identified. Typically the greatest concentrations are observed in boreholes located in the eastern portion of the site in the vicinity of Wrights Pit East, although concentrations are generally stable with the exception of BH107 where concentrations are noted to be fluctuating. Increasing concentrations have also been observed at BH104A (Ballacallow 1) with fluctuating concentrations observed at BH102A (Ballacallow 3) and P8A (Wrights Pit North). It is noted concentrations increased above the threshold value for the first time at upgradient location BH89/10 during the June 2021 monitoring round and are now fluctuating with concentrations dropping below the threshold during September 2022 before rising above the threshold again during the December 2022 round. Manganese concentrations have also been noted to be increasing at down gradient locations P6C and P9A. At all other locations manganese concentrations were noted to be relatively stable and/or declining.

#### **4.3.4 Iron**

Site wide exceedances of iron have been observed except for at the upgradient locations where they are typically detected below the laboratory limit of detection. In general concentrations are considered to be relatively stable and/or decreasing with the exception of P6C (down gradient) where an increase in concentration has been observed. Fluctuating concentrations have been identified at BH106A and BH107 (Wrights Pit East) and P6B (down gradient) suggesting concentrations have not yet stabilised at these locations.

#### **4.3.5 Arsenic**

The greatest arsenic concentrations have been identified within boreholes BH102A, BH103A and P3A installed to monitor water quality at Ballacallow 2 – 3 and at locations

BH106A, BH105A, P4A and P4B installed to monitor water quality at Wrights Pit East. A review of contaminant trends suggest that arsenic concentrations have increased at BH102A, BH106A and BH107 with fluctuating concentrations observed at P2A, P3A, P4B and P8A. At all other locations arsenic concentrations were observed to be stable and/or declining.

#### **4.3.6 Total TPH**

TPH is routinely detected at location BH103A (Ballacallow 2), with typically stable concentrations observed, although concentrations were recorded below the LMDL for the first time during the December 2022 monitoring round. A review of the data indicates that TPH aliphatic fraction >C21-C35 dominates the TPH signature at BH103A.

During the September 2022 monitoring round TPH was detected at BH101A (Wright's Pit North) and P3A (Wright's Pit East) for the first time since 2019. These boreholes were not analysed for total TPH as part of the December 2022 monitoring round and so it is unclear if these represent an isolated occurrence or a potential increasing trend. It is recommended that these boreholes be resampled as part of a subsequent monitoring round.

TPH was detected at BH104A (Ballacallow 1) and BH105A (Wright's Pit East) during the December 2022 and appear to fluctuate having been detected sporadically across the monitoring period.

TPH was detected at BH89/10 (up gradient) during the June 2021 monitoring round and again during the December 2022 monitoring round, although it was below the LMDL during the September 2022 monitoring round.

TPH concentrations at P8A were detected again during the September 2022 monitoring round, although concentrations were below the LMDL during the December 2022 monitoring round. Historically concentrations at P8A have been LMDL.

TPH was not detected at BH106A during the September or December 2022 monitoring rounds and has not been detected since December 2020. This suggests that this location can be sampled for TPH on an annual frequency rather than quarterly.

#### **4.3.7 Total PAH**

PAHs have been detected across the site with elevated concentrations consistently being detected at locations BH102A, BH103A and BH104A installed to monitor water quality at Ballacallow 1 – 3 and BH105A and BH106A installed to monitor water quality at Wright's Pit East. Elevated concentrations have also been detected at BH101A monitoring Wright's Pit North during the December 2022 round, although typically concentrations are low. PAH concentrations appear to be increasing at BH102A and fluctuating at BH101A, BH105A and P8A. At all locations PAH concentrations were observed to be relatively stable and/or declining.

#### **4.3.8 Total VOC**

Several VOC compounds have been detected at elevated levels across the site. The greatest concentrations have consistently been observed at BH102A in Ballacallow 3, BH104A in Ballacallow 1, BH105A in Wright's Pit East and P9A located down gradient.

Vinyl chloride is typically the key VOC detected at BH102A with exception of the December 2022 round where vinyl chloride was not detected and toluene was the dominant VOC, with an increase in concentrations observed. Chlorobenzene is typically the key VOC detected at BH105A with concentrations noted to fluctuate. At P9A concentrations are generally stable and typically comprise 1,1-dichloroethane and 1,1,1-trichloroethane. Chlorobenzene is typically detected at BH104A, although it is noted that several other VOCs were also detected during the December 2022 monitoring round with concentrations observed to have increased.

VOCs have also been detected at BH101A, BH103A and BH106A concentrations are typically low and close to the LMDL.

It is noted that VOCs have not been detected at upgradient locations BH89/10 and BH90/17 during the 2022 monitoring rounds and as such it is considered that they can be removed from the quarterly testing suite and analysed on an annual basis instead.

#### **4.3.9 PCBs**

Historically, PCB Congeners 28 and 52 have been identified at location BH103A installed at Ballacallow 2, although they have not been detected at this location by ALS since the September 2019 monitoring round. During the September 2022 monitoring round all PCB concentrations were reported to be below the ALS laboratory limit of detection of 0.015 µg/l.



## 5 CONCLUSIONS & RECOMMENDATIONS

### 5.1 Conclusions

The results of the monitoring and assessment indicate that a leachate plume underlies the POALS which has the potential to cause pollution of the water environment. The key contaminants of concern are considered to be ammoniacal nitrogen, iron and manganese which have been detected across the entire site area at significantly elevated levels. Elevated concentrations of chloride, arsenic, TPH and PAH have also been identified at several locations. In addition, localised exceedances of VOCs have also been identified.

Table 10 provides a summary of those borehole locations where key contaminant concentrations have been recorded at elevated levels and where an upward trend has been identified, suggesting continued leachate generation and plume expansion in these areas. These are therefore considered to present critical areas of leachate generation at the site. It is noted that fluctuating contaminant concentrations have also been observed at several locations suggesting that stable concentrations have not yet been reached at the site.

**Table 10: Critical locations**

| POALS  | Borehole             | Contaminants exceeding assessment criteria where increasing trend observed |
|--|----------------------|--|
| Up-gradient  | BH89/10              | Manganese  |
| Ballacallow 1  | BH104A               | Ammoniacal nitrogen , manganese and Total VOC                              |
| Ballacallow 2  | -                    | -  |
| Ballacallow 3  | BH102A               | Arsenic, Total PAH and Total VOC   |
| Wrights Pit North  | BH101A<br>P8A        | Total TPH<br>Ammoniacal nitrogen   |
| Wrights Pit East   | P2A<br>BH106A<br>P3A | Chloride<br>Arsenic<br>Total TPH   |
| Down-gradient  | P6A<br>P6C<br>P9A    | Chloride<br>Iron and manganese<br>Manganese                                |
| <p>Note:<br/>Table does not include data for locations where a typically high concentrations recorded during the June 2021 monitoring round as further data is required to determine if these are part of an increasing trend.</p> |                      |  |

### 5.2 Recommendations

#### 5.2.1 Monitoring regime

It is recommended that groundwater monitoring be continued at the site in order to comply with the conditions of the WDL, enable trends to be fully assessed and risks to the water environment quantified.

#### 5.2.2 Sample methodology

The sampling methodology is not compliant with the contract specification. While CTAS appear to have employed a type of low-flow sampling methodology it is noted that this could be improved by undertaking water quality measurements within a low flow through

cell with measurements provided at regular intervals to confirm parameter stabilisation occurred prior to sample collection.

### 5.2.3 Contaminant testing suite

Table 11 presents the proposed contaminant testing suite that should be considered going forward for site based on a review of data gathered during the 2022 monitoring rounds. The main changes comprise the addition of TPH CWG analysis to BH101A and P3A as part of the quarterly testing suites. In contrast as VOC concentrations have fallen to below LMDL at BH89/10 and BH90/17 during the 2022 rounds it is not considered necessary to monitor these locations on a quarterly basis going forward.

**Table 11. Chemical testing suite**

| Determinand   | Quarterly testing suite  | Annual testing suite # |
|---|--|------------------------|
| Groundwater level   | All boreholes and LAKE   | All boreholes and LAKE |
| Metals reduced suite - As, Ni, Zn, Mn, Fe   | All boreholes and LAKE   | -                      |
| Inorganics reduced suite - NH <sub>4</sub> _N, chloride, DOC  | All boreholes and LAKE   | -                      |
| Metals full suite – As, Cd, Cr, Cu, Pb, Mn, Ni, Zn, Na, Mg, K, Ca, Fe, Hg   | -  | All boreholes and LAKE |
| Inorganics full suite – suspended solids, alkalinity, BOD, DOC, NH <sub>4</sub> _N, sulphide, fluoride, COD, phosphorous, hardness, nitrite, phosphate, sulphate, chloride, nitrate, nitrogen | -  | All boreholes and LAKE |
| TPH CWG   | BH101A#, BH103A, BH104A, BH105A*, BH106A, BH89/10*, P3A#, P8A*                     | All boreholes and LAKE |
| PAHs  | BH101A, BH102A, BH103A, BH104A, BH105A, BH106A, P8A*                               | All boreholes and LAKE |
| PCBs  | -  | All boreholes and LAKE |
| SVOCs   | -  | All boreholes and LAKE |
| VOCs  | BH102A, BH104A, BH105A, <del>BH89/10*</del> , <del>BH90/17*</del> , P3A, P8A*, P9A | All boreholes and LAKE |

**Notes:**

\* Contaminant detected at significantly higher concentrations than expected during either March 2021 or June 2021 sampling round. Recommend resampling during next round. If not detected or concentrations decline to within a more expected range over the next two rounds then it is recommended these boreholes be moved to the annual testing suite for this parameter. Locations with a ~~strike through~~ indicate the criteria has been met and they should be analysed as part of the annual testing suite only.

# In the event sample results indicate an increasing trend and/or contaminants are significantly higher than expected during the annual monitoring round it would be recommended that these locations/determinands be resampled as part of the next two quarterly rounds.

### 5.2.4 Survey data

There is uncertainty as to whether the CCG survey accurately record ground level elevation at all location, particularly BH107. It is understood that elevation data is available for the top of all monitoring well headworks completed as part of the recent IOMG survey (Drawing WM/34581 S3). Therefore it is recommended that the 'offset' between the top of headworks and ground level is recorded at each borehole location to

enable a more accurate ground elevation to be calculated and for groundwater levels to be corrected to Ordnance Datum.

### **5.2.5 QA/QC**

Care should be taken by CTAS to ensure that samples are collected into bottles specific to the analysis to be completed and that bottles are filled completely to ensure no headspace is present in order to avoid sample deviations.

It is noted that QA/QC issues were noted within the duplicate samples submitted to the laboratory, in particular the TPH result at BH105A. The laboratory were contacted and confirmed they were satisfied with the results produced and there were no known QA/QC failures. To take this into account the results from both the duplicate and primary samples collected from BH105A and P8A have been considered in the assessment.

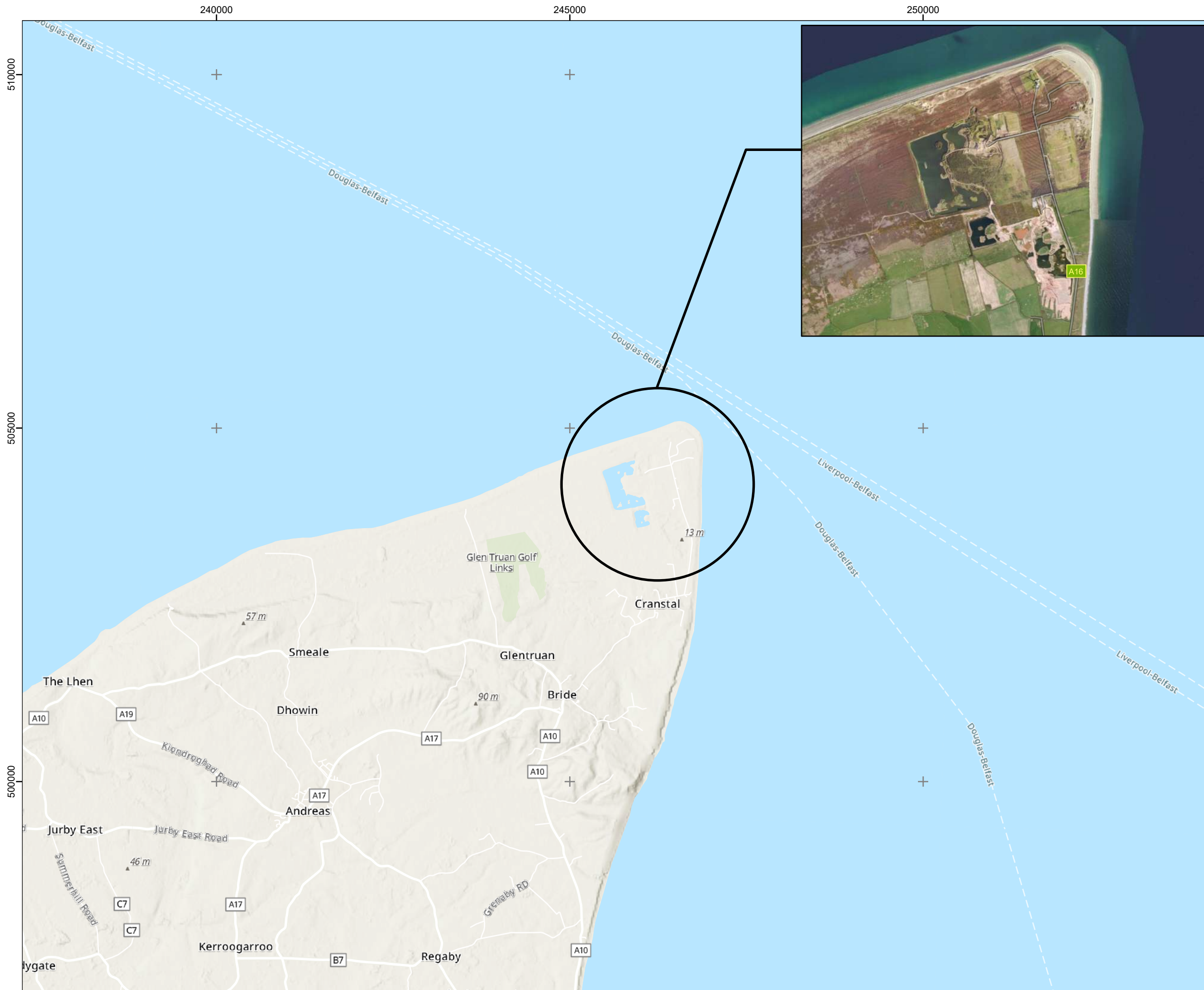
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## FIGURES

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**Legend:**

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 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

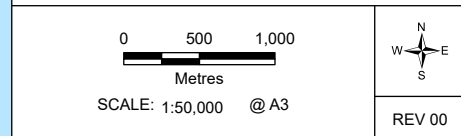


| Rev | Date       | Description | Drn | Chk | App |
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| 00  | 13/07/2020 | First Draft | DR  | ASH | ASH |

**Point of Ayre Landfill Sites**

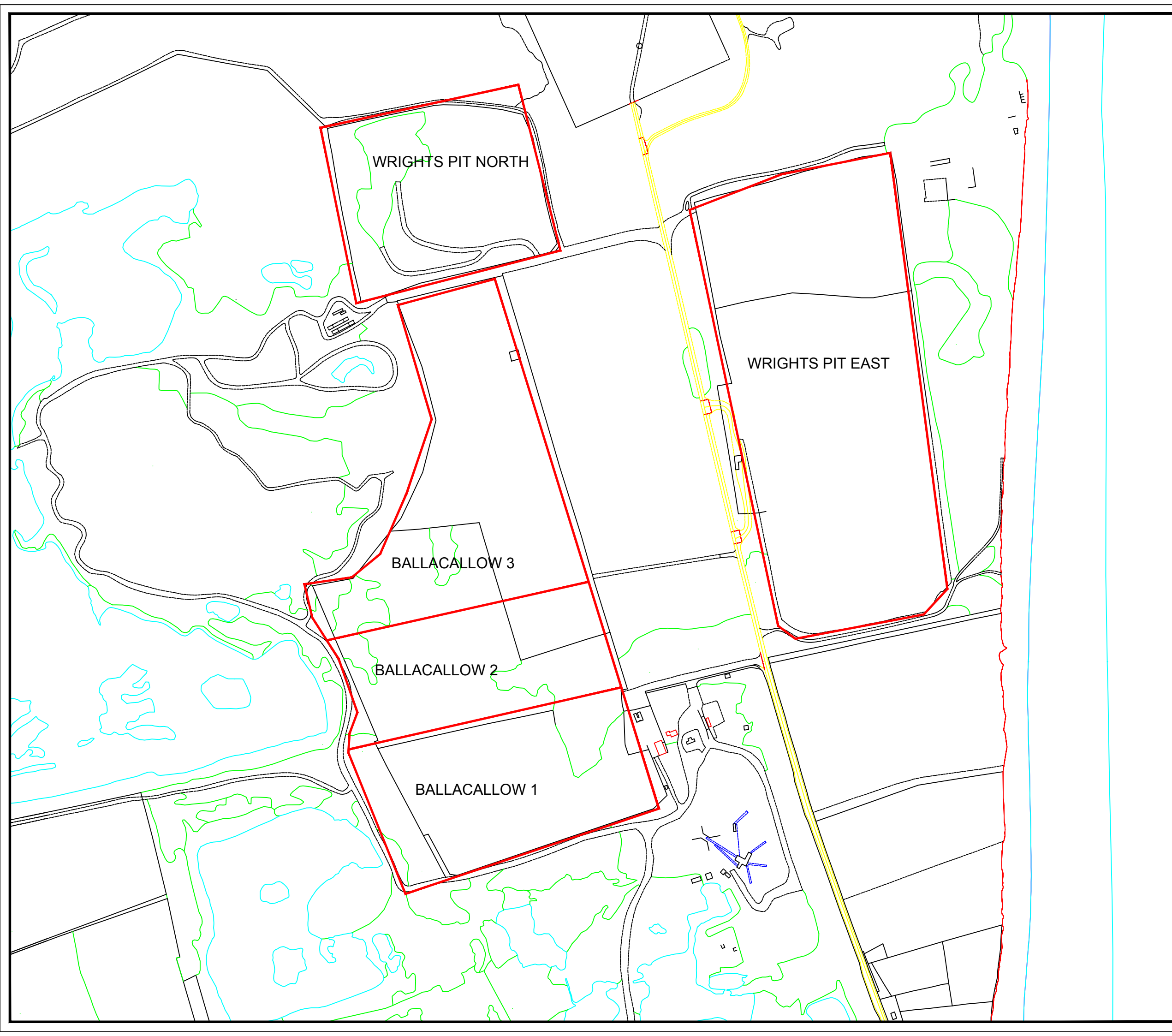


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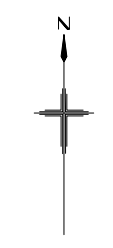
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 World Imagery (Clarity): Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community  
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**LEGEND:**

— Site boundaries



|            |          |             |         |           |         |
|------------|----------|-------------|---------|-----------|---------|
| REV        | DATE     | DESCRIPTION | BY      | CHD.      | APR.    |
| A          | 04.06.20 | FIRST ISSUE |         | HD        | HcM HcM |
| Dimensions |          | Projection  | Scale   | Orig Size |         |
| m          |          |             | 1:4,000 | A3        |         |

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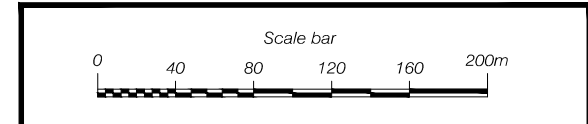
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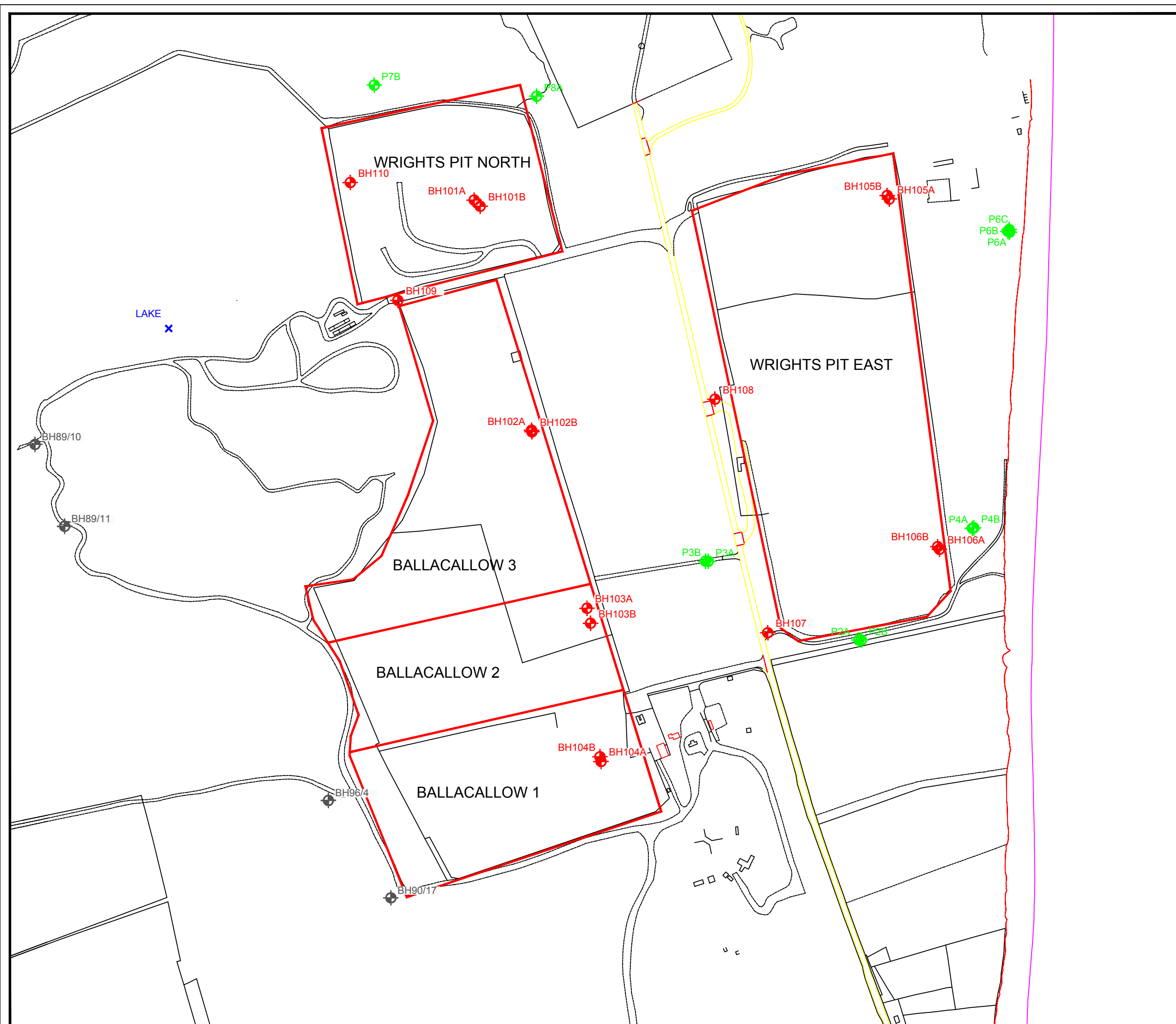
PROJECT  
 POINT OF AYRE, LANDFILL SITES

TITLE  
 SITE LAYOUT

JOB No.: 355250 DRAWING FILE: 355250-R01(00)D002A

|     |          |              |      |
|-----|----------|--------------|------|
| BY: | DATE:    | CONTRACT NO. | REV: |
| HD  | 04.06.20 |              | A    |





- LEGEND:**
- Site boundaries
  - + RSK borehole location
  - + RMC borehole location
  - + CCG borehole location
  - x Surface water sampling



| A          | 04.06.20 | FIRST ISSUE | HD      | HcM        | HcM  |
|------------|----------|-------------|---------|------------|------|
| REV        | DATE     | DESCRIPTION | BY      | CHD.       | APR. |
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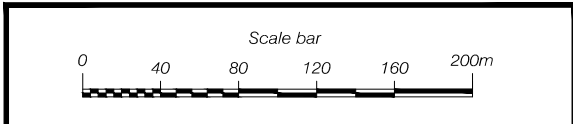
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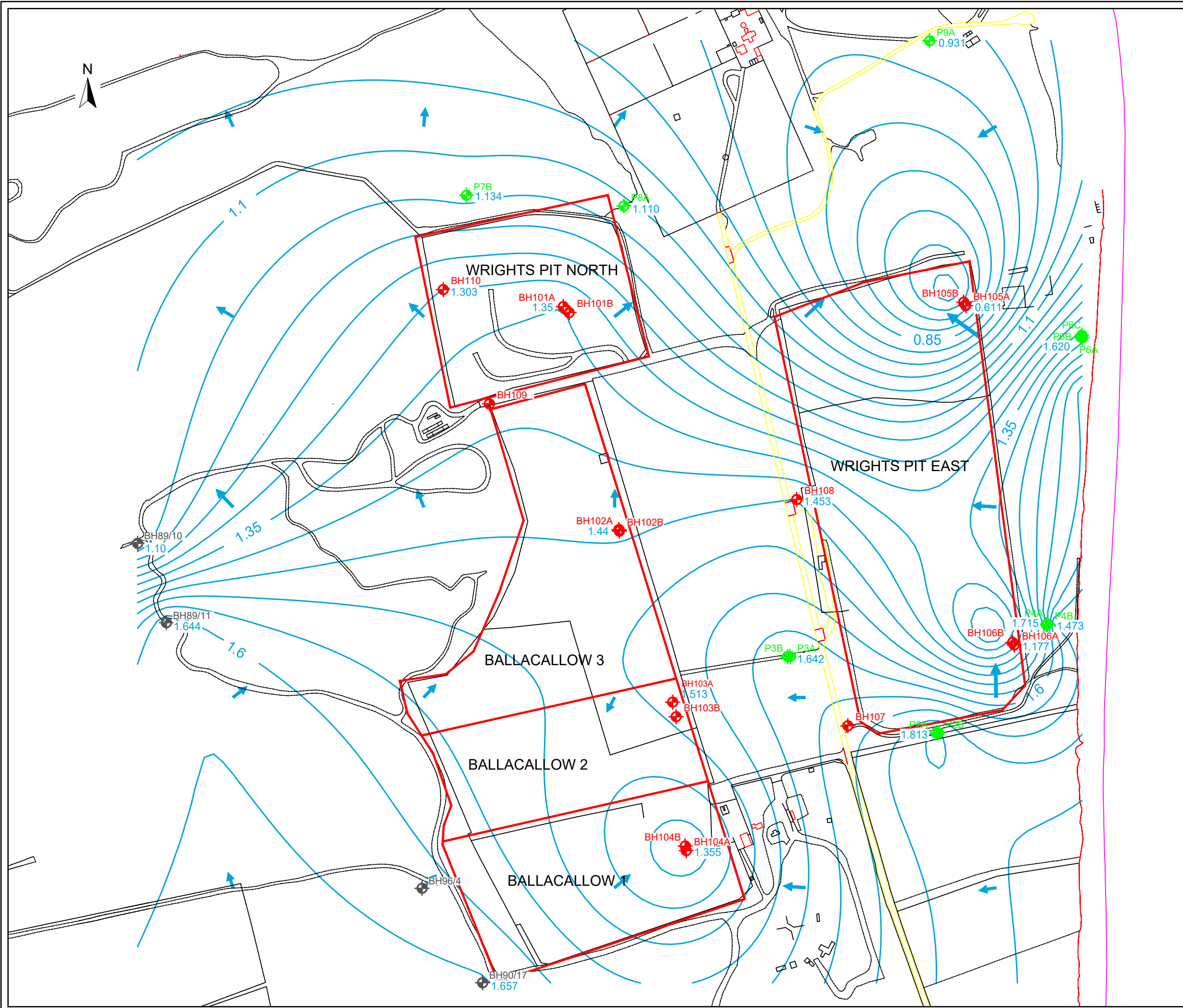
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TITLE  
**GROUNDWATER MONITORING WELL NETWORK**

JOB No.: **355250** DRAWING FILE: **355250-R01(00)D003A**

|     |          |               |      |
|-----|----------|---------------|------|
| BY: | DATE:    | CONTRACT NO.: | REV: |
| HD  | 04.06.20 |               | A    |





**LEGEND**

- Site boundaries
- RSK borehole location
- RMC borehole location
- CCG borehole location
- 6.943 Groundwater Level (mAOD)
- Groundwater Contour (mAOD)
- Groundwater Flow Direction

**Notes:**  
 Data from BH107 has been excluded from the groundwater contour plot due to uncertainty in the ground elevation survey data.

| Rev | Date     | Amendment   | Drawn | Chkd | Appd |
|-----|----------|-------------|-------|------|------|
| C01 | 23.12.22 | First Issue | AS    | SF   | SF   |

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Project Name  
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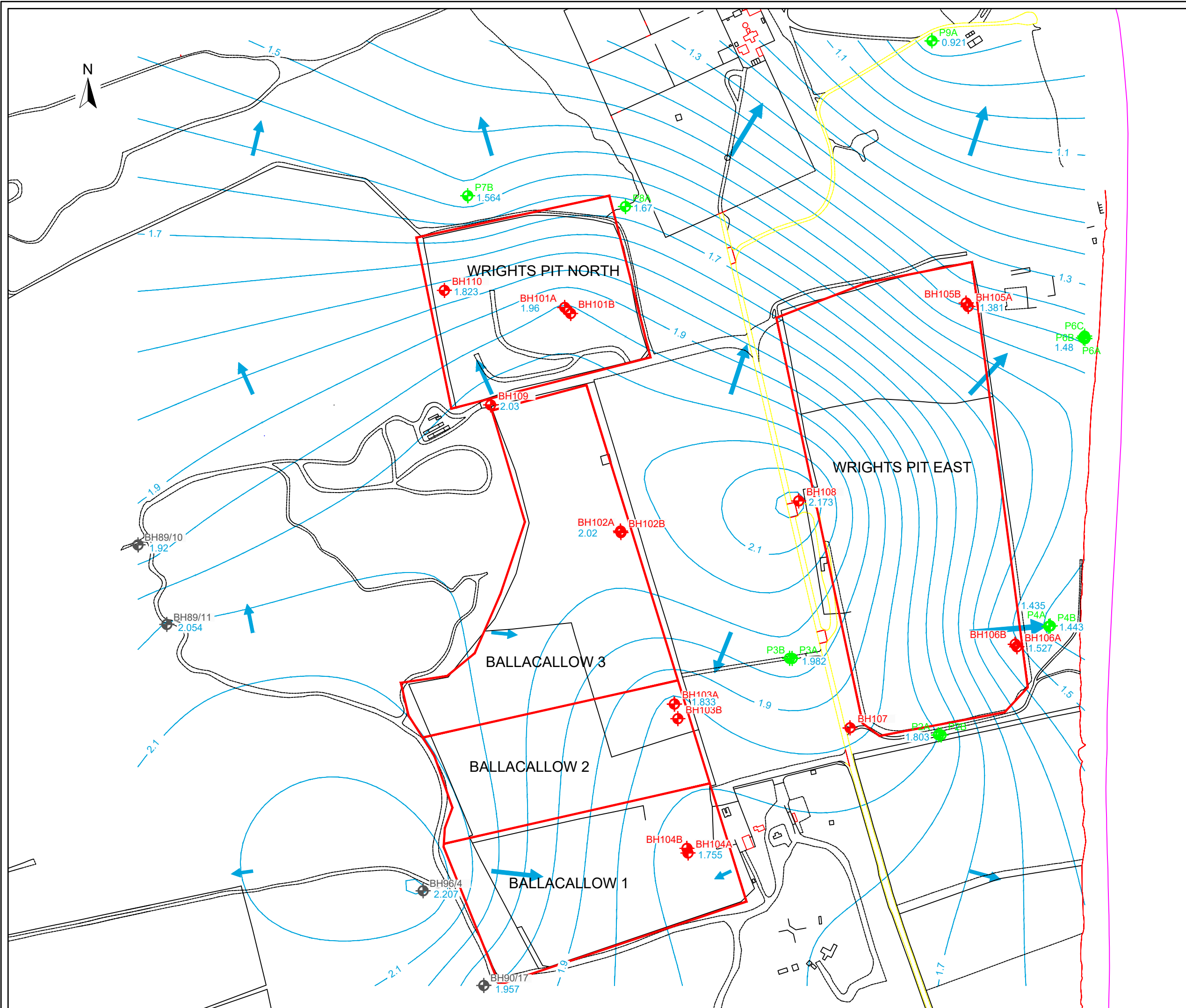
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| Project ID | Figure | Revision |
|------------|--------|----------|
| 355250     | 04     | C01      |

File name  
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| Dimensions | Scale | Size |
|------------|-------|------|
| m          | NTS   | A3   |





**LEGEND**

- Site boundaries
- ◆ RSK borehole location
- ◆ RMC borehole location
- ◆ CCG borehole location
- 6.943 Groundwater Level (mAOD)
- Groundwater Contour (mAOD)
- Groundwater Flow Direction

**Notes:**  
 Data from BH107 has been excluded from the groundwater contour plot due to uncertainty in the ground elevation survey data.

| 01  | 31.01.23 | First Issue | AE    | PJ   | PJ   |
|-----|----------|-------------|-------|------|------|
| Rev | Date     | Amendment   | Drawn | Chkd | Appd |

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Project Name  
**Point of Ayre Landfill Sites**

Description  
**Groundwater Contour Plot - December 2022**

|            |        |          |
|------------|--------|----------|
| Project ID | Figure | Revision |
| 355250     | 04     | 01       |

File name  
 355250-Groundwater Contour Plot-December 2022

|            |       |      |
|------------|-------|------|
| Dimensions | Scale | Size |
| m          | NTS   | A3   |



## APPENDIX A

# SERVICE CONSTRAINTS

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1. This report and the site investigation carried out in connection with the report (together the "Services") were compiled and carried out by RSK Environment Limited (RSK) for Isle of Man Government Department of Infrastructure (the "Client") in accordance with the terms of a contract [IOMG DOI Agreement for Mixed Wastes Landfill Consultancy Services] between RSK and the Client, dated 4 December 2019 which was extended by a variation agreement dated 31 March 2022. The Services were performed by RSK with the reasonable skill and care ordinarily exercised by an environmental consultant at the time the Services were performed. Further, and in particular, the Services were performed by RSK taking into account the limits of the scope of works required by the client, the time scale involved and the resources, including financial and manpower resources, agreed between RSK and the Client.
2. Other than that, expressly contained in paragraph 1 above, RSK provides no other representation or warranty whether express or implied, in relation to the Services.
3. Unless otherwise agreed in writing, the Services were performed by RSK exclusively for the purposes of the Client. RSK is not aware of any interest of or reliance by any party other than the Client in or on the Services. Unless expressly provided in writing, RSK does not authorise, consent or condone any party other than the client relying upon the Services. Should this report or any part of this report, or otherwise details of the Services or any part of the Services be made known to any such party, and such party relies thereon that party does so wholly at its own and sole risk and RSK disclaims any liability to such parties. **Any such party would be well advised to seek independent advice from a competent environmental consultant and/or lawyer.**
4. It is RSK's understanding that this report is to be used for the purpose described in the introduction to the report. That purpose was a significant factor in determining the scope and level of the Services. Should the purpose for which the report is used, or the proposed use of the site change, this report may no longer be valid and any further use of or reliance upon the report in those circumstances by the client without RSK 's review and advice shall be at the client's sole and own risk. Should RSK be requested to review the report after the date of this report, RSK shall be entitled to additional payment at the then existing rates or such other terms as agreed between RSK and the client.
5. The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the report inaccurate or unreliable. The information and conclusions contained in this report should not be relied upon in the future without the written advice of RSK. In the absence of such written advice of RSK, reliance on the report in the future shall be at the Client's own and sole risk. Should RSK be requested to review the report in the future, RSK shall be entitled to additional payment at the then existing rate or such other terms as may be agreed between RSK and the client.
6. The observations and conclusions described in this report are based solely upon the Services which were provided pursuant to the agreement between the Client and RSK. RSK has not performed any observations, investigations, studies or testing not specifically set out or required by the contract between the client and RSK. RSK is not liable for the existence of any condition, the discovery of which would require performance of services not otherwise contained in the Services. For the avoidance of doubt, unless otherwise expressly referred to in the introduction to this report, RSK did not seek to evaluate the presence on or off the site of asbestos, invasive plants, electromagnetic fields, lead paint, heavy metals, radon gas or other radioactive or hazardous materials, unless specifically identified in the Services.
7. The Services are based upon RSK's observations of existing physical conditions at the Site gained from a visual inspection of the site together with RSK's interpretation of information, including documentation, obtained from third parties and from the Client on the history and usage of the site, unless specifically identified in the Services or accreditation system (such as UKAS ISO 17020:2012 clause 7.1.6):



- a. The Services were based on information and/or analysis provided by independent testing and information services or laboratories upon which RSK was reasonably entitled to rely.
- b. The Services were limited by the accuracy of the information, including documentation, reviewed by RSK and the observations possible at the time of the visual inspection.
- c. The Services did not attempt to independently verify the accuracy or completeness of information, documentation or materials received from the client or third parties, including laboratories and information services, during the performance of the Services.

RSK is not liable for any inaccurate information or conclusions, the discovery of which inaccuracies required the doing of any act including the gathering of any information which was not reasonably available to RSK and including the doing of any independent investigation of the information provided to RSK save as otherwise provided in the terms of the contract between the Client and RSK.

8. The intrusive environmental site investigation aspects of the Services are a limited sampling of the site at pre-determined locations based on the known historic / operational configuration of the site. The conclusions given in this report are based on information gathered at the specific test locations and can only be extrapolated to an undefined limited area around those locations. The extent of the limited area depends on the properties of the materials adjacent and local conditions, together with the position of any current structures and underground utilities and facilities, and natural and other activities on site. In addition, chemical analysis was carried out for a limited number of parameters (as stipulated in the scope between the client and RSK, based on an understanding of the available operational and historical information) and it should not be inferred that other chemical species are not present.
9. Any site drawing(s) provided in this report is (are) not meant to be an accurate base plan but is (are) used to present the general relative locations of features on, and surrounding, the site. Features (intrusive and sample locations etc) annotated on site plans are not drawn to scale but are centred over the approximate location. Such features should not be used for setting out and should be considered indicative only.
10. The comments given in this report and the opinions expressed are based on the ground conditions encountered during the site work and on the results of tests made in the field and in the laboratory. However, there may be conditions pertaining to the site that have not been disclosed by the investigation and therefore could not be taken into account. In particular, it should be noted that there may be areas of made ground not detected due to the limited nature of the investigation or the thickness and quality of made ground across the site may be variable. In addition, groundwater levels and ground gas concentrations and flows, may vary from those reported due to seasonal, or other, effects and the limitations stated in the data should be recognised.
11. Asbestos is often observed to be present in soils in discrete areas. Whilst asbestos-containing materials may have been locally encountered during the fieldworks or supporting laboratory analysis, the history of brownfield and demolition sites indicates that asbestos fibres may be present more widely in soils and aggregates, which could be encountered during more extensive ground works.
12. Unless stated otherwise, only preliminary geotechnical recommendations are presented in this report and these should be verified in a Geotechnical Design Report, once proposed construction and structural design proposals are confirmed.





# **APPENDIX B**

## **CTAS GROUNDWATER SAMPLING RECORDS**

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## CTAS September 2022 Field Records

## **CONSTRUCTION TESTING AND ADVISORY SERVICES LTD**

### On Site Testing during Sampling

### Point of Ayre, Isle of Man

Date sample  
12/09/22

| BH                | 89/10 | Lake  | 89/11 | 96/4 | 90/17 | 104a    | 104b | 103a    |           |
|-------------------|-------|-------|-------|------|-------|---------|------|---------|-----------|
| Time              | 0850  | 08:40 | 09:05 |      |       | 07:25   |      | 07:50   |           |
| Depth of water    | 1.92  |       | 2.00  | Dry  | 2.22  | 6.62    | Dry  | 7.92    | m         |
| Depth of BH       | 6.06  |       | 2.64  | 1.40 | 2.30  | 9.98    | 4.25 | 12.53   | m         |
| Temperature       | 14.6  | 17.3  | 15.6  |      |       | 13.9    |      | 14.6    | °C        |
| pH value          | 9.46  | 10.82 | 8.60  |      |       | 7.73    |      | 9.05    |           |
| Electrical Conduc | 300.1 | 225.2 | 386.2 |      |       | (0.753) |      | (0.941) | µs (mS)   |
| Dissolved Oxygen  | 27.1  | 79.9  | 44.2  |      |       | 33.9    |      | 32.3    | %         |
| Dissolved Oxygen  | 3.03  | 8.00  | 4.62  |      |       | 3.73    |      | 3.59    | g/lt      |
| TA                | 12.2  | 14.6  | 12.8  |      |       | 10.9    |      | 12.1    |           |
| TDS               | 302.1 | 255.2 | 386.3 |      |       | (0.758) |      | (0.948) | mg/l(g/l) |
| Redox Potential   | -211  | 28    | 12    |      |       | -170    |      | -142    | mV        |
| Smell             | Yes   | None  | None  | None | None  | None    | Yes  | None    |           |

| BH                | 103b | 102a    | 102b | 107     | 108   | 2a      | 2b   | 109  | Date sample |
|-------------------|------|---------|------|---------|-------|---------|------|------|-------------|
| Time              |      | 08:10   |      | 10:10   | 10:55 | 09:50   |      |      | 12/09/22    |
| Depth of water    | 7.20 | 5.49    | Dry  | 6.17    | 5.34  | 6.57    | Dry  | Dry  | m           |
| Depth of BH       | 7.65 | 9.98    | 4.64 | 7.08    | 5.88  | 13.73   | 3.94 | 5.86 | m           |
| Temperature       |      | 14.3    |      | 14.0    |       | 15.0    |      |      | °C          |
| pH value          |      | 8.41    |      | 9.07    |       | 8.22    |      |      |             |
| Electrical Conduc |      | (1.221) |      | (0.635) |       | (3.545) |      |      | µs (mS)     |
| Dissolved Oxygen  |      | 34.5    |      | 27.5    |       | 37.0    |      |      | %           |
| Dissolved Oxygen  |      | 3.66    |      | 3.01    |       | 3.86    |      |      | g/lt        |
| TA                |      | 12.0    |      | 12.6    |       | 131     |      |      |             |
| TDS               |      | (1.225) |      | (0.635) |       | (3.567) |      |      | ppm(ppt)    |
| Redox Potential   |      | -166    |      | 53      |       | -97     |      |      | mV          |
| Smell             | Yes  | None    | Yes  | None    | None  | None    | None | None |             |

| <b>BH</b>         | <b>3a</b> | <b>3b</b> | <b>110</b> | <b>101a</b> | <b>101b</b> | <b>7b</b> | <b>8a</b> | <b>9a</b> | Date sample |
|-------------------|-----------|-----------|------------|-------------|-------------|-----------|-----------|-----------|-------------|
| Time              | 10:35     |           | 11:10      | 11:30       |             | 11:50     | 12:10     | 12:25     | 12/09/22    |
| Depth of water    | 5.31      | 5.45      | 4.27       | 5.12        | Dry         | 6.14      | 5.95      | 6.78      | m           |
| Depth of BH       | 6.15      | 6.88      | 5.64       | 11.42       | 4.92        | 11.68     | 20.78     | 20.3      | m           |
| Temperature       | 14.5      |           | 14.7       | 14.5        |             | 13.8      | 14.2      | 12.9      | °C          |
| pH value          | 8.43      |           | 9.61       | 8.90        |             | 9.20      | 8.4       | 9.52      |             |
| Electrical Conduc | (0.931)   |           | 471.4      | (9.658)     |             | 381.4     | 460.7     | (0.552)   | µs (mS)     |
| Dissolved Oxygen  | 28.2      |           | 24.2       | 24.4        |             | 26.2      | 26.7      | 38.0      | %           |
| Dissolved Oxygen  | 2.95      |           | 2.62       | 2.66        |             | 2.91      | 2.86      | 4.30      | g/lt        |
| TA                | 12.3      |           | 12.1       | 11.8        |             | 10.2      | 11.9      | 10.4      |             |
| TDS               | (0.932)   |           | 472        | (0.702)     |             | 391.4     | 463.1     | (0.553)   | mg/l(g/l)   |
| Redox Potential   | -148      |           | 151        | 149         |             | 70        | 263       | 52        | mV          |
| Smell             | None      | None      | None       | None        | None        | None      | None      | None      |             |

| <b>BH</b>         | <b>4a</b> | <b>4b</b> | <b>106a</b> | <b>106b</b> | <b>105a</b> | <b>105b</b> | <b>6a</b> | <b>6b</b> | Date sample |
|-------------------|-----------|-----------|-------------|-------------|-------------|-------------|-----------|-----------|-------------|
| Time              | 12:50     | 13:10     | 13:20       |             | 13:40       |             | 14:05     | 14:15     | 12/09/22    |
| Depth of water    | 5.67      | 5.87      | 7.40        | Dry         | 7.37        | 4.30        | 6.10      | 6.20      | m           |
| Depth of BH       | 22.57     | 6.12      | 10.48       | 5.51        | 10.46       | 4.50        | 17.85     | 14.00     | m           |
| Temperature       | 13.7      | 14.0      | 14.2        |             | 15.1        |             | 14.0      | 13.7      | °C          |
| pH value          | 8.47      | 8.38      | 7.80        |             | 8.02        |             | 7.82      | 7.73      |             |
| Electrical Conduc | (0.883)   | (1.003)   | (1.098)     |             | (1.497)     |             | (6.100)   | (4.101)   | µs (mS)     |
| Dissolved Oxygen  | 33.3      | 26.4      | 25.1        |             | 33.8        |             | 31.7      | 29.3      | %           |
| Dissolved Oxygen  | 3.53      | 2.74      | 2.80        |             | 3.55        |             | 3.41      | 3.28      | g/lt        |
| TA                | 11.6      | 11.9      | 12.1        |             | 12.6        |             | 11.6      | 11.6      |             |
| TDS               | (0.886)   | (1.007)   | (1.100)     |             | (1.499)     |             | (6.110)   | (4.101)   | mg/l(g/l)   |
| Redox Potential   | -142      | -72       | -217        |             | -48         |             | 61        | -66       | mV          |
| Smell             | None      | None      | None        | None        | None        | None        | None      | None      |             |

| <b>BH</b>         | <b>6c</b> |  |  |  |  |  |  |  | Date sample |
|-------------------|-----------|--|--|--|--|--|--|--|-------------|
| Time              | 14:30     |  |  |  |  |  |  |  | 12/09/22    |
| Depth of water    | 6.38      |  |  |  |  |  |  |  | m           |
| Depth of BH       | 8.66      |  |  |  |  |  |  |  | m           |
| Temperature       | 14.10     |  |  |  |  |  |  |  | °C          |
| pH value          | 8.00      |  |  |  |  |  |  |  |             |
| Electrical Conduc | (2.349)   |  |  |  |  |  |  |  | µs (mS)     |
| Dissolved Oxygen  | 29.8      |  |  |  |  |  |  |  | %           |
| Dissolved Oxygen  | 3.22      |  |  |  |  |  |  |  | g/lt        |
| TA                | 11.8      |  |  |  |  |  |  |  |             |
| TDS               | (2.351)   |  |  |  |  |  |  |  | mg/l(g/l)   |
| Redox Potential   | 56        |  |  |  |  |  |  |  | mV          |
| Smell             | None      |  |  |  |  |  |  |  |             |

Sampled by: Duncan Robertson

Tested by: Duncan Robertson



## CTAS December 2022 Field Records

# Duplicate Samples

## CONSTRUCTION TESTING & ADVISORY SERVICES LTD

### Point of Ayre Borehole Sampling Sheet

Date: 5/12/22

| BH 08A                 |                    |                    | BH 105A                |                    |                    | BH                     |                    |                    |
|------------------------|--------------------|--------------------|------------------------|--------------------|--------------------|------------------------|--------------------|--------------------|
| Time                   | Time               | Time               | Time                   | Time               | Time               | Time                   | Time               | Time               |
| 1340                   | 1345               | 1350               | 0926                   | 0930               | 0935               |                        |                    |                    |
| SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                |
| 5.39                   | 5.39               | 5.39               | 6.60                   | 6.60               | 6.60               |                        |                    |                    |
| Depth to Base          |                    |                    | Depth to Base          |                    |                    | Depth to Base          |                    |                    |
| 20.66                  |                    |                    | 10.53                  |                    |                    |                        |                    |                    |
| pH                     | pH                 | pH                 | pH                     | pH                 | pH                 | pH                     | pH                 | pH                 |
| 8.77                   | 8.50               | 8.72               | 8.55                   | 8.45               | 8.68               |                        |                    |                    |
| Temp                   | Temp               | Temp               | Temp                   | Temp               | Temp               | Temp                   | Temp               | Temp               |
| 12.7                   | 13.1               | 13.1               | 13.2                   | 13.2               | 13.4               |                        |                    |                    |
| O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   |
| 32.7                   | 26.5               | 25.6               | 42.7                   | 37.7               | 36.3               |                        |                    |                    |
| O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l |
| 4.21                   | 3.03               | 2.90               | 4.72                   | 3.05               | 4.22               |                        |                    |                    |
| Con                    | Con                | Con                | Con                    | Con                | Con                | Con                    | Con                | Con                |
| 0.54/mf                | 0.58/mf            | 0.559              | 1.352                  | 1.313              | 1.340              |                        |                    |                    |
| Redox                  | Redox              | Redox              | Redox                  | Redox              | Redox              | Redox                  | Redox              | Redox              |
| -93                    | -328               | 328                | -3                     | -133               | -130               |                        |                    |                    |
| Colour                 | Clear              |                    | Colour                 | Clear              |                    | Colour                 |                    |                    |
| Clarity                | Cloudy             |                    | Clarity                | Clear              |                    | Clarity                |                    |                    |
| Solids high-medium-low | low                |                    | Solids high-medium-low | low                |                    | Solids high-medium-low |                    |                    |
| Odour                  | Methane            |                    | Odour                  | Methane            |                    | Odour                  |                    |                    |
| BH                     |                    |                    | BH 105b                |                    |                    | BH                     |                    |                    |
| Time                   | Time               | Time               | Time                   | Time               | Time               | Time                   | Time               | Time               |
|                        |                    |                    |                        |                    |                    |                        |                    |                    |
| SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                |
|                        |                    |                    | Dry                    |                    |                    |                        |                    |                    |
| Depth to Base          |                    |                    | Depth to Base          |                    |                    | Depth to Base          |                    |                    |
|                        |                    |                    | 4.95                   |                    |                    |                        |                    |                    |
| Colour                 |                    |                    | Colour                 |                    |                    | Colour                 |                    |                    |
| Clarity                |                    |                    | Clarity                |                    |                    | Clarity                |                    |                    |
| Solids high-medium-low |                    |                    | Solids high-medium-low |                    |                    | Solids high-medium-low |                    |                    |
| Odour                  |                    |                    | Odour                  | Methane            |                    | Odour                  |                    |                    |

Sampled by: Duncan Robertson  
 Tested by: Duncan Robertson

204 x 2  
 503 x 2  
 214 x 4  
 297 x 6

204 x 2  
 503 x 2  
 214 x 4  
 297 x 6



6/12/22

# CONSTRUCTION TESTING & ADVISORY SERVICES LTD

## Point of Ayre Borehole Sampling Sheet

Date: 6/12/22

| BH 106 a               |                    |                    | BH P4a                 |                    |                    | BH P4b                 |                    |                    |
|------------------------|--------------------|--------------------|------------------------|--------------------|--------------------|------------------------|--------------------|--------------------|
| Time                   | Time               | Time               | Time                   | Time               | Time               | Time                   | Time               | Time               |
| 0900                   | 0905               | 0910               | 0825                   | 0830               | 0835               | 0840                   | 0845               | 0850               |
| SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                |
| 7.05                   | 7.05               | 7.05               | 5.95                   | 5.95               | 5.95               | 5.90                   | 5.90               | 5.90               |
| Depth to Base          |                    |                    | Depth to Base          |                    |                    | Depth to Base          |                    |                    |
| 10.53                  |                    |                    | 11.25                  |                    |                    |                        |                    |                    |
| pH                     | pH                 | pH                 | pH                     | pH                 | pH                 | pH                     | pH                 | pH                 |
| 8.00                   | 8.86               | 8.84               | 8.61                   | 8.68               | 8.86               | 8.95                   | 8.96               | 8.98               |
| Temp                   | Temp               | Temp               | Temp                   | Temp               | Temp               | Temp                   | Temp               | Temp               |
| 11.9                   | 12.3               | 12.3               | 11.4                   | 11.8               | 11.6               | 11.6                   | 11.9               | 12.0               |
| O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   |
| 43.3                   | 44.7               | 32.6               | 37.6                   | 39.2               | 37.0               | 47.6                   | 42.5               | 46.8               |
| O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l |
| 5.84                   | 5.77               | 4.29               | 4.96                   | 4.60               | 4.72               | 5.28                   | 5.54               | 5.45               |
| Con                    | Con                | Con                | Con                    | Con                | Con                | Con                    | Con                | Con                |
| 1.391                  | 1.347              | 1.404              | 0.846 mg               | 0.867              | 0.858              | 1.018 M                | 1.013              | 1.016              |
| Redox                  | Redox              | Redox              | Redox                  | Redox              | Redox              | Redox                  | Redox              | Redox              |
| 20                     | -68                | -68                | 98                     | 39                 | 22                 | -13                    | -28                | -17                |
| Colour                 | Clear              |                    | Colour                 | Clear              |                    | Colour                 | Clear              |                    |
| Clarity                | Clear              |                    | Clarity                | Clear              |                    | Clarity                | Clear              |                    |
| Solids high-medium-low | low                |                    | Solids high-medium-low | low                |                    | Solids high-medium-low | low                |                    |
| Odour                  | Methane            |                    | Odour                  | None               |                    | Odour                  | None               |                    |
| BH 106 b               |                    |                    | BH                     |                    |                    | BH                     |                    |                    |
| Time                   | Time               | Time               | Time                   | Time               | Time               | Time                   | Time               | Time               |
|                        |                    |                    |                        |                    |                    |                        |                    |                    |
| SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                |
| 5.44                   |                    |                    |                        |                    |                    |                        |                    |                    |
| Depth to Base          |                    |                    | Depth to Base          |                    |                    | Depth to Base          |                    |                    |
| 5.50                   |                    |                    |                        |                    |                    |                        |                    |                    |
| Colour                 |                    |                    | Colour                 |                    |                    | Colour                 |                    |                    |
| Clarity                |                    |                    | Clarity                |                    |                    | Clarity                |                    |                    |
| Solids high-medium-low |                    |                    | Solids high-medium-low |                    |                    | Solids high-medium-low |                    |                    |
| Odour                  |                    |                    | Odour                  |                    |                    | Odour                  |                    |                    |

Sampled by: Duncan Robertson

Tested by: Duncan Robertson

244  
204  
219 x 2  
303

244  
204  
219 x 2  
212

244  
204  
219 x 2  
212

# CONSTRUCTION TESTING & ADVISORY SERVICES LTD

Point of Ayre Borehole Sampling Sheet

Date: 5/12/22

|                        |                    |                    |                        |                    |                    |                        |                    |                    |
|------------------------|--------------------|--------------------|------------------------|--------------------|--------------------|------------------------|--------------------|--------------------|
| BH LAKE                |                    |                    | BH                     |                    |                    | BH                     |                    |                    |
| Time                   | Time               | Time               | Time                   | Time               | Time               | Time                   | Time               | Time               |
| 0800                   |                    |                    |                        |                    |                    |                        |                    |                    |
| SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                |
| /                      |                    |                    |                        |                    |                    |                        |                    |                    |
| Depth to Base          |                    |                    | Depth to Base          |                    |                    | Depth to Base          |                    |                    |
|                        |                    |                    |                        |                    |                    |                        |                    |                    |
| pH                     | pH                 | pH                 | pH                     | pH                 | pH                 | pH                     | pH                 | pH                 |
| 11.09                  |                    |                    |                        |                    |                    |                        |                    |                    |
| Temp                   | Temp               | Temp               | Temp                   | Temp               | Temp               | Temp                   | Temp               | Temp               |
| 7.2                    |                    |                    |                        |                    |                    |                        |                    |                    |
| O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   |
| 87.2                   |                    |                    |                        |                    |                    |                        |                    |                    |
| O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l |
| 11.71                  |                    |                    |                        |                    |                    |                        |                    |                    |
| Con                    | Con                | Con                | Con                    | Con                | Con                | Con                    | Con                | Con                |
| 292.4                  |                    |                    |                        |                    |                    |                        |                    |                    |
| Redox                  | Redox              | Redox              | Redox                  | Redox              | Redox              | Redox                  | Redox              | Redox              |
| 41                     |                    |                    |                        |                    |                    |                        |                    |                    |
| Colour                 | Clear              |                    | Colour                 |                    |                    | Colour                 |                    |                    |
| Clarity                | Clear              |                    | Clarity                |                    |                    | Clarity                |                    |                    |
| Solids high-medium-low | low                |                    | Solids high-medium-low |                    |                    | Solids high-medium-low |                    |                    |
| Odour                  | None.              |                    | Odour                  |                    |                    | Odour                  |                    |                    |
| BH                     |                    |                    | BH                     |                    |                    | BH                     |                    |                    |
| Time                   | Time               | Time               | Time                   | Time               | Time               | Time                   | Time               | Time               |
|                        |                    |                    |                        |                    |                    |                        |                    |                    |
| SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                |
|                        |                    |                    |                        |                    |                    |                        |                    |                    |
| Depth to Base          |                    |                    | Depth to Base          |                    |                    | Depth to Base          |                    |                    |
|                        |                    |                    |                        |                    |                    |                        |                    |                    |
| Colour                 |                    |                    | Colour                 |                    |                    | Colour                 |                    |                    |
| Clarity                |                    |                    | Clarity                |                    |                    | Clarity                |                    |                    |
| Solids high-medium-low |                    |                    | Solids high-medium-low |                    |                    | Solids high-medium-low |                    |                    |
| Odour                  |                    |                    | Odour                  |                    |                    | Odour                  |                    |                    |

Sampled by: Duncan Robertson  
 Tested by: Duncan Robertson

244  
204  
219  
508



# CONSTRUCTION TESTING & ADVISORY SERVICES LTD

Point of Ayre Borehole Sampling Sheet

Date: 5/2/22

| BH 89/10           |                    |                    | BH 89/11           |                    |                    | BH 96/4 <del>90/4</del> 70/4 |                    |                    |
|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|------------------------------|--------------------|--------------------|
| Time               | Time               | Time               | Time               | Time               | Time               | Time                         | Time               | Time               |
| 0820               | 0825               | 0830               | 0835               | 0840               | 0845               | 0900                         | 0905               | 0910               |
| SWL                | SWL                | SWL                | SWL                | SWL                | SWL                | SWL                          | SWL                | SWL                |
| 1.10               | 1.10               | 1.10               | 1.59               | 1.59               | 1.59               | 1.065                        | 1.35               | 1.30               |
| Depth to Base      |                    |                    | Depth to Base      |                    |                    | Depth to Base                |                    |                    |
| 6.60               |                    |                    | 2.50               |                    |                    | 1.35                         |                    |                    |
| pH                 | pH                 | pH                 | pH                 | pH                 | pH                 | pH                           | pH                 | pH                 |
| 9.90               | 9.54               | 10.15              | 9.88               | 9.61               | 9.80               | 10.50                        |                    |                    |
| Temp               | Temp               | Temp               | Temp               | Temp               | Temp               | Temp                         | Temp               | Temp               |
| 10.5               | 11.2               | 11.3               | 10.8               | 11.1               | 11.4               | 9.9                          |                    |                    |
| O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %             | O <sub>2</sub> %   | O <sub>2</sub> %   |
| 35.7               | 34.9               | 31.0               | 74.7               | 70.2               | 67.5               | 81.1                         |                    |                    |
| O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l           | O <sub>2</sub> g/l | O <sub>2</sub> g/l |
| 4.67               | 4.17               | 4.14               | 9.48               | 8.86               | 8.31               | 10.52                        |                    |                    |
| Con                | Con                | Con                | Con                | Con                | Con                | Con                          | Con                | Con                |
| 13520              | 1525               | 350.2              | 419.5              | 426.9              | 432.6              | 0.624                        |                    |                    |
| Redox              | Redox              | Redox              | Redox              | Redox              | Redox              | Redox                        | Redox              | Redox              |
| -108               | -180               | -112               | 49                 | 44                 | 48                 | 67                           |                    |                    |
| Colour             | Clear              |                    | Colour             | Clear              |                    | Colour                       | Clear              |                    |
| Clarity            | black pecks        |                    | Clarity            | Clear              |                    | Clarity                      | Clear              |                    |
| Solids             | high-medium-low    |                    | Solids             | high-medium-low    |                    | Solids                       | high-medium-low    |                    |
| Odour              | Methane            |                    | Odour              | None               |                    | Odour                        | None               |                    |
| BH                 |                    |                    | BH                 |                    |                    | BH 96/4                      |                    |                    |
| Time               | Time               | Time               | Time               | Time               | Time               | Time                         | Time               | Time               |
|                    |                    |                    |                    |                    |                    |                              |                    |                    |
| SWL                | SWL                | SWL                | SWL                | SWL                | SWL                | SWL                          | SWL                | SWL                |
|                    |                    |                    |                    |                    |                    |                              |                    |                    |
| Depth to Base      |                    |                    | Depth to Base      |                    |                    | Depth to Base                |                    |                    |
|                    |                    |                    |                    |                    |                    |                              |                    |                    |
| Colour             |                    |                    | Colour             |                    |                    | Colour                       |                    |                    |
| Clarity            |                    |                    | Clarity            |                    |                    | Clarity                      |                    |                    |
| Solids             | high-medium-low    |                    | Solids             | high-medium-low    |                    | Solids                       | high-medium-low    |                    |
| Odour              |                    |                    | Odour              |                    |                    | Odour                        |                    |                    |

Sampled by:

Duncan Robertson

Tested by:

Duncan Robertson

204 x1  
503 x1  
219 x2  
297 x3  
244 x1

244  
~~503~~  
204  
219  
503

244  
204  
~~503~~  
219  
297  
503



# CONSTRUCTION TESTING & ADVISORY SERVICES LTD

Point of Ayre Borehole Sampling Sheet

Date: 5/12/22

| BH 102A                |                    |                    | BH 107                 |                    |                    | BH P2a                 |                    |                    |
|------------------------|--------------------|--------------------|------------------------|--------------------|--------------------|------------------------|--------------------|--------------------|
| Time                   | Time               | Time               | Time                   | Time               | Time               | Time                   | Time               | Time               |
| 1025                   | 1037               | 1060               | 1050                   | 1058               | 1105               | 1115                   | 1124               | 1130               |
| SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                |
| 4.91                   | 4.91               | 4.91               | 6.02                   | 6.02               | 6.02               | 6.58                   | 6.58               | 6.58               |
| Depth to Base          |                    |                    | Depth to Base          |                    |                    | Depth to Base          |                    |                    |
| 9.98                   |                    |                    | 7.05                   |                    |                    | <del>17.29</del> 19.70 |                    |                    |
| pH                     | pH                 | pH                 | pH                     | pH                 | pH                 | pH                     | pH                 | pH                 |
| 8.17                   | 8.06               | 8.17               | 9.96                   | 9.73               | 9.75               | 7.86                   | 8.38               | 8.65               |
| Temp                   | Temp               | Temp               | Temp                   | Temp               | Temp               | Temp                   | Temp               | Temp               |
| 11.7                   | 12.0               | 11.8               | 11.6                   | 12.0               | 12.1               | 12.3                   | 12.3               | 12.1               |
| O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   |
| 26.0                   | 30.0               | 30.9               | 46.0                   | 54.3               | 52.0               |                        | 29.4               | 29.0               |
| O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l |
| 3.40                   | 3.45               | 3.88               | 5.57                   | 6.87               | 6.24               |                        | 3.62               | 3.33               |
| Con                    | Con                | Con                | Con                    | Con                | Con                | Con                    | Con                | Con                |
| 1.217 ms               | 1.191 ms           | 1.181 ms           | 252.7 ms               | 226.5              | 225.1              | 3.437                  | 3977               | 4.250              |
| Redox                  | Redox              | Redox              | Redox                  | Redox              | Redox              | Redox                  | Redox              | Redox              |
| -36                    | -91                | <del>88</del> 81   | 69                     | 65                 | 58                 | -145                   | -146               | -125               |
| Colour                 | Clear              |                    | Colour                 | Clear              |                    | Colour                 | Clear              |                    |
| Clarity                | Cloudy             |                    | Clarity                | Clear              |                    | Clarity                | Cloudy             |                    |
| Solids high-medium-low | low                |                    | Solids high-medium-low | low                |                    | Solids high-medium-low | low                |                    |
| Odour                  | None               |                    | Odour                  | None               |                    | Odour                  | Methane            |                    |
| BH 102b                |                    |                    | BH                     |                    |                    | BH P2b                 |                    |                    |
| Time                   | Time               | Time               | Time                   | Time               | Time               | Time                   | Time               | Time               |
| 1025                   |                    |                    |                        |                    |                    | 1115                   |                    |                    |
| SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                |
| 3.4                    |                    |                    |                        |                    |                    | 3.85                   |                    |                    |
| Depth to Base          |                    |                    | Depth to Base          |                    |                    | Depth to Base          |                    |                    |
| 4.64                   |                    |                    |                        |                    |                    | 3.85                   |                    |                    |
| Colour                 |                    |                    | Colour                 |                    |                    | Colour                 |                    |                    |
| Clarity                |                    |                    | Clarity                |                    |                    | Clarity                |                    |                    |
| Solids high-medium-low |                    |                    | Solids high-medium-low |                    |                    | Solids high-medium-low |                    |                    |
| Odour                  |                    |                    | Odour                  |                    |                    | Odour                  |                    |                    |

Sampled by: Duncan Robertson

Tested by: Duncan Robertson

244 x2  
204 x2  
219 x2  
503 x1  
297 x3

244  
204  
219 x2  
503

244  
204  
219 x2  
503



# CONSTRUCTION TESTING & ADVISORY SERVICES LTD

Point of Ayre Borehole Sampling Sheet

Date: 5/12/22

| BH 96/4 90/17          |                    |                    |                        |                    |                    | BH 1049                |                    |                    | BH 103             |                    |  |
|------------------------|--------------------|--------------------|------------------------|--------------------|--------------------|------------------------|--------------------|--------------------|--------------------|--------------------|--|
| Time                   | Time               | Time               | Time                   | Time               | Time               | Time                   | Time               | Time               | Time               | Time               |  |
| 0920                   | 0923               | 0930               | 0940                   | 0950               | 0955               | 1005                   | 1012               |                    |                    |                    |  |
| SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                | SWL                | SWL                |  |
| 1.92                   | 1.92               | 1.92               | 622                    | 621                | 621                | 7.60                   | 7.60               |                    |                    |                    |  |
| Depth to Base          |                    |                    | Depth to Base          |                    |                    | Depth to Base          |                    |                    |                    |                    |  |
| 2.30                   |                    |                    | 4.93                   |                    |                    | 12.46                  |                    |                    |                    |                    |  |
| pH                     | pH                 | pH                 | pH                     | pH                 | pH                 | pH                     | pH                 | pH                 | pH                 | pH                 |  |
| 7.85                   | 10.42              | 10.17              | 9.00                   | 8.47               | 8.49               | 8.94                   | 8.81               | 8.92               |                    |                    |  |
| Temp                   | Temp               | Temp               | Temp                   | Temp               | Temp               | Temp                   | Temp               | Temp               | Temp               | Temp               |  |
| 9.8                    | 10.6               | 10.7               | 10.7                   | 11.4               | 11.2               | 11.4                   | 11.5               | 11.4               |                    |                    |  |
| O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %   |  |
| 85.0                   | 83.7               | 83.7               | 28.5                   | 23.7               | 23.5               | 28.3                   | 28.8               | 31.8               |                    |                    |  |
| O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l |  |
| 10.91                  | 10.79              | 10.51              | 3.72                   | 2.87               | 3.02               | 3.44                   | 3.31               | 3.77               |                    |                    |  |
| Con                    | Con                | Con                | Con                    | Con                | Con                | Con                    | Con                | Con                | Con                | Con                |  |
| 7.19 µS/cm             | 210.1 µS/cm        | 209.0              | 0.846 mg/l             | 0.873 mg/l         | 0.871              | 1012 µS                | 1.030 mg/l         | 0.994              |                    |                    |  |
| Redox                  | Redox              | Redox              | Redox                  | Redox              | Redox              | Redox                  | Redox              | Redox              | Redox              | Redox              |  |
| 83                     | 91                 | 86                 | 84                     | -128               | -128               | -34                    | -142               | -81                |                    |                    |  |
| Colour                 | Clear              |                    | Colour                 | Black              |                    | Colour                 | Clear              |                    |                    |                    |  |
| Clarity                | Clear              |                    | Clarity                | Cloudy             |                    | Clarity                | Cloudy             |                    |                    |                    |  |
| Solids high-medium-low | low                |                    | Solids high-medium-low |                    |                    | Solids high-medium-low | low                |                    |                    |                    |  |
| Odour                  | None               |                    | Odour                  | Methane            |                    | Odour                  | Methane            |                    |                    |                    |  |
| BH 96/4 90/17          |                    |                    | BH 104b                |                    |                    | BH 103b                |                    |                    |                    |                    |  |
| Time                   | Time               | Time               | Time                   | Time               | Time               | Time                   | Time               | Time               | Time               | Time               |  |
|                        |                    |                    | 0940                   |                    |                    | 1000                   |                    |                    |                    |                    |  |
| SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                | SWL                | SWL                |  |
|                        |                    |                    | 4.17                   |                    |                    | 5.26                   |                    |                    |                    |                    |  |
| Depth to Base          |                    |                    | Depth to Base          |                    |                    | Depth to Base          |                    |                    |                    |                    |  |
|                        |                    |                    | 4.27                   |                    |                    | 7.60                   |                    |                    |                    |                    |  |
| Colour                 |                    |                    | Colour                 |                    |                    | Colour                 |                    |                    |                    |                    |  |
| Clarity                |                    |                    | Clarity                |                    |                    | Clarity                |                    |                    |                    |                    |  |
| Solids high-medium-low |                    |                    | Solids high-medium-low |                    |                    | Solids high-medium-low |                    |                    |                    |                    |  |
| Odour                  |                    |                    | Odour                  |                    |                    | Odour                  |                    |                    |                    |                    |  |

Sampled by: Duncan Robertson

Tested by: Duncan Robertson

244  
204  
219 x 2  
503

244  
204  
219 x 2  
503  
297 x 3

244  
204  
219 x 2  
503



# CONSTRUCTION TESTING & ADVISORY SERVICES LTD

## Point of Ayre Borehole Sampling Sheet

Date: 5/12/22

| BH 108                 |                    |                    | BH 109                 |                    |                    | BH 110                 |                    |                    |
|------------------------|--------------------|--------------------|------------------------|--------------------|--------------------|------------------------|--------------------|--------------------|
| Time                   | Time               | Time               | Time                   | Time               | Time               | Time                   | Time               | Time               |
| 1220                   | 1225               | 1230               | 1235                   |                    |                    | 1240                   | 1245               | 1250               |
| SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                |
| 4.82                   |                    |                    | 5.60                   |                    |                    | 3.75                   |                    |                    |
| Depth to Base          |                    |                    | Depth to Base          |                    |                    | Depth to Base          |                    |                    |
| 5.86                   |                    |                    | 5.77                   |                    |                    | 5.65                   |                    |                    |
| pH                     | pH                 | pH                 | pH                     | pH                 | pH                 | pH                     | pH                 | pH                 |
| 9.98                   | 10.03              | 9.67               |                        |                    |                    | 9.65                   | 7.21               | 9.62               |
| Temp                   | Temp               | Temp               | Temp                   | Temp               | Temp               | Temp                   | Temp               | Temp               |
| 11.8                   | 12.2               | 12.1               |                        |                    |                    | 12.1                   | 12.2               | 12.2               |
| O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   |
| 79.1                   | 85.0               | 89.1               |                        |                    |                    | 39.1                   | 36.0               | 34.0               |
| O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l |
| 9.91                   | 10.42              | 11.32              |                        |                    |                    | 4.77                   | 4.97               | 4.01               |
| Con                    | Con                | Con                | Con                    | Con                | Con                | Con                    | Con                | Con                |
| 323.6 μS               | 286.8              | 287.6              |                        |                    |                    | 0.530 mS               | 1.50 μS            | 0.547 mS           |
| Redox                  | Redox              | Redox              | Redox                  | Redox              | Redox              | Redox                  | Redox              | Redox              |
| 32                     | 29                 | 39                 |                        |                    |                    | -2                     |                    |                    |
| Colour                 | Clear              |                    | Colour                 | Could not Sample.  |                    | Colour                 | Clear              |                    |
| Clarity                | Clear              |                    | Clarity                |                    |                    | Clarity                | Clear              |                    |
| Solids high-medium-low | low                |                    | Solids high-medium-low |                    |                    | Solids high-medium-low | low                |                    |
| Odour                  | None               |                    | Odour                  | None               |                    | Odour                  | None               |                    |
| BH                     |                    |                    | BH                     | No Samples         |                    | BH                     |                    |                    |
| Time                   | Time               | Time               | Time                   | Time               | Time               | Time                   | Time               | Time               |
|                        |                    |                    |                        |                    |                    |                        |                    |                    |
| SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                |
|                        |                    |                    |                        |                    |                    |                        |                    |                    |
| Depth to Base          |                    |                    | Depth to Base          |                    |                    | Depth to Base          |                    |                    |
|                        |                    |                    |                        |                    |                    |                        |                    |                    |
| Colour                 |                    |                    | Colour                 |                    |                    | Colour                 |                    |                    |
| Clarity                |                    |                    | Clarity                |                    |                    | Clarity                |                    |                    |
| Solids high-medium-low |                    |                    | Solids high-medium-low |                    |                    | Solids high-medium-low |                    |                    |
| Odour                  |                    |                    | Odour                  |                    |                    | Odour                  |                    |                    |

Sampled by: Duncan Robertson  
 Tested by: Duncan Robertson

214  
 204  
 214 x 2  
 503

214  
 204  
 214 x 2  
 503

214  
 204  
 214 x 2  
 503



# CONSTRUCTION TESTING & ADVISORY SERVICES LTD

## Point of Ayre Borehole Sampling Sheet

Date: 5/12/22

| BH 101 A               |                    |                    | BH P7b                 |                    |                    | BH 9a                  |                    |                    |
|------------------------|--------------------|--------------------|------------------------|--------------------|--------------------|------------------------|--------------------|--------------------|
| Time                   | Time               | Time               | Time                   | Time               | Time               | Time                   | Time               | Time               |
| 1300                   | 1305               | 1310               | 1320                   | 1325               | 1330               | 1405                   | 1410               | 1415               |
| SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                |
| 4.51                   |                    | 4.51               | 5.71                   |                    | 5.71               | 6.79                   |                    | 6.79               |
| Depth to Base          |                    |                    | Depth to Base          |                    |                    | Depth to Base          |                    |                    |
| 11.48                  |                    |                    | 11.62                  |                    |                    | 20.24                  |                    |                    |
| pH                     | pH                 | pH                 | pH                     | pH                 | pH                 | pH                     | pH                 | pH                 |
| 9.60                   | 9.55               | 9.82               | 10.08                  | 9.62               | 9.58               | 9.60                   | 9.40               | 9.42               |
| Temp                   | Temp               | Temp               | Temp                   | Temp               | Temp               | Temp                   | Temp               | Temp               |
| 12.7                   | 12.7               | 12.7               | 11.1                   | 11.1               | 11.0               | 11.1                   | 11.0               | 10.9               |
| O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   |
| 35.0                   | 33.4               | 33.0               | 29.5                   | 28.7               | 32.9               | 31.0                   | 34.0               | 37.2               |
| O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l |
| 4.40                   | 3.87               | 3.91               | 3.50                   | 3.81               | 4.04               | 4.12                   | 4.12               | 4.42               |
| Con                    | Con                | Con                | Con                    | Con                | Con                | Con                    | Con                | Con                |
| 0.691 mg               | 0.705              | 0.684              | 416.8                  | 410.2              | 411.2              | 421.3                  | 481.3              | 448.7              |
| Redox                  | Redox              | Redox              | Redox                  | Redox              | Redox              | Redox                  | Redox              | Redox              |
| -18                    | -2                 | 3                  | 15                     | 38                 | 24                 | -7                     | -68                | -63                |
| Colour                 | Clear              |                    | Colour                 | Clear              |                    | Colour                 | Clear              |                    |
| Clarity                | Clear              |                    | Clarity                | Yel                |                    | Clarity                | Cloudy             |                    |
| Solids high-medium-low | low                |                    | Solids high-medium-low | low                |                    | Solids high-medium-low | low                |                    |
| Odour                  | None               |                    | Odour                  | None               |                    | Odour                  | None               |                    |
| BH 101 B               |                    |                    | BH                     |                    |                    | BH                     |                    |                    |
| Time                   | Time               | Time               | Time                   | Time               | Time               | Time                   | Time               | Time               |
| 1300                   |                    |                    |                        |                    |                    |                        |                    |                    |
| SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                |
| 2.2                    |                    |                    |                        |                    |                    |                        |                    |                    |
| Depth to Base          |                    |                    | Depth to Base          |                    |                    | Depth to Base          |                    |                    |
| 494                    |                    |                    |                        |                    |                    |                        |                    |                    |
| Colour                 |                    |                    | Colour                 |                    |                    | Colour                 |                    |                    |
| Clarity                |                    |                    | Clarity                |                    |                    | Clarity                |                    |                    |
| Solids high-medium-low |                    |                    | Solids high-medium-low |                    |                    | Solids high-medium-low |                    |                    |
| Odour                  | Vomit.             |                    | Odour                  |                    |                    | Odour                  |                    |                    |

Sampled by: Duncan Robertson

Tested by: Duncan Robertson

244  
204  
219x2  
503

244  
204  
219x2  
503

244  
204  
219x2  
297x3  
503



# CONSTRUCTION TESTING & ADVISORY SERVICES LTD

Point of Ayre Borehole Sampling Sheet

Date: 5/12/22

| BH 26a                 |                    |                    | BH 26b                 |                    |                    | BH 26c                 |                    |                    |
|------------------------|--------------------|--------------------|------------------------|--------------------|--------------------|------------------------|--------------------|--------------------|
| Time                   | Time               | Time               | Time                   | Time               | Time               | Time                   | Time               | Time               |
| 1500                   | 1505               | 1510               | 1445                   | 1450               | 1455               | 1430                   | 1435               | 1440               |
| SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                |
| 6.34                   | 6.34               | 6.34               | 6.34                   | 6.34               | 6.34               | 6.40                   | 6.40               | 6.60               |
| Depth to Base          |                    |                    | Depth to Base          |                    |                    | Depth to Base          |                    |                    |
| 17.90                  |                    |                    | 14.91                  |                    |                    | 8.64                   |                    |                    |
| pH                     | pH                 | pH                 | pH                     | pH                 | pH                 | pH                     | pH                 | pH                 |
| 8.68                   | 8.67               | 8.23               | 9.08                   | 8.86               | 8.78               | 8.77                   | <del>8.26</del>    | 8.79               |
| Temp                   | Temp               | Temp               | Temp                   | Temp               | Temp               | Temp                   | Temp               | Temp               |
| 11.9                   | 11.9               | 11.9               | 11.8                   | 12.1               | 11.8               | 12.2                   | <del>11.9</del>    | 12.3               |
| O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   |
| 37.2                   | 36.1               | 39.1               | 37.3                   | 38.2               | 36.0               | 30.9                   | <del>36.1</del>    | 35.0               |
| O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l |
| 4.03                   | 4.77               | 4.54               | 4.70                   | 3.85               | 4.65               | 3.90                   | <del>4.50</del>    | 4.11               |
| Con                    | Con                | Con                | Con                    | Con                | Con                | Con                    | Con <sup>m</sup>   | Con                |
| 6.24 <sub>s</sub>      | 6.28 <sub>s</sub>  | 6.03               | 3.64 <sub>s</sub>      | 3.59 <sub>s</sub>  | 3.71 <sub>s</sub>  | 26.69 <sub>s</sub>     | <del>24.5</del>    | 24.19              |
| Redox                  | Redox              | Redox              | Redox                  | Redox              | Redox              | Redox                  | Redox              | Redox              |
| -60                    | -107               |                    | -188                   | -211               | -216               | 48                     | -18                | -23                |
| Colour                 | Clear              |                    | Colour                 | Clear              |                    | Colour                 | Clear              |                    |
| Clarity                | Clear              |                    | Clarity                | Clear              |                    | Clarity                | Clear              |                    |
| Solids high-medium-low | low                |                    | Solids high-medium-low | low                |                    | Solids high-medium-low | low                |                    |
| Odour                  | None               |                    | Odour                  | None               |                    | Odour                  | None               |                    |
| BH                     |                    |                    | BH                     |                    |                    | BH                     |                    |                    |
| Time                   | Time               | Time               | Time                   | Time               | Time               | Time                   | Time               | Time               |
| SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                |
| Depth to Base          |                    |                    | Depth to Base          |                    |                    | Depth to Base          |                    |                    |
| Colour                 |                    |                    | Colour                 |                    |                    | Colour                 |                    |                    |
| Clarity                |                    |                    | Clarity                |                    |                    | Clarity                |                    |                    |
| Solids high-medium-low |                    |                    | Solids high-medium-low |                    |                    | Solids high-medium-low |                    |                    |
| Odour                  |                    |                    | Odour                  |                    |                    | Odour                  |                    |                    |

Sampled by: Duncan Robertson

Tested by: Duncan Robertson

244  
204  
219 x 2  
212

244  
204  
219 x 2  
212

244  
204  
219 x 2  
212



# CONSTRUCTION TESTING & ADVISORY SERVICES LTD

Point of Ayre Borehole Sampling Sheet **P3a**

Date: 5/12/22

| BH <del>P3a</del>      |                    |                    | BH <b>P3a</b>          |                    |                    | BH <b>P3b</b>          |                    |                    |
|------------------------|--------------------|--------------------|------------------------|--------------------|--------------------|------------------------|--------------------|--------------------|
| Time                   | Time               | Time               | Time                   | Time               | Time               | Time                   | Time               | Time               |
|                        |                    |                    | 1205                   | 1210               | 1215               | 1142                   | 1147               | 1200               |
| SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                |
|                        |                    |                    | 4.97                   | 4.97               | 4.97               | 5.10                   | 5.10               | 5.10               |
| Depth to Base          |                    |                    | Depth to Base          |                    |                    | Depth to Base          |                    |                    |
|                        |                    |                    | 10.04                  |                    |                    | 6.92                   |                    |                    |
| pH                     | pH                 | pH                 | pH                     | pH                 | pH                 | pH                     | pH                 | pH                 |
|                        |                    |                    | 9.02                   | 8.70               | 8.96               | 9.53                   | 9.70               | 9.34               |
| Temp                   | Temp               | Temp               | Temp                   | Temp               | Temp               | Temp                   | Temp               | Temp               |
|                        |                    |                    | 11.4                   | 11.5               | 11.5               | 11.0                   | 11.3               | 11.4               |
| O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   | O <sub>2</sub> %       | O <sub>2</sub> %   | O <sub>2</sub> %   |
|                        |                    |                    | 29.4                   | 25.0               | 31.1               | 29.7                   | 33.0               | 30.7               |
| O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l | O <sub>2</sub> g/l     | O <sub>2</sub> g/l | O <sub>2</sub> g/l |
|                        |                    |                    | 3.54                   | 3.38               | 3.58               | 3.91                   | 3.92               | 4.30               |
| Con                    | Con                | Con                | Con                    | Con                | Con                | Con                    | Con                | Con                |
|                        |                    |                    | 0.9172                 | 0.954              | 0.930              | 0.640                  | 0.607              | 0.634              |
| Redox                  | Redox              | Redox              | Redox                  | Redox              | Redox              | Redox                  | Redox              | Redox              |
|                        |                    |                    | -62                    | -119               | -182               | 82                     | 67                 |                    |
| Colour                 |                    |                    | Colour                 | Clear              |                    | Colour                 | Stain              |                    |
| Clarity                |                    |                    | Clarity                | Elevated           |                    | Clarity                | Clear              |                    |
| Solids high-medium-low |                    |                    | Solids high-medium-low | low                |                    | Solids high-medium-low | low                |                    |
| Odour                  |                    |                    | Odour                  | None               |                    | Odour                  | No/trace           |                    |
| BH                     |                    |                    | BH                     |                    |                    | BH                     |                    |                    |
| Time                   | Time               | Time               | Time                   | Time               | Time               | Time                   | Time               | Time               |
|                        |                    |                    |                        |                    |                    |                        |                    |                    |
| SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                | SWL                    | SWL                | SWL                |
|                        |                    |                    |                        |                    |                    |                        |                    |                    |
| Depth to Base          |                    |                    | Depth to Base          |                    |                    | Depth to Base          |                    |                    |
|                        |                    |                    |                        |                    |                    |                        |                    |                    |
| Colour                 |                    |                    | Colour                 |                    |                    | Colour                 |                    |                    |
| Clarity                |                    |                    | Clarity                |                    |                    | Clarity                |                    |                    |
| Solids high-medium-low |                    |                    | Solids high-medium-low |                    |                    | Solids high-medium-low |                    |                    |
| Odour                  |                    |                    | Odour                  |                    |                    | Odour                  |                    |                    |

Sampled by: Duncan Robertson  
 Tested by: Duncan Robertson

244  
 204  
 216 x 2  
 297 x 3  
 503

244  
 204  
 216 x 2  
 503

244  
 204  
 216 x 2  
 503

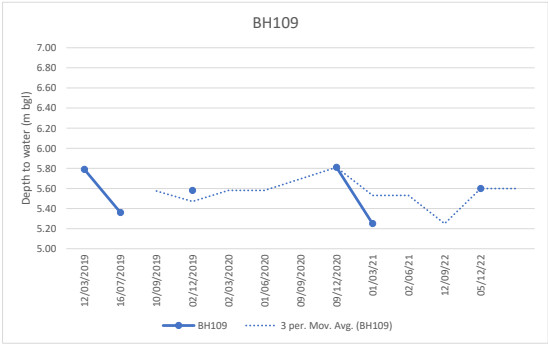
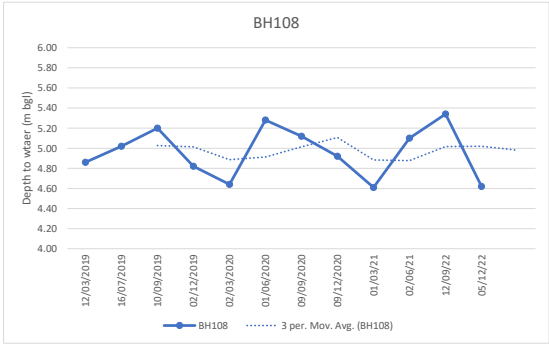
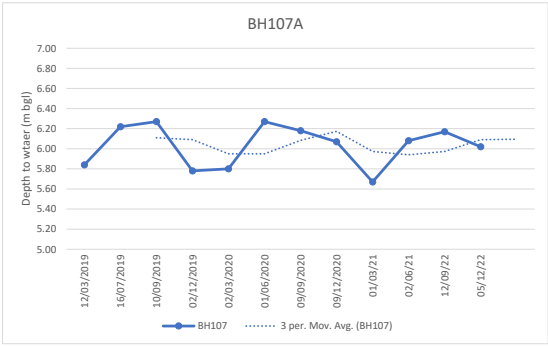
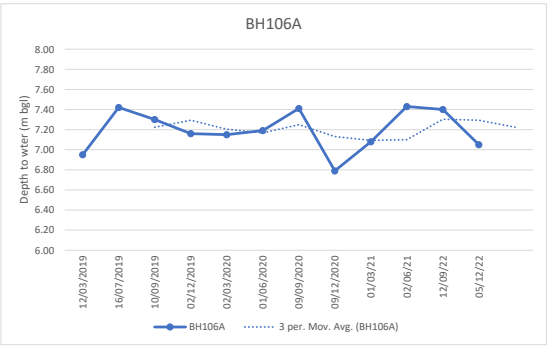
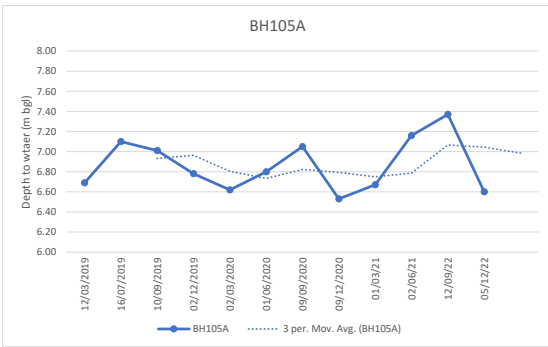
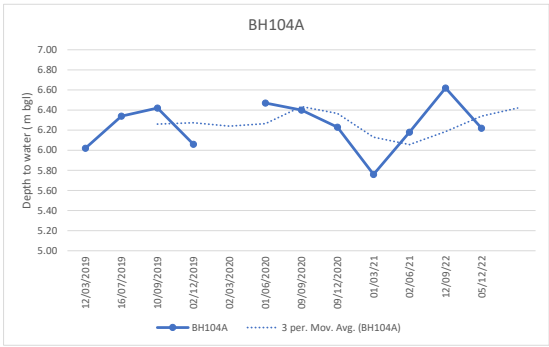
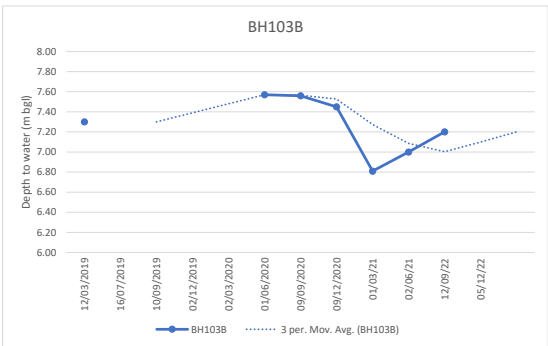
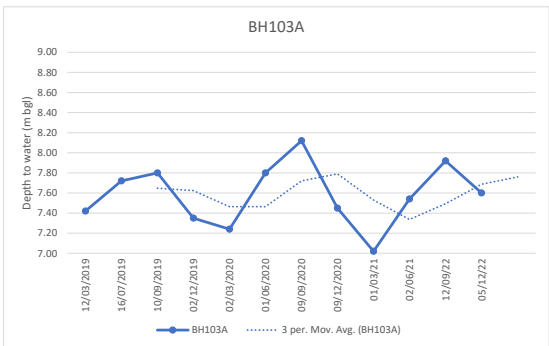
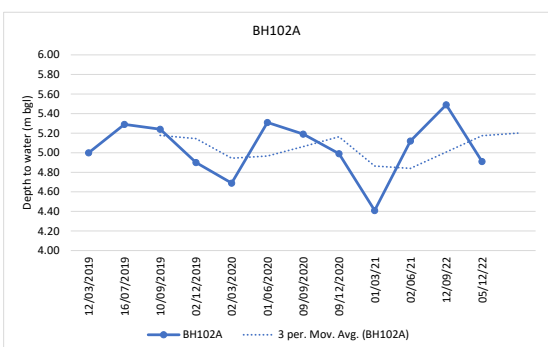
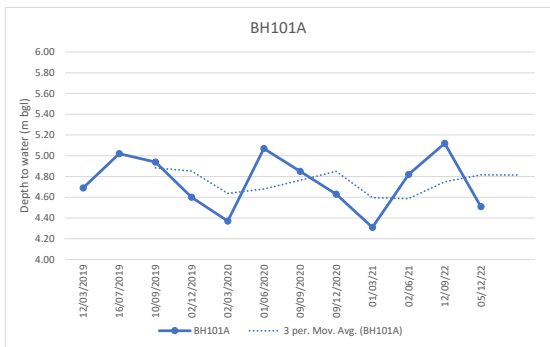
P3b

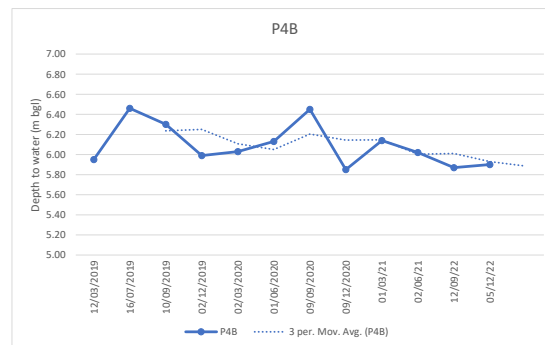
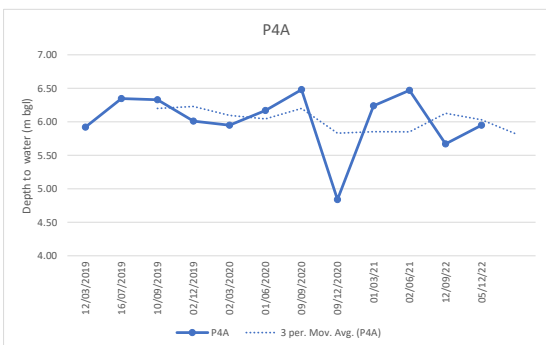
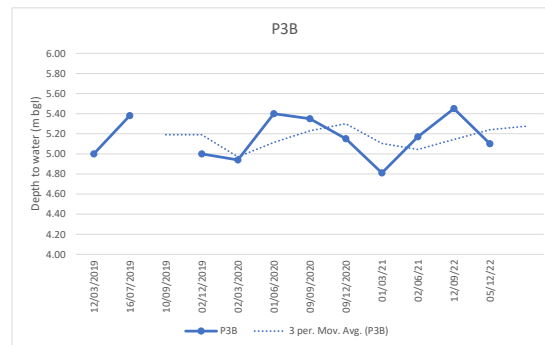
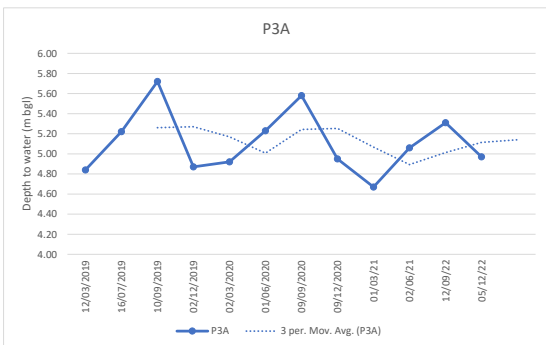
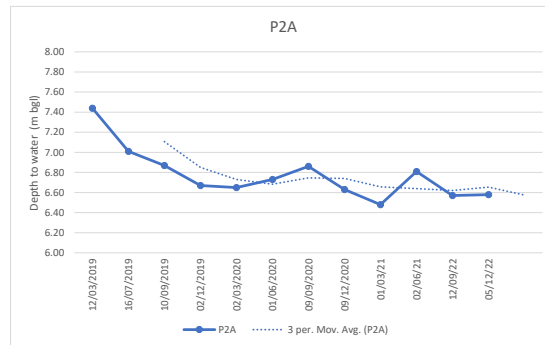
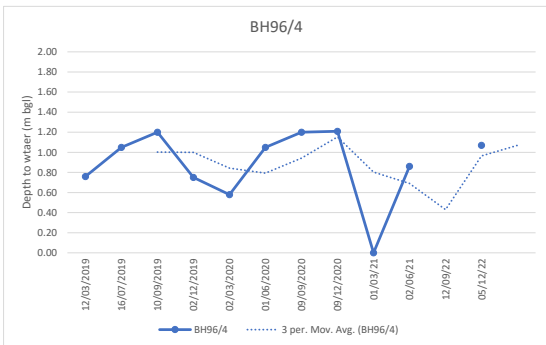
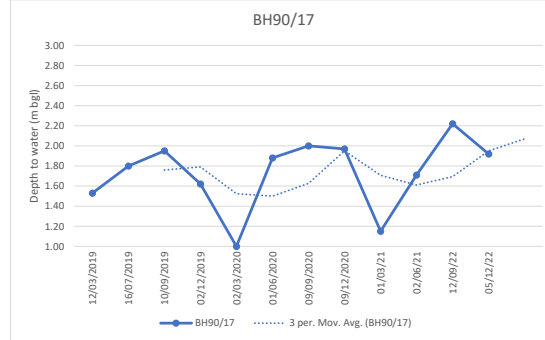
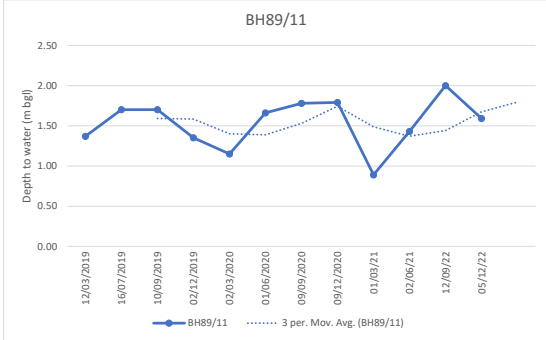
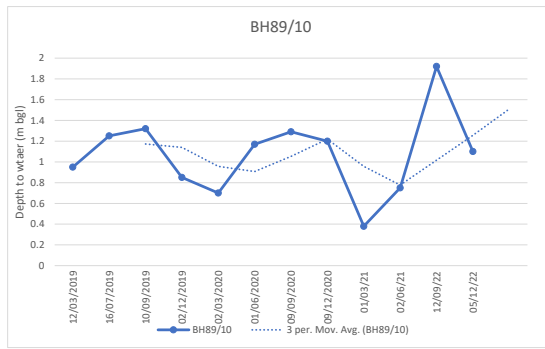
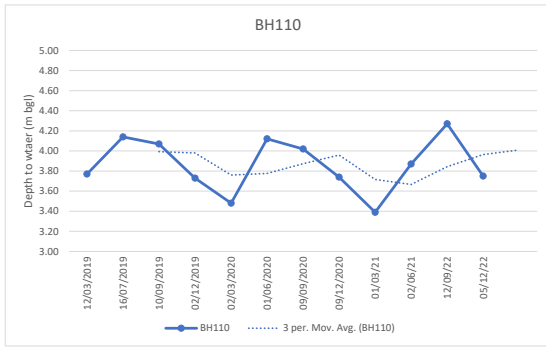


# APPENDIX C

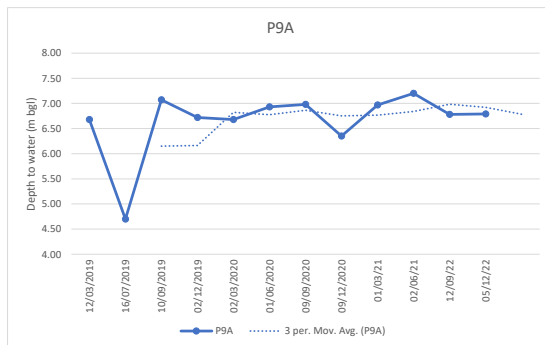
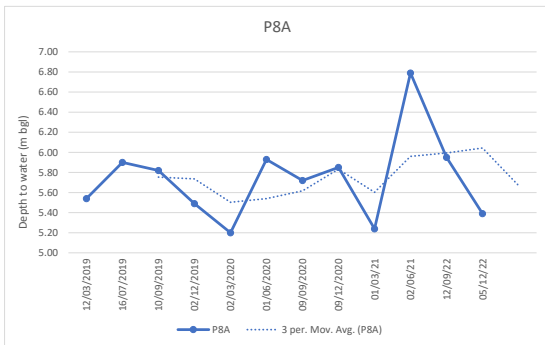
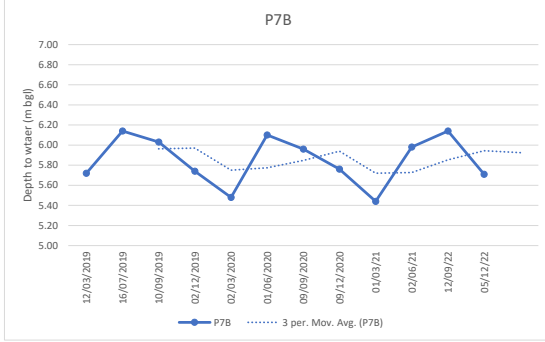
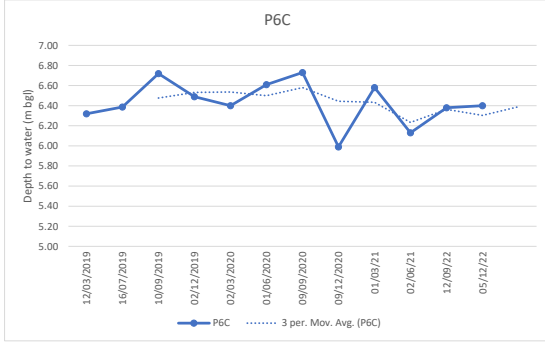
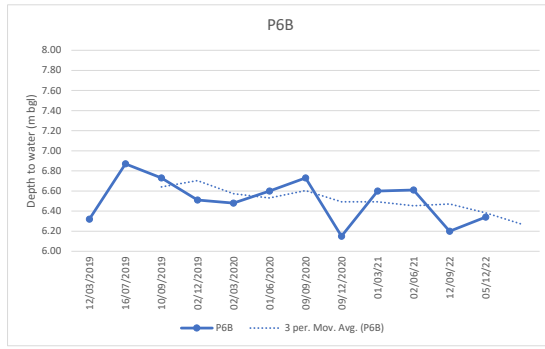
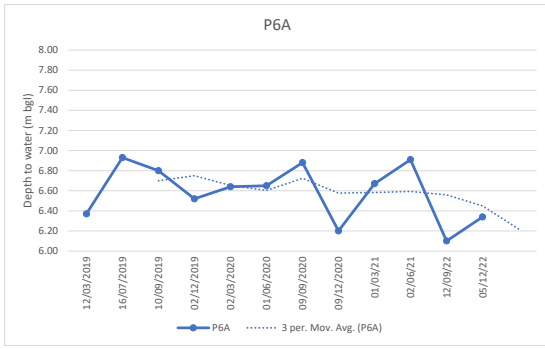
## GROUNDWATER LEVEL PLOTS

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# APPENDIX D

## LABORATORY CERTIFICATES

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## ALS September 2022 Laboratory Certificates



Unit 7-8 Hawarden Business Park  
Manor Road (off Manor Lane)  
Hawarden  
Deeside  
CH5 3US

Tel: (01244) 528777

email: hawardencustomerservices@alsglobal.com

Website: www.alsenvironmental.co.uk

Concept Site Investigations  
Unit 8  
Warple Mews  
Warple Way  
London  
W3 0RF

**Attention:** Daniel Freeland

## CERTIFICATE OF ANALYSIS

**Date of report Generation:** 27 September 2022  
**Customer:** Concept Site Investigations  
**Sample Delivery Group (SDG):** 220915-96  
**Your Reference:** 22/3748  
**Location:** Point of Ayre, Isle of Man  
**Report No:** 662608  
**Order Number:** CL4121

We received 22 samples on Thursday September 15, 2022 and 22 of these samples were scheduled for analysis which was completed on Tuesday September 27, 2022. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.

Incorrect sampling dates and/or sample information will affect the validity of results.

The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

**Sonia McWhan**

Operations Manager





# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

## Received Sample Overview

| Lab Sample No(s) | Customer Sample Ref. | AGS Ref. | Depth (m) | Sampled Date |
|------------------|----------------------|----------|-----------|--------------|
| 26881763         | 107                  |          |           | 12/09/2022   |
| 26881765         | 108                  |          |           | 12/09/2022   |
| 26881766         | 110                  |          |           | 12/09/2022   |
| 26881767         | 89/10                |          |           | 12/09/2022   |
| 26881768         | 89/11                |          |           | 12/09/2022   |
| 26881754         | 101A                 |          |           | 12/09/2022   |
| 26881756         | 102A                 |          |           | 12/09/2022   |
| 26881757         | 103A                 |          |           | 12/09/2022   |
| 26881758         | 104A                 |          |           | 12/09/2022   |
| 26881761         | 105A                 |          |           | 12/09/2022   |
| 26881762         | 106A                 |          |           | 12/09/2022   |
| 26881779         | LAKE                 |          |           | 12/09/2022   |
| 26881769         | P2A                  |          |           | 12/09/2022   |
| 26881770         | P3A                  |          |           | 12/09/2022   |
| 26881771         | P4A                  |          |           | 12/09/2022   |
| 26881773         | P6A                  |          |           | 12/09/2022   |
| 26881777         | P8A                  |          |           | 12/09/2022   |
| 26881778         | P9A                  |          |           | 12/09/2022   |
| 26881772         | P4B                  |          |           | 12/09/2022   |
| 26881774         | P6B                  |          |           | 12/09/2022   |
| 26881776         | P7B                  |          |           | 12/09/2022   |
| 26881775         | P6C                  |          |           | 12/09/2022   |

Only received samples which have had analysis scheduled will be shown on the following pages.



# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

| Results Legend | Lab Sample No(s)   |  | Customer Sample Reference |  | AGS Reference |  | Depth (m) |  | Container |  |  |  |  |  |  |  |  |  |  |  | Sample Type |
|----------------|--|--|---------------------------|--|---------------|--|-----------|--|-----------|--|--|--|--|--|--|--|--|--|--|--|-------------|
|                | <div style="display: flex; flex-direction: column; gap: 5px;"> <div style="background-color: yellow; border: 1px solid black; padding: 2px; display: inline-block;">X</div> Test</div> <div style="background-color: red; color: white; border: 1px solid black; padding: 2px; display: inline-block;">N</div> No Determination Possible |  |                           |  |               |  |           |  |           |  |  |  |  |  |  |  |  |  |  |  |             |











# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

| Results Legend                     | Lab Sample No(s) |                             | Customer Sample Reference |          | AGS Reference |      | Depth (m) |  | Container      |                        |                          |               |               |                                  |                    |                        |                |                        |                          |               | Sample Type   |                                  |                    |                        |                |                        |                          |               |               |             |
|------------------------------------|------------------|-----------------------------|---------------------------|----------|---------------|------|-----------|--|----------------|------------------------|--------------------------|---------------|---------------|----------------------------------|--------------------|------------------------|----------------|------------------------|--------------------------|---------------|---------------|----------------------------------|--------------------|------------------------|----------------|------------------------|--------------------------|---------------|---------------|-------------|
|                                    | X Test           | N No Determination Possible | 26881754                  | 26881756 | 101A          | 102A |           |  | H2SO4 (ALE244) | HNO3 Filtered (ALE204) | HNO3 Unfiltered (ALE204) | NaOH (ALE245) | Vial (ALE297) | 250ml Amber GI. PTFE/PE (ALE219) | 250ml BOD (ALE112) | 500ml Plastic (ALE208) | H2SO4 (ALE244) | HNO3 Filtered (ALE204) | HNO3 Unfiltered (ALE204) | NaOH (ALE245) | Vial (ALE297) | 250ml Amber GI. PTFE/PE (ALE219) | 250ml BOD (ALE112) | 500ml Plastic (ALE208) | H2SO4 (ALE244) | HNO3 Filtered (ALE204) | HNO3 Unfiltered (ALE204) | NaOH (ALE245) | Vial (ALE297) | Sample Type |
| Alkalinity as CaCO3                | All              | NDPs: 0<br>Tests: 21        |                           |          |               |      |           |  |                |                        |                          |               |               |                                  |                    | X                      |                |                        |                          |               |               |                                  |                    |                        |                | X                      |                          |               |               | GW          |
| Ammoniacal Nitrogen                | All              | NDPs: 0<br>Tests: 22        | X                         |          |               |      |           |  |                |                        |                          |               |               |                                  |                    |                        | X              |                        |                          |               |               |                                  |                    |                        |                |                        | X                        |               |               | GW          |
| Anions by Kone (w)                 | All              | NDPs: 0<br>Tests: 22        |                           |          |               |      |           |  |                |                        |                          |               |               |                                  | X                  |                        |                |                        |                          |               |               |                                  |                    |                        |                | X                      |                          |               |               | GW          |
| BOD True Total                     | All              | NDPs: 0<br>Tests: 22        |                           |          |               |      |           |  |                |                        |                          |               |               | X                                |                    |                        |                |                        |                          |               |               |                                  |                    |                        |                | X                      |                          |               |               | GW          |
| COD Unfiltered                     | All              | NDPs: 0<br>Tests: 22        |                           |          |               |      |           |  |                |                        |                          |               |               | X                                |                    |                        |                |                        |                          |               |               |                                  |                    |                        |                | X                      |                          |               |               | GW          |
| Dissolved Metals by ICP-MS         | All              | NDPs: 0<br>Tests: 22        | X                         |          |               |      |           |  |                |                        |                          |               |               |                                  |                    |                        |                | X                      |                          |               |               |                                  |                    |                        |                |                        | X                        |               |               | GW          |
| Dissolved Organic/Inorganic Carbon | All              | NDPs: 0<br>Tests: 21        |                           |          |               |      |           |  |                |                        |                          |               | X             |                                  |                    |                        |                |                        |                          |               |               |                                  |                    |                        |                | X                      |                          |               |               | GW          |
| EPH CWG (Aliphatic) Aqueous GC (W) | All              | NDPs: 0<br>Tests: 20        |                           |          |               |      |           |  |                |                        |                          |               | X             |                                  |                    |                        |                |                        |                          |               |               |                                  |                    |                        |                | X                      |                          |               |               | GW          |
| EPH CWG (Aromatic) Aqueous GC (W)  | All              | NDPs: 0<br>Tests: 20        |                           |          |               |      |           |  |                |                        |                          |               | X             |                                  |                    |                        |                |                        |                          |               |               |                                  |                    |                        |                | X                      |                          |               |               | GW          |
| Fluoride                           | All              | NDPs: 0<br>Tests: 21        |                           |          |               |      |           |  |                |                        |                          |               |               |                                  | X                  |                        |                |                        |                          |               |               |                                  |                    |                        |                | X                      |                          |               |               | GW          |
| GRO by GC-FID (W)                  | All              | NDPs: 0<br>Tests: 21        |                           |          |               |      |           |  |                |                        |                          | X             |               |                                  |                    |                        |                |                        |                          |               |               |                                  |                    |                        |                | X                      |                          |               |               | GW          |
| Mercury Dissolved                  | All              | NDPs: 0<br>Tests: 22        | X                         |          |               |      |           |  |                |                        |                          |               |               |                                  |                    |                        |                | X                      |                          |               |               |                                  |                    |                        |                |                        | X                        |               |               | GW          |
| Nitrite by Kone (w)                | All              | NDPs: 0<br>Tests: 22        |                           |          |               |      |           |  |                |                        |                          | X             |               |                                  |                    |                        |                |                        |                          |               |               |                                  |                    |                        |                | X                      |                          |               |               | GW          |
| PAH Spec MS - Aqueous (W)          | All              | NDPs: 0<br>Tests: 20        |                           |          |               |      |           |  |                |                        |                          |               |               | X                                |                    |                        |                |                        |                          |               |               |                                  |                    |                        |                | X                      |                          |               |               | GW          |
| PCB Congeners - Aqueous (W)        | All              | NDPs: 0<br>Tests: 20        |                           |          |               |      |           |  |                |                        |                          |               |               | X                                |                    |                        |                |                        |                          |               |               |                                  |                    |                        |                | X                      |                          |               |               | GW          |

















# CERTIFICATE OF ANALYSIS

Validated

**SDG:** 220915-96  
**Client Ref.:** 22/3748

**Report Number:** 662608  
**Location:** Point of Ayre, Isle of Man

**Superseded Report:**

| Results Legend         | Lab Sample No(s)          |                          | 26881762               |                |                        |                   |                                  |               |               |                          |                        |                | 26881779               | 26881769          |                                  |               |               |                          |                        |                |                        |                   |                                  |               |   |
|------------------------|---------------------------|--------------------------|------------------------|----------------|------------------------|-------------------|----------------------------------|---------------|---------------|--------------------------|------------------------|----------------|------------------------|-------------------|----------------------------------|---------------|---------------|--------------------------|------------------------|----------------|------------------------|-------------------|----------------------------------|---------------|---|
|                        | Customer Sample Reference |                          | 106A                   |                |                        |                   |                                  |               |               |                          |                        |                | LAKE                   | P2A               |                                  |               |               |                          |                        |                |                        |                   |                                  |               |   |
| AGS Reference          |                           |                          |                        |                |                        |                   |                                  |               |               |                          |                        |                |                        |                   |                                  |               |               |                          |                        |                |                        |                   |                                  |               |   |
| Depth (m)              |                           |                          |                        |                |                        |                   |                                  |               |               |                          |                        |                |                        |                   |                                  |               |               |                          |                        |                |                        |                   |                                  |               |   |
| Container              |                           | HNO3 Unfiltered (ALE204) | HNO3 Filtered (ALE204) | H2SO4 (ALE244) | 500ml Plastic (ALE208) | 250ml BOD (ALE12) | 250ml Amber GI. PTFE/PE (ALE219) | Vial (ALE297) | NaOH (ALE245) | HNO3 Unfiltered (ALE204) | HNO3 Filtered (ALE204) | H2SO4 (ALE244) | 500ml Plastic (ALE208) | 250ml BOD (ALE12) | 250ml Amber GI. PTFE/PE (ALE219) | Vial (ALE297) | NaOH (ALE245) | HNO3 Unfiltered (ALE204) | HNO3 Filtered (ALE204) | H2SO4 (ALE244) | 500ml Plastic (ALE208) | 250ml BOD (ALE12) | 250ml Amber GI. PTFE/PE (ALE219) | Vial (ALE297) |   |
| Sample Type            |                           | GW                       | GW                     | GW             | SW                     | SW                | SW                               | SW            | SW            | SW                       | SW                     | SW             | SW                     | SW                | SW                               | SW            | SW            | SW                       | SW                     | SW             | SW                     | SW                | SW                               | SW            |   |
| Phosphate by Kone (w)  | All                       | NDPs: 0<br>Tests: 21     |                        |                |                        |                   |                                  |               |               |                          |                        |                | X                      |                   |                                  |               |               |                          |                        |                |                        |                   |                                  | X             |   |
| Sulphide               | All                       | NDPs: 0<br>Tests: 21     |                        |                |                        |                   |                                  |               |               |                          |                        |                | X                      |                   |                                  |               |               |                          |                        |                |                        |                   |                                  | X             |   |
| Suspended Solids       | All                       | NDPs: 1<br>Tests: 20     |                        |                |                        |                   |                                  |               |               |                          |                        |                | X                      |                   |                                  |               |               |                          |                        |                |                        |                   |                                  | X             |   |
| SVOC MS (W) - Aqueous  | All                       | NDPs: 1<br>Tests: 21     |                        |                |                        |                   |                                  | X             |               |                          |                        |                |                        |                   |                                  |               |               |                          |                        |                |                        |                   |                                  | X             |   |
| Total Metals by ICP-MS | All                       | NDPs: 0<br>Tests: 22     |                        |                | X                      |                   |                                  |               |               |                          |                        |                |                        |                   |                                  |               |               |                          |                        | X              |                        |                   |                                  |               | X |
| Total Nitrogen         | All                       | NDPs: 0<br>Tests: 21     |                        |                |                        |                   |                                  |               |               |                          |                        |                | X                      |                   |                                  |               |               |                          |                        |                |                        |                   |                                  | X             |   |
| TPH CWG (W)            | All                       | NDPs: 0<br>Tests: 20     |                        |                |                        |                   |                                  |               |               |                          |                        |                |                        |                   | X                                |               |               |                          |                        |                |                        |                   |                                  | X             |   |
| VOC MS (W)             | All                       | NDPs: 0<br>Tests: 22     |                        |                |                        |                   |                                  |               | X             |                          |                        |                |                        |                   |                                  |               |               |                          |                        |                |                        |                   |                                  | X             |   |





# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

| Results Legend                     | Lab Sample No(s) |                             | Customer Sample Reference |          | AGS Reference |     | Depth (m) |     | Container                |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        | Sample Type        |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |             |    |
|------------------------------------|------------------|-----------------------------|---------------------------|----------|---------------|-----|-----------|-----|--------------------------|------------------------|----------------|------------------------|--------------------|----------------------------------|---------------|---------------|--------------------------|------------------------|----------------|------------------------|--------------------|----------------------------------|---------------|---------------|--------------------------|------------------------|----------------|------------------------|--------------------|----------------------------------|---------------|---------------|-------------|----|
|                                    | X Test           | N No Determination Possible | 26881773                  | 26881777 | 26881778      | P8A | P8A       | P8A | HNO3 Unfiltered (ALE204) | HNO3 Filtered (ALE204) | H2SO4 (ALE244) | 500ml Plastic (ALE208) | 250ml BOD (ALE212) | 250ml Amber GI. PTFE/PE (ALE219) | Vial (ALE297) | NaOH (ALE245) | HNO3 Unfiltered (ALE204) | HNO3 Filtered (ALE204) | H2SO4 (ALE244) | 500ml Plastic (ALE208) | 250ml BOD (ALE212) | 250ml Amber GI. PTFE/PE (ALE219) | Vial (ALE297) | NaOH (ALE245) | HNO3 Unfiltered (ALE204) | HNO3 Filtered (ALE204) | H2SO4 (ALE244) | 500ml Plastic (ALE208) | 250ml BOD (ALE212) | 250ml Amber GI. PTFE/PE (ALE219) | Vial (ALE297) | NaOH (ALE245) | Sample Type |    |
| Alkalinity as CaCO3                | All              | NDPs: 0<br>Tests: 21        |                           |          |               |     |           |     |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |             | GW |
| Ammoniacal Nitrogen                | All              | NDPs: 0<br>Tests: 22        | X                         |          |               |     |           |     |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |             | GW |
| Anions by Kone (w)                 | All              | NDPs: 0<br>Tests: 22        |                           |          |               |     |           |     |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |             | GW |
| BOD True Total                     | All              | NDPs: 0<br>Tests: 22        |                           |          |               |     |           |     |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |             | GW |
| COD Unfiltered                     | All              | NDPs: 0<br>Tests: 22        |                           |          |               |     |           |     |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |             | GW |
| Dissolved Metals by ICP-MS         | All              | NDPs: 0<br>Tests: 22        | X                         |          |               |     |           |     |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |             | GW |
| Dissolved Organic/Inorganic Carbon | All              | NDPs: 0<br>Tests: 21        |                           |          |               |     |           |     |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |             | GW |
| EPH CWG (Aliphatic) Aqueous GC (W) | All              | NDPs: 0<br>Tests: 20        |                           |          |               |     |           |     |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |             | GW |
| EPH CWG (Aromatic) Aqueous GC (W)  | All              | NDPs: 0<br>Tests: 20        |                           |          |               |     |           |     |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |             | GW |
| Fluoride                           | All              | NDPs: 0<br>Tests: 21        |                           |          |               |     |           |     |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |             | GW |
| GRO by GC-FID (W)                  | All              | NDPs: 0<br>Tests: 21        |                           |          |               |     |           |     |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |             | GW |
| Mercury Dissolved                  | All              | NDPs: 0<br>Tests: 22        | X                         |          |               |     |           |     |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |             | GW |
| Nitrite by Kone (w)                | All              | NDPs: 0<br>Tests: 22        |                           |          |               |     |           |     |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |             | GW |
| PAH Spec MS - Aqueous (W)          | All              | NDPs: 0<br>Tests: 20        |                           |          |               |     |           |     |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |             | GW |
| PCB Congeners - Aqueous (W)        | All              | NDPs: 0<br>Tests: 20        |                           |          |               |     |           |     |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |                          |                        |                |                        |                    |                                  |               |               |             | GW |







|          |     |  |  |                                  |    |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|----------|-----|--|--|----------------------------------|----|---|--|--|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 26881776 | P7B |  |  | HNO3 Filtered (ALE204)           | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | H2SO4 (ALE244)                   | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | 500ml Plastic (ALE208)           | GW | X |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | 250ml BOD (ALE212)               | GW | X |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | 250ml Amber Gl. PTFE/PE (ALE219) | GW |   |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | Vial (ALE297)                    | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | NaOH (ALE245)                    | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | HNO3 Unfiltered (ALE204)         | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | HNO3 Filtered (ALE204)           | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | H2SO4 (ALE244)                   | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 26881774 | P6B |  |  | 500ml Plastic (ALE208)           | GW | X |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | 250ml BOD (ALE212)               | GW | X |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | 250ml Amber Gl. PTFE/PE (ALE219) | GW |   |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | Vial (ALE297)                    | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | NaOH (ALE245)                    | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | HNO3 Unfiltered (ALE204)         | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | HNO3 Filtered (ALE204)           | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | H2SO4 (ALE244)                   | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | 500ml Plastic (ALE208)           | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | 250ml BOD (ALE212)               | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 26881772 | P4B |  |  | 250ml Amber Gl. PTFE/PE (ALE219) | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | Vial (ALE297)                    | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | NaOH (ALE245)                    | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | HNO3 Unfiltered (ALE204)         | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | HNO3 Filtered (ALE204)           | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | H2SO4 (ALE244)                   | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | 500ml Plastic (ALE208)           | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | 250ml BOD (ALE212)               | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | 250ml Amber Gl. PTFE/PE (ALE219) | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | Vial (ALE297)                    | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 26881778 | P9A |  |  | 500ml Plastic (ALE208)           | GW | X |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | Vial (ALE297)                    | GW | X |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | NaOH (ALE245)                    | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | HNO3 Unfiltered (ALE204)         | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | HNO3 Filtered (ALE204)           | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | H2SO4 (ALE244)                   | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | 500ml Plastic (ALE208)           | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | Vial (ALE297)                    | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  | NaOH (ALE245)                    | GW |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |     |  |  |                                  |    |   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |



# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

| Results Legend   | Lab Sample No(s)          |                          |               |               |                                  |                   |                        |                |                        |               |               |   |
|--|---------------------------|--------------------------|---------------|---------------|----------------------------------|-------------------|------------------------|----------------|------------------------|---------------|---------------|---|
|  | Customer Sample Reference |                          |               |               |                                  |                   |                        |                |                        |               |               |   |
|  | AGS Reference             |                          |               |               |                                  |                   |                        |                |                        |               |               |   |
| Sample Types -<br>S - Soil/Solid<br>UNS - Unspecified Solid<br>GW - Ground Water<br>SW - Surface Water<br>LE - Land Leachate<br>PL - Prepared Leachate<br>PR - Process Water<br>SA - Saline Water<br>TE - Trade Effluent<br>TS - Treated Sewage<br>US - Untreated Sewage<br>RE - Recreational Water<br>DW - Drinking Water Non-regulatory<br>UNL - Unspecified Liquid<br>SL - Sludge<br>G - Gas<br>OTH - Other | Depth (m)                 |                          |               |               |                                  |                   |                        |                |                        |               |               |   |
|  | Container                 | HNO3 Unfiltered (ALE204) | NaOH (ALE245) | Vial (ALE297) | 250ml Amber GI. PTFE/PE (ALE219) | 250ml BOD (ALE12) | 500ml Plastic (ALE208) | H2SO4 (ALE244) | HNO3 Filtered (ALE204) | NaOH (ALE245) | Vial (ALE297) |   |
|  | Sample Type               | GW                       | GW            | GW            | GW                               | GW                | GW                     | GW             | GW                     | GW            | GW            |   |
| Alkalinity as CaCO3  | All                       | NDPs: 0<br>Tests: 21     |               |               |                                  |                   | X                      |                |                        |               |               |   |
| Ammoniacal Nitrogen  | All                       | NDPs: 0<br>Tests: 22     |               |               |                                  |                   |                        | X              |                        |               |               |   |
| Anions by Kone (w)   | All                       | NDPs: 0<br>Tests: 22     |               |               |                                  |                   | X                      |                |                        |               |               |   |
| BOD True Total   | All                       | NDPs: 0<br>Tests: 22     |               |               |                                  | X                 |                        |                |                        |               |               |   |
| COD Unfiltered   | All                       | NDPs: 0<br>Tests: 22     |               |               |                                  | X                 |                        |                |                        |               |               |   |
| Dissolved Metals by ICP-MS   | All                       | NDPs: 0<br>Tests: 22     |               |               |                                  |                   |                        |                | X                      |               |               |   |
| Dissolved Organic/Inorganic Carbon   | All                       | NDPs: 0<br>Tests: 21     |               |               | X                                |                   |                        |                |                        |               |               |   |
| EPH CWG (Aliphatic) Aqueous GC (W)   | All                       | NDPs: 0<br>Tests: 20     |               |               | X                                |                   |                        |                |                        |               |               |   |
| EPH CWG (Aromatic) Aqueous GC (W)  | All                       | NDPs: 0<br>Tests: 20     |               |               | X                                |                   |                        |                |                        |               |               |   |
| Fluoride   | All                       | NDPs: 0<br>Tests: 21     |               |               |                                  |                   | X                      |                |                        |               |               |   |
| GRO by GC-FID (W)  | All                       | NDPs: 0<br>Tests: 21     |               | X             |                                  |                   |                        |                |                        |               |               | X |
| Mercury Dissolved  | All                       | NDPs: 0<br>Tests: 22     |               |               |                                  |                   |                        |                | X                      |               |               |   |
| Nitrite by Kone (w)  | All                       | NDPs: 0<br>Tests: 22     | X             |               |                                  |                   |                        |                |                        |               | X             |   |
| PAH Spec MS - Aqueous (W)  | All                       | NDPs: 0<br>Tests: 20     |               |               | X                                |                   |                        |                |                        |               |               |   |
| PCB Congeners - Aqueous (W)  | All                       | NDPs: 0<br>Tests: 20     |               |               | X                                |                   |                        |                |                        |               |               |   |





# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

| Results Legend   |             | Customer Sample Ref.  | 107   | 108   | 110   | 89/10   | 89/11   | 101A   |
|--|-------------|---|---|---|---|---|---|--|
| # ISO17025 accredited.<br>M mCERTS accredited.<br>aq Aqueous / settled sample.<br>diss.filt Dissolved / filtered sample.<br>tot.unfilt Total / unfiltered sample.<br>* Subcontracted - refer to subcontractor report for accreditation status.<br>** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery<br>(F) Trigger breach confirmed<br>1-4*# Sample deviation (see appendix) |             | Depth (m)<br>Sample Type<br>Date Sampled<br>Sample Time<br>Date Received<br>SDG Ref<br>Lab Sample No.(s)<br>AGS Reference | 107<br>Ground Water (GW)<br>12/09/2022<br>15/09/2022<br>220915-96<br>26881763 | 108<br>Ground Water (GW)<br>12/09/2022<br>15/09/2022<br>220915-96<br>26881765 | 110<br>Ground Water (GW)<br>12/09/2022<br>15/09/2022<br>220915-96<br>26881766 | 89/10<br>Ground Water (GW)<br>12/09/2022<br>15/09/2022<br>220915-96<br>26881767 | 89/11<br>Ground Water (GW)<br>12/09/2022<br>15/09/2022<br>220915-96<br>26881768 | 101A<br>Ground Water (GW)<br>12/09/2022<br>15/09/2022<br>220915-96<br>26881754 |
| Component  | LOD/Units   | Method  |   |   |   |   |   |  |
| Suspended solids, Total  | <2 mg/l     | TM022   | 2.2   |   | 73.1  | 11.3  | <2  | 43.3   |
| Alkalinity, Total as CaCO3   | <2 mg/l     | TM043   | 424   |   | 311   | 175   | 232   | 324  |
| BOD, unfiltered  | <1 mg/l     | TM045   | 5.16  | 3.65  | <1  | 5.35  | <1  | 7.28   |
| Carbon, Organic (diss.filt)  | <3 mg/l     | TM090   | 7.02  |   | 3.87  | <3  | 4.9   | 4.25   |
| Ammoniacal Nitrogen as N   | <0.2 mg/l   | TM099   | 11.6  | <0.2  | <0.2  | 4.21  | <0.2  | <0.2   |
| Sulphide   | <0.01 mg/l  | TM101   | <0.01   |   | <0.01   | <0.01   | <0.01   | <0.01  |
| Fluoride   | <0.5 mg/l   | TM104   | <0.5  |   | <0.5  | <0.5  | <0.5  | <0.5   |
| COD, unfiltered  | <7 mg/l     | TM107   | 27.6  | 20.9  | 43.1  | 35.3  | 16  | 33.4   |
| Arsenic (diss.filt)  | <0.5 µg/l   | TM152   | 2.35  | <0.5  | 4.73  | 0.95  | 1.62  | 0.75   |
| Cadmium (diss.filt)  | <0.08 µg/l  | TM152   | <0.08   | <0.08   | <0.08   | <0.08   | <0.08   | <0.08  |
| Chromium (diss.filt)   | <1 µg/l     | TM152   | <1  | <1  | <1  | <1  | <1  | <1   |
| Copper (diss.filt)   | <0.3 µg/l   | TM152   | 2.42  | 0.854   | 1.08  | <0.3  | 3.03  | 1.43   |
| Lead (diss.filt)   | <0.2 µg/l   | TM152   | <0.2  | <0.2  | <0.2  | <0.2  | 0.393   | <0.2   |
| Manganese (diss.filt)  | <3 µg/l     | TM152   | 2120  | 18.2  | 902   | 36.6  | 27.3  | 502  |
| Phosphorus (tot.unfilt)  | <20 µg/l    | TM152   | <20   | 81  | 124   | 981   | 31.9  | 90   |
| Nickel (diss.filt)   | <0.4 µg/l   | TM152   | 5.29  | 0.627   | 2.83  | 1   | 1.52  | 2.74   |
| Zinc (diss.filt)   | <1 µg/l     | TM152   | 15.1  | 1.55  | 5.41  | 2.28  | 9.57  | 7.41   |
| Sodium (Dis.Filt)  | <0.076 mg/l | TM152   | 51.5  | 31.1  | 29  | 14.3  | 26.8  | 41.6   |
| Magnesium (Dis.Filt)   | <0.036 mg/l | TM152   | 23.7  | 13  | 14.7  | 9.41  | 9.73  | 22.1   |
| Potassium (Dis.Filt)   | <0.2 mg/l   | TM152   | 14.4  | 2.22  | 3.71  | 2.96  | 3.27  | 5.68   |
| Calcium (Dis.Filt)   | <0.2 mg/l   | TM152   | 108   | 84.9  | 100   | 61.2  | 82  | 153  |
| Iron (Dis.Filt)  | <0.019 mg/l | TM152   | 0.907   | <0.019  | 0.167   | 0.0834  | <0.019  | <0.019   |
| Hardness, Total as CaCO3 unfiltered  | <0.35 mg/l  | TM152   | 383   | 301   | 357   | 206   | 253   | 535  |
| Mercury (diss.filt)  | <0.01 µg/l  | TM183   | <0.01   | <0.01   | <0.01   | <0.01   | <0.01   | <0.01  |
| Nitrite as NO2   | <0.05 mg/l  | TM184   | <0.05   | <0.05   | <0.05   | <0.05   | <0.05   | <0.05  |
| Phosphate (Ortho as PO4)   | <0.05 mg/l  | TM184   | <0.05   |   | <0.05   | 1.92  | <0.05   | <0.05  |
| Sulphate   | <2 mg/l     | TM184   | 12.4  | 8.3   | 13.2  | 19.2  | 2.8   | 182  |
| Chloride   | <2 mg/l     | TM184   | 82.6  | 48  | 54.5  | 29.9  | 48.3  | 63   |
| Nitrate as NO3   | <0.3 mg/l   | TM184   | 4.65  | 35.3  | 0.543   | 15.2  | 7.33  | 3.32   |
| PCB congener 28  | <0.015 µg/l | TM197   | <0.015  |   | <0.015  | <0.015  | <0.015  | <0.015   |
| PCB congener 52  | <0.015 µg/l | TM197   | <0.015  |   | <0.015  | <0.015  | <0.015  | <0.015   |
| PCB congener 101   | <0.015 µg/l | TM197   | <0.015  |   | <0.015  | <0.015  | <0.015  | <0.015   |
| PCB congener 118   | <0.015 µg/l | TM197   | <0.015  |   | <0.015  | <0.015  | <0.015  | <0.015   |







# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

| Results Legend   |             | Customer Sample Ref.  | 102A   | 103A   | 104A   | 105A   | 106A   | LAKE  |
|--|-------------|---|--|--|--|--|--|---|
| # ISO17025 accredited.<br>M mCERTS accredited.<br>aq Aqueous / settled sample.<br>diss.filt Dissolved / filtered sample.<br>tot.unfilt Total / unfiltered sample.<br>* Subcontracted - refer to subcontractor report for accreditation status.<br>** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery<br>(F) Trigger breach confirmed<br>1-4*\$@ Sample deviation (see appendix) |             | Depth (m)<br>Sample Type<br>Date Sampled<br>Sample Time<br>Date Received<br>SDG Ref<br>Lab Sample No.(s)<br>AGS Reference | Ground Water (GW)<br>12/09/2022<br><br>15/09/2022<br>220915-96<br>26881756 | Ground Water (GW)<br>12/09/2022<br><br>15/09/2022<br>220915-96<br>26881757 | Ground Water (GW)<br>12/09/2022<br><br>15/09/2022<br>220915-96<br>26881758 | Ground Water (GW)<br>12/09/2022<br><br>15/09/2022<br>220915-96<br>26881761 | Ground Water (GW)<br>12/09/2022<br><br>15/09/2022<br>220915-96<br>26881762 | Surface Water (SW)<br>12/09/2022<br><br>15/09/2022<br>220915-96<br>26881779 |
| Component  | LOD/Units   | Method  |  |  |  |  |  |   |
| Suspended solids, Total  | <2 mg/l     | TM022   | 702 #  | 143 #  | 322 #  | 58.5 #   | 119 #  | 22  |
| Alkalinity, Total as CaCO3   | <2 mg/l     | TM043   | 910 #  | 621 #  | 490 #  | 1040 #   | 575 #  | 74.6  |
| BOD, unfiltered  | <1 mg/l     | TM045   | <5 @ #   | 5.38 @ #   | 66.4 @ #   | 3.78 @ #   | <5 @ #   | 8.92 @  |
| Carbon, Organic (diss.filt)  | <3 mg/l     | TM090   | 17.8   | 12.5   | 12.3   | 20.1   | 11   | 9.2   |
| Ammoniacal Nitrogen as N   | <0.2 mg/l   | TM099   | 48.7 #   | 49 #   | 32.3 #   | 115 #  | 41.8 #   | <0.2  |
| Sulphide   | <0.01 mg/l  | TM101   | <0.01 2 #  | <0.01 2 #  | 0.0159 2 #   | <0.01 2 #  | <0.01 2 #  | <0.01 2   |
| Fluoride   | <0.5 mg/l   | TM104   | <0.5 #   | <0.5 #   | <0.5 #   | <0.5 #   | <0.5 #   | <0.5  |
| COD, unfiltered  | <7 mg/l     | TM107   | 167 #  | 73.9 #   | 234 #  | 71.5 #   | 50.2 #   | 45.8  |
| Arsenic (diss.filt)  | <0.5 µg/l   | TM152   | 132 #  | 136 #  | 8.42 #   | 51.3 #   | 203 #  | 7.52  |
| Cadmium (diss.filt)  | <0.08 µg/l  | TM152   | <0.08 #  | <0.08 #  | <0.08 #  | <0.08 #  | <0.08 #  | <0.08   |
| Chromium (diss.filt)   | <1 µg/l     | TM152   | <1 #   | <1 #   | 1.08 #   | 1.29 #   | 1.39 #   | <1  |
| Copper (diss.filt)   | <0.3 µg/l   | TM152   | 1.07 #   | 1.42 #   | 1.62 #   | 0.562 #  | 0.527 #  | 3.11  |
| Lead (diss.filt)   | <0.2 µg/l   | TM152   | <0.2 #   | <0.2 #   | <0.2 #   | <0.2 #   | <0.2 #   | <0.2  |
| Manganese (diss.filt)  | <3 µg/l     | TM152   | 454 #  | 921 #  | 1320 #   | 1090 #   | 1080 #   | 22.1  |
| Phosphorus (tot.unfilt)  | <20 µg/l    | TM152   | 643 #  | 278 #  | 3450 #   | 87.6 #   | 209 #  | 175   |
| Nickel (diss.filt)   | <0.4 µg/l   | TM152   | 5.13 #   | 5.57 #   | 4.26 #   | 7.1 #  | 5.01 #   | 1.43  |
| Zinc (diss.filt)   | <1 µg/l     | TM152   | 7.24 #   | 17.5 #   | 20.9 #   | 9.77 #   | 8.79 #   | 17.4  |
| Sodium (Dis.Filt)  | <0.076 mg/l | TM152   | 68.4 #   | 82.1 #   | 53.8 #   | 93.9 #   | 86.5 #   | 30.5  |
| Magnesium (Dis.Filt)   | <0.036 mg/l | TM152   | 28.6 #   | 31.5 #   | 23.9 #   | 40.4 #   | 31.1 #   | 11  |
| Potassium (Dis.Filt)   | <0.2 mg/l   | TM152   | 43.7 #   | 37.9 #   | 15.4 #   | 63.1 #   | 34.5 #   | 2.14  |
| Calcium (Dis.Filt)   | <0.2 mg/l   | TM152   | 204 #  | 105 #  | 106 #  | 140 #  | 115 #  | 20  |
| Iron (Dis.Filt)  | <0.019 mg/l | TM152   | 25.2 #   | 15.4 #   | 13.4 #   | 15.6 #   | 46.4 #   | 0.055   |
| Hardness, Total as CaCO3 unfiltered  | <0.35 mg/l  | TM152   | 724  | 419  | 369  | 533  | 420  | 105   |
| Mercury (diss.filt)  | <0.01 µg/l  | TM183   | <0.01 #  | <0.01 #  | <0.01 #  | <0.01 #  | <0.01 #  | <0.01   |
| Nitrite as NO2   | <0.05 mg/l  | TM184   | <0.05 #  | 0.422 #  | <0.05 #  | <0.05 #  | <0.05 #  | <0.05   |
| Phosphate (Ortho as PO4)   | <0.05 mg/l  | TM184   | <0.05 #  | <0.05 #  | <0.05 #  | <0.05 #  | <0.05 #  | <0.05   |
| Sulphate   | <2 mg/l     | TM184   | 23.6 #   | 18.2 #   | 12.8 #   | 5.5 #  | 26 #   | 23.1  |
| Chloride   | <2 mg/l     | TM184   | 87.4 #   | 107 #  | 79.5 #   | 98.1 #   | 139 #  | 54.3  |
| Nitrate as NO3   | <0.3 mg/l   | TM184   | <0.3 #   | 11.1 #   | <0.3 #   | 6.17 #   | 3.3 #  | 9.38  |
| PCB congener 28  | <0.015 µg/l | TM197   | <0.015   | <0.015   | <0.015   | <0.015   | <0.015   | <0.015  |
| PCB congener 52  | <0.015 µg/l | TM197   | <0.015   | <0.015   | <0.015   | <0.015   | <0.015   | <0.015  |
| PCB congener 101   | <0.015 µg/l | TM197   | <0.015   | <0.015   | <0.015   | <0.015   | <0.015   | <0.015  |
| PCB congener 118   | <0.015 µg/l | TM197   | <0.015   | <0.015   | <0.015   | <0.015   | <0.015   | <0.015  |



CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96
Client Ref.: 22/3748

Report Number: 662608
Location: Point of Ayre, Isle of Man

Superseded Report:

Table with columns for Results Legend, Customer Sample Ref., 102A, 103A, 104A, 105A, 106A, LAKE. Rows include PCB congeners (138, 153, 180), Sum of detected EC7 PCB's, Nitrogen, Total, and multiple empty rows.



# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

| Results Legend   |             | Customer Sample Ref.  | P2A                             | P3A                             | P4A                             | P6A                             | P8A                             | P9A                             |
|--|-------------|---|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| # ISO17025 accredited.<br>M mCERTS accredited.<br>aq Aqueous / settled sample.<br>diss.filt Dissolved / filtered sample.<br>tot.unfilt Total / unfiltered sample.<br>* Subcontracted - refer to subcontractor report for accreditation status.<br>** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery<br>(F) Trigger breach confirmed<br>1-4*# Sample deviation (see appendix) |             | Depth (m)<br>Sample Type<br>Date Sampled<br>Sample Time<br>Date Received<br>SDG Ref<br>Lab Sample No.(s)<br>AGS Reference | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 |
| Component  | LOD/Units   | Method  |                                 |                                 |                                 |                                 |                                 |                                 |
| Suspended solids, Total  | <2 mg/l     | TM022   | 68.5                            | 77.3                            | 37.3                            | 15.8                            | 41.5                            | 111                             |
| Alkalinity, Total as CaCO3   | <2 mg/l     | TM043   | 187                             | 562                             | 543                             | 828                             | 213                             | 373                             |
| BOD, unfiltered  | <1 mg/l     | TM045   | 8.96                            | <5                              | <3                              | 2.86                            | <10                             | <1                              |
| Carbon, Organic (diss.filt)  | <3 mg/l     | TM090   | 16.3                            | 9.41                            | 13.4                            | 14.4                            | 19.5                            | 4.05                            |
| Ammoniacal Nitrogen as N   | <0.2 mg/l   | TM099   | 4.56                            | 37.9                            | 31.9                            | 55.8                            | 24.7                            | 0.296                           |
| Sulphide   | <0.01 mg/l  | TM101   | <0.01                           | <0.01                           | <0.01                           | <0.01                           | <0.01                           | <0.01                           |
| Fluoride   | <0.5 mg/l   | TM104   | <0.5                            | <0.5                            | <0.5                            | <0.5                            | <0.5                            | <0.5                            |
| COD, unfiltered  | <7 mg/l     | TM107   | 210                             | 51                              | 39.6                            | 113                             | 78.4                            | 13.8                            |
| Arsenic (diss.filt)  | <0.5 µg/l   | TM152   | 9.8                             | 114                             | 119                             | 5.2                             | 1.26                            | 2.05                            |
| Cadmium (diss.filt)  | <0.08 µg/l  | TM152   | <0.08                           | <0.08                           | <0.08                           | <0.08                           | <0.08                           | <0.08                           |
| Chromium (diss.filt)   | <1 µg/l     | TM152   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| Copper (diss.filt)   | <0.3 µg/l   | TM152   | <0.3                            | <0.3                            | 0.317                           | 1.51                            | 1.76                            | 0.646                           |
| Lead (diss.filt)   | <0.2 µg/l   | TM152   | <0.2                            | <0.2                            | <0.2                            | 0.268                           | 0.321                           | <0.2                            |
| Manganese (diss.filt)  | <3 µg/l     | TM152   | 529                             | 1290                            | 968                             | 715                             | 65.7                            | 86.9                            |
| Phosphorus (tot.unfilt)  | <20 µg/l    | TM152   | 1560                            | 289                             | 77                              | 68.6                            | 3520                            | 226                             |
| Nickel (diss.filt)   | <0.4 µg/l   | TM152   | 1.81                            | 2.29                            | 5.19                            | 22                              | 2.12                            | 2.57                            |
| Zinc (diss.filt)   | <1 µg/l     | TM152   | 4.9                             | 7.27                            | 7.77                            | 3.08                            | 8.24                            | 6.33                            |
| Sodium (Dis.Filt)  | <0.076 mg/l | TM152   | 609                             | 78.1                            | 68.4                            | 1120                            | 25.4                            | 54.5                            |
| Magnesium (Dis.Filt)   | <0.036 mg/l | TM152   | 104                             | 27.2                            | 28.4                            | 239                             | 6.76                            | 26.5                            |
| Potassium (Dis.Filt)   | <0.2 mg/l   | TM152   | 18.4                            | 32.4                            | 28.7                            | 81.5                            | 13.4                            | 2.26                            |
| Calcium (Dis.Filt)   | <0.2 mg/l   | TM152   | 328                             | 97.7                            | 104                             | 226                             | 47.9                            | 94.6                            |
| Iron (Dis.Filt)  | <0.019 mg/l | TM152   | 0.589                           | 13.4                            | 15.6                            | 1.68                            | 0.387                           | 0.288                           |
| Hardness, Total as CaCO3 unfiltered  | <0.35 mg/l  | TM152   | 1310                            | 403                             | 431                             | 1680                            | 156                             | 392                             |
| Mercury (diss.filt)  | <0.01 µg/l  | TM183   | <0.01                           | <0.01                           | <0.01                           | <0.01                           | <0.01                           | <0.01                           |
| Nitrite as NO2   | <0.05 mg/l  | TM184   | <0.05                           | <0.05                           | <0.05                           | <0.05                           | <0.05                           | <0.05                           |
| Phosphate (Ortho as PO4)   | <0.05 mg/l  | TM184   | 1.93                            | <0.05                           | <0.05                           | <0.05                           | 9.03                            | 0.091                           |
| Sulphate   | <2 mg/l     | TM184   | 193                             | 9.3                             | 14.6                            | 319                             | 4.7                             | 40.6                            |
| Chloride   | <2 mg/l     | TM184   | 1670                            | 117                             | 104                             | 2660                            | 54.7                            | 53.6                            |
| Nitrate as NO3   | <0.3 mg/l   | TM184   | 8.2                             | 9.38                            | 0.547                           | 0.759                           | 3.93                            | 0.788                           |
| PCB congener 28  | <0.015 µg/l | TM197   | <0.015                          | <0.015                          | <0.015                          | <0.015                          | <0.015                          | <0.015                          |
| PCB congener 52  | <0.015 µg/l | TM197   | <0.015                          | <0.015                          | <0.015                          | <0.015                          | <0.015                          | <0.015                          |
| PCB congener 101   | <0.015 µg/l | TM197   | <0.015                          | <0.015                          | <0.015                          | <0.015                          | <0.015                          | <0.015                          |
| PCB congener 118   | <0.015 µg/l | TM197   | <0.015                          | <0.015                          | <0.015                          | <0.015                          | <0.015                          | <0.015                          |





# CERTIFICATE OF ANALYSIS

Validated

**SDG:** 220915-96  
**Client Ref.:** 22/3748

**Report Number:** 662608  
**Location:** Point of Ayre, Isle of Man

**Superseded Report:**

| Results Legend   |             | Customer Sample Ref.  | P4B                             | P6B                             | P7B                             | P6C                             |  |
|--|-------------|---|---------------------------------|---------------------------------|---------------------------------|---------------------------------|--|
| # ISO17025 accredited.<br>M mCERTS accredited.<br>aq Aqueous / settled sample.<br>diss.filt Dissolved / filtered sample.<br>tot.unfilt Total / unfiltered sample.<br>* Subcontracted - refer to subcontractor report for accreditation status.<br>** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery<br>(F) Trigger breach confirmed<br>1-4*\$@ Sample deviation (see appendix) |             | Depth (m)<br>Sample Type<br>Date Sampled<br>Sample Time<br>Date Received<br>SDG Ref<br>Lab Sample No.(s)<br>AGS Reference | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 |  |
| Component  | LOD/Units   | Method  |                                 |                                 |                                 |                                 |  |
| Suspended solids, Total  | <2 mg/l     | TM022   |                                 | 83.8                            | 7.05                            | 21.4                            |  |
| Alkalinity, Total as CaCO3   | <2 mg/l     | TM043   | 618                             | 942                             | 230                             | 939                             |  |
| BOD, unfiltered  | <1 mg/l     | TM045   | 274                             | 3.2                             | 2.36                            | 3.77                            |  |
| Carbon, Organic (diss.filt)  | <3 mg/l     | TM090   | 13.1 @                          | 21.5 @                          | <3 @                            | 19.9 @                          |  |
| Ammoniacal Nitrogen as N   | <0.2 mg/l   | TM099   | 41.3                            | 87.3                            | <0.2                            | 84                              |  |
| Sulphide   | <0.01 mg/l  | TM101   | 0.935 <sub>2</sub>              | <0.01 <sub>2</sub>              | <0.01 <sub>2</sub>              | <0.01 <sub>2</sub>              |  |
| Fluoride   | <0.5 mg/l   | TM104   | <0.5                            | <0.5                            | <0.5                            | <0.5                            |  |
| COD, unfiltered  | <7 mg/l     | TM107   | 1090                            | 173                             | 14.5                            | 96.4                            |  |
| Arsenic (diss.filt)  | <0.5 µg/l   | TM152   | 187                             | 26.7                            | 0.759                           | 17.2                            |  |
| Cadmium (diss.filt)  | <0.08 µg/l  | TM152   | <0.08                           | <0.08                           | <0.08                           | <0.08                           |  |
| Chromium (diss.filt)   | <1 µg/l     | TM152   | <1                              | <1                              | <1                              | <1                              |  |
| Copper (diss.filt)   | <0.3 µg/l   | TM152   | 2.07                            | <0.3                            | 1.9                             | 1.06                            |  |
| Lead (diss.filt)   | <0.2 µg/l   | TM152   | <0.2                            | <0.2                            | <0.2                            | <0.2                            |  |
| Manganese (diss.filt)  | <3 µg/l     | TM152   | 1050                            | 1130                            | 122                             | 2720                            |  |
| Phosphorus (tot.unfilt)  | <20 µg/l    | TM152   | 9240                            | 113                             | 34.3                            | 40.6 <sub>2</sub>               |  |
| Nickel (diss.filt)   | <0.4 µg/l   | TM152   | 12.4                            | 20                              | 1.75                            | 15                              |  |
| Zinc (diss.filt)   | <1 µg/l     | TM152   | 13.8                            | 1.73                            | 9.58                            | 3.38                            |  |
| Sodium (Dis.Filt)  | <0.076 mg/l | TM152   | 75.2                            | 723                             | 30.6                            | 280                             |  |
| Magnesium (Dis.Filt)   | <0.036 mg/l | TM152   | 30.9                            | 126                             | 16.2                            | 66.6                            |  |
| Potassium (Dis.Filt)   | <0.2 mg/l   | TM152   | 34.2                            | 72.2                            | 2.86                            | 63.1                            |  |
| Calcium (Dis.Filt)   | <0.2 mg/l   | TM152   | 127                             | 200                             | 86.6                            | 196                             |  |
| Iron (Dis.Filt)  | <0.019 mg/l | TM152   | 9.82                            | 15.4                            | 0.0212                          | 6.17                            |  |
| Hardness, Total as CaCO3 unfiltered  | <0.35 mg/l  | TM152   | 537                             | 1070                            | 294                             | 793 <sub>2</sub>                |  |
| Mercury (diss.filt)  | <0.01 µg/l  | TM183   | <0.01                           | <0.01                           | <0.01                           | <0.01                           |  |
| Nitrite as NO2   | <0.05 mg/l  | TM184   | 0.152                           | <0.05                           | <0.05                           | <0.05                           |  |
| Phosphate (Ortho as PO4)   | <0.05 mg/l  | TM184   | 0.308                           | <0.05                           | <0.05                           | <0.05                           |  |
| Sulphate   | <2 mg/l     | TM184   | 50.7                            | 179                             | 33.5                            | 68.7                            |  |
| Chloride   | <2 mg/l     | TM184   | 112                             | 1460                            | 51.4                            | 598                             |  |
| Nitrate as NO3   | <0.3 mg/l   | TM184   | 18.7                            | 2.52                            | 16.8                            | 4.57                            |  |
| PCB congener 28  | <0.015 µg/l | TM197   |                                 | <0.015                          | <0.015                          | <0.015                          |  |
| PCB congener 52  | <0.015 µg/l | TM197   |                                 | <0.015                          | <0.015                          | <0.015                          |  |
| PCB congener 101   | <0.015 µg/l | TM197   |                                 | <0.015                          | <0.015                          | <0.015                          |  |
| PCB congener 118   | <0.015 µg/l | TM197   |                                 | <0.015                          | <0.015                          | <0.015                          |  |









# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

## PAH Spec MS - Aqueous (W)

| Results Legend                    |  |        | Customer Sample Ref. | 107               | 110          | 89/10       | 89/11         | 101A    | 102A              |               |
|-----------------------------------|--|--------|----------------------|-------------------|--------------|-------------|---------------|---------|-------------------|---------------|
| #                                 | ISO17025 accredited.   |        |                      |                   |              |             |               |         |                   |               |
| M                                 | mCERTS accredited.   |        |                      |                   |              |             |               |         |                   |               |
| aq                                | Aqueous / settled sample.  |        |                      |                   |              |             |               |         |                   |               |
| diss.filt                         | Dissolved / filtered sample.   |        |                      |                   |              |             |               |         |                   |               |
| tot.unfilt                        | Total / unfiltered sample.   |        |                      |                   |              |             |               |         |                   |               |
| *                                 | Subcontracted - refer to subcontractor report for accreditation status.  |        |                      |                   |              |             |               |         |                   |               |
| **                                | % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery |        |                      |                   |              |             |               |         |                   |               |
| (F)                               | Trigger breach confirmed   |        |                      |                   |              |             |               |         |                   |               |
| 1-4*\$@                           | Sample deviation (see appendix)  |        |                      |                   |              |             |               |         |                   |               |
| Component                         | LOD/Units  | Method | Depth (m)            | Sample Type       | Date Sampled | Sample Time | Date Received | SDG Ref | Lab Sample No.(s) | AGS Reference |
| Naphthalene (aq)                  | <0.01 µg/l   | TM178  |                      | Ground Water (GW) | 12/09/2022   |             |               |         | 26881763          |               |
| Acenaphthene (aq)                 | <0.005 µg/l  | TM178  |                      | Ground Water (GW) | 12/09/2022   |             |               |         | 26881766          |               |
| Acenaphthylene (aq)               | <0.005 µg/l  | TM178  |                      | Ground Water (GW) | 12/09/2022   |             |               |         | 26881767          |               |
| Fluoranthene (aq)                 | <0.005 µg/l  | TM178  |                      | Ground Water (GW) | 12/09/2022   |             |               |         | 26881768          |               |
| Anthracene (aq)                   | <0.005 µg/l  | TM178  |                      | Ground Water (GW) | 12/09/2022   |             |               |         | 26881754          |               |
| Phenanthrene (aq)                 | <0.005 µg/l  | TM178  |                      | Ground Water (GW) | 12/09/2022   |             |               |         | 26881756          |               |
| Fluorene (aq)                     | <0.005 µg/l  | TM178  |                      | Ground Water (GW) | 12/09/2022   |             |               |         |                   |               |
| Chrysene (aq)                     | <0.005 µg/l  | TM178  |                      | Ground Water (GW) | 12/09/2022   |             |               |         |                   |               |
| Pyrene (aq)                       | <0.005 µg/l  | TM178  |                      | Ground Water (GW) | 12/09/2022   |             |               |         |                   |               |
| Benzo(a)anthracene (aq)           | <0.005 µg/l  | TM178  |                      | Ground Water (GW) | 12/09/2022   |             |               |         |                   |               |
| Benzo(b)fluoranthene (aq)         | <0.005 µg/l  | TM178  |                      | Ground Water (GW) | 12/09/2022   |             |               |         |                   |               |
| Benzo(k)fluoranthene (aq)         | <0.005 µg/l  | TM178  |                      | Ground Water (GW) | 12/09/2022   |             |               |         |                   |               |
| Benzo(a)pyrene (aq)               | <0.002 µg/l  | TM178  |                      | Ground Water (GW) | 12/09/2022   |             |               |         |                   |               |
| Dibenzo(a,h)anthracene (aq)       | <0.005 µg/l  | TM178  |                      | Ground Water (GW) | 12/09/2022   |             |               |         |                   |               |
| Benzo(g,h,i)perylene (aq)         | <0.005 µg/l  | TM178  |                      | Ground Water (GW) | 12/09/2022   |             |               |         |                   |               |
| Indeno(1,2,3-cd)pyrene (aq)       | <0.005 µg/l  | TM178  |                      | Ground Water (GW) | 12/09/2022   |             |               |         |                   |               |
| PAH, Total Detected USEPA 16 (aq) | <0.082 µg/l  | TM178  |                      | Ground Water (GW) | 12/09/2022   |             |               |         |                   |               |



# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

## PAH Spec MS - Aqueous (W)

| Results Legend                    |  |        | Customer Sample Ref.  | 103A                            | 104A                            | 105A                            | 106A                            | LAKE                             | P2A                             |
|-----------------------------------|--|--------|---|---------------------------------|---------------------------------|---------------------------------|---------------------------------|----------------------------------|---------------------------------|
| #                                 | ISO17025 accredited.   |        | Depth (m)<br>Sample Type<br>Date Sampled<br>Sample Time<br>Date Received<br>SDG Ref<br>Lab Sample No.(s)<br>AGS Reference | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 | Surface Water (SW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 |
| M                                 | mCERTS accredited.   |        |   |                                 |                                 |                                 |                                 |                                  |                                 |
| aq                                | Aqueous / settled sample.  |        |   |                                 |                                 |                                 |                                 |                                  |                                 |
| diss.filt                         | Dissolved / filtered sample.   |        |   |                                 |                                 |                                 |                                 |                                  |                                 |
| tot.unfilt                        | Total / unfiltered sample.   |        |   |                                 |                                 |                                 |                                 |                                  |                                 |
| *                                 | Subcontracted - refer to subcontractor report for accreditation status.  |        |   |                                 |                                 |                                 |                                 |                                  |                                 |
| **                                | % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery |        |   |                                 |                                 |                                 |                                 |                                  |                                 |
| (F)                               | Trigger breach confirmed   |        |   |                                 |                                 |                                 |                                 |                                  |                                 |
| 1-4*§                             | Sample deviation (see appendix)  |        |   |                                 |                                 |                                 |                                 |                                  |                                 |
| Component                         | LOD/Units  | Method |   |                                 |                                 |                                 |                                 |                                  |                                 |
| Naphthalene (aq)                  | <0.01 µg/l   | TM178  | 0.049   | 0.0611                          | 0.55                            | 0.0166                          | <0.01                           | <0.01                            |                                 |
|                                   |  |        | #   | #                               | #                               | #                               |                                 |                                  |                                 |
| Acenaphthene (aq)                 | <0.005 µg/l  | TM178  | 0.0436  | 0.0955                          | 0.288                           | 0.0239                          | <0.005                          | <0.005                           |                                 |
|                                   |  |        | #   | #                               | #                               | #                               |                                 |                                  |                                 |
| Acenaphthylene (aq)               | <0.005 µg/l  | TM178  | <0.005  | <0.005                          | 0.0077                          | <0.005                          | <0.005                          | <0.005                           |                                 |
|                                   |  |        | #   | #                               | #                               | #                               |                                 |                                  |                                 |
| Fluoranthene (aq)                 | <0.005 µg/l  | TM178  | 0.035   | 0.0298                          | <0.005                          | <0.005                          | <0.005                          | <0.005                           |                                 |
|                                   |  |        | #   | #                               | #                               | #                               |                                 |                                  |                                 |
| Anthracene (aq)                   | <0.005 µg/l  | TM178  | <0.005  | 0.0083                          | <0.005                          | <0.005                          | <0.005                          | <0.005                           |                                 |
|                                   |  |        | #   | #                               | #                               | #                               |                                 |                                  |                                 |
| Phenanthrene (aq)                 | <0.005 µg/l  | TM178  | 0.0297  | 0.0431                          | 0.0622                          | 0.015                           | <0.005                          | <0.005                           |                                 |
|                                   |  |        | #   | #                               | #                               | #                               |                                 |                                  |                                 |
| Fluorene (aq)                     | <0.005 µg/l  | TM178  | <0.005  | 0.0849                          | 0.129                           | 0.0165                          | <0.005                          | <0.005                           |                                 |
|                                   |  |        | #   | #                               | #                               | #                               |                                 |                                  |                                 |
| Chrysene (aq)                     | <0.005 µg/l  | TM178  | 0.0134  | 0.0115                          | <0.005                          | <0.005                          | <0.005                          | <0.005                           |                                 |
|                                   |  |        | #   | #                               | #                               | #                               |                                 |                                  |                                 |
| Pyrene (aq)                       | <0.005 µg/l  | TM178  | 0.0427  | 0.0425                          | <0.005                          | 0.0092                          | <0.005                          | <0.005                           |                                 |
|                                   |  |        | #   | #                               | #                               | #                               |                                 |                                  |                                 |
| Benzo(a)anthracene (aq)           | <0.005 µg/l  | TM178  | 0.00857   | 0.0052                          | <0.005                          | <0.005                          | <0.005                          | <0.005                           |                                 |
|                                   |  |        | #   | #                               | #                               | #                               |                                 |                                  |                                 |
| Benzo(b)fluoranthene (aq)         | <0.005 µg/l  | TM178  | 0.0212  | 0.0102                          | <0.005                          | <0.005                          | <0.005                          | <0.005                           |                                 |
|                                   |  |        | #   | #                               | #                               | #                               |                                 |                                  |                                 |
| Benzo(k)fluoranthene (aq)         | <0.005 µg/l  | TM178  | 0.0135  | 0.0086                          | <0.005                          | <0.005                          | <0.005                          | <0.005                           |                                 |
|                                   |  |        | #   | #                               | #                               | #                               |                                 |                                  |                                 |
| Benzo(a)pyrene (aq)               | <0.002 µg/l  | TM178  | <0.002  | 0.0099                          | <0.002                          | <0.002                          | <0.002                          | <0.002                           |                                 |
|                                   |  |        | #   | #                               | #                               | #                               |                                 |                                  |                                 |
| Dibenzo(a,h)anthracene (aq)       | <0.005 µg/l  | TM178  | <0.005  | <0.005                          | <0.005                          | <0.005                          | <0.005                          | <0.005                           |                                 |
|                                   |  |        | #   | #                               | #                               | #                               |                                 |                                  |                                 |
| Benzo(g,h,i)perylene (aq)         | <0.005 µg/l  | TM178  | <0.005  | <0.005                          | <0.005                          | <0.005                          | <0.005                          | <0.005                           |                                 |
|                                   |  |        | #   | #                               | #                               | #                               |                                 |                                  |                                 |
| Indeno(1,2,3-cd)pyrene (aq)       | <0.005 µg/l  | TM178  | <0.005  | <0.005                          | <0.005                          | <0.005                          | <0.005                          | <0.005                           |                                 |
|                                   |  |        | #   | #                               | #                               | #                               |                                 |                                  |                                 |
| PAH, Total Detected USEPA 16 (aq) | <0.082 µg/l  | TM178  | 0.257   | 0.411                           | 1.04                            | <0.082                          | <0.082                          | <0.082                           |                                 |
|                                   |  |        | #   | #                               | #                               | #                               |                                 |                                  |                                 |







# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

## SVOC MS (W) - Aqueous

| Results Legend                   |  |        | Customer Sample Ref.  | 107  | 108  | 110  | 89/10  | 89/11  | 101A   |
|----------------------------------|--|--------|---|--|--|--|--|--|--|
| #                                | ISO17025 accredited.   |        | Depth (m)<br>Sample Type<br>Date Sampled<br>Sample Time<br>Date Received<br>SDG Ref<br>Lab Sample No.(s)<br>AGS Reference | Ground Water (GW)<br>12/09/2022<br>15/09/2022<br>220915-96<br>26881763 | Ground Water (GW)<br>12/09/2022<br>15/09/2022<br>220915-96<br>26881765 | Ground Water (GW)<br>12/09/2022<br>15/09/2022<br>220915-96<br>26881766 | Ground Water (GW)<br>12/09/2022<br>15/09/2022<br>220915-96<br>26881767 | Ground Water (GW)<br>12/09/2022<br>15/09/2022<br>220915-96<br>26881768 | Ground Water (GW)<br>12/09/2022<br>15/09/2022<br>220915-96<br>26881754 |
| M                                | mCERTS accredited.   |        |   |  |  |  |  |  |  |
| aq                               | Aqueous / settled sample.  |        |   |  |  |  |  |  |  |
| dis.sol                          | Dissolved / filtered sample.   |        |   |  |  |  |  |  |  |
| tot.unfilt                       | Total / unfiltered sample.   |        |   |  |  |  |  |  |  |
| *                                | Subcontracted - refer to subcontractor report for accreditation status.  |        |   |  |  |  |  |  |  |
| **                               | % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery |        |   |  |  |  |  |  |  |
| (F)                              | Trigger breach confirmed   |        |   |  |  |  |  |  |  |
| 1-4*#                            | Sample deviation (see appendix)  |        |   |  |  |  |  |  |  |
| Component                        | LOD/Units  | Method |   |  |  |  |  |  |  |
| 1,2,4-Trichlorobenzene (aq)      | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| 1,2-Dichlorobenzene (aq)         | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| 1,3-Dichlorobenzene (aq)         | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| 1,4-Dichlorobenzene (aq)         | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| 2,4,5-Trichlorophenol (aq)       | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| 2,4,6-Trichlorophenol (aq)       | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| 2,4-Dichlorophenol (aq)          | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| 2,4-Dimethylphenol (aq)          | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| 2,4-Dinitrotoluene (aq)          | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| 2,6-Dinitrotoluene (aq)          | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| 2-Chloronaphthalene (aq)         | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| 2-Chlorophenol (aq)              | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| 2-Methylnaphthalene (aq)         | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| 2-Methylphenol (aq)              | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| 2-Nitroaniline (aq)              | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| 2-Nitrophenol (aq)               | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| 3-Nitroaniline (aq)              | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| 4-Bromophenylphenylether (aq)    | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| 4-Chloro-3-methylphenol (aq)     | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| 4-Chloroaniline (aq)             | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| 4-Chlorophenylphenylether (aq)   | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| 4-Methylphenol (aq)              | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| 4-Nitroaniline (aq)              | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| 4-Nitrophenol (aq)               | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| Azobenzene (aq)                  | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| Acenaphthylene (aq)              | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| Acenaphthene (aq)                | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| Anthracene (aq)                  | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| bis(2-Chloroethyl)ether (aq)     | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| bis(2-Chloroethoxy)methane (aq)  | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| bis(2-Ethylhexyl) phthalate (aq) | <2 µg/l  | TM176  |   | <2   | <8   | <2   | <2   | <2   | <2   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| Butylbenzyl phthalate (aq)       | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |
| Benzo(a)anthracene (aq)          | <1 µg/l  | TM176  |   | <1   | <4   | <1   | <1   | <1   | <1   |
|                                  |  |        | #   |  | @  |  |  |  | #  |





# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

## SVOC MS (W) - Aqueous

| Results Legend   |           |        | Customer Sample Ref.  | 107   | 108   | 110   | 89/10   | 89/11   | 101A   |
|--|-----------|--------|---|---|---|---|---|---|--|
| # ISO17025 accredited.<br>M mCERTS accredited.<br>aq Aqueous / settled sample.<br>dis.filt Dissolved / filtered sample.<br>tot.unfilt Total / unfiltered sample.<br>* Subcontracted - refer to subcontractor report for accreditation status.<br>** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery.<br>(F) Trigger breach confirmed<br>1-4*# Sample deviation (see appendix) |           |        | Depth (m)<br>Sample Type<br>Date Sampled<br>Sample Time<br>Date Received<br>SDG Ref<br>Lab Sample No.(s)<br>AGS Reference | 107<br>Ground Water (GW)<br>12/09/2022<br>15/09/2022<br>220915-96<br>26881763 | 108<br>Ground Water (GW)<br>12/09/2022<br>15/09/2022<br>220915-96<br>26881765 | 110<br>Ground Water (GW)<br>12/09/2022<br>15/09/2022<br>220915-96<br>26881766 | 89/10<br>Ground Water (GW)<br>12/09/2022<br>15/09/2022<br>220915-96<br>26881767 | 89/11<br>Ground Water (GW)<br>12/09/2022<br>15/09/2022<br>220915-96<br>26881768 | 101A<br>Ground Water (GW)<br>12/09/2022<br>15/09/2022<br>220915-96<br>26881754 |
| Component  | LOD/Units | Method |   |   |   |   |   |   |  |
| Benzo(b)fluoranthene (aq)  | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| Benzo(k)fluoranthene (aq)  | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| Benzo(a)pyrene (aq)  | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| Benzo(g,h,i)perylene (aq)  | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| Carbazole (aq)   | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| Chrysene (aq)  | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| Dibenzofuran (aq)  | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| n-Dibutyl phthalate (aq)   | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| Diethyl phthalate (aq)   | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| Dibenzo(a,h)anthracene (aq)  | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| Dimethyl phthalate (aq)  | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| n-Dioctyl phthalate (aq)   | <5 µg/l   | TM176  | <5  | <20   | <5  | <5  | <5  | <5  | <5   |
| Fluoranthene (aq)  | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| Fluorene (aq)  | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| Hexachlorobenzene (aq)   | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| Hexachlorobutadiene (aq)   | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| Pentachlorophenol (aq)   | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| Phenol (aq)  | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| n-Nitroso-n-dipropylamine (aq)   | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| Hexachloroethane (aq)  | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| Nitrobenzene (aq)  | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| Naphthalene (aq)   | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| Isophorone (aq)  | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| Hexachlorocyclopentadiene (aq)   | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| Phenanthrene (aq)  | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| Indeno(1,2,3-cd)pyrene (aq)  | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |
| Pyrene (aq)  | <1 µg/l   | TM176  | <1  | <4  | <1  | <1  | <1  | <1  | <1   |



# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

## SVOC MS (W) - Aqueous

| Results Legend                   |  |        | Customer Sample Ref.  | 102A    | 103A     | 104A     | 105A    | 106A     | LAKE    |
|----------------------------------|--|--------|---|---------|----------|----------|---------|----------|---------|
| #                                | ISO17025 accredited.   |        |   |         |          |          |         |          |         |
| M                                | mCERTS accredited.   |        |   |         |          |          |         |          |         |
| aq                               | Aqueous / settled sample.  |        |   |         |          |          |         |          |         |
| dis.filt                         | Dissolved / filtered sample.   |        |   |         |          |          |         |          |         |
| tot.unfilt                       | Total / unfiltered sample.   |        |   |         |          |          |         |          |         |
| *                                | Subcontracted - refer to subcontractor report for accreditation status.  |        |   |         |          |          |         |          |         |
| **                               | % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery |        |   |         |          |          |         |          |         |
| (F)                              | Trigger breach confirmed   |        |   |         |          |          |         |          |         |
| 1-4*§@                           | Sample deviation (see appendix)  |        |   |         |          |          |         |          |         |
| Component                        | LOD/Units  | Method | Depth (m)<br>Sample Type<br>Date Sampled<br>Sample Time<br>Date Received<br>SDG Ref<br>Lab Sample No.(s)<br>AGS Reference | 102A    | 103A     | 104A     | 105A    | 106A     | LAKE    |
| 1,2,4-Trichlorobenzene (aq)      | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| 1,2-Dichlorobenzene (aq)         | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| 1,3-Dichlorobenzene (aq)         | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| 1,4-Dichlorobenzene (aq)         | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| 2,4,5-Trichlorophenol (aq)       | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| 2,4,6-Trichlorophenol (aq)       | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| 2,4-Dichlorophenol (aq)          | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| 2,4-Dimethylphenol (aq)          | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| 2,4-Dinitrotoluene (aq)          | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| 2,6-Dinitrotoluene (aq)          | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| 2-Chloronaphthalene (aq)         | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| 2-Chlorophenol (aq)              | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| 2-Methylnaphthalene (aq)         | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| 2-Methylphenol (aq)              | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| 2-Nitroaniline (aq)              | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| 2-Nitrophenol (aq)               | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| 3-Nitroaniline (aq)              | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| 4-Bromophenylphenylether (aq)    | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| 4-Chloro-3-methylphenol (aq)     | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| 4-Chloroaniline (aq)             | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| 4-Chlorophenylphenylether (aq)   | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| 4-Methylphenol (aq)              | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| 4-Nitroaniline (aq)              | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| 4-Nitrophenol (aq)               | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| Azobenzene (aq)                  | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| Acenaphthylene (aq)              | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| Acenaphthene (aq)                | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| Anthracene (aq)                  | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| bis(2-Chloroethyl)ether (aq)     | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| bis(2-Chloroethoxy)methane (aq)  | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| bis(2-Ethylhexyl) phthalate (aq) | <2 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <8<br># | <16<br># | <16<br># | <8<br># | <16<br># | <2<br># |
| Butylbenzyl phthalate (aq)       | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |
| Benzo(a)anthracene (aq)          | <1 µg/l  | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br># | <8<br>#  | <8<br>#  | <4<br># | <8<br>#  | <1<br># |



# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

## SVOC MS (W) - Aqueous

| Results Legend                 |   |        | Customer Sample Ref.  | 102A     | 103A     | 104A     | 105A     | 106A     | LAKE    |
|--------------------------------|---|--------|---|----------|----------|----------|----------|----------|---------|
| #                              | ISO17025 accredited.  |        |   |          |          |          |          |          |         |
| M                              | mCERTS accredited.  |        |   |          |          |          |          |          |         |
| aq                             | Aqueous / settled sample.   |        |   |          |          |          |          |          |         |
| dis.filt                       | Dissolved / filtered sample.  |        |   |          |          |          |          |          |         |
| tot.unfilt                     | Total / unfiltered sample.  |        |   |          |          |          |          |          |         |
| *                              | Subcontracted - refer to subcontractor report for accreditation status.   |        |   |          |          |          |          |          |         |
| **                             | % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery. |        |   |          |          |          |          |          |         |
| (F)                            | Trigger breach confirmed  |        |   |          |          |          |          |          |         |
| 1-4*#                          | Sample deviation (see appendix)   |        |   |          |          |          |          |          |         |
| Component                      | LOD/Units   | Method | Depth (m)<br>Sample Type<br>Date Sampled<br>Sample Time<br>Date Received<br>SDG Ref<br>Lab Sample No.(s)<br>AGS Reference | 102A     | 103A     | 104A     | 105A     | 106A     | LAKE    |
| Benzo(b)fluoranthene (aq)      | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| Benzo(k)fluoranthene (aq)      | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| Benzo(a)pyrene (aq)            | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| Benzo(g,h,i)perylene (aq)      | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| Carbazole (aq)                 | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| Chrysene (aq)                  | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| Dibenzofuran (aq)              | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| n-Dibutyl phthalate (aq)       | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| Diethyl phthalate (aq)         | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| Dibenzo(a,h)anthracene (aq)    | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| Dimethyl phthalate (aq)        | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| n-Dioctyl phthalate (aq)       | <5 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <20<br># | <40<br># | <40<br># | <20<br># | <40<br># | <5<br># |
| Fluoranthene (aq)              | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| Fluorene (aq)                  | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| Hexachlorobenzene (aq)         | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| Hexachlorobutadiene (aq)       | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| Pentachlorophenol (aq)         | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| Phenol (aq)                    | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| n-Nitroso-n-dipropylamine (aq) | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| Hexachloroethane (aq)          | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| Nitrobenzene (aq)              | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| Naphthalene (aq)               | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| Isophorone (aq)                | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| Hexachlorocyclopentadiene (aq) | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| Phenanthrene (aq)              | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| Indeno(1,2,3-cd)pyrene (aq)    | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |
| Pyrene (aq)                    | <1 µg/l   | TM176  | Ground Water (GW)<br>12/09/2022   | <4<br>#  | <8<br>#  | <8<br>#  | <4<br>#  | <8<br>#  | <1<br># |



# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

## SVOC MS (W) - Aqueous

| Results Legend                   |  |        | Customer Sample Ref.  | P2A                             | P3A                             | P4A                             | P6A                             | P8A                             | P9A                             |
|----------------------------------|--|--------|---|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| #                                | ISO17025 accredited.   |        | Depth (m)<br>Sample Type<br>Date Sampled<br>Sample Time<br>Date Received<br>SDG Ref<br>Lab Sample No.(s)<br>AGS Reference | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 |
| M                                | mCERTS accredited.   |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| aq                               | Aqueous / settled sample.  |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| dis.filt                         | Dissolved / filtered sample.   |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| tot.unfilt                       | Total / unfiltered sample.   |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| *                                | Subcontracted - refer to subcontractor report for accreditation status.  |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| **                               | % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| (F)                              | Trigger breach confirmed   |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| 1-4**@                           | Sample deviation (see appendix)  |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| Component                        | LOD/Units  | Method |   |                                 |                                 |                                 |                                 |                                 |                                 |
| 1,2,4-Trichlorobenzene (aq)      | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| 1,2-Dichlorobenzene (aq)         | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| 1,3-Dichlorobenzene (aq)         | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| 1,4-Dichlorobenzene (aq)         | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| 2,4,5-Trichlorophenol (aq)       | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| 2,4,6-Trichlorophenol (aq)       | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| 2,4-Dichlorophenol (aq)          | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| 2,4-Dimethylphenol (aq)          | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| 2,4-Dinitrotoluene (aq)          | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| 2,6-Dinitrotoluene (aq)          | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| 2-Chloronaphthalene (aq)         | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| 2-Chlorophenol (aq)              | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| 2-Methylnaphthalene (aq)         | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| 2-Methylphenol (aq)              | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| 2-Nitroaniline (aq)              | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| 2-Nitrophenol (aq)               | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| 3-Nitroaniline (aq)              | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| 4-Bromophenylphenylether (aq)    | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| 4-Chloro-3-methylphenol (aq)     | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| 4-Chloroaniline (aq)             | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| 4-Chlorophenylphenylether (aq)   | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| 4-Methylphenol (aq)              | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| 4-Nitroaniline (aq)              | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| 4-Nitrophenol (aq)               | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| Azobenzene (aq)                  | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| Acenaphthylene (aq)              | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| Acenaphthene (aq)                | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| Anthracene (aq)                  | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| bis(2-Chloroethyl)ether (aq)     | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| bis(2-Chloroethoxy)methane (aq)  | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| bis(2-Ethylhexyl) phthalate (aq) | <2 µg/l  | TM176  |   | <16                             | <8                              | <8                              | <2                              | <4                              | <2                              |
| Butylbenzyl phthalate (aq)       | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |
| Benzo(a)anthracene (aq)          | <1 µg/l  | TM176  |   | <8                              | <4                              | <4                              | <1                              | <2                              | <1                              |





# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

## SVOC MS (W) - Aqueous

| Results Legend                   |  | Customer Sample Ref.  | P6B                             | P7B                             | P6C                             |  |  |
|----------------------------------|--|---|---------------------------------|---------------------------------|---------------------------------|--|--|
| #                                | ISO17025 accredited.   | Depth (m)<br>Sample Type<br>Date Sampled<br>Sample Time<br>Date Received<br>SDG Ref<br>Lab Sample No.(s)<br>AGS Reference | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 |  |  |
| M                                | mCERTS accredited.   |   |                                 |                                 |                                 |  |  |
| aq                               | Aqueous / settled sample.  |   |                                 |                                 |                                 |  |  |
| diss.filt                        | Dissolved / filtered sample.   |   |                                 |                                 |                                 |  |  |
| tot.unfilt                       | Total / unfiltered sample.   |   |                                 |                                 |                                 |  |  |
| *                                | Subcontracted - refer to subcontractor report for accreditation status.  |   |                                 |                                 |                                 |  |  |
| **                               | % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery |   |                                 |                                 |                                 |  |  |
| (F)                              | Trigger breach confirmed   |   |                                 |                                 |                                 |  |  |
| 1-4**@                           | Sample deviation (see appendix)  |   |                                 |                                 |                                 |  |  |
| Component                        | LOD/Units  |   |                                 |                                 |                                 |  |  |
| 1,2,4-Trichlorobenzene (aq)      | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| 1,2-Dichlorobenzene (aq)         | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| 1,3-Dichlorobenzene (aq)         | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| 1,4-Dichlorobenzene (aq)         | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| 2,4,5-Trichlorophenol (aq)       | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| 2,4,6-Trichlorophenol (aq)       | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| 2,4-Dichlorophenol (aq)          | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| 2,4-Dimethylphenol (aq)          | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| 2,4-Dinitrotoluene (aq)          | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| 2,6-Dinitrotoluene (aq)          | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| 2-Chloronaphthalene (aq)         | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| 2-Chlorophenol (aq)              | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| 2-Methylnaphthalene (aq)         | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| 2-Methylphenol (aq)              | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| 2-Nitroaniline (aq)              | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| 2-Nitrophenol (aq)               | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| 3-Nitroaniline (aq)              | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| 4-Bromophenylphenylether (aq)    | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| 4-Chloro-3-methylphenol (aq)     | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| 4-Chloroaniline (aq)             | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| 4-Chlorophenylphenylether (aq)   | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| 4-Methylphenol (aq)              | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| 4-Nitroaniline (aq)              | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| 4-Nitrophenol (aq)               | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| Azobenzene (aq)                  | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| Acenaphthylene (aq)              | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| Acenaphthene (aq)                | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| Anthracene (aq)                  | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| bis(2-Chloroethyl)ether (aq)     | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| bis(2-Chloroethoxy)methane (aq)  | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| bis(2-Ethylhexyl) phthalate (aq) | <2 µg/l  | TM176   | <16                             | <2                              | <20                             |  |  |
| Butylbenzyl phthalate (aq)       | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |
| Benzo(a)anthracene (aq)          | <1 µg/l  | TM176   | <8                              | <1                              | <10                             |  |  |







# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

## TPH CWG (W)

| Results Legend  |           |        | Customer Sample Ref. |                   |                   |                   |                   |                   |                   |                   |
|---|-----------|--------|----------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| # ISO17025 accredited.  |           |        | 107                  | 110               | 89/10             | 89/11             | 101A              | 102A              |                   |                   |
| M mCERTS accredited.  |           |        |                      |                   |                   |                   |                   |                   |                   |                   |
| aq Aqueous / settled sample.  |           |        |                      |                   |                   |                   |                   |                   |                   |                   |
| diss.filt Dissolved / filtered sample.  |           |        |                      |                   |                   |                   |                   |                   |                   |                   |
| tot.unfilt Total / unfiltered sample.   |           |        |                      |                   |                   |                   |                   |                   |                   |                   |
| * Subcontracted - refer to subcontractor report for accreditation status.   |           |        |                      |                   |                   |                   |                   |                   |                   |                   |
| ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery |           |        |                      |                   |                   |                   |                   |                   |                   |                   |
| (F) Trigger breach confirmed  |           |        |                      |                   |                   |                   |                   |                   |                   |                   |
| 1-4*# Sample deviation (see appendix)   |           |        |                      |                   |                   |                   |                   |                   |                   |                   |
| Component   | LOD/Units | Method | Depth (m)            | Sample Type       | Date Sampled      | Sample Time       | Date Received     | SDG Ref           | Lab Sample No.(s) | AGS Reference     |
| GRO Surrogate % recovery**  | %         | TM245  | Ground Water (GW)    | Ground Water (GW) | Ground Water (GW) | Ground Water (GW) | Ground Water (GW) | Ground Water (GW) | Ground Water (GW) | Ground Water (GW) |
|   |           |        | 12/09/2022           | 12/09/2022        | 12/09/2022        | 12/09/2022        | 12/09/2022        | 12/09/2022        | 12/09/2022        | 12/09/2022        |
|   |           |        | 15/09/2022           | 15/09/2022        | 15/09/2022        | 15/09/2022        | 15/09/2022        | 15/09/2022        | 15/09/2022        | 15/09/2022        |
|   |           |        | 220915-96            | 220915-96         | 220915-96         | 220915-96         | 220915-96         | 220915-96         | 220915-96         | 220915-96         |
|   |           |        | 26881763             | 26881766          | 26881767          | 26881768          | 26881754          | 26881756          | 26881756          | 26881756          |
| GRO >C5-C12   | <50 µg/l  | TM245  | <50                  | <50               | <50               | <50               | <50               | <50               | <50               | <50               |
| Aliphatics >C5-C6   | <10 µg/l  | TM245  | <10                  | <10               | <10               | <10               | <10               | <10               | <10               | <10               |
| Aliphatics >C6-C8   | <10 µg/l  | TM245  | <10                  | <10               | <10               | <10               | <10               | <10               | <10               | <10               |
| Aliphatics >C8-C10  | <10 µg/l  | TM245  | <10                  | <10               | <10               | <10               | <10               | <10               | <10               | <10               |
| Aliphatics >C10-C12   | <10 µg/l  | TM245  | <10                  | <10               | <10               | <10               | <10               | <10               | <10               | <10               |
| Aliphatics >C12-C16 (aq)  | <10 µg/l  | TM174  | <10                  | <10               | <10               | <10               | <10               | <10               | <10               | <10               |
| Aliphatics >C16-C21 (aq)  | <10 µg/l  | TM174  | <10                  | <10               | <10               | <10               | <10               | <10               | <10               | <10               |
| Aliphatics >C21-C35 (aq)  | <10 µg/l  | TM174  | <10                  | <10               | <10               | <10               | <10               | 146               | <10               | <10               |
| Total Aliphatics >C12-C35 (aq)  | <10 µg/l  | TM174  | <10                  | <10               | <10               | <10               | <10               | 146               | <10               | <10               |
| Aromatics >EC5-EC7  | <10 µg/l  | TM245  | <10                  | <10               | <10               | <10               | <10               | <10               | <10               | <10               |
| Aromatics >EC7-EC8  | <10 µg/l  | TM245  | <10                  | <10               | <10               | <10               | <10               | <10               | <10               | <10               |
| Aromatics >EC8-EC10   | <10 µg/l  | TM245  | <10                  | <10               | <10               | <10               | <10               | <10               | <10               | <10               |
| Aromatics >EC10-EC12  | <10 µg/l  | TM245  | <10                  | <10               | <10               | <10               | <10               | <10               | <10               | <10               |
| Aromatics >EC12-EC16 (aq)   | <10 µg/l  | TM174  | <10                  | <10               | <10               | <10               | <10               | <10               | <10               | <10               |
| Aromatics >EC16-EC21 (aq)   | <10 µg/l  | TM174  | <10                  | <10               | <10               | <10               | <10               | <10               | <10               | <10               |
| Aromatics >EC21-EC35 (aq)   | <10 µg/l  | TM174  | <10                  | <10               | <10               | <10               | <10               | <10               | <10               | <10               |
| Total Aromatics >EC12-EC35 (aq)   | <10 µg/l  | TM174  | <10                  | <10               | <10               | <10               | <10               | <10               | <10               | <10               |
| Total Aliphatics & Aromatics >C5-35 (aq)  | <10 µg/l  | TM174  | <10                  | <10               | <10               | <10               | <10               | 146               | <10               | <10               |
| Aliphatics >C16-C35 Aqueous   | <10 µg/l  | TM174  | <10                  | <10               | <10               | <10               | <10               | 146               | <10               | <10               |









# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

## VOC MS (W)

| Results Legend                     |  |        | Customer Sample Ref. |                   | 107               | 108               | 110               | 89/10             | 89/11             | 101A              |
|------------------------------------|--|--------|----------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| #                                  | ISO17025 accredited.   |        | Depth (m)            | Sample Type       | Ground Water (GW) | Ground Water (GW) | Ground Water (GW) | Ground Water (GW) | Ground Water (GW) | Ground Water (GW) |
| M                                  | mCERTS accredited.   |        |                      |                   | 12/09/2022        | 12/09/2022        | 12/09/2022        | 12/09/2022        | 12/09/2022        | 12/09/2022        |
| aq                                 | Aqueous / settled sample.  |        | Date Sampled         | Date Sampled      | Date Sampled      | Date Sampled      | Date Sampled      | Date Sampled      | Date Sampled      | Date Sampled      |
| dis.filt                           | Dissolved / filtered sample.   |        | Sample Time          | Sample Time       | Sample Time       | Sample Time       | Sample Time       | Sample Time       | Sample Time       | Sample Time       |
| tot.unfilt                         | Total / unfiltered sample.   |        | Date Received        | Date Received     | Date Received     | Date Received     | Date Received     | Date Received     | Date Received     | Date Received     |
| *                                  | Subcontracted - refer to subcontractor report for accreditation status.  |        | SDG Ref              | SDG Ref           | SDG Ref           | SDG Ref           | SDG Ref           | SDG Ref           | SDG Ref           | SDG Ref           |
| **                                 | % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery |        | Lab Sample No.(s)    | Lab Sample No.(s) | Lab Sample No.(s) | Lab Sample No.(s) | Lab Sample No.(s) | Lab Sample No.(s) | Lab Sample No.(s) | Lab Sample No.(s) |
| (F)                                | Trigger breach confirmed   |        | AGS Reference        | AGS Reference     | AGS Reference     | AGS Reference     | AGS Reference     | AGS Reference     | AGS Reference     | AGS Reference     |
| 1-4*§@                             | Sample deviation (see appendix)  |        |                      |                   |                   |                   |                   |                   |                   |                   |
| Component                          | LOD/Units  | Method |                      |                   |                   |                   |                   |                   |                   |                   |
| Dibromofluoromethane**             | %  | TM208  | 117                  | 112               | 119               | 108               | 107               | 117               |                   |                   |
| Toluene-d8**                       | %  | TM208  | 101                  | 100               | 103               | 99.6              | 98.2              | 101               |                   |                   |
| 4-Bromofluorobenzene**             | %  | TM208  | 101                  | 94                | 95.1              | 98.3              | 96.4              | 95.7              |                   |                   |
| Dichlorodifluoromethane            | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| Chloromethane                      | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| Vinyl chloride                     | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| Bromomethane                       | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| Chloroethane                       | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| Trichlorofluoromethane             | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | 1.08              |                   | #                 |
| 1,1-Dichloroethene                 | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| Carbon disulphide                  | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| Dichloromethane                    | <3 µg/l  | TM208  | <3                   | <3                | <3                | <3                | <3                | <3                |                   | #                 |
| Methyl tertiary butyl ether (MTBE) | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| trans-1,2-Dichloroethene           | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| 1,1-Dichloroethane                 | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| cis-1,2-Dichloroethene             | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| 2,2-Dichloropropane                | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| Bromochloromethane                 | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| Chloroform                         | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| 1,1,1-Trichloroethane              | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| 1,1-Dichloropropene                | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| Carbontetrachloride                | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| 1,2-Dichloroethane                 | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| Benzene                            | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| Trichloroethene                    | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| 1,2-Dichloropropane                | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| Dibromomethane                     | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| Bromodichloromethane               | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| cis-1,3-Dichloropropene            | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| Toluene                            | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| trans-1,3-Dichloropropene          | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| 1,1,2-Trichloroethane              | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |
| 1,3-Dichloropropane                | <1 µg/l  | TM208  | <1                   | <1                | <1                | <1                | <1                | <1                |                   | #                 |









# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

## VOC MS (W)

| Results Legend                     |  |        | Customer Sample Ref.  | 102A                                | 103A                                | 104A                                | 105A                                | 106A                                | LAKE                             |
|------------------------------------|--|--------|---|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|----------------------------------|
| #                                  | ISO17025 accredited.   |        | Depth (m)<br>Sample Type<br>Date Sampled<br>Sample Time<br>Date Received<br>SDG Ref<br>Lab Sample No.(s)<br>AGS Reference | Ground Water (GW)<br>12/09/2022     | Ground Water (GW)<br>12/09/2022     | Ground Water (GW)<br>12/09/2022     | Ground Water (GW)<br>12/09/2022     | Ground Water (GW)<br>12/09/2022     | Surface Water (SW)<br>12/09/2022 |
| M                                  | mCERTS accredited.   |        |   |                                     |                                     |                                     |                                     |                                     |                                  |
| aq                                 | Aqueous / settled sample.  |        |   |                                     |                                     |                                     |                                     |                                     |                                  |
| dis.filt                           | Dissolved / filtered sample.   |        |   |                                     |                                     |                                     |                                     |                                     |                                  |
| tot.unfilt                         | Total / unfiltered sample.   |        |   |                                     |                                     |                                     |                                     |                                     |                                  |
| *                                  | Subcontracted - refer to subcontractor report for accreditation status.  |        |   |                                     |                                     |                                     |                                     |                                     |                                  |
| **                                 | % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery |        | 15/09/2022<br>220915-96<br>26881756   | 15/09/2022<br>220915-96<br>26881757 | 15/09/2022<br>220915-96<br>26881758 | 15/09/2022<br>220915-96<br>26881761 | 15/09/2022<br>220915-96<br>26881762 | 15/09/2022<br>220915-96<br>26881779 |                                  |
| (F)                                | Trigger breach confirmed   |        |   |                                     |                                     |                                     |                                     |                                     |                                  |
| 1-4*§                              | Sample deviation (see appendix)  |        |   |                                     |                                     |                                     |                                     |                                     |                                  |
| Component                          | LOD/Units  | Method |   |                                     |                                     |                                     |                                     |                                     |                                  |
| Dibromofluoromethane**             | %  | TM208  |   | 117                                 | 120                                 | 119                                 | 117                                 | 112                                 | 110                              |
| Toluene-d8**                       | %  | TM208  |   | 101                                 | 98.5                                | 98                                  | 102                                 | 99.6                                | 98.4                             |
| 4-Bromofluorobenzene**             | %  | TM208  |   | 95.2                                | 95.2                                | 94.4                                | 96.7                                | 98.5                                | 97.7                             |
| Dichlorodifluoromethane            | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| Chloromethane                      | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| Vinyl chloride                     | <1 µg/l  | TM208  |   | 5.45                                | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| Bromomethane                       | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| Chloroethane                       | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| Trichlorofluoromethane             | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| 1,1-Dichloroethene                 | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| Carbon disulphide                  | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| Dichloromethane                    | <3 µg/l  | TM208  |   | <3                                  | <3                                  | <3                                  | <3                                  | <3                                  | <3                               |
| Methyl tertiary butyl ether (MTBE) | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| trans-1,2-Dichloroethene           | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| 1,1-Dichloroethane                 | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| cis-1,2-Dichloroethene             | <1 µg/l  | TM208  |   | 5.54                                | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| 2,2-Dichloropropane                | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| Bromochloromethane                 | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| Chloroform                         | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| 1,1,1-Trichloroethane              | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| 1,1-Dichloropropene                | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| Carbontetrachloride                | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| 1,2-Dichloroethane                 | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| Benzene                            | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | 1.08                                | <1                                  | <1                               |
| Trichloroethene                    | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| 1,2-Dichloropropane                | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| Dibromomethane                     | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| Bromodichloromethane               | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| cis-1,3-Dichloropropene            | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| Toluene                            | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| trans-1,3-Dichloropropene          | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| 1,1,2-Trichloroethane              | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |
| 1,3-Dichloropropane                | <1 µg/l  | TM208  |   | <1                                  | <1                                  | <1                                  | <1                                  | <1                                  | <1                               |



# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

## VOC MS (W)

| Results Legend  |           |        | Customer Sample Ref.   | 102A   | 103A   | 104A   | 105A   | 106A   | LAKE  |
|---|-----------|--------|--|--|--|--|--|--|---|
| # ISO17025 accredited.<br>M mCERTS accredited.<br>sq. Aqueous / settled sample.<br>dis. fil. Dissolved / filtered sample.<br>tot.unfil. Total / unfiltered sample.<br>* Subcontracted - refer to subcontractor report for accreditation status.<br>** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery.<br>(F) Trigger breach confirmed<br>1-4* @ Sample deviation (see appendix) |           |        | Depth (m)<br>Sample Type<br>Date Sampled<br>Sample Time<br>Date Received<br>SDG Ref<br>Lab Sample No.(s) | Ground Water (GW)<br>12/09/2022<br>15/09/2022<br>220915-96<br>26881756 | Ground Water (GW)<br>12/09/2022<br>15/09/2022<br>220915-96<br>26881757 | Ground Water (GW)<br>12/09/2022<br>15/09/2022<br>220915-96<br>26881758 | Ground Water (GW)<br>12/09/2022<br>15/09/2022<br>220915-96<br>26881761 | Ground Water (GW)<br>12/09/2022<br>15/09/2022<br>220915-96<br>26881762 | Surface Water (SW)<br>12/09/2022<br>15/09/2022<br>220915-96<br>26881779 |
| Component   | LOD/Units | Method |  |  |  |  |  |  |   |
| Tetrachloroethene   | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| Dibromochloromethane  | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| 1,2-Dibromoethane   | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| Chlorobenzene   | <1 µg/l   | TM208  | <1   | <1   | <1   | 5.81   | <1   | <1   | <1  |
| 1,1,1,2-Tetrachloroethane   | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| Ethylbenzene  | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| m,p-Xylene  | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| o-Xylene  | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| Styrene   | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| Bromofom  | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| Isopropylbenzene  | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| 1,1,2,2-Tetrachloroethane   | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| 1,2,3-Trichloropropane  | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| Bromobenzene  | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| Propylbenzene   | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| 2-Chlorotoluene   | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| 1,3,5-Trimethylbenzene  | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| 4-Chlorotoluene   | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| tert-Butylbenzene   | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| 1,2,4-Trimethylbenzene  | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| sec-Butylbenzene  | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| 4-iso-Propyltoluene   | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| 1,3-Dichlorobenzene   | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| 1,4-Dichlorobenzene   | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| n-Butylbenzene  | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| 1,2-Dichlorobenzene   | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| 1,2-Dibromo-3-chloropropane   | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| 1,2,4-Trichlorobenzene  | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| Hexachlorobutadiene   | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| tert-Amyl methyl ether (TAME)   | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| Naphthalene   | <1 µg/l   | TM208  | <1   | <1   | <1   | 1.09   | <1   | <1   | <1  |
| 1,2,3-Trichlorobenzene  | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |
| 1,3,5-Trichlorobenzene  | <1 µg/l   | TM208  | <1   | <1   | <1   | <1   | <1   | <1   | <1  |





# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

## VOC MS (W)

| Results Legend                     |  |        | Customer Sample Ref.  | P2A                             | P3A                             | P4A                             | P6A                             | P8A                             | P9A                             |
|------------------------------------|--|--------|---|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| #                                  | ISO17025 accredited.   |        | Depth (m)<br>Sample Type<br>Date Sampled<br>Sample Time<br>Date Received<br>SDG Ref<br>Lab Sample No.(s)<br>AGS Reference | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 |
| M                                  | mCERTS accredited.   |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| aq                                 | Aqueous / settled sample.  |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| dis.filt                           | Dissolved / filtered sample.   |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| tot.unfilt                         | Total / unfiltered sample.   |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| *                                  | Subcontracted - refer to subcontractor report for accreditation status.  |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| **                                 | % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| (F)                                | Trigger breach confirmed   |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| 1-4**@                             | Sample deviation (see appendix)  |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| Component                          | LOD/Units  | Method |   |                                 |                                 |                                 |                                 |                                 |                                 |
| Dibromofluoromethane**             | %  | TM208  | 105   | 106                             | 108                             | 106                             | 107                             | 106                             |                                 |
| Toluene-d8**                       | %  | TM208  | 98.9  | 98.7                            | 99.5                            | 99                              | 96.4                            | 99.4                            |                                 |
| 4-Bromofluorobenzene**             | %  | TM208  | 95.2  | 96.6                            | 96.5                            | 96.2                            | 97                              | 98.2                            |                                 |
| Dichlorodifluoromethane            | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| Chloromethane                      | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| Vinyl chloride                     | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| Bromomethane                       | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| Chloroethane                       | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| Trichlorofluoromethane             | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| 1,1-Dichloroethene                 | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| Carbon disulphide                  | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| Dichloromethane                    | <3 µg/l  | TM208  | <3  | <3                              | <3                              | <3                              | <3                              | <3                              |                                 |
| Methyl tertiary butyl ether (MTBE) | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| trans-1,2-Dichloroethene           | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| 1,1-Dichloroethane                 | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | 1.95                            |                                 |
| cis-1,2-Dichloroethene             | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| 2,2-Dichloropropane                | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| Bromochloromethane                 | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| Chloroform                         | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| 1,1,1-Trichloroethane              | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | 2.93                            |                                 |
| 1,1-Dichloropropene                | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| Carbon tetrachloride               | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| 1,2-Dichloroethane                 | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| Benzene                            | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| Trichloroethene                    | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| 1,2-Dichloropropane                | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| Dibromomethane                     | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| Bromodichloromethane               | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| cis-1,3-Dichloropropene            | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| Toluene                            | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | 295                             | <1                              |                                 |
| trans-1,3-Dichloropropene          | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| 1,1,2-Trichloroethane              | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |
| 1,3-Dichloropropane                | <1 µg/l  | TM208  | <1  | <1                              | <1                              | <1                              | <1                              | <1                              |                                 |





# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

## VOC MS (W)

| Results Legend                |   |        | Customer Sample Ref.  | P2A                             | P3A                             | P4A                             | P6A                             | P8A                             | P9A                             |
|-------------------------------|---|--------|---|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| #                             | ISO17025 accredited.  |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| M                             | mCERTS accredited.  |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| AQ                            | Aqueous / settled sample.   |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| DIS.FIL                       | Dissolved / filtered sample.  |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| TOT.UNFIL                     | Total / unfiltered sample.  |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| *                             | Subcontracted - refer to subcontractor report for accreditation status.   |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| **                            | % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery. |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| (F)                           | Trigger breach confirmed  |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| 1-4                           | Sample deviation (see appendix)   |        |   |                                 |                                 |                                 |                                 |                                 |                                 |
| Component                     | LOD/Units   | Method | Depth (m)<br>Sample Type<br>Date Sampled<br>Sample Time<br>Date Received<br>SDG Ref<br>Lab Sample No.(s)<br>AGS Reference | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 |
| Tetrachloroethene             | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| Dibromochloromethane          | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| 1,2-Dibromoethane             | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| Chlorobenzene                 | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| 1,1,1,2-Tetrachloroethane     | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| Ethylbenzene                  | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| m,p-Xylene                    | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| o-Xylene                      | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| Styrene                       | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| Bromoform                     | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| Isopropylbenzene              | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| 1,1,2,2-Tetrachloroethane     | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| 1,2,3-Trichloropropane        | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| Bromobenzene                  | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| Propylbenzene                 | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| 2-Chlorotoluene               | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| 1,3,5-Trimethylbenzene        | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| 4-Chlorotoluene               | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| tert-Butylbenzene             | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| 1,2,4-Trimethylbenzene        | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| sec-Butylbenzene              | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| 4-iso-Propyltoluene           | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| 1,3-Dichlorobenzene           | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| 1,4-Dichlorobenzene           | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| n-Butylbenzene                | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| 1,2-Dichlorobenzene           | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| 1,2-Dibromo-3-chloropropane   | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| 1,2,4-Trichlorobenzene        | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| Hexachlorobutadiene           | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| tert-Amyl methyl ether (TAME) | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| Naphthalene                   | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| 1,2,3-Trichlorobenzene        | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |
| 1,3,5-Trichlorobenzene        | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              | <1                              | <1                              |





# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

## VOC MS (W)

| Results Legend                     |  | Customer Sample Ref.  | P4B               | P6B               | P7B               | P6C               |  |  |
|------------------------------------|--|---|-------------------|-------------------|-------------------|-------------------|--|--|
| #                                  | ISO17025 accredited.   | Depth (m)<br>Sample Type<br>Date Sampled<br>Sample Time<br>Date Received<br>SDG Ref<br>Lab Sample No.(s)<br>AGS Reference |                   |                   |                   |                   |  |  |
| M                                  | mCERTS accredited.   |   | Ground Water (GW) | Ground Water (GW) | Ground Water (GW) | Ground Water (GW) |  |  |
| aq                                 | Aqueous / settled sample.  |   | 12/09/2022        | 12/09/2022        | 12/09/2022        | 12/09/2022        |  |  |
| diss.filt                          | Dissolved / filtered sample.   |   | 15/09/2022        | 15/09/2022        | 15/09/2022        | 15/09/2022        |  |  |
| tot.unfilt                         | Total / unfiltered sample.   |   | 220915-96         | 220915-96         | 220915-96         | 220915-96         |  |  |
| tot.unfilt                         | Total / unfiltered sample.   |   | 26881772          | 26881774          | 26881776          | 26881775          |  |  |
| *                                  | Subcontracted - refer to subcontractor report for accreditation status.  |   |                   |                   |                   |                   |  |  |
| **                                 | % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery |   |                   |                   |                   |                   |  |  |
| (F)                                | Trigger breach confirmed   |   |                   |                   |                   |                   |  |  |
| 1-4*§                              | Sample deviation (see appendix)  |   |                   |                   |                   |                   |  |  |
| Component                          | LOD/Units  | Method  |                   |                   |                   |                   |  |  |
| Dibromofluoromethane**             | %  | TM208   | 109               | 108               | 114               | 113               |  |  |
| Toluene-d8**                       | %  | TM208   | 96.7              | 99.2              | 99.7              | 99.3              |  |  |
| 4-Bromofluorobenzene**             | %  | TM208   | 89.2              | 96.4              | 96.1              | 95.6              |  |  |
| Dichlorodifluoromethane            | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| Chloromethane                      | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| Vinyl chloride                     | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| Bromomethane                       | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| Chloroethane                       | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| Trichlorofluoromethane             | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| 1,1-Dichloroethene                 | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| Carbon disulphide                  | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| Dichloromethane                    | <3 µg/l  | TM208   | <3                | <3                | <3                | <3                |  |  |
| Methyl tertiary butyl ether (MTBE) | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| trans-1,2-Dichloroethene           | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| 1,1-Dichloroethane                 | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| cis-1,2-Dichloroethene             | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| 2,2-Dichloropropane                | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| Bromochloromethane                 | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| Chloroform                         | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| 1,1,1-Trichloroethane              | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| 1,1-Dichloropropene                | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| Carbontetrachloride                | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| 1,2-Dichloroethane                 | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| Benzene                            | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| Trichloroethene                    | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| 1,2-Dichloropropane                | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| Dibromomethane                     | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| Bromodichloromethane               | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| cis-1,3-Dichloropropene            | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| Toluene                            | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| trans-1,3-Dichloropropene          | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| 1,1,2-Trichloroethane              | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |
| 1,3-Dichloropropane                | <1 µg/l  | TM208   | <1                | <1                | <1                | <1                |  |  |



# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

## VOC MS (W)

| Results Legend                |   |        | Customer Sample Ref.  | P4B                             | P6B                             | P7B                             | P6C                             |  |  |
|-------------------------------|---|--------|---|---------------------------------|---------------------------------|---------------------------------|---------------------------------|--|--|
| #                             | ISO17025 accredited.  |        |   |                                 |                                 |                                 |                                 |  |  |
| M                             | mCERTS accredited.  |        |   |                                 |                                 |                                 |                                 |  |  |
| aq                            | Aqueous / settled sample.   |        |   |                                 |                                 |                                 |                                 |  |  |
| dis. fil.                     | Dissolved / filtered sample.  |        |   |                                 |                                 |                                 |                                 |  |  |
| tot.unfilt.                   | Total / unfiltered sample.  |        |   |                                 |                                 |                                 |                                 |  |  |
| *                             | Subcontracted - refer to subcontractor report for accreditation status.   |        |   |                                 |                                 |                                 |                                 |  |  |
| **                            | % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery. |        |   |                                 |                                 |                                 |                                 |  |  |
| (F)                           | Trigger breach confirmed  |        |   |                                 |                                 |                                 |                                 |  |  |
| 1-4*#                         | Sample deviation (see appendix)   |        |   |                                 |                                 |                                 |                                 |  |  |
| Component                     | LOD/Units   | Method | Depth (m)<br>Sample Type<br>Date Sampled<br>Sample Time<br>Date Received<br>SDG Ref<br>Lab Sample No.(s)<br>AGS Reference | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 | Ground Water (GW)<br>12/09/2022 |  |  |
| Tetrachloroethene             | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| Dibromochloromethane          | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| 1,2-Dibromoethane             | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| Chlorobenzene                 | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| 1,1,1,2-Tetrachloroethane     | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| Ethylbenzene                  | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| m,p-Xylene                    | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| o-Xylene                      | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| Styrene                       | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| Bromofom                      | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| Isopropylbenzene              | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| 1,1,2,2-Tetrachloroethane     | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| 1,2,3-Trichloropropane        | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| Bromobenzene                  | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| Propylbenzene                 | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| 2-Chlorotoluene               | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| 1,3,5-Trimethylbenzene        | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| 4-Chlorotoluene               | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| tert-Butylbenzene             | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| 1,2,4-Trimethylbenzene        | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| sec-Butylbenzene              | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| 4-iso-Propyltoluene           | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| 1,3-Dichlorobenzene           | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| 1,4-Dichlorobenzene           | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| n-Butylbenzene                | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| 1,2-Dichlorobenzene           | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| 1,2-Dibromo-3-chloropropane   | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| 1,2,4-Trichlorobenzene        | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| Hexachlorobutadiene           | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| tert-Amyl methyl ether (TAME) | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| Naphthalene                   | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| 1,2,3-Trichlorobenzene        | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |
| 1,3,5-Trichlorobenzene        | <1 µg/l   | TM208  |   | <1                              | <1                              | <1                              | <1                              |  |  |





# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

## Notification of NDPs (No determination possible)

Date Received : 15/09/2022 14:06:19

| Sample No | Customer Sample Ref. | Depth (m) | Test                  | Comment             |
|-----------|----------------------|-----------|-----------------------|---------------------|
| 26881772  | P4B                  |           | SVOC MS (W) - Aqueous | Insufficient Sample |
| 26881772  | P4B                  |           | SVOC MS (W) - Aqueous | Insufficient Sample |
| 26881772  | P4B                  |           | Suspended Solids      | Insufficient Sample |
| 26881772  | P4B                  |           | Suspended Solids      | Insufficient Sample |



# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

## Table of Results - Appendix

| Method No | Reference   | Description  |
|-----------|---|--|
| TM022     | Method 2540D, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part120 1981;BS EN 872   | Determination of total suspended solids in waters  |
| TM043     | Method 2320B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part109 1984   | Determination of alkalinity in aqueous samples   |
| TM045     | MEWAM BOD5 2nd Ed.HMSO 1988 / Method 5210B, AWWA/APHA, 20th Ed., 1999; SCA Blue Book 130  | Determination of BOD5 (ATU) Filtered by Oxygen Meter on liquids  |
| TM090     | Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060   | Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water                            |
| TM099     | BS 2690: Part 7:1968 / BS 6068: Part2.11:1984   | Determination of Ammonium in Water Samples using the Kone Analyser   |
| TM101     | Method 4500B & C, AWWA/APHA, 20th Ed., 1999   | Determination of Sulphide in soil and water samples using the Kone Analyser                                      |
| TM104     | Method 4500F, AWWA/APHA, 20th Ed., 1999   | Determination of Fluoride using the Kone Analyser  |
| TM107     | ISO 6060-1989   | Determination of Chemical Oxygen Demand using COD Dr Lange Kit   |
| TM152     | ISO 17294-2:2016 Water quality - Application of inductively coupled plasma mass spectrometry (ICP-MS)   | Analysis of Aqueous Samples by ICP-MS  |
| TM174     | Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria  | Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID                                |
| TM176     | EPA 8270D Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)   | Determination of SVOCs in Water by GCMS  |
| TM178     | Modified: US EPA Method 8100  | Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters                                      |
| TM183     | BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3  | Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry |
| TM184     | EPA Methods 325.1 & 325.2,  | The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers                      |
| TM197     | Modified: US EPA Method 8082.EA Method 174 and 5109631  | Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Waters                             |
| TM208     | Modified: US EPA Method 8260b & 624   | Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters                                       |
| TM212     | SO/TR 11905-2: 1997. Water quality – Determination of nitrogen – Part 2:Determination of bound nitrogen, after combustion and oxidation to nitrogen dioxide, chemiluminescence detection. | Determination of Total Nitrogen by High Temperature Catalytic Oxidation followed by Chemiluminescence Detection  |
| TM245     | By GC-FID   | Determination of GRO by Headspace in waters  |

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM).





# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

## Test Completion Dates

| Lab Sample No(s)<br>Customer Sample Ref.<br>AGS Ref.<br>Depth<br>Type | 26881763     | 26881765     | 26881766     | 26881767     | 26881768     | 26881754     | 26881756     | 26881757     | 26881758     | 26881761     |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|   | 107          | 108          | 110          | 89/10        | 89/11        | 101A         | 102A         | 103A         | 104A         | 105A         |
|   | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water |
| Alkalinity as CaCO3   | 21-Sep-2022  |              | 21-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 22-Sep-2022  | 21-Sep-2022  |
| Ammoniacal Nitrogen   | 21-Sep-2022  | 23-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  |
| Anions by Kone (w)  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  |
| BOD True Total  | 21-Sep-2022  | 22-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  |
| COD Unfiltered  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  |
| Dissolved Metals by ICP-MS  | 22-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 23-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  |
| Dissolved Organic/Inorganic Carbon                                    | 18-Sep-2022  |              | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 18-Sep-2022  | 18-Sep-2022  | 18-Sep-2022  | 18-Sep-2022  |
| EPH CWG (Aliphatic) Aqueous GC (W)                                    | 24-Sep-2022  |              | 21-Sep-2022  | 24-Sep-2022  | 24-Sep-2022  | 24-Sep-2022  | 24-Sep-2022  | 21-Sep-2022  | 24-Sep-2022  | 24-Sep-2022  |
| EPH CWG (Aromatic) Aqueous GC (W)                                     | 24-Sep-2022  |              | 21-Sep-2022  | 24-Sep-2022  | 24-Sep-2022  | 24-Sep-2022  | 24-Sep-2022  | 21-Sep-2022  | 24-Sep-2022  | 24-Sep-2022  |
| Fluoride  | 17-Sep-2022  |              | 17-Sep-2022  | 16-Sep-2022  | 16-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  |
| GRO by GC-FID (W)   | 21-Sep-2022  |              | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  |
| Mercury Dissolved   | 20-Sep-2022  | 20-Sep-2022  | 20-Sep-2022  | 20-Sep-2022  | 20-Sep-2022  | 20-Sep-2022  | 16-Sep-2022  | 16-Sep-2022  | 16-Sep-2022  | 16-Sep-2022  |
| Nitrite by Kone (w)   | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  |
| PAH Spec MS - Aqueous (W)   | 22-Sep-2022  |              | 21-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 21-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  |
| PCB Congeners - Aqueous (W)   | 23-Sep-2022  |              | 22-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  | 22-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  |
| Phosphate by Kone (w)   | 17-Sep-2022  |              | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  |
| Sulphide  | 23-Sep-2022  |              | 23-Sep-2022  | 23-Sep-2022  | 22-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  |
| Suspended Solids  | 20-Sep-2022  |              | 20-Sep-2022  | 20-Sep-2022  | 20-Sep-2022  | 20-Sep-2022  | 20-Sep-2022  | 20-Sep-2022  | 20-Sep-2022  | 20-Sep-2022  |
| SVOC MS (W) - Aqueous   | 22-Sep-2022  | 27-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  |
| Total Metals by ICP-MS  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  |
| Total Nitrogen  | 23-Sep-2022  |              | 23-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  |
| TPH CWG (W)   | 24-Sep-2022  |              | 21-Sep-2022  | 24-Sep-2022  | 24-Sep-2022  | 24-Sep-2022  | 24-Sep-2022  | 21-Sep-2022  | 24-Sep-2022  | 24-Sep-2022  |
| VOC MS (W)  | 21-Sep-2022  | 26-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  |

| Lab Sample No(s)<br>Customer Sample Ref.<br>AGS Ref.<br>Depth<br>Type | 26881762     | 26881779      | 26881769     | 26881770     | 26881771     | 26881773     | 26881777     | 26881778     | 26881772     | 26881774     |
|---|--------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|   | 106A         | LAKE          | P2A          | P3A          | P4A          | P6A          | P8A          | P9A          | P4B          | P6B          |
|   | Ground Water | Surface Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water |
| Alkalinity as CaCO3   | 22-Sep-2022  | 21-Sep-2022   | 21-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  |
| Ammoniacal Nitrogen   | 21-Sep-2022  | 21-Sep-2022   | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  |
| Anions by Kone (w)  | 22-Sep-2022  | 22-Sep-2022   | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  |
| BOD True Total  | 21-Sep-2022  | 21-Sep-2022   | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 22-Sep-2022  | 21-Sep-2022  |
| COD Unfiltered  | 22-Sep-2022  | 22-Sep-2022   | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  |
| Dissolved Metals by ICP-MS  | 22-Sep-2022  | 22-Sep-2022   | 22-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  | 22-Sep-2022  | 23-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  |
| Dissolved Organic/Inorganic Carbon                                    | 18-Sep-2022  | 17-Sep-2022   | 17-Sep-2022  | 18-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 18-Sep-2022  | 18-Sep-2022  |
| EPH CWG (Aliphatic) Aqueous GC (W)                                    | 24-Sep-2022  | 24-Sep-2022   | 24-Sep-2022  | 24-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 24-Sep-2022  | 24-Sep-2022  |              | 26-Sep-2022  |
| EPH CWG (Aromatic) Aqueous GC (W)                                     | 24-Sep-2022  | 24-Sep-2022   | 24-Sep-2022  | 24-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 24-Sep-2022  | 24-Sep-2022  |              | 26-Sep-2022  |
| Fluoride  | 17-Sep-2022  | 16-Sep-2022   | 16-Sep-2022  | 16-Sep-2022  | 16-Sep-2022  | 16-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  |
| GRO by GC-FID (W)   | 21-Sep-2022  | 21-Sep-2022   | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  |
| Mercury Dissolved   | 16-Sep-2022  | 21-Sep-2022   | 20-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 16-Sep-2022  | 20-Sep-2022  | 20-Sep-2022  | 16-Sep-2022  |
| Nitrite by Kone (w)   | 17-Sep-2022  | 17-Sep-2022   | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  |
| PAH Spec MS - Aqueous (W)   | 22-Sep-2022  | 22-Sep-2022   | 22-Sep-2022  | 22-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  |              | 22-Sep-2022  |
| PCB Congeners - Aqueous (W)   | 23-Sep-2022  | 23-Sep-2022   | 23-Sep-2022  | 23-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  |              | 23-Sep-2022  |
| Phosphate by Kone (w)   | 17-Sep-2022  | 17-Sep-2022   | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  | 17-Sep-2022  |
| Sulphide  | 23-Sep-2022  | 23-Sep-2022   | 23-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  |
| Suspended Solids  | 20-Sep-2022  | 22-Sep-2022   | 20-Sep-2022  | 20-Sep-2022  | 20-Sep-2022  | 20-Sep-2022  | 20-Sep-2022  | 20-Sep-2022  |              | 20-Sep-2022  |
| SVOC MS (W) - Aqueous   | 22-Sep-2022  | 22-Sep-2022   | 22-Sep-2022  | 23-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  |              | 22-Sep-2022  |
| Total Metals by ICP-MS  | 22-Sep-2022  | 22-Sep-2022   | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  | 22-Sep-2022  |
| Total Nitrogen  | 23-Sep-2022  | 23-Sep-2022   | 23-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  | 23-Sep-2022  |
| TPH CWG (W)   | 24-Sep-2022  | 24-Sep-2022   | 24-Sep-2022  | 24-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 24-Sep-2022  | 24-Sep-2022  |              | 26-Sep-2022  |
| VOC MS (W)  | 21-Sep-2022  | 21-Sep-2022   | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  | 21-Sep-2022  |



# CERTIFICATE OF ANALYSIS

Validated

SDG: 220915-96  
Client Ref.: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

|                             |              |              |
|-----------------------------|--------------|--------------|
| <b>Lab Sample No(s)</b>     | 26881776     | 26881775     |
| <b>Customer Sample Ref.</b> | P7B          | P6C          |
| <b>AGS Ref.</b>             |              |              |
| <b>Depth</b>                |              |              |
| <b>Type</b>                 | Ground Water | Ground Water |

|                                    |             |             |
|------------------------------------|-------------|-------------|
| Alkalinity as CaCO3                | 21-Sep-2022 | 21-Sep-2022 |
| Ammoniacal Nitrogen                | 21-Sep-2022 | 21-Sep-2022 |
| Anions by Kone (w)                 | 22-Sep-2022 | 22-Sep-2022 |
| BOD True Total                     | 21-Sep-2022 | 21-Sep-2022 |
| COD Unfiltered                     | 22-Sep-2022 | 22-Sep-2022 |
| Dissolved Metals by ICP-MS         | 22-Sep-2022 | 22-Sep-2022 |
| Dissolved Organic/Inorganic Carbon | 17-Sep-2022 | 18-Sep-2022 |
| EPH CWG (Aliphatic) Aqueous GC (W) | 24-Sep-2022 | 24-Sep-2022 |
| EPH CWG (Aromatic) Aqueous GC (W)  | 24-Sep-2022 | 24-Sep-2022 |
| Fluoride                           | 17-Sep-2022 | 17-Sep-2022 |
| GRO by GC-FID (W)                  | 21-Sep-2022 | 21-Sep-2022 |
| Mercury Dissolved                  | 16-Sep-2022 | 16-Sep-2022 |
| Nitrite by Kone (w)                | 17-Sep-2022 | 17-Sep-2022 |
| PAH Spec MS - Aqueous (W)          | 22-Sep-2022 | 22-Sep-2022 |
| PCB Congeners - Aqueous (W)        | 23-Sep-2022 | 23-Sep-2022 |
| Phosphate by Kone (w)              | 17-Sep-2022 | 17-Sep-2022 |
| Sulphide                           | 23-Sep-2022 | 23-Sep-2022 |
| Suspended Solids                   | 20-Sep-2022 | 20-Sep-2022 |
| SVOC MS (W) - Aqueous              | 22-Sep-2022 | 22-Sep-2022 |
| Total Metals by ICP-MS             | 22-Sep-2022 | 22-Sep-2022 |
| Total Nitrogen                     | 23-Sep-2022 | 23-Sep-2022 |
| TPH CWG (W)                        | 24-Sep-2022 | 24-Sep-2022 |
| VOC MS (W)                         | 21-Sep-2022 | 21-Sep-2022 |



# CERTIFICATE OF ANALYSIS

SDG: 220915-96  
Client Ref: 22/3748

Report Number: 662608  
Location: Point of Ayre, Isle of Man

Superseded Report:

## Appendix

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

## General

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

### 19. Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

|   |   |
|---|---|
| 1 | Container with Headspace provided for volatiles analysis                    |
| 2 | Incorrect container received  |
| 3 | Deviation from method   |
| 4 | Matrix interference   |
| ♦ | Sample holding time exceeded in laboratory                                  |
| @ | Sample holding time exceeded due to late arrival of instructions or samples |
| § | Sampled on date not provided  |

### 20. Asbestos

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

#### Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials and soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

| Asbestos Type         | Common Name    |
|-----------------------|----------------|
| Chrysotile            | White Asbestos |
| Amosite               | Brown Asbestos |
| Crocidolite           | Blue Asbestos  |
| Fibrous Actinolite    | -              |
| Fibrous Anthophyllite | -              |
| Fibrous Tremolite     | -              |

#### Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

#### Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

**Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.**

**The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.**

# ALS

|                              |   | Customer Sample ID     | 107          | 108          | 110          | 89/10        | 89/11        | 101A         | 102A         |      |      |
|------------------------------|---|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------|------|
|                              |   | Depth                  | -            | -            | -            | -            | -            | -            | -            |      |      |
|                              |   | AGS Id                 |              |              |              |              |              |              |              |      |      |
| SDG(s):                      | 220915-96                                 | Sample Type            | GROUND_WATER | GROUND_WATER | GROUND_WATER | GROUND_WATER | GROUND_WATER | GROUND_WATER | GROUND_WATER |      |      |
| Customer:                    | Concept Site Investigations London (7590) | Sampled Date           | 12/09/2022   | 12/09/2022   | 12/09/2022   | 12/09/2022   | 12/09/2022   | 12/09/2022   | 12/09/2022   |      |      |
| Client Reference / Location: | Point of Ayre, Isle of Man                | Sample Received Date   | 15/09/2022   | 15/09/2022   | 15/09/2022   | 15/09/2022   | 15/09/2022   | 15/09/2022   | 15/09/2022   |      |      |
| Order no:                    | CL4121                                    | Final Instruction Date | 15/09/2022   | 15/09/2022   | 15/09/2022   | 15/09/2022   | 15/09/2022   | 15/09/2022   | 15/09/2022   |      |      |
|                              |   | Report Completed Date  | 27/09/2022   | 27/09/2022   | 27/09/2022   | 27/09/2022   | 27/09/2022   | 27/09/2022   | 27/09/2022   |      |      |
|                              |   | SDG                    | 220915-96    | 220915-96    | 220915-96    | 220915-96    | 220915-96    | 220915-96    | 220915-96    |      |      |
|                              |   | Lab Sample Number      | 26881763     | 26881765     | 26881766     | 26881767     | 26881768     | 26881754     | 26881756     |      |      |
|                              |   | Sample Temperature     | 13.2         | 13.2         | 13.2         | 13.2         | 13.2         | 13.2         | 13.2         |      |      |
|                              |   | Sample Time            |              |              |              |              |              |              |              |      |      |
| Analysis                     | Test                                      | Method                 | Units        | LOD          |              |              |              |              |              |      |      |
| <b>Inorganics</b>            |   |                        |              |              |              |              |              |              |              |      |      |
|                              | Ammoniacal Nitrogen as N                  | TM099                  | mg/l         | <0.2         | 11.6         | <0.2         | <0.2         | 4.21         | <0.2         | <0.2 | 48.7 |
|                              | Ammoniacal Nitrogen as NH4*               | -                      | mg/l         | <0.3**       | 14.9         | <0.3         | <0.3         | 5.41         | <0.3         | <0.3 | 62.6 |

\* - Ammoniacal Nitrogen as NH4 calculated from Ammoniacal Nitrogen as N value by correcting for molecular weight (x 1.286)

\*\* - Limit of detection (LoD) value for Ammoniacal Nitrogen as NH4 has been rounded up from 0.257 to ensure consistency with earlier monitoring rounds.

# ALS

|                                     | Customer Sample ID                        | 103A                          | 104A         | 105A         | 106A         | P2A          | P3A          | P4A          |
|-------------------------------------|---|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                                     | Depth                                     | -                             | -            | -            | -            | -            | -            | -            |
|                                     | AGS Id                                    |                               |              |              |              |              |              |              |
| <b>SDG(s):</b>                      | 220915-96                                 |                               |              |              |              |              |              |              |
| <b>Customer:</b>                    | Concept Site Investigations London (7590) | <b>Sample Type</b>            | GROUND_WATER | GROUND_WATER | GROUND_WATER | GROUND_WATER | GROUND_WATER | GROUND_WATER |
| <b>Client Reference / Location:</b> | Point of Ayre, Isle of Man                | <b>Sampled Date</b>           | 12/09/2022   | 12/09/2022   | 12/09/2022   | 12/09/2022   | 12/09/2022   | 12/09/2022   |
| <b>Order no:</b>                    | CL4121                                    | <b>Sample Received Date</b>   | 15/09/2022   | 15/09/2022   | 15/09/2022   | 15/09/2022   | 15/09/2022   | 15/09/2022   |
|                                     |   | <b>Final Instruction Date</b> | 15/09/2022   | 15/09/2022   | 15/09/2022   | 15/09/2022   | 15/09/2022   | 15/09/2022   |
|                                     |   | <b>Report Completed Date</b>  | 27/09/2022   | 27/09/2022   | 27/09/2022   | 27/09/2022   | 27/09/2022   | 27/09/2022   |
|                                     |   | <b>SDG</b>                    | 220915-96    | 220915-96    | 220915-96    | 220915-96    | 220915-96    | 220915-96    |
|                                     |   | <b>Lab Sample Number</b>      | 26881757     | 26881758     | 26881761     | 26881762     | 26881769     | 26881770     |
|                                     |   | <b>Sample Temperature</b>     | 13.2         | 13.2         | 13.2         | 13.2         | 13.2         | 13.2         |
|                                     |   | <b>Sample Time</b>            |              |              |              |              |              |              |

| Analysis          | Test                        | Method | Units | LOD    | 103A | 104A | 105A | 106A | P2A  | P3A  | P4A  |
|-------------------|-----------------------------|--------|-------|--------|------|------|------|------|------|------|------|
| <b>Inorganics</b> |                             |        |       |        |      |      |      |      |      |      |      |
|                   | Ammoniacal Nitrogen as N    | TM099  | mg/l  | <0.2   | 49   | 32.3 | 115  | 41.8 | 4.56 | 37.9 | 31.9 |
|                   | Ammoniacal Nitrogen as NH4* | -      | mg/l  | <0.3** | 63.0 | 41.5 | 148  | 53.7 | 5.86 | 48.7 | 41.0 |

\* - Ammoniacal Nitrogen as NH4 calculated from Ammoniacal Nitrogen as N value by correcting for molecular weight  
 \*\* - Limit of detection (LoD) value for Ammoniacal Nitrogen as NH4 has been rounded up from 0.257 to ensure consistency

# ALS

|                                     |   | Customer Sample ID            | P6A          | P8A          | P9A          | P4B          | P6B          | P7B          | P6C          |      |     |
|-------------------------------------|---|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------|-----|
|                                     |   | Depth                         | -            | -            | -            | -            | -            | -            | -            |      |     |
|                                     |   | AGS Id                        |              |              |              |              |              |              |              |      |     |
| <b>SDG(s):</b>                      | 220915-96                                 | <b>Sample Type</b>            | GROUND_WATER | GROUND_WATER | GROUND_WATER | GROUND_WATER | GROUND_WATER | GROUND_WATER | GROUND_WATER |      |     |
| <b>Customer:</b>                    | Concept Site Investigations London (7590) | <b>Sampled Date</b>           | 12/09/2022   | 12/09/2022   | 12/09/2022   | 12/09/2022   | 12/09/2022   | 12/09/2022   | 12/09/2022   |      |     |
| <b>Client Reference / Location:</b> | Point of Ayre, Isle of Man                | <b>Sample Received Date</b>   | 15/09/2022   | 15/09/2022   | 15/09/2022   | 15/09/2022   | 15/09/2022   | 15/09/2022   | 15/09/2022   |      |     |
| <b>Order no:</b>                    | CL4121                                    | <b>Final Instruction Date</b> | 15/09/2022   | 15/09/2022   | 15/09/2022   | 15/09/2022   | 15/09/2022   | 15/09/2022   | 15/09/2022   |      |     |
|                                     |   | <b>Report Completed Date</b>  | 27/09/2022   | 27/09/2022   | 27/09/2022   | 27/09/2022   | 27/09/2022   | 27/09/2022   | 27/09/2022   |      |     |
|                                     |   | <b>SDG</b>                    | 220915-96    | 220915-96    | 220915-96    | 220915-96    | 220915-96    | 220915-96    | 220915-96    |      |     |
|                                     |   | <b>Lab Sample Number</b>      | 26881773     | 26881777     | 26881778     | 26881772     | 26881774     | 26881776     | 26881775     |      |     |
|                                     |   | <b>Sample Temperature</b>     | 13.2         | 13.2         | 13.2         | 13.2         | 13.2         | 13.2         | 13.2         |      |     |
|                                     |   | <b>Sample Time</b>            |              |              |              |              |              |              |              |      |     |
| Analysis                            | Test                                      | Method                        | Units        | LOD          |              |              |              |              |              |      |     |
| <b>Inorganics</b>                   |   |                               |              |              |              |              |              |              |              |      |     |
|                                     | Ammoniacal Nitrogen as N                  | TM099                         | mg/l         | <0.2         | 55.8         | 24.7         | 0.296        | 41.3         | 87.3         | <0.2 | 84  |
|                                     | Ammoniacal Nitrogen as NH4*               | -                             | mg/l         | <0.3**       | 71.7         | 31.8         | 0.38         | 53.1         | 112          | <0.3 | 108 |

\* - Ammoniacal Nitrogen as NH4 calculated from Ammoniacal Nitrogen as N value by correcting for molecular weight  
 \*\* - Limit of detection (LoD) value for Ammoniacal Nitrogen as NH4 has been rounded up from 0.257 to ensure consistency

# ALS

|                                     |   |
|-------------------------------------|---|
| <b>Customer Sample ID</b>           | LAKE                                      |
| <b>Depth</b>                        | -   |
| <b>SDG(s):</b>                      | 220915-96                                 |
| <b>AGS Id</b>                       | SURFACE_                                  |
| <b>Customer:</b>                    | Concept Site Investigations London (7590) |
| <b>Sample Type</b>                  | WATER                                     |
| <b>Client Reference / Location:</b> | Point of Ayre, Isle of Man                |
| <b>Sampled Date</b>                 | 12/09/2022                                |
| <b>Order no:</b>                    | CL4121                                    |
| <b>Sample Received Date</b>         | 15/09/2022                                |
| <b>Final Instruction Date</b>       | 15/09/2022                                |
| <b>Report Completed Date</b>        | 27/09/2022                                |
| <b>SDG</b>                          | 220915-96                                 |
| <b>Lab Sample Number</b>            | 26881779                                  |
| <b>Sample Temperature</b>           | 13.2                                      |
| <b>Sample Time</b>                  |   |

| Analysis          | Test                        | Method | Units | LOD    |      |
|-------------------|-----------------------------|--------|-------|--------|------|
| <b>Inorganics</b> |                             |        |       |        |      |
|                   | Ammoniacal Nitrogen as N    | TM099  | mg/l  | <0.2   | <0.2 |
|                   | Ammoniacal Nitrogen as NH4* | -      | mg/l  | <0.3** | <0.3 |

\* - Ammoniacal Nitrogen as NH4 calculated from Ammoniacal Nitrogen as N value by correcting for molecular weight  
\*\* - Limit of detection (LoD) value for Ammoniacal Nitrogen as NH4 has been rounded up from 0.257 to ensure consistency





## ALS December 2022 Laboratory Certificates



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Concept Site Investigations  
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Warple Way  
London  
W3 0RF

**Attention:** Daniel Freeland

## CERTIFICATE OF ANALYSIS

**Date of report Generation:** 09 January 2023  
**Customer:** Concept Site Investigations  
**Sample Delivery Group (SDG):** 221207-97  
**Your Reference:** 22/3748  
**Location:** Point of Ayre, Isle of Man  
**Report No:** 674463  
**Order Number:** P322697

**This report has been revised and directly supersedes 672607 in its entirety.**

We received 27 samples on Wednesday December 07, 2022 and 27 of these samples were scheduled for analysis which was completed on Monday December 19, 2022. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.

Incorrect sampling dates and/or sample information will affect the validity of results.

The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

**Sonia McWhan**

Operations Manager



# CERTIFICATE OF ANALYSIS

Validated

SDG: 221207-97  
Client Ref.: 22/3748

Report Number: 674463  
Location: Point of Ayre, Isle of Man

Superseded Report: 672607

## Received Sample Overview

| Lab Sample No(s) | Customer Sample Ref. | AGS Ref. | Depth (m) | Sampled Date |
|------------------|----------------------|----------|-----------|--------------|
| 27276240         | 107                  |          | 6.02      | 05/12/2022   |
| 27276239         | 108                  |          | 4.82      | 05/12/2022   |
| 27276238         | 110                  |          | 3.75      | 05/12/2022   |
| 27276234         | 96/4                 |          | 1.07      | 05/12/2022   |
| 27276237         | 89/10                |          | 1.10      | 05/12/2022   |
| 27276236         | 89/11                |          | 1.59      | 05/12/2022   |
| 27276235         | 90/17                |          | 1.92      | 05/12/2022   |
| 27276246         | 101A                 |          | 4.51      | 05/12/2022   |
| 27276245         | 102A                 |          | 4.91      | 05/12/2022   |
| 27276244         | 103A                 |          | 7.60      | 05/12/2022   |
| 27276243         | 104A                 |          | 6.22      | 05/12/2022   |
| 27276242         | 105A                 |          | 6.60      | 06/12/2022   |
| 27276241         | 106A                 |          | 7.05      | 06/12/2022   |
| 27276223         | Lake                 |          |           | 05/12/2022   |
| 27276233         | P2A                  |          | 6.53      | 05/12/2022   |
| 27276222         | P3A                  |          | 4.97      | 05/12/2022   |
| 27276631         | P4A                  |          | 5.95      | 06/12/2022   |
| 27276229         | P6A                  |          | 6.34      | 05/12/2022   |
| 27276225         | P8A                  |          | 5.39      | 06/12/2022   |
| 27276224         | P9A                  |          | 6.79      | 05/12/2022   |
| 27276231         | P3B                  |          | 5.10      | 05/12/2022   |
| 27276230         | P4B                  |          | 5.90      | 06/12/2022   |
| 27276228         | P6B                  |          | 6.34      | 05/12/2022   |
| 27276226         | P7B                  |          | 5.71      | 05/12/2022   |
| 27276227         | P6C                  |          | 6.40      | 05/12/2022   |
| 27289466         | QAQC1                |          | 6.60      | 06/12/2022   |
| 27289460         | QAQC2                |          | 5.39      | 06/12/2022   |

Only received samples which have had analysis scheduled will be shown on the following pages.



# CERTIFICATE OF ANALYSIS

Validated

SDG: 221207-97  
Client Ref.: 22/3748

Report Number: 674463  
Location: Point of Ayre, Isle of Man

Superseded Report: 672607

| <b>Results Legend</b><br><br><div style="display: flex; flex-direction: column; gap: 5px;"> <div style="display: flex; align-items: center;"><span style="background-color: yellow; border: 1px solid black; padding: 2px;">X</span> Test</div> <div style="display: flex; align-items: center;"><span style="background-color: red; color: white; border: 1px solid black; padding: 2px;">N</span> No Determination Possible</div> </div><br>Sample Types -<br>S - Soil/Solid<br>UNS - Unspecified Solid<br>GW - Ground Water<br>SW - Surface Water<br>LE - Land Leachate<br>PL - Prepared Leachate<br>PR - Process Water<br>SA - Saline Water<br>TE - Trade Effluent<br>TS - Treated Sewage<br>US - Untreated Sewage<br>RE - Recreational Water<br>DW - Drinking Water<br>Non-regulatory<br>UNL - Unspecified Liquid<br>SL - Sludge<br>G - Gas<br>OTH - Other | Lab Sample No(s) | Customer Sample Reference | AGS Reference | Depth (m) | Container | Sample Type |  |          |          |          |          |          |                |                               |                                  |                        |                |                               |                                  |                        |                |                               |                                  |                        |     |
|---|------------------|---------------------------|---------------|-----------|-----------|-------------|--|----------|----------|----------|----------|----------|----------------|-------------------------------|----------------------------------|------------------------|----------------|-------------------------------|----------------------------------|------------------------|----------------|-------------------------------|----------------------------------|------------------------|-----|
|   |                  |                           |               |           |           |             |  | 27276240 | 27276239 | 27276238 | 27276234 | 27276237 |                |                               |                                  |                        |                |                               |                                  |                        |                |                               |                                  |                        |     |
|   |                  |                           |               |           |           |             |  | 107      | 108      | 110      | 96/4     | 89/10    |                |                               |                                  |                        |                |                               |                                  |                        |                |                               |                                  |                        |     |
|   |                  |                           |               |           |           |             |  | 6.02     | 4.82     | 3.75     | 1.07     | 1.10     | H2SO4 (ALE244) | 330ml plastic bottle (ALE503) | 250ml Amber Gl. PTFE/PE (ALE219) | HNO3 Filtered (ALE204) | H2SO4 (ALE244) | 330ml plastic bottle (ALE503) | 250ml Amber Gl. PTFE/PE (ALE219) | HNO3 Filtered (ALE204) | H2SO4 (ALE244) | 330ml plastic bottle (ALE503) | 250ml Amber Gl. PTFE/PE (ALE219) | HNO3 Filtered (ALE204) |     |
|   |                  |                           |               |           |           |             |  | UNL      | UNL      | UNL      | UNL      | UNL      | UNL            | UNL                           | UNL                              | UNL                    | UNL            | UNL                           | UNL                              | UNL                    | UNL            | UNL                           | UNL                              | UNL                    | UNL |
|   |                  |                           |               |           |           |             |  | UNL      | UNL      | UNL      | UNL      | UNL      | UNL            | UNL                           | UNL                              | UNL                    | UNL            | UNL                           | UNL                              | UNL                    | UNL            | UNL                           | UNL                              | UNL                    | UNL |
| Ammoniacal Nitrogen   | All              | NDPs: 0<br>Tests: 27      |               |           |           |             |  |          |          |          |          |          |                |                               |                                  |                        |                |                               |                                  |                        |                |                               |                                  |                        |     |
| Anions by Kone (w)  | All              | NDPs: 0<br>Tests: 27      |               |           |           |             |  |          |          |          |          |          |                |                               |                                  |                        |                |                               |                                  |                        |                |                               |                                  |                        |     |
| Dissolved Metals by ICP-MS  | All              | NDPs: 0<br>Tests: 27      |               |           |           |             |  |          |          |          |          |          |                |                               |                                  |                        |                |                               |                                  |                        |                |                               |                                  |                        |     |
| Dissolved Organic/Inorganic Carbon  | All              | NDPs: 0<br>Tests: 27      |               |           |           |             |  |          |          |          |          |          |                |                               |                                  |                        |                |                               |                                  |                        |                |                               |                                  |                        |     |
| EPH CWG (Aliphatic) Aqueous GC (W)  | All              | NDPs: 0<br>Tests: 8       |               |           |           |             |  |          |          |          |          |          |                |                               |                                  |                        |                |                               |                                  |                        |                |                               |                                  |                        |     |
| EPH CWG (Aromatic) Aqueous GC (W)   | All              | NDPs: 0<br>Tests: 8       |               |           |           |             |  |          |          |          |          |          |                |                               |                                  |                        |                |                               |                                  |                        |                |                               |                                  |                        |     |
| GRO by GC-FID (W)   | All              | NDPs: 0<br>Tests: 8       |               |           |           |             |  |          |          |          |          |          |                |                               |                                  |                        |                |                               |                                  |                        |                |                               |                                  |                        |     |
| PAH Spec MS - Aqueous (W)   | All              | NDPs: 0<br>Tests: 9       |               |           |           |             |  |          |          |          |          |          |                |                               |                                  |                        |                |                               |                                  |                        |                |                               |                                  |                        |     |
| TPH CWG (W)   | All              | NDPs: 0<br>Tests: 8       |               |           |           |             |  |          |          |          |          |          |                |                               |                                  |                        |                |                               |                                  |                        |                |                               |                                  |                        |     |
| VOC MS (W)  | All              | NDPs: 0<br>Tests: 12      |               |           |           |             |  |          |          |          |          |          |                |                               |                                  |                        |                |                               |                                  |                        |                |                               |                                  |                        |     |











# CERTIFICATE OF ANALYSIS

Validated

SDG: 221207-97  
Client Ref.: 22/3748

Report Number: 674463  
Location: Point of Ayre, Isle of Man

Superseded Report: 672607

| Results Legend   | Lab Sample No(s) | Customer Sample Reference | AGS Reference | Depth (m) | Container      |                        |                        |                |                        |                        |                                  |                                  |                               |                               | Sample Type            |                                  |
|--|------------------|---------------------------|---------------|-----------|----------------|------------------------|------------------------|----------------|------------------------|------------------------|----------------------------------|----------------------------------|-------------------------------|-------------------------------|------------------------|----------------------------------|
|  |                  |                           |               |           | H2SO4 (ALE244) | HNO3 Filtered (ALE204) | HNO3 Filtered (ALE219) | H2SO4 (ALE244) | HNO3 Filtered (ALE204) | HNO3 Filtered (ALE219) | 250ml Amber Gl. PTFE/PE (ALE219) | 250ml Amber Gl. PTFE/PE (ALE219) | 330ml plastic bottle (ALE503) | 330ml plastic bottle (ALE503) |                        | HNO3 Filtered (ALE204)           |
| <b>X</b> Test<br><b>N</b> No Determination Possible<br><br>Sample Types -<br>S - Soil/Solid<br>UNS - Unspecified Solid<br>GW - Ground Water<br>SW - Surface Water<br>LE - Land Leachate<br>PL - Prepared Leachate<br>PR - Process Water<br>SA - Saline Water<br>TE - Trade Effluent<br>TS - Treated Sewage<br>US - Untreated Sewage<br>RE - Recreational Water<br>DW - Drinking Water<br>Non-regulatory<br>UNL - Unspecified Liquid<br>SL - Sludge<br>G - Gas<br>OTH - Other | 27276224         | P9A                       |               | 6.79      | H2SO4 (ALE244) | HNO3 Filtered (ALE204) | HNO3 Filtered (ALE219) | H2SO4 (ALE244) | HNO3 Filtered (ALE204) | HNO3 Filtered (ALE219) | 250ml Amber Gl. PTFE/PE (ALE219) | 250ml Amber Gl. PTFE/PE (ALE219) | 330ml plastic bottle (ALE503) | 330ml plastic bottle (ALE503) | HNO3 Filtered (ALE204) | 250ml Amber Gl. PTFE/PE (ALE219) |
|  | 27276231         | P3B                       |               | 5.10      |                |                        |                        |                |                        |                        |                                  |                                  |                               |                               |                        |                                  |
|  | 27276230         | P4B                       |               | 5.90      |                |                        |                        |                |                        |                        |                                  |                                  |                               |                               |                        |                                  |
|  | 27276228         | P6B                       |               | 6.34      |                |                        |                        |                |                        |                        |                                  |                                  |                               |                               |                        |                                  |
|  | 27276226         | P7B                       |               | 5.71      |                |                        |                        |                |                        |                        |                                  |                                  |                               |                               |                        |                                  |
|  | 27276227         | P6C                       |               | 6.40      |                |                        |                        |                |                        |                        |                                  |                                  |                               |                               |                        |                                  |
| Ammoniacal Nitrogen  | All              | NDPs: 0<br>Tests: 27      |               |           | X              |                        | X                      |                | X                      |                        | X                                |                                  | X                             |                               | X                      |                                  |
| Anions by Kone (w)   | All              | NDPs: 0<br>Tests: 27      |               |           |                | X                      |                        | X              | X                      |                        | X                                |                                  | X                             |                               | X                      |                                  |
| Dissolved Metals by ICP-MS   | All              | NDPs: 0<br>Tests: 27      |               |           | X              |                        | X                      |                | X                      |                        | X                                |                                  | X                             |                               | X                      |                                  |
| Dissolved Organic/Inorganic Carbon   | All              | NDPs: 0<br>Tests: 27      |               |           |                | X                      |                        | X              | X                      |                        | X                                |                                  | X                             |                               | X                      |                                  |
| EPH CWG (Aliphatic) Aqueous GC (W)   | All              | NDPs: 0<br>Tests: 8       |               |           |                |                        |                        |                |                        |                        |                                  |                                  |                               |                               |                        |                                  |
| EPH CWG (Aromatic) Aqueous GC (W)  | All              | NDPs: 0<br>Tests: 8       |               |           |                |                        |                        |                |                        |                        |                                  |                                  |                               |                               |                        |                                  |
| GRO by GC-FID (W)  | All              | NDPs: 0<br>Tests: 8       |               |           |                |                        |                        |                |                        |                        |                                  |                                  |                               |                               |                        |                                  |
| PAH Spec MS - Aqueous (W)  | All              | NDPs: 0<br>Tests: 9       |               |           |                |                        |                        |                |                        |                        |                                  |                                  |                               |                               |                        |                                  |
| TPH CWG (W)  | All              | NDPs: 0<br>Tests: 8       |               |           |                |                        |                        |                |                        |                        |                                  |                                  |                               |                               |                        |                                  |
| VOC MS (W)   | All              | NDPs: 0<br>Tests: 12      |               |           |                |                        |                        |                |                        |                        |                                  |                                  |                               |                               |                        |                                  |





















# CERTIFICATE OF ANALYSIS

Validated

SDG: 221207-97  
Client Ref.: 22/3748

Report Number: 674463  
Location: Point of Ayre, Isle of Man

Superseded Report: 672607

## TPH CWG (W)

| Results Legend                           |  |        | Customer Sample Ref.  | 89/10                    | 103A                     | 104A                     | 105A                     | 106A                     | P8A                      |
|--|--|--------|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| #  | ISO17025 accredited.   |        | Depth (m)<br>Sample Type<br>Date Sampled<br>Sample Time<br>Date Received<br>SDG Ref<br>Lab Sample No.(s)<br>AGS Reference | 89/10                    | 103A                     | 104A                     | 105A                     | 106A                     | P8A                      |
| M  | mCERTS accredited.   |        |   | 1.10                     | 7.60                     | 6.22                     | 6.60                     | 7.05                     | 5.39                     |
| aq                                       | Aqueous / settled sample.  |        |   | Unspecified Liquid (UNL) | Unspecified Liquid (UNL) | Unspecified Liquid (UNL) | Unspecified Liquid (UNL) | Unspecified Liquid (UNL) | Unspecified Liquid (UNL) |
| diss.filt                                | Dissolved / filtered sample.   |        |   | 05/12/2022               | 05/12/2022               | 05/12/2022               | 06/12/2022               | 06/12/2022               | 06/12/2022               |
| tot.unfilt                               | Total / unfiltered sample.   |        |   | 07/12/2022               | 07/12/2022               | 07/12/2022               | 07/12/2022               | 07/12/2022               | 07/12/2022               |
| *  | Subcontracted - refer to subcontractor report for accreditation status.  |        |   | 221207-97                | 221207-97                | 221207-97                | 221207-97                | 221207-97                | 221207-97                |
| **                                       | % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery |        |   | 27276237                 | 27276244                 | 27276243                 | 27276242                 | 27276241                 | 27276225                 |
| (F)                                      | Trigger breach confirmed   |        |   |                          |                          |                          |                          |                          |                          |
| 1-4*                                     | @ Sample deviation (see appendix)  |        |   |                          |                          |                          |                          |                          |                          |
| Component                                | LOD/Units  | Method |   |                          |                          |                          |                          |                          |                          |
| GRO Surrogate % recovery**               | %  | TM245  | 95  | 86                       | 87                       | 81                       | 83                       | 86                       |                          |
| GRO >C5-C12                              | <50 µg/l   | TM245  | <50   | <50                      | <50                      | <50                      | <50                      | <50                      |                          |
| Aliphatics >C5-C6                        | <10 µg/l   | TM245  | <10   | <10                      | <10                      | <10                      | <10                      | <10                      |                          |
| Aliphatics >C6-C8                        | <10 µg/l   | TM245  | <10   | <10                      | <10                      | <10                      | <10                      | <10                      |                          |
| Aliphatics >C8-C10                       | <10 µg/l   | TM245  | <10   | <10                      | <10                      | <10                      | <10                      | <10                      |                          |
| Aliphatics >C10-C12                      | <10 µg/l   | TM245  | <10   | <10                      | <10                      | <10                      | <10                      | <10                      |                          |
| Aliphatics >C12-C16 (aq)                 | <10 µg/l   | TM174  | <10   | <10                      | <10                      | <10                      | <10                      | <10                      |                          |
| Aliphatics >C16-C21 (aq)                 | <10 µg/l   | TM174  | <10   | <10                      | <10                      | <10                      | <10                      | <10                      |                          |
| Aliphatics >C21-C35 (aq)                 | <10 µg/l   | TM174  | 11  | <10                      | 79                       | <10                      | <10                      | <10                      |                          |
| Total Aliphatics >C12-C35 (aq)           | <10 µg/l   | TM174  | 11  | <10                      | 79                       | <10                      | <10                      | <10                      |                          |
| Aromatics >EC5-EC7                       | <10 µg/l   | TM245  | <10   | <10                      | <10                      | <10                      | <10                      | <10                      |                          |
| Aromatics >EC7-EC8                       | <10 µg/l   | TM245  | <10   | <10                      | <10                      | <10                      | <10                      | <10                      |                          |
| Aromatics >EC8-EC10                      | <10 µg/l   | TM245  | <10   | <10                      | <10                      | <10                      | <10                      | <10                      |                          |
| Aromatics >EC10-EC12                     | <10 µg/l   | TM245  | <10   | <10                      | <10                      | <10                      | <10                      | <10                      |                          |
| Aromatics >EC12-EC16 (aq)                | <10 µg/l   | TM174  | <10   | <10                      | <10                      | <10                      | <10                      | <10                      |                          |
| Aromatics >EC16-EC21 (aq)                | <10 µg/l   | TM174  | <10   | <10                      | 16                       | <10                      | <10                      | <10                      |                          |
| Aromatics >EC21-EC35 (aq)                | <10 µg/l   | TM174  | <10   | <10                      | 121                      | <10                      | <10                      | <10                      |                          |
| Total Aromatics >EC12-EC35 (aq)          | <10 µg/l   | TM174  | <10   | <10                      | 137                      | <10                      | <10                      | <10                      |                          |
| Total Aliphatics & Aromatics >C5-35 (aq) | <10 µg/l   | TM174  | 12  | <10                      | 216                      | <10                      | <10                      | <10                      |                          |
| Aliphatics >C16-C35 Aqueous              | <10 µg/l   | TM174  | 11  | <10                      | 79                       | <10                      | <10                      | <10                      |                          |





# CERTIFICATE OF ANALYSIS

Validated

SDG: 221207-97  
Client Ref.: 22/3748

Report Number: 674463  
Location: Point of Ayre, Isle of Man

Superseded Report: 672607

## VOC MS (W)

| Results Legend                     |  |                   | Customer Sample Ref.     |                          |                          |                          |                          |                          |
|------------------------------------|--|-------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| #                                  | ISO17025 accredited.   |                   | 89/10                    | 90/17                    | 102A                     | 103A                     | 104A                     | 105A                     |
| M                                  | mCERTS accredited.   |                   |                          |                          |                          |                          |                          |                          |
| aq                                 | Aqueous / settled sample.  |                   |                          |                          |                          |                          |                          |                          |
| dis.s.filt                         | Dissolved / filtered sample.   |                   |                          |                          |                          |                          |                          |                          |
| tot.unfilt                         | Total / unfiltered sample.   |                   |                          |                          |                          |                          |                          |                          |
| *                                  | Subcontracted - refer to subcontractor report for accreditation status.  |                   |                          |                          |                          |                          |                          |                          |
| **                                 | % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery |                   |                          |                          |                          |                          |                          |                          |
| (F)                                | Trigger breach confirmed   |                   |                          |                          |                          |                          |                          |                          |
| 1-4*                               | @Sample deviation (see appendix)   |                   |                          |                          |                          |                          |                          |                          |
|                                    |  | Depth (m)         | 1.10                     | 1.92                     | 4.91                     | 7.60                     | 6.22                     | 6.60                     |
|                                    |  | Sample Type       | Unspecified Liquid (UNL) | Unspecified Liquid (UNL) | Unspecified Liquid (UNL) | Unspecified Liquid (UNL) | Unspecified Liquid (UNL) | Unspecified Liquid (UNL) |
|                                    |  | Date Sampled      | 05/12/2022               | 05/12/2022               | 05/12/2022               | 05/12/2022               | 05/12/2022               | 06/12/2022               |
|                                    |  | Sample Time       |                          |                          |                          |                          |                          |                          |
|                                    |  | Date Received     | 07/12/2022               | 07/12/2022               | 07/12/2022               | 07/12/2022               | 07/12/2022               | 07/12/2022               |
|                                    |  | SDG Ref           | 221207-97                | 221207-97                | 221207-97                | 221207-97                | 221207-97                | 221207-97                |
|                                    |  | Lab Sample No.(s) | 27276237                 | 27276235                 | 27276245                 | 27276244                 | 27276243                 | 27276242                 |
|                                    |  | AGS Reference     |                          |                          |                          |                          |                          |                          |
| Component                          | LOD/Units  | Method            |                          |                          |                          |                          |                          |                          |
| Dibromofluoromethane**             | %  | TM208             | 129                      | 136                      | 130                      |                          | 126                      | 108                      |
| Toluene-d8**                       | %  | TM208             | 99.9                     | 99                       | 99.5                     |                          | 100                      | 101                      |
| 4-Bromofluorobenzene**             | %  | TM208             | 94.4                     | 81.4                     | 90.8                     |                          | 94.9                     | 95.6                     |
| Dichlorodifluoromethane            | <1 µg/l  | TM208             | <1                       | <1                       | <1                       |                          | <1                       | <1                       |
| Chloromethane                      | <1 µg/l  | TM208             | <1                       | <1                       | <1                       |                          | <1                       | <1                       |
| Vinyl chloride                     | <1 µg/l  | TM208             | <1                       | <1                       | <1                       |                          | 5.78                     | <1                       |
| Bromomethane                       | <1 µg/l  | TM208             | <1                       | <1                       | <1                       |                          | <1                       | <1                       |
| Chloroethane                       | <1 µg/l  | TM208             | <1                       | <1                       | <1                       |                          | <1                       | <1                       |
| Trichlorofluoromethane             | <1 µg/l  | TM208             | <1                       | <1                       | <1                       |                          | <1                       | <1                       |
| 1,1-Dichloroethene                 | <1 µg/l  | TM208             | <1                       | <1                       | <1                       |                          | <1                       | <1                       |
| Carbon disulphide                  | <1 µg/l  | TM208             | <1                       | <1                       | <1                       |                          | <1                       | <1                       |
| Dichloromethane                    | <3 µg/l  | TM208             | <3                       | <3                       | <3                       |                          | <3                       | <3                       |
| Methyl tertiary butyl ether (MTBE) | <1 µg/l  | TM208             | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| trans-1,2-Dichloroethene           | <1 µg/l  | TM208             | <1                       | <1                       | <1                       | 2                        | <1                       | <1                       |
| 1,1-Dichloroethane                 | <1 µg/l  | TM208             | <1                       | <1                       | <1                       |                          | <1                       | <1                       |
| cis-1,2-Dichloroethene             | <1 µg/l  | TM208             | <1                       | <1                       | <1                       |                          | 5.9                      | <1                       |
| 2,2-Dichloropropane                | <1 µg/l  | TM208             | <1                       | <1                       | <1                       |                          | <1                       | <1                       |
| Bromochloromethane                 | <1 µg/l  | TM208             | <1                       | <1                       | <1                       |                          | <1                       | <1                       |
| Chloroform                         | <1 µg/l  | TM208             | <1                       | <1                       | <1                       |                          | <1                       | <1                       |
| 1,1,1-Trichloroethane              | <1 µg/l  | TM208             | <1                       | <1                       | <1                       |                          | <1                       | <1                       |
| 1,1-Dichloropropene                | <1 µg/l  | TM208             | <1                       | <1                       | <1                       |                          | <1                       | <1                       |
| Carbontetrachloride                | <1 µg/l  | TM208             | <1                       | <1                       | <1                       |                          | <1                       | <1                       |
| 1,2-Dichloroethane                 | <1 µg/l  | TM208             | <1                       | <1                       | <1                       |                          | <1                       | <1                       |
| Benzene                            | <1 µg/l  | TM208             | <1                       | <1                       | 1.43                     | <1                       | 1.31                     | <1                       |
| Trichloroethene                    | <1 µg/l  | TM208             | <1                       | <1                       | <1                       | 2                        | <1                       | <1                       |
| 1,2-Dichloropropane                | <1 µg/l  | TM208             | <1                       | <1                       | <1                       |                          | <1                       | <1                       |
| Dibromomethane                     | <1 µg/l  | TM208             | <1                       | <1                       | <1                       |                          | <1                       | <1                       |
| Bromodichloromethane               | <1 µg/l  | TM208             | <1                       | <1                       | <1                       |                          | <1                       | <1                       |
| cis-1,3-Dichloropropene            | <1 µg/l  | TM208             | <1                       | <1                       | <1                       |                          | <1                       | <1                       |
| Toluene                            | <1 µg/l  | TM208             | <1                       | <1                       | 28.2                     | <1                       | <1                       | <1                       |
| trans-1,3-Dichloropropene          | <1 µg/l  | TM208             | <1                       | <1                       | <1                       | 2                        | <1                       | <1                       |
| 1,1,2-Trichloroethane              | <1 µg/l  | TM208             | <1                       | <1                       | <1                       |                          | <1                       | <1                       |
| 1,3-Dichloropropane                | <1 µg/l  | TM208             | <1                       | <1                       | <1                       |                          | <1                       | <1                       |



# CERTIFICATE OF ANALYSIS

Validated

SDG: 221207-97  
Client Ref.: 22/3748

Report Number: 674463  
Location: Point of Ayre, Isle of Man

Superseded Report: 672607

## VOC MS (W)

| Results Legend  |           |        | Customer Sample Ref.  | 89/10  | 90/17  | 102A   | 103A   | 104A   | 105A   |
|---|-----------|--------|---|--|--|--|--|--|--|
| # ISO17025 accredited.<br>M mCERTS accredited.<br>aq Aqueous / settled sample.<br>diss.filt Dissolved / filtered sample.<br>tot.unfilt Total / unfiltered sample.<br>* Subcontracted - refer to subcontractor report for accreditation status.<br>** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery<br>(F) Trigger breach confirmed<br>1-4@ Sample deviation (see appendix) |           |        | Depth (m)<br>Sample Type<br>Date Sampled<br>Sample Time<br>Date Received<br>SDG Ref<br>Lab Sample No.(s)<br>AGS Reference | 1.10<br>Unspecified Liquid (UNL)<br>05/12/2022 | 1.92<br>Unspecified Liquid (UNL)<br>05/12/2022 | 4.91<br>Unspecified Liquid (UNL)<br>05/12/2022 | 7.60<br>Unspecified Liquid (UNL)<br>05/12/2022 | 6.22<br>Unspecified Liquid (UNL)<br>05/12/2022 | 6.60<br>Unspecified Liquid (UNL)<br>06/12/2022 |
| Component   | LOD/Units | Method |   |  |  |  |  |  |  |
| Tetrachloroethene   | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| Dibromochloromethane  | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| 1,2-Dibromoethane   | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| Chlorobenzene   | <1 µg/l   | TM208  | <1  | <1   | 4.69   |  |  | 4.26   | 4.37   |
| 1,1,1,2-Tetrachloroethane   | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| Ethylbenzene  | <1 µg/l   | TM208  | <1  | <1   | <1   |  | <1   | <1   | <1   |
| m,p-Xylene  | <1 µg/l   | TM208  | <1  | <1   | <1   |  | <1   | <1   | <1   |
| o-Xylene  | <1 µg/l   | TM208  | <1  | <1   | <1   |  | <1   | <1   | <1   |
| Styrene   | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| Bromoform   | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| Isopropylbenzene  | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| 1,1,2,2-Tetrachloroethane   | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| 1,2,3-Trichloropropane  | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| Bromobenzene  | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| Propylbenzene   | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| 2-Chlorotoluene   | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| 1,3,5-Trimethylbenzene  | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| 4-Chlorotoluene   | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| tert-Butylbenzene   | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| 1,2,4-Trimethylbenzene  | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| sec-Butylbenzene  | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| 4-iso-Propyltoluene   | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| 1,3-Dichlorobenzene   | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| 1,4-Dichlorobenzene   | <1 µg/l   | TM208  | <1  | <1   | 1.34   |  |  | <1   | 1.21   |
| n-Butylbenzene  | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| 1,2-Dichlorobenzene   | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| 1,2-Dibromo-3-chloropropane   | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| 1,2,4-Trichlorobenzene  | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| Hexachlorobutadiene   | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| tert-Amyl methyl ether (TAME)   | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| Naphthalene   | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| 1,2,3-Trichlorobenzene  | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |
| 1,3,5-Trichlorobenzene  | <1 µg/l   | TM208  | <1  | <1   | <1   |  |  | <1   | <1   |







# CERTIFICATE OF ANALYSIS

Validated

SDG: 221207-97  
Client Ref.: 22/3748

Report Number: 674463  
Location: Point of Ayre, Isle of Man

Superseded Report: 672607

## VOC MS (W)

| Results Legend                     |   |        | Customer Sample Ref.  | 106A                     | P3A                      | P8A                      | P9A                      | QAQC1                    | QAQC2                    |                          |
|------------------------------------|---|--------|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| #                                  | ISO17025 accredited.  |        | Depth (m)<br>Sample Type<br>Date Sampled<br>Sample Time<br>Date Received<br>SDG Ref<br>Lab Sample No.(s)<br>AGS Reference | 7.05                     | 4.97                     | 5.39                     | 6.79                     | 6.60                     | 5.39                     |                          |
| M                                  | mCERTS accredited.  |        |   | Unspecified Liquid (UNL) | Unspecified Liquid (UNL) | Unspecified Liquid (UNL) | Unspecified Liquid (UNL) | Unspecified Liquid (UNL) | Unspecified Liquid (UNL) | Unspecified Liquid (UNL) |
| aq                                 | Aqueous / settled sample.   |        |   | 06/12/2022               | 05/12/2022               | 06/12/2022               | 05/12/2022               | 06/12/2022               | 06/12/2022               | 06/12/2022               |
| diss.filt                          | Dissolved / filtered sample.  |        |   | 07/12/2022               | 07/12/2022               | 07/12/2022               | 07/12/2022               | 07/12/2022               | 07/12/2022               | 07/12/2022               |
| tot.unfilt                         | Total / unfiltered sample.  |        |   | 221207-97                | 221207-97                | 221207-97                | 221207-97                | 221207-97                | 221207-97                | 221207-97                |
|                                    | * Subcontracted - refer to subcontractor report for accreditation status.   |        |   | 27276241                 | 27276222                 | 27276225                 | 27276224                 | 27289466                 | 27289460                 |                          |
|                                    | ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery |        |   |                          |                          |                          |                          |                          |                          |                          |
|                                    | (F) Trigger breach confirmed  |        |   |                          |                          |                          |                          |                          |                          |                          |
|                                    | 1-4*§@Sample deviation (see appendix)   |        |   |                          |                          |                          |                          |                          |                          |                          |
| Component                          | LOD/Units   | Method |   |                          |                          |                          |                          |                          |                          |                          |
| Dibromofluoromethane**             | %   | TM208  |   | 107                      | 107                      | 106                      | 107                      | 107                      | 107                      |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| Toluene-d8**                       | %   | TM208  |   | 99.5                     | 98.7                     | 100                      | 99.2                     | 99.6                     | 99.6                     |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| 4-Bromofluorobenzene**             | %   | TM208  |   | 97.8                     | 100                      | 100                      | 97.8                     | 98.3                     | 98.3                     |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| Dichlorodifluoromethane            | <1 µg/l   | TM208  |   | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| Chloromethane                      | <1 µg/l   | TM208  |   | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| Vinyl chloride                     | <1 µg/l   | TM208  |   | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| Bromomethane                       | <1 µg/l   | TM208  |   | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| Chloroethane                       | <1 µg/l   | TM208  |   | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| Trichlorofluoromethane             | <1 µg/l   | TM208  |   | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| 1,1-Dichloroethene                 | <1 µg/l   | TM208  |   | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| Carbon disulphide                  | <1 µg/l   | TM208  |   | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| Dichloromethane                    | <3 µg/l   | TM208  |   | <3                       | <3                       | <3                       | <3                       | <3                       | <3                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| Methyl tertiary butyl ether (MTBE) | <1 µg/l   | TM208  | <1  | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        | 1   |                          |                          | 2                        |                          |                          |                          |                          |
| trans-1,2-Dichloroethene           | <1 µg/l   | TM208  |   | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| 1,1-Dichloroethane                 | <1 µg/l   | TM208  |   | <1                       | <1                       | 2.47                     | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| cis-1,2-Dichloroethene             | <1 µg/l   | TM208  |   | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| 2,2-Dichloropropane                | <1 µg/l   | TM208  |   | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| Bromochloromethane                 | <1 µg/l   | TM208  |   | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| Chloroform                         | <1 µg/l   | TM208  |   | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| 1,1,1-Trichloroethane              | <1 µg/l   | TM208  |   | <1                       | <1                       | 2.23                     | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| 1,1-Dichloropropene                | <1 µg/l   | TM208  |   | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| Carbontetrachloride                | <1 µg/l   | TM208  |   | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| 1,2-Dichloroethane                 | <1 µg/l   | TM208  |   | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| Benzene                            | <1 µg/l   | TM208  | <1  | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        | 1   |                          |                          | 2                        |                          |                          |                          |                          |
| Trichloroethene                    | <1 µg/l   | TM208  |   | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| 1,2-Dichloropropane                | <1 µg/l   | TM208  |   | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| Dibromomethane                     | <1 µg/l   | TM208  |   | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| Bromodichloromethane               | <1 µg/l   | TM208  |   | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| cis-1,3-Dichloropropene            | <1 µg/l   | TM208  |   | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| Toluene                            | <1 µg/l   | TM208  | <1  | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        | 1   |                          |                          | 2                        |                          |                          |                          |                          |
| trans-1,3-Dichloropropene          | <1 µg/l   | TM208  |   | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| 1,1,2-Trichloroethane              | <1 µg/l   | TM208  |   | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |
| 1,3-Dichloropropane                | <1 µg/l   | TM208  |   | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |                          |
|                                    |   |        |   |                          |                          | 2                        |                          |                          |                          |                          |



# CERTIFICATE OF ANALYSIS

Validated

SDG: 221207-97  
Client Ref.: 22/3748

Report Number: 674463  
Location: Point of Ayre, Isle of Man

Superseded Report: 672607

## VOC MS (W)

| Results Legend                |  | Customer Sample Ref. | 106A                     | P3A                      | P8A                      | P9A                      | QAQC1                    | QAQC2                    |
|-------------------------------|--|----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| #                             | ISO17025 accredited.   |                      |                          |                          |                          |                          |                          |                          |
| M                             | mCERTS accredited.   |                      |                          |                          |                          |                          |                          |                          |
| aq                            | Aqueous / settled sample.  |                      |                          |                          |                          |                          |                          |                          |
| dis.s.filt                    | Dissolved / filtered sample.   |                      |                          |                          |                          |                          |                          |                          |
| tot.unfilt                    | Total / unfiltered sample.   |                      |                          |                          |                          |                          |                          |                          |
| *                             | Subcontracted - refer to subcontractor report for accreditation status.  | Depth (m)            | 7.05                     | 4.97                     | 5.39                     | 6.79                     | 6.60                     | 5.39                     |
| **                            | % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery | Sample Type          | Unspecified Liquid (UNL) | Unspecified Liquid (UNL) | Unspecified Liquid (UNL) | Unspecified Liquid (UNL) | Unspecified Liquid (UNL) | Unspecified Liquid (UNL) |
| (F)                           | Trigger breach confirmed   | Date Sampled         | 06/12/2022               | 05/12/2022               | 06/12/2022               | 05/12/2022               | 06/12/2022               | 06/12/2022               |
| 1-4                           | @ Sample deviation (see appendix)  | Date Received        | 07/12/2022               | 07/12/2022               | 07/12/2022               | 07/12/2022               | 07/12/2022               | 07/12/2022               |
|                               |  | SDG Ref              | 221207-97                | 221207-97                | 221207-97                | 221207-97                | 221207-97                | 221207-97                |
|                               |  | Lab Sample No.(s)    | 27276241                 | 27276222                 | 27276225                 | 27276224                 | 27289466                 | 27289460                 |
|                               |  | AGS Reference        |                          |                          |                          |                          |                          |                          |
| Component                     | LOD/Units  | Method               |                          |                          |                          |                          |                          |                          |
| Tetrachloroethene             | <1 µg/l  | TM208                |                          | <1                       | <1                       | <1                       | <1                       | <1                       |
| Dibromochloromethane          | <1 µg/l  | TM208                |                          | <1                       | <1                       | <1                       | <1                       | <1                       |
| 1,2-Dibromoethane             | <1 µg/l  | TM208                |                          | <1                       | <1                       | <1                       | <1                       | <1                       |
| Chlorobenzene                 | <1 µg/l  | TM208                |                          | 1.5                      | <1                       | <1                       | 3.63                     | <1                       |
| 1,1,1,2-Tetrachloroethane     | <1 µg/l  | TM208                |                          | <1                       | <1                       | <1                       | <1                       | <1                       |
| Ethylbenzene                  | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| m,p-Xylene                    | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| o-Xylene                      | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| Styrene                       | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| Bromoform                     | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| Isopropylbenzene              | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| 1,1,2,2-Tetrachloroethane     | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| 1,2,3-Trichloropropane        | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| Bromobenzene                  | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| Propylbenzene                 | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| 2-Chlorotoluene               | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| 1,3,5-Trimethylbenzene        | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| 4-Chlorotoluene               | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| tert-Butylbenzene             | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| 1,2,4-Trimethylbenzene        | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| sec-Butylbenzene              | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| 4-iso-Propyltoluene           | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| 1,3-Dichlorobenzene           | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| 1,4-Dichlorobenzene           | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | 1.14                     | <1                       |
| n-Butylbenzene                | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| 1,2-Dichlorobenzene           | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| 1,2-Dibromo-3-chloropropane   | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| 1,2,4-Trichlorobenzene        | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| Hexachlorobutadiene           | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| tert-Amyl methyl ether (TAME) | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| Naphthalene                   | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| 1,2,3-Trichlorobenzene        | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |
| 1,3,5-Trichlorobenzene        | <1 µg/l  | TM208                | <1                       | <1                       | <1                       | <1                       | <1                       | <1                       |





# CERTIFICATE OF ANALYSIS

Validated

SDG: 221207-97  
Client Ref.: 22/3748

Report Number: 674463  
Location: Point of Ayre, Isle of Man

Superseded Report: 672607

## Table of Results - Appendix

| Method No | Reference   | Description   |
|-----------|---|---|
| TM090     | Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060                         | Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water       |
| TM099     | BS 2690: Part 7:1968 / BS 6068: Part2.11:1984   | Determination of Ammonium in Water Samples using the Kone Analyser                          |
| TM152     | ISO 17294-2:2016 Water quality - Application of inductively coupled plasma mass spectrometry (ICP-MS) | Analysis of Aqueous Samples by ICP-MS   |
| TM174     | Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria      | Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID           |
| TM178     | Modified: US EPA Method 8100  | Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters                 |
| TM184     | EPA Methods 325.1 & 325.2,  | The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers |
| TM208     | Modified: US EPA Method 8260b & 624   | Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters                  |
| TM245     | By GC-FID   | Determination of GRO by Headspace in waters   |

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden (Method codes TM).



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## Test Completion Dates

| Lab Sample No(s)<br>Customer Sample Ref. | 27276240    | 27276239    | 27276238    | 27276234    | 27276237    | 27276236    | 27276235    | 27276246    | 27276245    | 27276244    |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|  | 107         | 108         | 110         | 96/4        | 89/10       | 89/11       | 90/17       | 101A        | 102A        | 103A        |
| AGS Ref.                                 |             |             |             |             |             |             |             |             |             |             |
| Depth                                    | 6.02        | 4.82        | 3.75        | 1.07        | 1.10        | 1.59        | 1.92        | 4.51        | 4.91        | 7.60        |
| Type                                     | Unspecified | Unspecified | Unspecified | Unspecified | Unspecified | Unspecified | Unspecified | Unspecified | Unspecified | Unspecified |
| Ammoniacal Nitrogen                      | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 |
| Anions by Kone (w)                       | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 |
| Dissolved Metals by ICP-MS               | 14-Dec-2022 | 14-Dec-2022 | 14-Dec-2022 | 14-Dec-2022 | 14-Dec-2022 | 14-Dec-2022 | 14-Dec-2022 | 14-Dec-2022 | 14-Dec-2022 | 14-Dec-2022 |
| Dissolved Organic/Inorganic Carbon       | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 11-Dec-2022 |
| EPH CWG (Aliphatic) Aqueous GC (W)       |             |             |             |             | 14-Dec-2022 |             |             |             |             | 14-Dec-2022 |
| EPH CWG (Aromatic) Aqueous GC (W)        |             |             |             |             | 14-Dec-2022 |             |             |             |             | 14-Dec-2022 |
| GRO by GC-FID (W)                        |             |             |             |             | 09-Dec-2022 |             |             |             |             | 09-Dec-2022 |
| PAH Spec MS - Aqueous (W)                |             |             |             |             |             |             |             | 15-Dec-2022 | 15-Dec-2022 | 15-Dec-2022 |
| TPH CWG (W)                              |             |             |             |             | 14-Dec-2022 |             |             |             |             | 14-Dec-2022 |
| VOC MS (W)                               |             |             |             |             | 09-Dec-2022 |             | 09-Dec-2022 |             | 09-Dec-2022 | 09-Dec-2022 |

| Lab Sample No(s)<br>Customer Sample Ref. | 27276243    | 27276242    | 27276241    | 27276223    | 27276233    | 27276222    | 27276631    | 27276229    | 27276225    | 27276224    |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|  | 104A        | 105A        | 106A        | Lake        | P2A         | P3A         | P4A         | P6A         | P8A         | P9A         |
| AGS Ref.                                 |             |             |             |             |             |             |             |             |             |             |
| Depth                                    | 6.22        | 6.60        | 7.05        |             | 6.53        | 4.97        | 5.95        | 6.34        | 5.39        | 6.79        |
| Type                                     | Unspecified | Unspecified | Unspecified | Unspecified | Unspecified | Unspecified | Unspecified | Unspecified | Unspecified | Unspecified |
| Ammoniacal Nitrogen                      | 09-Dec-2022 | 15-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 14-Dec-2022 | 09-Dec-2022 |
| Anions by Kone (w)                       | 09-Dec-2022 | 13-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 14-Dec-2022 | 09-Dec-2022 |
| Dissolved Metals by ICP-MS               | 14-Dec-2022 | 15-Dec-2022 | 14-Dec-2022 | 13-Dec-2022 | 14-Dec-2022 | 14-Dec-2022 | 14-Dec-2022 | 14-Dec-2022 | 15-Dec-2022 | 14-Dec-2022 |
| Dissolved Organic/Inorganic Carbon       | 10-Dec-2022 | 13-Dec-2022 | 09-Dec-2022 | 10-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 14-Dec-2022 | 09-Dec-2022 |
| EPH CWG (Aliphatic) Aqueous GC (W)       | 14-Dec-2022 | 19-Dec-2022 | 14-Dec-2022 |             |             |             |             |             | 19-Dec-2022 |             |
| EPH CWG (Aromatic) Aqueous GC (W)        | 14-Dec-2022 | 19-Dec-2022 | 14-Dec-2022 |             |             |             |             |             | 19-Dec-2022 |             |
| GRO by GC-FID (W)                        | 09-Dec-2022 | 12-Dec-2022 | 09-Dec-2022 |             |             |             |             |             | 12-Dec-2022 |             |
| PAH Spec MS - Aqueous (W)                | 15-Dec-2022 | 16-Dec-2022 | 15-Dec-2022 |             |             |             |             |             | 16-Dec-2022 |             |
| TPH CWG (W)                              | 14-Dec-2022 | 19-Dec-2022 | 14-Dec-2022 |             |             |             |             |             | 19-Dec-2022 |             |
| VOC MS (W)                               | 09-Dec-2022 | 12-Dec-2022 | 09-Dec-2022 |             |             | 12-Dec-2022 |             |             | 12-Dec-2022 | 12-Dec-2022 |

| Lab Sample No(s)<br>Customer Sample Ref. | 27276231    | 27276230    | 27276228    | 27276226    | 27276227    | 27289466    | 27289460    |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|  | P3B         | P4B         | P6B         | P7B         | P6C         | QAQC1       | QAQC2       |
| AGS Ref.                                 |             |             |             |             |             |             |             |
| Depth                                    | 5.10        | 5.90        | 6.34        | 5.71        | 6.40        | 6.60        | 5.39        |
| Type                                     | Unspecified | Unspecified | Unspecified | Unspecified | Unspecified | Unspecified | Unspecified |
| Ammoniacal Nitrogen                      | 09-Dec-2022 | 12-Dec-2022 | 12-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 14-Dec-2022 | 14-Dec-2022 |
| Anions by Kone (w)                       | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 13-Dec-2022 | 13-Dec-2022 |
| Dissolved Metals by ICP-MS               | 13-Dec-2022 | 14-Dec-2022 | 14-Dec-2022 | 14-Dec-2022 | 14-Dec-2022 | 15-Dec-2022 | 15-Dec-2022 |
| Dissolved Organic/Inorganic Carbon       | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 09-Dec-2022 | 10-Dec-2022 | 14-Dec-2022 | 14-Dec-2022 |
| EPH CWG (Aliphatic) Aqueous GC (W)       |             |             |             |             |             | 19-Dec-2022 | 19-Dec-2022 |
| EPH CWG (Aromatic) Aqueous GC (W)        |             |             |             |             |             | 19-Dec-2022 | 19-Dec-2022 |
| GRO by GC-FID (W)                        |             |             |             |             |             | 12-Dec-2022 | 12-Dec-2022 |
| PAH Spec MS - Aqueous (W)                |             |             |             |             |             | 16-Dec-2022 | 16-Dec-2022 |
| TPH CWG (W)                              |             |             |             |             |             | 19-Dec-2022 | 19-Dec-2022 |
| VOC MS (W)                               |             |             |             |             |             | 12-Dec-2022 | 12-Dec-2022 |



# CERTIFICATE OF ANALYSIS

SDG: 221207-97  
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Superseded Report: 672607

## Appendix

## General

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

### 19. Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

|   |   |
|---|---|
| 1 | Container with Headspace provided for volatiles analysis                    |
| 2 | Incorrect container received  |
| 3 | Deviation from method   |
| 4 | Matrix interference   |
| ♦ | Sample holding time exceeded in laboratory                                  |
| @ | Sample holding time exceeded due to late arrival of instructions or samples |
| § | Sampled on date not provided  |

### 20. Asbestos

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

#### Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials and soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

| Asbestos Type           | Common Name    |
|-------------------------|----------------|
| Chrysotile              | White Asbestos |
| Amosite                 | Brown Asbestos |
| Crocidolite             | Blue Asbestos  |
| Fibrous Actinolite      | -              |
| Fibrous Anorthophyllite | -              |
| Fibrous Tremolite       | -              |

#### Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

#### Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

**Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.**

**The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.**

|                         |                   |
|-------------------------|-------------------|
| Site                    | POA               |
| Project number          | 25250             |
| Duplicate sample review | Revised and QA/QC |
| Sample date             | 01/29/2022        |
| Laboratory              | ALS               |

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| Analysis                                  | Units  | Sample BH105A | Duplicate Result QA/QC1 | Difference | Average | RPD         | Comment                    |
|---|--------|---------------|-------------------------|------------|---------|-------------|----------------------------|
| <b>Carbon</b>                             |        |               |                         |            |         |             |                            |
| Carbon, Organic (diss. fil)               | µg/l   | 18.2          | 18.1                    | 0.1        | 18.15   | 0.56094187  | Good match between samples |
| <b>Inorganics</b>                         |        |               |                         |            |         |             |                            |
| Ammoniacal Nitrogen as N (diss. fil)      | µg/l   | 91.2          | 90.4                    | 0.8        | 90.8    | 0.881057249 | Good match between samples |
| Ammoniacal Nitrogen as N (diss. fil)      | µg/l   | 76.4          | 76.4                    | 0.0        | 76.5    | 0.261437908 | Good match between samples |
| <b>Filtered (Dissolved) Metals</b>        |        |               |                         |            |         |             |                            |
| Arsenic (diss. fil)                       | µg/l   | 22.7          | 40.2                    | -17.5      | 31.45   | 45.6439792  | Generally a good match     |
| Mercury (diss. fil)                       | µg/l   | 19.0          | 19.0                    | 0.0        | 19.0    | 1.5544156   | Good match between samples |
| Nickel (diss. fil)                        | µg/l   | 10.3          | 9.94                    | 0.36       | 10.12   | 3.627312263 | Good match between samples |
| Zinc (diss. fil)                          | µg/l   | 60.7          | 3.87                    | 56.83      | 32.285  | 176.0207183 | Poor match between samples |
| Iron (diss. fil)                          | µg/l   | 35.1          | 35.3                    | -0.2       | 35.2    | 20.2929074  | Good match between samples |
| <b>TPH Criteria Working Group</b>         |        |               |                         |            |         |             |                            |
| BCO Sample % Recovery                     | %      | 81            | 81                      | 0          | 81      | 0           | Good match between samples |
| BCO C1-C12                                | µg/l   | 10            | 10                      | 0          | 10      | 0           | Good match between samples |
| Aliphatics C1-C8                          | µg/l   | 10            | 10                      | 0          | 10      | 0           | Good match between samples |
| Aliphatics C9-C10                         | µg/l   | 10            | 10                      | 0          | 10      | 0           | Good match between samples |
| Aliphatics C11-C12                        | µg/l   | 10            | 10                      | 0          | 10      | 0           | Good match between samples |
| Aliphatics C12-C14 (iso)                  | µg/l   | 10            | 10                      | 0          | 10      | 0           | Good match between samples |
| Aliphatics C15-C16 (iso)                  | µg/l   | 10            | 10                      | 0          | 10      | 0           | Good match between samples |
| Aliphatics C17-C18 (iso)                  | µg/l   | 10            | 10                      | 0          | 10      | 0           | Good match between samples |
| Aliphatics C19-C20 (iso)                  | µg/l   | 10            | 10                      | 0          | 10      | 0           | Good match between samples |
| Aliphatics C21-C22 (iso)                  | µg/l   | 10            | 10                      | 0          | 10      | 0           | Good match between samples |
| Aliphatics C23-C24 (iso)                  | µg/l   | 10            | 10                      | 0          | 10      | 0           | Good match between samples |
| Aliphatics C25-C26 (iso)                  | µg/l   | 10            | 10                      | 0          | 10      | 0           | Good match between samples |
| Aliphatics C27-C28                        | µg/l   | 10            | 10                      | 0          | 10      | 0           | Good match between samples |
| Aromatics C9-C10                          | µg/l   | 10            | 10                      | 0          | 10      | 0           | Good match between samples |
| Aromatics C11-C12                         | µg/l   | 10            | 10                      | 0          | 10      | 0           | Good match between samples |
| Aromatics C13-C14 (iso)                   | µg/l   | 10            | 10                      | 0          | 10      | 0           | Good match between samples |
| Aromatics C15-C16 (iso)                   | µg/l   | 10            | 10                      | 0          | 10      | 0           | Good match between samples |
| Aromatics C17-C18 (iso)                   | µg/l   | 10            | 10                      | 0          | 10      | 0           | Good match between samples |
| Aromatics C19-C20 (iso)                   | µg/l   | 10            | 10                      | 0          | 10      | 0           | Good match between samples |
| Aromatics C21-C22 (iso)                   | µg/l   | 10            | 10                      | 0          | 10      | 0           | Good match between samples |
| Aromatics C23-C24 (iso)                   | µg/l   | 10            | 10                      | 0          | 10      | 0           | Good match between samples |
| Aromatics C25-C26 (iso)                   | µg/l   | 10            | 10                      | 0          | 10      | 0           | Good match between samples |
| Total Aliphatics C9-C26 (iso)             | µg/l   | 10            | 10                      | 0          | 10      | 0           | Good match between samples |
| Total Aromatics C9-C26 (iso)              | µg/l   | 10            | 10                      | 0          | 10      | 0           | Good match between samples |
| Total Aliphatics & Aromatics C9-C26 (iso) | µg/l   | 10            | 10                      | 0          | 10      | 0           | Good match between samples |
| <b>Polycyclic Aromatic Hydrocarbons</b>   |        |               |                         |            |         |             |                            |
| Naphthalene (iso)                         | µg/l   | 0.006         | 0.002                   | 0.004      | 0.004   | 8.649816388 | Good match between samples |
| Acenaphthene (iso)                        | µg/l   | 0.107         | 0.144                   | -0.037     | 0.1255  | 8.620777564 | Good match between samples |
| Acenaphthylene (iso)                      | µg/l   | 0.005         | 0.005                   | 0.0        | 0.005   | 0           | Good match between samples |
| Fluorene (iso)                            | µg/l   | 0.005         | 0.005                   | 0.0        | 0.005   | 0           | Good match between samples |
| Phenanthrene (iso)                        | µg/l   | 0.004         | 0.0489                  | -0.0449    | 0.02645 | 8.912426444 | Good match between samples |
| Fluorene (iso)                            | µg/l   | 0.018         | 0.0207                  | -0.0026    | 0.01935 | 14.3472755  | Good match between samples |
| Chrysene (iso)                            | µg/l   | 0.005         | 0.005                   | 0.0        | 0.005   | 0           | Good match between samples |
| Pyrene (iso)                              | µg/l   | 0.005         | 0.005                   | 0.0        | 0.005   | 21.44687143 | Good match between samples |
| Benzo[a]fluorene (iso)                    | µg/l   | 0.005         | 0.005                   | 0.0        | 0.005   | 0           | Good match between samples |
| Benzo[b]fluorene (iso)                    | µg/l   | 0.005         | 0.005                   | 0.0        | 0.005   | 0           | Good match between samples |
| Benzo[k]fluorene (iso)                    | µg/l   | 0.005         | 0.005                   | 0.0        | 0.005   | 0           | Good match between samples |
| Benzo[a]anthracene (iso)                  | µg/l   | 0.005         | 0.005                   | 0.0        | 0.005   | 0           | Good match between samples |
| Benzo[a]pyrene (iso)                      | µg/l   | 0.005         | 0.005                   | 0.0        | 0.005   | 0           | Good match between samples |
| Benzo[e]pyrene (iso)                      | µg/l   | 0.005         | 0.005                   | 0.0        | 0.005   | 0           | Good match between samples |
| Benzo[b]fluoranthene (iso)                | µg/l   | 0.005         | 0.005                   | 0.0        | 0.005   | 0           | Good match between samples |
| PAH, Total Dissolved (USEPA 16 (iso)      | µg/l   | 0.005         | 0.004                   | 0.004      | 0.004   | 8.52345622  | Good match between samples |
| <b>Volatile Organic Compounds</b>         |        |               |                         |            |         |             |                            |
| Dichloromethane                           | %      | 108           | 107                     | 1          | 107.5   | 8.590230556 | Good match between samples |
| Toluene (M)                               | %      | 191           | 192                     | 1          | 190.1   | 1.788201798 | Good match between samples |
| 1,1-Dichloroethene                        | %      | 66.6          | 67.8                    | -1.2       | 66.7    | 2.276707765 | Good match between samples |
| Dichloroethene                            | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| Chloroethene                              | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| Triethylamine                             | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| Bromoethene                               | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| Chloroethene                              | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| Triethylamine                             | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1-Dichloroethene                        | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| Carbon disulfide                          | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| Dichloromethane                           | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| Methyl acetate (MIBK) (MIBK)              | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| Hex-1,2-Dichloroethene                    | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1-Dichloroethene                        | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,2-Dichloroethene                        | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1-Dibromoethene                         | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| Carbon tetrachloride                      | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,2-Dibromoethene                         | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| Bromoethene                               | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| Triethylamine                             | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,2-Dichloroethene                        | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| Chloroethene                              | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,2-Dibromoethene                         | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,1-Trichloroethene                     | µg/l   | 1             | 1                       | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethene                     | µg/l</ |               |                         |            |         |             |                            |

|                         |                |
|-------------------------|----------------|
| Site                    | POA            |
| Project number          | 25250          |
| Duplicate sample review | P8A and QA/QC2 |
| Sample date             | 09/29/02       |
| Laboratory              | ALS            |

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| Analytes                                    | Units | Duplicate Result |        | Difference | Average | RPD         | Comment                    |
|---|-------|------------------|--------|------------|---------|-------------|----------------------------|
|   |       | Sample P8A       | QA/QC2 |            |         |             |                            |
| <b>Carbon</b>                               |       |                  |        |            |         |             |                            |
| Carbon, Organic (diss. fil)                 | µg/l  | 7.1              | 8.21   | -1.11      | 7.656   | 14.5003069  | Good match between samples |
| <b>Inorganics</b>                           |       |                  |        |            |         |             |                            |
| Chloride                                    | µg/l  | 55.7             | 53.8   | 2.8        | 54.3    | 5.195037763 | Good match between samples |
| Ammoniacal Nitrogen (as N) (N)              | µg/l  | 4.04             | 4.09   | -0.06      | 4.066   | 1.2000123   | Good match between samples |
| <b>Filtered (Dissolved) Metals</b>          |       |                  |        |            |         |             |                            |
| Arsenic (diss. fil)                         | µg/l  | 27.7             | 27.3   | 0.4        | 27.5    | 1.645454545 | Good match between samples |
| Nickel (diss. fil)                          | µg/l  | 7.6              | 7.9    | -0.3       | 7.75    | 1.72862796  | Good match between samples |
| Cadmium (diss. fil)                         | µg/l  | 0.1              | 0.13   | -0.03      | 0.115   | 14.602614   | Good match between samples |
| Lead (diss. fil)                            | µg/l  | 18               | 18.2   | -0.2       | 18.1    | 118.7229299 | Poor match between samples |
| Iron (diss. fil)                            | µg/l  | 1.61             | 1.55   | 0.06       | 1.58    | 3.72269864  | Good match between samples |
| <b>TPH Criteria Working Group</b>           |       |                  |        |            |         |             |                            |
| GC0 Sample % recovery**                     | %     | 86               | 87     | -1         | 86.5    | 1.15620266  | Good match between samples |
| GC0 <C12                                    | µg/l  | 10               | 10     | 0          | 10      | 0           | Good match between samples |
| Aliphatics <C12-C18                         | µg/l  | 10               | 10     | 0          | 10      | 0           | Good match between samples |
| Aliphatics <C18-C40                         | µg/l  | 10               | 10     | 0          | 10      | 0           | Good match between samples |
| Aliphatics <C12-C18 (lab)                   | µg/l  | 10               | 10     | 0          | 10      | 0           | Good match between samples |
| Aliphatics <C18-C40 (lab)                   | µg/l  | 10               | 10     | 0          | 10      | 0           | Good match between samples |
| Total Aliphatics <C12-C40 (lab)             | µg/l  | 10               | 10     | 0          | 10      | 0           | Good match between samples |
| Aromatics <C12-C17                          | µg/l  | 10               | 10     | 0          | 10      | 0           | Good match between samples |
| Aromatics <C17-C21                          | µg/l  | 10               | 10     | 0          | 10      | 0           | Good match between samples |
| Aromatics <C21-C25                          | µg/l  | 10               | 10     | 0          | 10      | 0           | Good match between samples |
| Aromatics <C25-C29                          | µg/l  | 10               | 10     | 0          | 10      | 0           | Good match between samples |
| Aromatics <C29-C33                          | µg/l  | 10               | 10     | 0          | 10      | 0           | Good match between samples |
| Aromatics <C33-C37                          | µg/l  | 10               | 10     | 0          | 10      | 0           | Good match between samples |
| Aromatics <C37-C41                          | µg/l  | 10               | 10     | 0          | 10      | 0           | Good match between samples |
| Aromatics <C41-C45                          | µg/l  | 10               | 10     | 0          | 10      | 0           | Good match between samples |
| Aromatics <C45-C49                          | µg/l  | 10               | 10     | 0          | 10      | 0           | Good match between samples |
| Aromatics <C49-C53                          | µg/l  | 10               | 10     | 0          | 10      | 0           | Good match between samples |
| Aromatics <C53-C57                          | µg/l  | 10               | 10     | 0          | 10      | 0           | Good match between samples |
| Aromatics <C57-C61                          | µg/l  | 10               | 10     | 0          | 10      | 0           | Good match between samples |
| Total Aromatics <C12-C61 (lab)              | µg/l  | 10               | 10     | 0          | 10      | 0           | Good match between samples |
| Total Aliphatics & Aromatics <C12-C61 (lab) | µg/l  | 10               | 10     | 0          | 10      | 0           | Good match between samples |
| <b>Polyaromatic Hydrocarbons</b>            |       |                  |        |            |         |             |                            |
| Naphthalene (lab)                           | µg/l  | 0.01             | 0.01   | 0          | 0.01    | 0           | Good match between samples |
| Acenaphthene (lab)                          | µg/l  | 0.005            | 0.015  | -0.01      | 0.01    | -0.009      | Poor match between samples |
| Acenaphthylene (lab)                        | µg/l  | 0.005            | 0.005  | 0          | 0.005   | 0           | Good match between samples |
| Fluorene (lab)                              | µg/l  | 0.005            | 0.005  | 0          | 0.005   | 0           | Good match between samples |
| Anthracene (lab)                            | µg/l  | 0.005            | 0.005  | -0.004     | 0.00725 | -62.969655  | Good match between samples |
| Phenanthrene (lab)                          | µg/l  | 0.005            | 0.001  | -0.003     | 0.00625 | -47.325243  | Surprise - a good match    |
| Fluorene (lab)                              | µg/l  | 0.005            | 0.005  | 0          | 0.005   | 0           | Good match between samples |
| Chrysene (lab)                              | µg/l  | 0.005            | 0.0117 | -0.0067    | 0.00935 | -80.23521   | Poor match between samples |
| Pyrene (lab)                                | µg/l  | 0.005            | 0.005  | 0          | 0.005   | 0           | Good match between samples |
| Benzo[a]anthracene (lab)                    | µg/l  | 0.005            | 0.005  | 0          | 0.005   | 0           | Good match between samples |
| Benzo[b]fluoranthene (lab)                  | µg/l  | 0.005            | 0.005  | 0          | 0.005   | 0           | Good match between samples |
| Benzo[k]fluoranthene (lab)                  | µg/l  | 0.005            | 0.005  | 0          | 0.005   | 0           | Good match between samples |
| Benzo[e]pyrene (lab)                        | µg/l  | 0.002            | 0.002  | 0          | 0.002   | 0           | Good match between samples |
| Benzo[a]pyrene (lab)                        | µg/l  | 0.005            | 0.005  | -0.004     | 0.005   | -7.6523263  | Good match between samples |
| Benzo[a]fluoranthene (lab)                  | µg/l  | 0.005            | 0.0148 | -0.0098    | 0.0099  | -98.98989   | Poor match between samples |
| Indeno[1,2,3-cd]perylene (lab)              | µg/l  | 0.004            | 0.005  | 0          | 0.0045  | 0           | Good match between samples |
| PAH, Total (Percent USEPA 16 (lab))         | µg/l  | 0.062            | 0.062  | 0          | 0.062   | 0           | Good match between samples |
| <b>Volatile Organic Compound</b>            |       |                  |        |            |         |             |                            |
| Dibromofluoromethane**                      | %     | 107              | 107    | 0          | 107     | 0           | Good match between samples |
| Toluene**                                   | %     | 99.7             | 99.6   | 0.1        | 99.15   | -0.60773558 | Good match between samples |
| 4-Ethyltoluene**                            | %     | 100              | 99.3   | 1.7        | 99.15   | -1.74672873 | Good match between samples |
| Dichlorodifluoromethane                     | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Chloromethane                               | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Trichloroethane                             | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Bromomethane                                | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Chloroethane                                | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Transdichloroethane                         | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| 1,1-Dichloroethane                          | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Carbon disulfide                            | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Dichloromethane                             | µg/l  | 3                | 3      | 0          | 3       | 0           | Good match between samples |
| Methyl tert-butyl ether (MTBE)              | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Isopentane 1,2-Dichloroethane               | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| 1,1-Dichloroethane                          | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Isopentane                                  | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Isopentane                                  | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| 1,2-Dichloroethane                          | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Hexane                                      | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Trichloroethane                             | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| 1,2-Dichloroethane                          | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Chloromethane                               | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Bromoethane                                 | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Isopentane                                  | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Toluene                                     | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Isopentane                                  | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| 1,1,2-Trichloroethane                       | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| 1,2-Dichloroethane                          | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Trichloroethane                             | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Dibromodifluoromethane**                    | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| 1,2-Dichloroethane                          | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Chlorobenzene                               | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| 1,1,2,2-Tetrachloroethane                   | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Ethylbenzene                                | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Isopentane                                  | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| o-Xylene                                    | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Styrene                                     | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Bromobenzene                                | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Isopentane                                  | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| 1,1,2,2-Tetrachloroethane                   | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| 1,2,3-Trichloroethane                       | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Bromobenzene                                | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Propylbenzene                               | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| 4-Chlorobenzene                             | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| 1,3,4-Trimethylbenzene                      | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| 4-Chlorobenzene                             | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Isopentane                                  | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| 1,2,4-Trimethylbenzene                      | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Isopentane                                  | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Isopentane                                  | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| 1,3-Dichlorobenzene                         | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| 1,4-Dichlorobenzene                         | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Hexachlorobenzene                           | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| 1,2-Dichlorobenzene                         | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| 1,2-Dibromo-3-chloropropane                 | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| 1,2,4-Trichlorobenzene                      | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Hexachlorocyclopentadiene                   | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Hexachloroethane (THAME)                    | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Naphthalene                                 | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| 1,2,3-Trichlorobenzene                      | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| 1,3,4,5-Tetrachlorobenzene                  | µg/l  | 1                | 1      | 0          | 1       | 0           | Good match between samples |
| Isopentane                                  | µg/l  | 2                | 2      | 0          | 2       | 0           | Good match between samples |
| Isopentane                                  | µg/l  | 2                | 2      | 0          | 2       | 0           | Good match between samples |
| <b>EPH CWG (Speciated)</b>                  |       |                  |        |            |         |             |                            |
| Aliphatics <C18-C35, Aromatic               | µg/l  | 10               | 10     | 0          | 10      | 0           | Good match between samples |

  Limited sample variation. Good match between samples (RPD <30%)  
  Generally a good match between samples allowing for natural variability (RPD 30-60%)  
  Poor match between samples. In these instances the lab has been contacted for further clarification. (RPD >60%)





# APPENDIX E

## ASSESSMENT CRITERIA

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# GENERIC ASSESSMENT CRITERIA FOR WATER ENVIRONMENT – SCOTLAND

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## Protection of the water environment

The water environment in the United Kingdom is protected under a number of regulatory regimes. The relevant environmental regulator is consulted where there may be a risk that pollution of 'controlled waters' or the 'water environment' may occur or may have occurred in the past.

The term "water environment" is used in all legislation and guidance in Scotland. Water environment is defined in the Water Environment & Water Services (Scotland) Act 2003 as follows:

*"The water environment" means all surface water, groundwater and wetlands.*

*"Surface water" means inland water (other than groundwater), transitional water and coastal water. "Groundwater" means water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.*

*"Wetland" means an area of ground the ecological, chemical and hydrological characteristics of which are attributable to frequent inundation or saturation by water and which is directly dependent, with regard to its water needs, on a body of groundwater or a body of surface water.*

The EU Water Framework Directive (WFD) (2000/60/EC)<sup>(1)</sup> is implemented via domestic regulations and guidance, covering aspects of groundwater and surface water protection as well as drinking water supply policy. Domestic legislation and guidance will vary across the United Kingdom. Therefore, the relevant legislation for England, Wales, Northern Ireland and Scotland should be reviewed, alongside guidance provided by the Environment Agency (EA), Natural Resource Wales (NRW), the Scottish Environment Protection Agency (SEPA) or the Northern Ireland Environment Agency (NIEA), as appropriate.

The main objectives of the protection and remediation of groundwater under threat from land contamination are set out in the SEPA documents Groundwater Protection Policy for Scotland<sup>(2)</sup>. When assessing risks to groundwater the following need to be taken into consideration:

- Where pollutants have not yet entered groundwater, all necessary and reasonable measures must be taken to:
  - **prevent** the input of **hazardous** substances into groundwater (see description of hazardous substances below)
  - **limit** the entry of other (non-hazardous) pollutants into groundwater so as to avoid pollution, and to avoid deterioration of the status of groundwater bodies or sustained, upward trends in pollutant concentration.
- Where hazardous substances or non-hazardous pollutants have already entered groundwater, the priority is to
  - **minimise** further entry of **hazardous substances** and non-hazardous pollutants into groundwater

- take **necessary and reasonable measures to limit the pollution** of groundwater or impact on the status of the groundwater body from the future expansion of a contaminant 'plume', if necessary by actively reducing its extent if the economic, social and environmental benefits of doing so outweigh the costs.

SEPA guidance on groundwater risk assessment is contained in WAT-PS-10-01<sup>(3)</sup>, Assigning Groundwater Assessment Criteria for Pollutant Inputs<sup>(10)</sup>. SEPA has also published guidance entitled "Water Pollution Arising from Land Containing Chemical Contaminants, which details the considerations for assessment of sites under Part IIA <sup>(4)</sup>.

### **Selecting the appropriate assessment criteria**

When assessing the risks to water environment, various assessment criteria apply, depending on the nature of the assessment and the conceptual site model.

Where a surface water body is involved, then Environmental Quality Standards (EQS) are the relevant assessment criteria as they are designed to be protective of surface water ecology. Appropriate EQS for Scotland are referenced within SEPA WAT-SG-53<sup>(5)</sup> and include criteria defined in The Scotland River Basin District (Standards) Amendments Directions 2015<sup>(6a)</sup> and The Solway Tweed River Basin District (Standards) Amendments Directions 2015<sup>(6b)</sup>. The latter area has been defined as a separate river basin district from the rest of Scotland.

Where a public water supply or a groundwater resource aquifer is involved, then appropriate assessment criteria comprise resource protection values (RPVs). A range of RPVs are included within Annex 6 and Annex 7 of SEPA WAT-PS-10-01<sup>(3)</sup>. The RPVs have been derived from a variety of sources for protecting the groundwater resource potential and comprise the standards defined in legislation relating to public water supplies<sup>(7)</sup>. Legislation relating to private water supplies<sup>(8)</sup> may also be applicable in some cases. For instances where there are no UK assessment criteria, then the World Health Organisation (WHO) drinking water guidelines<sup>(9)</sup> and US EPA National Primary Drinking Water Regulations<sup>(10)</sup> may be used.

This appendix presents the generic assessment criteria (GAC) that RSK considers suitable for assessing risks to the water environment for our most commonly encountered determinants.

The RSK GAC for the water environment are presented in **Table 1**. The RSK GAC for the water environment are termed 'assessment limits'.

The appropriate assessment limits should be selected with consideration to:

- the site conceptual model and the receptor at potential risk (see flowchart attached);
- whether the substance is already present in groundwater at the site;
- whether or not the substance is classified as a priority hazardous substance under the Priority Substances Directive (2013/39/EC) <sup>(11)</sup> (see above), or as a hazardous substance according to the current list within SEPA WAT-PS-10-01<sup>(3)</sup>; and
- background concentrations in the aquifer (if applicable).

It is important to remember that the WFD and groundwater protection guidance issued by regulators support a sustainable, risk-based approach be applied to groundwater contamination. Exceedance of any target concentration does not necessarily imply that an unacceptable risk exists or that remediation is inevitably required.

## **River Basin Districts**

There are two river basin districts that have been defined in Scotland: the Solway Tweed and the rest of Scotland. There are separate River Basin District EQS published by the Scottish Government for these, most recently published in 2015 with associated amendments. Consolidated GAC are provided in SEPA guidance WAT-SG-53<sup>(5)</sup>.

## **References for preliminary text**

1. Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy
2. SEPA (2009), Groundwater Protection Policy for Scotland, v3, November 2009, Environmental Policy Number 19.
3. SEPA (2014), WAT-PS-10-01, Assigning Groundwater Assessment Criteria for Pollutant Inputs.
4. SEPA (2012), Water Pollution Arising from Land Containing Chemical Contaminants, 2nd edition 2012.
5. SEPA (2019). Supporting Guidance (WAT-SG-53) Environmental Quality Standards and Standards for Discharges to Surface Waters, v7, September 2019.
6. (a) The Scotland River Basin District (Standards) Amendment Directions 2015  
(b) The Solway Tweed River Basin District (Standards) Amendment Directions 2015
7. The Public Water Supplies (Water Quality) (Scotland) Regulations 2014 (as amended)
8. The Private Water Supplies (Scotland) Regulations 2006 (SI 2010/210) (as amended)
9. WHO (2011), *Guidelines for drinking-water quality*, 4th edn
10. US EPA National Primary Drinking Water Regulations available at <https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations>
11. Directive 2013/39/EU of the European Parliament and of the Council of 12 August 2013 amending Directives 2000/60/EC and 2008/105/EC as regards priority substances in the field of water policy.

## DEFINITIONS AND SUBSTANCE CLASSIFICATIONS

### Risks to surface waters:

**When assessing risks to surface waters, the following list of definitions should be understood:**

**Priority substances (PS)** are harmful substances originally identified under the Water Framework Directive (WFD) 2000/60/EC as substances 'presenting a significant risk to or via the aquatic environment' at a European level. Member States are required to incorporate the identified **PS** into their country-wide monitoring programmes. There are currently 33 **PS** defined within the Priority Substances Directive (2013/39/EU; Annex 1), with a further 12 additional substances due to come into force from 22 December 2018.

Under the umbrella of **PS**, there is a sub-set of substances identified as being "hazardous", and these are referred to as **Priority hazardous substances (PHS)**. The list of **PHS** is defined at EU level within the Priority Substances Directive (2013/39/EU). The WFD defines hazardous substances as 'substances (or groups of substances) that are toxic, persistent and liable to bio-accumulate, and other substances or groups of substances that give rise to an equivalent level of concern.' There are currently 15 **PHS**, with a further 6 additional substances due to come into force from 22 December 2018.

There is also another group of substances defined at EU level and which are referred to as **other pollutants (OP)** in Directive 2013/39/EU. These are additional substances which although not **priority substances**, have EQS which are identical to those laid down in the legislation which applied prior to 13 January 2009 (Directive 2008/105/EU). The **OP** are listed along with the **priority substance (PS)** within the Priority Substances Directive (2013/39/EU), and their associated EQS are also listed therein. There are 6 **OP** defined within the Priority Substances Directive (2013/39/EU).

In addition to the EU level substances, there are also a group of pollutants defined at a Member State level, referred to as **Specific pollutants (SP)**. These substances are pollutants which are released in significant quantities into water bodies in each of the individual European Member States. Under the WFD, Member States are required to set their own EQS for these substances. An indicative list of **SP** is given in Annex VIII of the WFD. Many of the substances categorised as **SP** in the UK were formerly List 2 substances under the old Groundwater Directive (80/68/EEC).

### Risks to groundwater:

**When assessing risks to groundwater, the following definitions should be understood:**

Under the requirements of the Groundwater Daughter Directive (2006/118/EU), the UK has published a list of substances it considers to be **hazardous substances** with respect to groundwater. In their advisory capacity to the government, this list has been derived by the UK Joint Agencies Groundwater Directive Advisory Group (JAGDAG), of which the Environment Agency and SEPA are a member. The JAGDAG list of **hazardous substances** is extensive, and can be found in full at:

<https://www.wfduk.org/stakeholders/jagdag>

In Scotland, the current classification of substances is contained available on the SEPA website at <https://www.sepa.org.uk/media/34384/list-of-hazardous-substances-as-determined-in-accordance-with-schedule-2-of-car.pdf> . Annex 6 of SEPA WAT-PS-10-01 details RPVs for non-hazardous substances.

|   |  |
|---|--|
| Target concentrations shaded in green are <u>statutory values</u> | Target concentrations shaded in orange are <u>non-statutory values</u> |
|---|--|

**Note:** Units µg/l throughout (unless otherwise stated)

**Table 1: Target concentrations for controlled waters**

| Substance classification             |                         | Determinant      | Target concentrations (µg/l) |  |   |  |
|--------------------------------------|-------------------------|------------------|------------------------------|--|---|--|
| Groundwater receptors                | Surface water receptors |                  | Minimum reporting value      | Resource Protection Value (RPV) (or best equivalent) | EQS or best equivalent                        |  |
|                                      |                         |                  |                              |  | Freshwater                                    | Transitional (estuaries) and coastal waters      |
| <b>Metals &amp; other inorganics</b> |                         |                  |                              |  |   |  |
|                                      | Specific pollutant      | Arsenic          | -                            | 10 <sup>(1)</sup>                                    | 50 <sup>(2a)</sup>                            | 25 <sup>(2a)</sup>                               |
| <b>Hazardous substance</b>           | Priority substance      | Cadmium          | 0.1 <sup>(3)</sup>           | 5 <sup>(1)</sup>                                     | ≤0.08, 0.08, 0.09, 0.15, 0.25 <sup>(2b)</sup> | 0.2 <sup>(2a)</sup>                              |
|                                      | -                       | Chromium (total) | -                            | 50 <sup>(1)</sup>                                    | 8.1<br>Sum values for chromium III and VI     | -  |
|                                      | Specific pollutant      | Chromium (III)   | -                            | Use value for total chromium                         | 4.7 <sup>(2a)</sup>                           | -  |
|                                      | Specific pollutant      | Chromium (VI)    |                              |  | 3.4 <sup>(2a)</sup>                           | 0.6 <sup>(2a)</sup>                              |
|                                      | Specific pollutant      | Copper           | -                            | 2,000 <sup>(1)</sup>                                 | 1 bioavailable <sup>(2a)</sup>                | 3.76 dissolved, where DOC ≤1mg/l <sup>(2a)</sup> |



| Substance classification   |                                     | Determinant                                | Target concentrations (µg/l) |  |  |  |
|----------------------------|-------------------------------------|--|------------------------------|--|--|--|
| Groundwater receptors      | Surface water receptors             |  | Minimum reporting value      | Resource Protection Value (RPV) (or best equivalent) | EQS or best equivalent   |  |
|                            |                                     |  |                              |  | Freshwater   | Transitional (estuaries) and coastal waters  |
|                            |                                     |  |                              |  |  | 3.76µg/l + (2.677µg/l x ((DOC/2) – 0.5µg/l)) dissolved, where DOC >1mg/l <sup>(2a)</sup> |
|                            | Priority substance                  | Lead                                       | -                            | 10 <sup>(1)</sup>                                    | 1.2 bioavailable <sup>(2a)</sup>   | 1.3 <sup>(2a)</sup>  |
| <b>Hazardous substance</b> | <b>Priority hazardous substance</b> | Mercury                                    | 0.01 <sup>(3)</sup>          | 1 <sup>(1)</sup>                                     | 0.07 <sup>(2c)</sup>   | 0.07 <sup>(2c)</sup>   |
|                            | Priority substance                  | Nickel                                     | -                            | 20 <sup>(1)</sup>                                    | 4.0 bioavailable <sup>(2a)</sup>   | 8.6 <sup>(2a)</sup>  |
|                            | -                                   | Selenium                                   | -                            | 10 <sup>(1)</sup>                                    | -  | -  |
|                            | Specific pollutant                  | Zinc                                       | -                            | 5,000 <sup>(4)</sup>                                 | 11.9 bioavailable <sup>(2a)*1</sup> (EQS of 10.9 amended to be inclusive of background dissolved Zn) | 7.9 dissolved <sup>(2a)*1</sup>  |
|                            | Specific pollutant                  | Iron                                       | -                            | 200 <sup>(1)</sup>                                   | 1000 <sup>(2a)</sup>   | 1000 <sup>(2a)</sup>   |
|                            | Specific pollutant                  | Manganese                                  | -                            | 50 <sup>(1)</sup> (0.05mg/l)                         | 123 bioavailable <sup>(2a)</sup> (0.123mg/l)   | -  |
|                            | -                                   | Aluminium                                  | -                            | 200 <sup>(4)</sup>                                   | 15 (pH > 6.5) <sup>(2g)</sup>  | 15 <sup>(2g)</sup>   |
| <b>Hazardous substance</b> | <b>Priority hazardous substance</b> | Tributyltin compounds (Tributyltin-cation) | 0.001 <sup>(3)</sup>         | -  | 0.0002 <sup>(2a)</sup>   | 0.0002 <sup>(2a)</sup>   |



| Substance classification |                         | Determinant   | Target concentrations (µg/l) |   |   |   |
|--------------------------|-------------------------|---|------------------------------|---|---|---|
| Groundwater receptors    | Surface water receptors |   | Minimum reporting value      | Resource Protection Value (RPV) (or best equivalent)  | EQS or best equivalent  |   |
|                          |                         |   |                              |   | Freshwater  | Transitional (estuaries) and coastal waters |
|                          | -                       | Sodium  | -                            | 200,000 <sup>(1)</sup><br>(200mg/l)   | -   | -   |
|                          | Specific pollutant      | Cyanide<br>(Hydrogen cyanide)   | -                            | 50 <sup>(1)</sup><br>(0.05mg/l)   | 1 <sup>(2a)</sup><br>(0.001mg/l)  | 1 <sup>(2a)</sup><br>(0.001mg/l)            |
|                          | -                       | Total ammoniacal nitrogen <sup>§</sup>                                  | -                            | 500 <sup>(1)</sup><br>(0.5mg/l)<br>as NH <sub>4</sub><br>(472 expressed as NH <sub>3</sub> ;<br>389 expressed as N) | 300 <sup>(2f)</sup><br>(0.3mg/l)<br>as N<br>(364 expressed as NH <sub>3</sub> ;<br>386 expressed as NH <sub>4</sub> ) | -   |
|                          | Specific pollutant      | Ammonia un-ionised<br>(equilibrium ratio calculated) (NH <sub>3</sub> ) | -                            | -   | -   | 21 <sup>(2a)</sup><br>(0.021mg/l)           |
|                          | Specific pollutant      | Chlorine  | -                            | -   | 2 <sup>(2a)</sup><br>(0.002mg/l)  | 10 <sup>(2d)</sup><br>(0.002mg/l)           |
|                          | -                       | Chloride  | -                            | 250,000 <sup>(1)</sup><br>(250mg/l)   | 250,000 <sup>(2g)</sup><br>(250mg/l)  | -   |
|                          | -                       | Sulphate  | -                            | 250,000 <sup>(1)</sup><br>(250mg/l)   | 400,000 <sup>(2g)</sup><br>(400mg/l)  | -   |
|                          | -                       | Nitrate (as NO <sub>3</sub> )   | -                            | 50,000 <sup>(1)</sup><br>(50mg/l)   | -   | -   |
|                          | -                       | Nitrite (as NO <sub>2</sub> )   | -                            | 500 <sup>(1)</sup><br>(0.5mg/l)   | 10 <sup>(5)</sup><br>(0.01mg/l)   | -   |





| Substance classification                |                         | Determinant                                      | Target concentrations (µg/l) |  |                        |   |
|---|-------------------------|--|------------------------------|--|------------------------|---|
| Groundwater receptors                   | Surface water receptors |  | Minimum reporting value      | Resource Protection Value (RPV) (or best equivalent)                   | EQS or best equivalent |   |
|   |                         |  |                              |  | Freshwater             | Transitional (estuaries) and coastal waters |
| <b>Volatile organic compounds (VOC)</b> |                         |  |                              |  |                        |   |
| <b>Hazardous substance</b>              | Other pollutant         | Tetrachloroethene (tetrachloroethylene; PCE)     | 0.1 <sup>(3)</sup>           | 10 <sup>(1)*2</sup><br>(sum of TCE and PCE)                            | 10 <sup>(2a)</sup>     | 10 <sup>(2a)</sup>                          |
| <b>Hazardous substance</b>              | Other pollutant         | Trichloroethene (trichloroethylene; TCE)         | 0.1 <sup>(3)</sup>           |  | 10 <sup>(2a)</sup>     | 10 <sup>(2a)</sup>                          |
|   | Specific pollutant      | Tetrachloroethane                                | -                            | -  | 140 <sup>(2a)</sup>    | -   |
| <b>Hazardous substance</b>              | Other pollutant         | Carbon tetrachloride (tetrachloromethane)        | 0.1 <sup>(3)</sup>           | 3.0 <sup>(1)</sup>   | 12 <sup>(2a)</sup>     | 12 <sup>(2a)</sup>                          |
| <b>Hazardous substance</b>              | Priority substance      | 1,2-Dichloroethane                               | 1.0 <sup>(3)</sup>           | 3.0 <sup>(1)</sup>   | 10 <sup>(2a)</sup>     | 10 <sup>(2a)</sup>                          |
| Non-hazardous pollutant                 | -                       | 1,2-Dichloroethene (DCE)<br>sum of cis and trans | -                            | 50 <sup>(1)</sup>  | -                      | -   |
| <b>Hazardous substance</b>              | -                       | Vinyl chloride (chloroethene)                    | -                            | 0.5 <sup>(1)</sup>   | -                      | -   |
| <b>Hazardous substance</b>              | Priority substance      | Dichloromethane                                  | -                            | 5 <sup>(1)</sup>   | 20 <sup>(2a)</sup>     | 20 <sup>(2a)</sup>                          |
| <b>Hazardous substance</b>              | Priority substance      | Trichlorobenzenes                                | 0.01 <sup>(3)</sup>          | 70 <sup>(1)*4</sup>  | 0.4 <sup>(2a)</sup>    | 0.4 <sup>(2a)</sup>                         |
| <b>Hazardous substance</b>              | Priority substance      | Trichloromethane (Chloroform)                    | 0.1 <sup>(3)</sup>           | 100 <sup>(1)</sup><br>(Sum of trihalomethanes – chloroform, bromoform, | 2.5 <sup>(2a)</sup>    | 2.5 <sup>(2a)</sup>                         |
|   | -                       | Bromoform  | -                            |  | -                      | -   |



| Substance classification                      |                                     | Determinant  | Target concentrations (µg/l) |  |                        |   |
|---|-------------------------------------|--|------------------------------|--|------------------------|---|
| Groundwater receptors                         | Surface water receptors             |  | Minimum reporting value      | Resource Protection Value (RPV) (or best equivalent) | EQS or best equivalent |   |
|   |                                     |  |                              |  | Freshwater             | Transitional (estuaries) and coastal waters |
|   | -                                   | Dibromochloromethane   | -                            | dibromochloromethane, bromodichloromethane           | -                      | -   |
|   | -                                   | Bromodichloromethane   | -                            |  | -                      | -   |
|   | <b>Priority hazardous substance</b> | Di(2-ethylhexyl) phthalate (bis(2-ethylhexyl) phthalate, DEHP)         | -                            | 6 <sup>(1)</sup>                                     | 1.3 <sup>(2a)</sup>    | 1.3 <sup>(2a)</sup>                         |
|   | Specific pollutant                  | Benzyl butyl phthalate   | -                            | -  | 7.5 <sup>(2a)</sup>    | 0.75 <sup>(2e)</sup>                        |
| <b>Hazardous substance</b>                    | <b>Priority hazardous substance</b> | Hexachlorobutadiene (as a pesticide, but reported in a VOC suite)      | 0.005 <sup>(3)</sup>         | 0.1 <sup>(1)</sup>                                   | 0.6 <sup>(2c)</sup>    | 0.6 <sup>(2c)</sup>                         |
| <b>Semi-volatile organic compounds (SVOC)</b> |                                     |  |                              |  |                        |   |
|   | -                                   | Acenaphthylene (Aro EC12-EC16)   | -                            | -  | 5.8 <sup>(6)</sup>     |   |
| <b>Hazardous substance</b>                    | <b>Priority hazardous substance</b> | Anthracene (Aro EC16-EC21)   | -                            | -  | 0.1 <sup>(2a)</sup>    | 0.1 <sup>(2a)</sup>                         |
| <b>Hazardous substance</b>                    | Priority substance                  | Naphthalene (Aro EC10-EC12)  | -                            | -  | 2 <sup>(2a)</sup>      | 2 <sup>(2a)</sup>                           |
| <b>Hazardous substance</b>                    | Priority substance                  | Fluoranthene (Aro EC21-EC35) not used as an indicator for this EC band | -                            | -  | 0.0063 <sup>(2a)</sup> | 0.0063 <sup>(2a)</sup>                      |



| Substance classification      |  | Determinant  | Target concentrations (µg/l) |  |  |   |
|-------------------------------|--|--|------------------------------|--|--|---|
| Groundwater receptors         | Surface water receptors                |  | Minimum reporting value      | Resource Protection Value (RPV) (or best equivalent) | EQS or best equivalent   |   |
|                               |  |  |                              |  | Freshwater   | Transitional (estuaries) and coastal waters |
| <b>Hazardous substance(s)</b> | <b>Priority hazardous substance(s)</b> | Benzo(a)pyrene (Aro EC21-EC35)   | -                            | 0.01 <sup>(1)</sup>                                  | 0.00017 <sup>(2a)</sup>  | 0.00017 <sup>(2a)</sup>                     |
| <b>Hazardous substance</b>    |  | Benzo(b)fluoranthene (Aro EC21-EC35)                                     | -                            | 0.1 <sup>(1)</sup>                                   | No EQS for these substances. B(a)P should be used as the indicator compound instead. |   |
| <b>Hazardous substance</b>    |  | Benzo(k)fluoranthene (Aro EC21-EC35)                                     | -                            |  |  |   |
| <b>Hazardous substance</b>    |  | Benzo(g,h,i)perylene (Aro EC21-EC35)                                     | -                            |  |  |   |
| <b>Hazardous substance</b>    |  | Indeno(1,2,3-cd) pyrene (Aro EC21-EC35)                                  | -                            |  |  |   |
|                               | Specific pollutant                     | Phenol   | -                            | -  | 7.7 <sup>(2a)</sup>  | 7.7 <sup>(2a)</sup>                         |
| <b>Hazardous substance</b>    | Specific pollutant                     | 2,4-Dichlorophenol   | 0.1 <sup>(3)</sup>           | -  | 4.2 <sup>(2a)</sup>  | 0.42 <sup>(2a)</sup>                        |
| <b>Hazardous substance</b>    | Priority substance                     | Pentachloro-phenol (PCP) (as a pesticide, but reported in an SVOC suite) | 0.1 <sup>(3)</sup>           | 0.1 <sup>(1)</sup>                                   | 0.4 <sup>(2a)</sup>  | 0.4 <sup>(2a)</sup>                         |
| <b>Petroleum hydrocarbons</b> |  |  |                              |  |  |   |



| Substance classification                                   |                         | Determinant   | Target concentrations (µg/l) |  |  |   |
|--|-------------------------|---|------------------------------|--|--|---|
| Groundwater receptors                                      | Surface water receptors |   | Minimum reporting value      | Resource Protection Value (RPV) (or best equivalent)   | EQS or best equivalent   |   |
|  |                         |   |                              |  | Freshwater   | Transitional (estuaries) and coastal waters |
| <b>Hazardous substance</b>                                 | -                       | Total petroleum hydrocarbons                                  | -                            | See individual risk driving compounds (i.e. BTEX and PAH for specific RPVs. Where no criteria use value of 10 µg/l to screen individual fractions. | See individual risk driving compounds (i.e. BTEX and PAH) for specific EQS. Where no criteria use value of 10 µg/l to screen individual fractions. |   |
| <b>Hazardous substance</b>                                 | Priority substance      | Benzene (Aro EC5-EC7)   | 1 <sup>(3)</sup>             | 1 <sup>(1)</sup>   | 10 <sup>(2a)</sup>   | 8 <sup>(2a)</sup>                           |
| <b>Hazardous substance</b>                                 | Specific pollutant      | Toluene (Aro EC7-EC8)   | 4 <sup>(3)</sup>             | 700 <sup>(1)</sup>   | 74 <sup>(2a)</sup>   | 74 <sup>(2a)</sup>                          |
| <b>Hazardous substance</b>                                 | -                       | Ethylbenzene (Aro EC8-EC10)                                   | -                            | 300 <sup>(1)</sup>   | 20 <sup>(2)</sup>  | 20 <sup>(2)</sup>                           |
| <b>Hazardous substance</b>                                 | -                       | Xylenes (Aro EC8-EC10)  | 3 <sup>(3)</sup>             | 500 <sup>(1)</sup>   | 30 <sup>(2)</sup>  | 30 <sup>(2)</sup>                           |
|  | -                       | Methyl tertiary butyl ether (MTBE)                            | -                            | 15 <sup>(8)</sup>  | -  | -   |
| <b>Pesticides, fungicides, insecticides and herbicides</b> |                         |   |                              |  |  |   |
|  | -                       | Total pesticides  | -                            | 0.5 <sup>(1)</sup>   | -  | -   |
|  | -                       | Other individual pesticides (unless otherwise detailed below) | -                            | 0.1 <sup>(1)</sup>   | -  | -   |
| <b>Hazardous</b>   | Other pollutant         | Aldrin  | 0.003 <sup>(3)</sup>         | 0.03 <sup>(1)</sup>  | 0.01 <sup>(2a)</sup> (sum of   | 0.005 <sup>(2a)</sup> (sum of               |

| Substance classification   |  | Determinant    | Target concentrations (µg/l) |  |  |  |
|----------------------------|--|----------------|------------------------------|--|--|--|
| Groundwater receptors      | Surface water receptors  |                | Minimum reporting value      | Resource Protection Value (RPV) (or best equivalent) | EQS or best equivalent   |  |
|                            |  |                |                              |  | Freshwater   | Transitional (estuaries) and coastal waters                        |
| <b>substance(s)</b>        | (Cyclodiene pesticides)  | Dieldrin       | 0.003 <sup>(3)</sup>         | 0.03 <sup>(1)</sup>                                  | all four)  | all four)  |
|                            |  | Endrin         | 0.003 <sup>(3)</sup>         | 0.1 <sup>(1)</sup><br>(‘other individual pesticide’) |  |  |
|                            |  | Isodrin        | 0.003 <sup>(3)</sup>         | 0.1 <sup>(1)</sup><br>(‘other individual pesticide’) |  |  |
| <b>Hazardous substance</b> | Other pollutant  | DDT (total)    | 0.002 <sup>(3)</sup>         | 0.1 <sup>(2)</sup><br>(‘other individual pesticide’) | 0.025 <sup>(2a)</sup>  | 0.025 <sup>(2a)</sup>  |
| <b>Hazardous substance</b> | Specific pollutant   | Carbendazim    | -                            | 0.1 <sup>(1)</sup><br>(‘other individual pesticide’) | 0.15 <sup>(2a)</sup>   | -  |
| <b>Hazardous substance</b> | Specific pollutant   | Chlorothalonil | -                            | 0.1 <sup>(1)</sup><br>(‘other individual pesticide’) | 0.035 <sup>(2a)</sup>  | -  |
| <b>Hazardous substance</b> | Specific pollutant (until 22/12/18, after which it becomes a Priority substance) | Cypermethrin   | -                            | 0.1 <sup>(1)</sup><br>(‘other individual pesticide’) | 0.0001 <sup>(2a)</sup><br>From 22/12/18:<br>8.0E <sup>-5(2a)</sup> | 0.0001 <sup>(2a)</sup><br>From 22/12/18:<br>8.0E <sup>-6(2a)</sup> |
| <b>Hazardous substance</b> | Specific pollutant   | Dimethoate     | 0.01 <sup>(3)</sup>          | 0.1 <sup>(1)</sup><br>(‘other individual pesticide’) | 0.48 <sup>(2a)</sup>   | 0.48 <sup>(2a)</sup>   |

| Substance classification   |                         | Determinant   | Target concentrations (µg/l) |  |                        |   |
|----------------------------|-------------------------|---------------|------------------------------|--|------------------------|---|
| Groundwater receptors      | Surface water receptors |               | Minimum reporting value      | Resource Protection Value (RPV) (or best equivalent) | EQS or best equivalent |   |
|                            |                         |               |                              |  | Freshwater             | Transitional (estuaries) and coastal waters |
|                            | Specific pollutant      | Glyphosate    | -                            | 0.1 <sup>(1)</sup><br>(‘other individual pesticide’) | 196 <sup>(2a)</sup>    | 196 <sup>(2a)</sup>                         |
| <b>Hazardous substance</b> | Specific pollutant      | Linuron       | -                            | 0.1 <sup>(1)</sup><br>(‘other individual pesticide’) | 0.5 <sup>(2a)</sup>    | 0.5 <sup>(2a)</sup>                         |
|                            | Specific pollutant      | Mecoprop      | 0.04 <sup>(3)</sup>          | 0.1 <sup>(1)</sup><br>(‘other individual pesticide’) | 18 <sup>(2a)</sup>     | 18 <sup>(2a)</sup>                          |
|                            | Specific pollutant      | Methiocarb    | -                            | 0.1 <sup>(1)</sup><br>(‘other individual pesticide’) | 0.01 <sup>(2a)</sup>   | -   |
|                            | Specific pollutant      | Pendimethalin | -                            | 0.1 <sup>(1)</sup><br>(‘other individual pesticide’) | 0.3 <sup>(2a)</sup>    | -   |
| <b>Hazardous substance</b> | Specific pollutant      | Permethrin    | 0.001 <sup>(3)</sup>         | 0.1 <sup>(1)</sup><br>(‘other individual pesticide’) | 0.001 <sup>(2a)</sup>  | 0.0002 <sup>(2a)</sup>                      |
| <b>Hazardous substance</b> | Priority substance      | Alachlor      | -                            | 0.1 <sup>(1)</sup><br>(‘other individual pesticide’) | 0.3 <sup>(2a)</sup>    | 0.3 <sup>(2a)</sup>                         |
| <b>Hazardous substance</b> | Priority substance      | Atrazine      | 0.03 <sup>(3)</sup>          | 0.1 <sup>(1)</sup><br>(‘other individual pesticide’) | 0.6 <sup>(2a)</sup>    | 0.6 <sup>(2a)</sup>                         |

| Substance classification   |                                     | Determinant                       | Target concentrations (µg/l) |  |                        |   |
|----------------------------|-------------------------------------|-----------------------------------|------------------------------|--|------------------------|---|
| Groundwater receptors      | Surface water receptors             |                                   | Minimum reporting value      | Resource Protection Value (RPV) (or best equivalent) | EQS or best equivalent |   |
|                            |                                     |                                   |                              |  | Freshwater             | Transitional (estuaries) and coastal waters |
| <b>Hazardous substance</b> | Priority substance                  | Diuron                            | -                            | 0.1 <sup>(1)</sup><br>(‘other individual pesticide’) | 0.2 <sup>(2a)</sup>    | 0.2 <sup>(2a)</sup>                         |
| <b>Hazardous substance</b> | <b>Priority hazardous substance</b> | Endosulphan                       | 0.005 <sup>(3)</sup>         | 0.1 <sup>(1)</sup><br>(‘other individual pesticide’) | 0.005 <sup>(2a)</sup>  | 0.0005 <sup>(2a)</sup>                      |
|                            | Priority substance                  | Isoproturon                       | -                            | 0.1 <sup>(1)</sup><br>(‘other individual pesticide’) | 0.3 <sup>(2a)</sup>    | 0.3 <sup>(2a)</sup>                         |
| <b>Hazardous substance</b> | Priority substance                  | Simazine                          | 0.03 <sup>(3)</sup>          | 0.1 <sup>(1)</sup><br>(‘other individual pesticide’) | 1 <sup>(2a)</sup>      | 1 <sup>(2a)</sup>                           |
| <b>Hazardous substance</b> | <b>Priority hazardous substance</b> | Trifluralin                       | 0.01 <sup>(3)</sup>          | 0.1 <sup>(1)</sup><br>(‘other individual pesticide’) | 0.03 <sup>(2a)</sup>   | 0.03 <sup>(2a)</sup>                        |
| <b>Hazardous substance</b> | From 22/12/18: Priority substance   | Dichlorvos                        | -                            | 0.1 <sup>(1)</sup><br>(‘other individual pesticide’) | 6.0E <sup>-4(2a)</sup> | 6.0E <sup>-5(2a)</sup>                      |
| <b>Hazardous substance</b> | From 22/12/18: Priority substance   | Heptachlor and heptachlor epoxide | -                            | 0.03 <sup>(1)</sup>                                  | 2.0E <sup>-7(2a)</sup> | 1.0E <sup>-08(2a)</sup>                     |
| <b>Miscellaneous</b>       |                                     |                                   |                              |  |                        |   |
|                            | Specific pollutant                  | Triclosan (antibacterial agent)   | -                            | -  | 0.1 <sup>(2a)</sup>    | 0.1 <sup>(2a)</sup>                         |

| Substance classification |  | Determinant   | Target concentrations (µg/l) |  |                        |   |
|--------------------------|--|---|------------------------------|--|------------------------|---|
| Groundwater receptors    | Surface water receptors                            |   | Minimum reporting value      | Resource Protection Value (RPV) (or best equivalent) | EQS or best equivalent |   |
|                          |  |   |                              |  | Freshwater             | Transitional (estuaries) and coastal waters |
|                          | <b>From 22/12/18: Priority hazardous substance</b> | Perfluoro-octane sulfonic acid (and its derivatives) (PFOS) | -                            | -  | 6.5E <sup>-4(2a)</sup> | 1.3E <sup>-4(2a)</sup>                      |
|                          | <b>From 22/12/18: Priority hazardous substance</b> | Hexabromo cyclododecane (HBCDD)                             | -                            | -  | 0.0016 <sup>(2a)</sup> | 0.0008 <sup>(2a)</sup>                      |

**Note:**

<sup>1</sup> A target concentration is not available.

<sup>§</sup>Please note that total ammonia (NH<sub>4</sub><sup>+</sup> and NH<sub>3</sub>) is equivalent to ammoniacal nitrogen in laboratory reports

\*1 The zinc freshwater EQS is listed in the Scotland 2015 Direction and WAT-SG-53 as 10.9 µg/l, with supporting notes that '*Prior to applying the standard for bioavailable zinc in rivers and freshwater lochs, SEPA must subtract 1 µg/l from the measured or otherwise estimated concentration of dissolved zinc in the river or part thereof or the loch or part thereof.*' For simplicity, RSK has added 1 µg/l to the EQS to take into account background zinc concentration. Note that The Scotland River Basin District (Standards) Direction 2014 and The Solway Tweed River Basin District (Standards) Direction 2014 incorrectly state the background concentration in mg/l, not µg/l.

\*2 Please note that although trichlorethene is listed in WAT-PS-10-01 as 10 µg/l, this has been confirmed as a mistake by SEPA. The value of 10 µg/l is for the sum of trichloroethene and tetrachloroethene.

\*3 Please note that although 2,4-dichlorophenol is listed in the Scotland 2015 Direction as 0.042 µg/l, this is a mistake and should read 0.42 µg/l.

\*4 SEPA WAT\_PS\_10\_01 details this RPV as for 1,2,4 trimethylbenzene

"Bioavailable" in relation to copper, zinc, nickel, manganese and lead is the generic EQSbioavailable. Exceedance of this value should prompt a site-specific assessment using the M-BAT with pH, DOC and Ca to derive a site-specific EQS termed the PNEC<sub>dissolved</sub>.

<http://www.wfduk.org/resources/rivers-lakes-metal-bioavailability-assessment-tool-m-bat>. For zinc, background concentration should be taken into account – see footnote \*1 above.



## References for Table 1

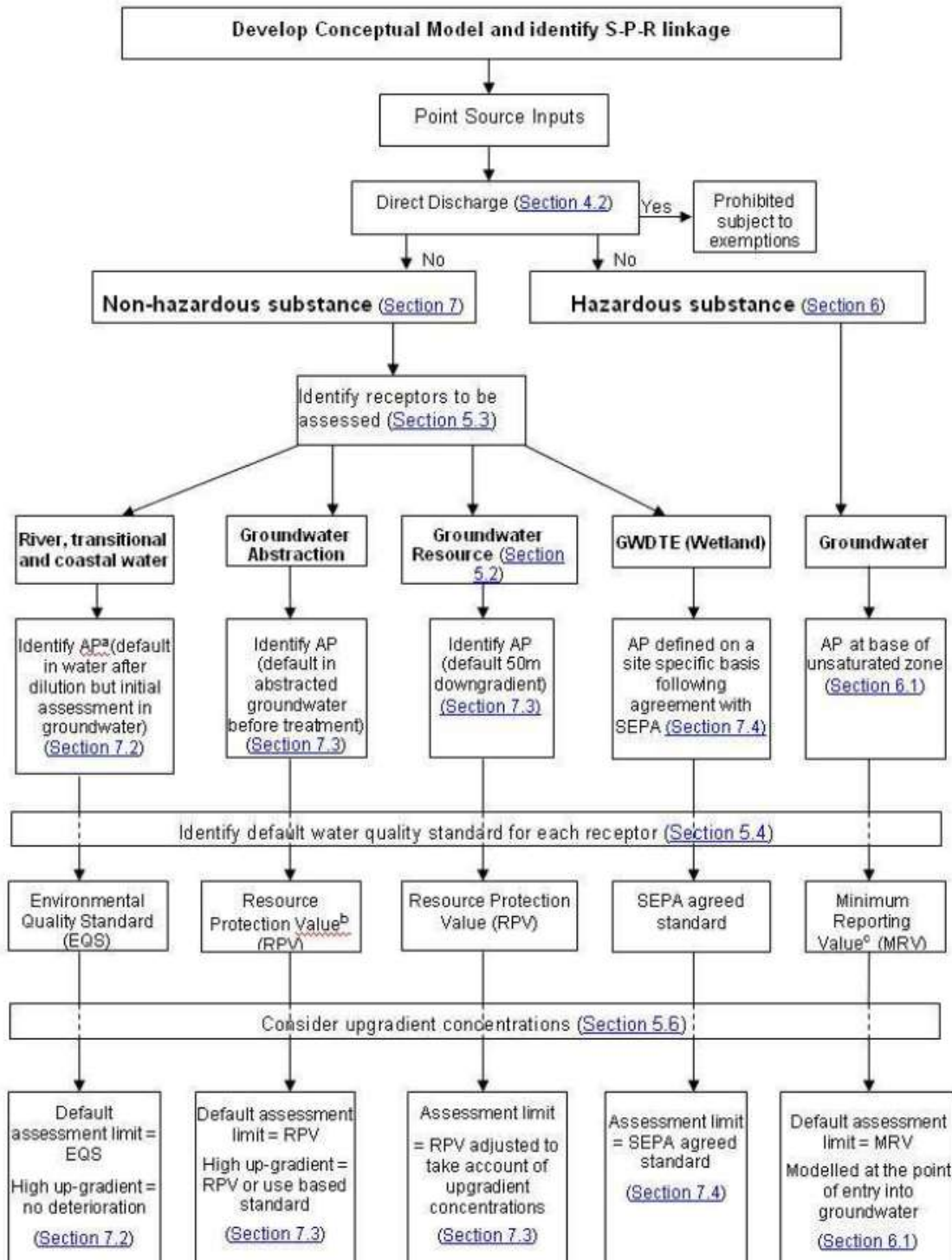
1. RPV referenced within SEPA WAT-PS-10-01
2. The Scotland River Basin District (Standards) Directions 2014 and The Solway Tweed River Basin District (Standards) Directions 2014.
  - 2a. The EQS for these substances are based on a “long term mean” or an “annual average (AA)” EQS.
  - 2b. For cadmium and its compounds the EQS values vary depending on the hardness of the water as specified in five class categories (Class 1: < 40 mg CaCO<sub>3</sub>/l, Class 2: 40 to < 50 mg CaCO<sub>3</sub>/l, Class 3: 50 to < 100 mg CaCO<sub>3</sub>/l, Class 4: 100 to < 200 mg CaCO<sub>3</sub>/l and Class 5: ≥ 200 mg CaCO<sub>3</sub>/l).
  - 2c. The EQS for Mercury and hexachlorobutadiene are based on a “maximum acceptable concentration (MAC)” EQS in absence of an “annual average (AA)” EQS.
  - 2d. The EQS for chlorine in saltwater is based on the 95<sup>th</sup> percentile concentration of total residual oxidant, which refers to the sum of all oxidising agents existing in water, expressed as available chlorine.
  - 2e. The recommended saltwater standard is derived using a safety factor of 100. Where the standard is failed, it is recommended that supporting evidence of ecological damage should be obtained before committing to expensive action.
  - 2f. EQS for total ammonia is as per Table C4.1 of the above directions. EQS applies to river types 1, 2 and 4 and 6 (namely upland and low alkalinity). The EQS for a lowland and high alkalinity rivers (types 3, 5 and 7) is 600µg/l (0.6mg/l).
  - 2g. Additional non-statutory EQS values provided in WAT-SG-53.

Additional information on the Metal Bioavailability Assessment Tool (M-BAT) is available at <http://www.wfduk.org/resources/rivers-lakes-metal-bioavailability-assessment-tool-m-bat>

3. Minimum reporting values listed in Annex (J) of Horizontal Guidance Note H1 (H1 Environmental Risk Assessment Framework, Environment Agency, April 2010 v2.0). Note target concentration for xylenes is 0.003mg/l each for o-xylene and m/p xylene)
4. The Private Water Supplies (Scotland) Regulations 2006
5. Council Directive on the Quality of Fresh Waters Needing Protection or Improvement in Order to Support Fish Life (Freshwater Fish Directive) (78/659/EEC)
6. WRc plc (2002), R&D Technical Report P45.
7. Environment Agency (2009), ‘Petroleum hydrocarbons in groundwater: supplementary guidance for hydrogeological risk assessment’. NOTE: EA advice in the above document should be referred to with respect to risk rankings of TPH CWG fractions. It may be possible to eliminate low risk fractions and/or those not detected above LMDL from concern
8. Drinking Water Inspectorate (London, UK). Environmental Information Request on MTBE in drinking water. Ref. DWI 1/10/18; dated 28 November 2006. Value is based on the odour threshold for MTBE, which is lower than a health-based guideline value

# FLOW CHART TO ASSIST WITH SELECTION OF TARGET CONCENTRATIONS (SCOTLAND)

Reproduced from SEPA (2014) Position Statement (WAS-PS-10-01. Assigning groundwater assessment criteria for pollutant impacts.



<sup>a</sup> AP = assessment point

<sup>b</sup> RPV = Values derived from human health risk based standards

<sup>c</sup> MRV = The lowest concentration of a substance that can be routinely determined with a known degree of confidence, and may not be equivalent to limit of detection

**Table 4.1 Example Completion Criteria for Leachates**

| Determinand                                    | Concentration |   |
|--|---------------|---|
| pH   | 6.5 – 8.5     |   |
| Conductivity                                   | 4000          | µS/cm   |
| Chloride                                       | 2000          | mg l <sup>-1</sup> Cl                               |
| Sulphate                                       | 2500          | mg l <sup>-1</sup> SO <sub>4</sub>                  |
| Calcium  | 1000          | mg l <sup>-1</sup> Ca                               |
| Magnesium                                      | 500           | mg l <sup>-1</sup> Mg                               |
| Sodium   | 1500          | mg l <sup>-1</sup> Na                               |
| Potassium                                      | 120           | mg l <sup>-1</sup> K                                |
| Aluminium                                      | 2             | mg l <sup>-1</sup> Al                               |
| Nitrate  | 500           | mg l <sup>-1</sup> NO <sub>3</sub>                  |
| Nitrite  | 1             | mg l <sup>-1</sup> NO <sub>2</sub>                  |
| Ammonia  | 5             | mg l <sup>-1</sup> NH <sub>4</sub>                  |
| Total Organic Carbon                           | 10            | mg l <sup>-1</sup> C                                |
| Iron   | 2             | mg l <sup>-1</sup> Fe                               |
| Manganese                                      | 0.5           | mg l <sup>-1</sup> Mn                               |
| Copper   | 1             | mg l <sup>-1</sup> Cu                               |
| Zinc   | 1             | mg l <sup>-1</sup> Zn                               |
| Phosphorus                                     | 10            | mg l <sup>-1</sup> P <sub>2</sub> O <sub>5</sub>    |
| Fluoride                                       | 10            | mg l <sup>-1</sup> F                                |
| Barium   | 1             | mg l <sup>-1</sup> Ba                               |
| Silver   | 0.1           | mg l <sup>-1</sup> Ag                               |
| Arsenic  | 0.5           | mg l <sup>-1</sup> As                               |
| Cadmium  | 0.05          | mg l <sup>-1</sup> Cd                               |
| Cyanides                                       | 0.5           | mg l <sup>-1</sup> CN                               |
| Chromium                                       | 0.5           | mg l <sup>-1</sup> Cr                               |
| Mercury  | 0.01          | mg l <sup>-1</sup> Hg                               |
| Nickel   | 0.5           | mg l <sup>-1</sup> Ni                               |
| Lead   | 0.5           | mg l <sup>-1</sup> Pb                               |
| Antimony                                       | 0.1           | mg l <sup>-1</sup> Sb                               |
| Selenium                                       | 0.1           | mg l <sup>-1</sup> Se                               |
| Mineral Oils                                   | 0.1           | mg l <sup>-1</sup>                                  |
| Phenols  | 0.005         | mg l <sup>-1</sup> C <sub>6</sub> H <sub>5</sub> OH |
| Organochlorine compounds other than pesticides | 0.01          | mg l <sup>-1</sup>                                  |
| Pesticides                                     |               |   |
| —individually                                  | 0.001         | mg l <sup>-1</sup>                                  |
| —collectively                                  | 0.005         | mg l <sup>-1</sup>                                  |
| PAHs   | 0.002         | mg l <sup>-1</sup>                                  |

- Assumptions:
1. the leachate will enter groundwater;
  2. local water quality objectives are set for potable supply;
  3. a minimum dilution factor of 10 is expected.
  4. there is no significant unsaturated zone attenuation.






# APPENDIX F

## SCREENING TABLES

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## Exceedance colours

|   |   |
|---|---|
|  | Coastal EQS/ RPV/LOD                        |
|  | WMP 26A Landfill Completion Criteria        |
|  | Coastal EQS/ RPV/LOD and WMP 26A exceedance |

Point of Ayre Landfill's  
Groundwater Sample Results

ALS

| Customer Sample ID     | BH101A     | 101A       | 101A       | 101A       | 101         | 101A       | 101A       | 101A       | 101A       | 101A       | 101A       | 101A       | 101A       | 101A       | 101A        |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 4.69-      | 5.02-      | 5.02-      | 4.58-      | -           | -          | -          | -          | -          | -          | -          | -          | -          | -          | 4.51-       |
| AGS Id                 |            |            |            |            |             |            |            |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 12/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |            |            |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |            |            |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |            |            |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |            |            |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |            |            |             |
| Lab Sample Number      | 19558456   | 20363925   | 20719345   | 21297982   | 21836340    | 22246290   | 22802696   | 23404139   | 23838532   | 24394421   | 26881754   | 27276246   |            |            |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |            |            |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |            |            |             |

| Analysis                                    | Test                                   | Method      | Units  | LOD | Coastal Waters EQS | RPV (If no EQS) | WMP 26A Landfill Completion Criteria |       |       |         |        |       |       |        |        |       |        |        |        |        |
|---|--|-------------|--------|-----|--------------------|-----------------|--------------------------------------|-------|-------|---------|--------|-------|-------|--------|--------|-------|--------|--------|--------|--------|
| <b>Carbon</b>                               |  |             |        |     |                    |                 |                                      |       |       |         |        |       |       |        |        |       |        |        |        |        |
|   | Carbon, Organic (diss.filt)            | TM090       | mg/l   |     | 6                  | /               | /                                    | 10    | 4.37  | 4.34    | 5.11   | 4.3   | 5.1   | 4.01   | 5.49   | 4.07  | 3.43   | 4.08   | 4.25   | 3.6    |
| <b>Inorganics</b>                           |  |             |        |     |                    |                 |                                      |       |       |         |        |       |       |        |        |       |        |        |        |        |
|   | Fluoride                               | TM104       | mg/l   |     | 0.5                | /               | /                                    | 10    | <0.5  | <0.5    | <0.5   | <0.5  | <0.5  | <0.5   | <0.5   | <0.5  | <0.5   | <0.5   | <0.5   | <0.5   |
|   | Ionic balance                          | Calculation | % Diff |     |                    | /               | /                                    |       | 0.733 | -0.0382 | 0.386  | 0.28  | 0.538 | 6.89   | -0.361 | -1.34 | -1.78  | 3.13   | -      | -      |
|   | Nitrite as NO2                         | TM184       | mg/l   |     | 0.05               | 0.5             | /                                    | 1     | 0.05  | <0.05   | <0.05  | <0.05 | <0.05 | <0.05  | <0.05  | <0.05 | <0.05  | <0.05  | <0.05  | <0.05  |
|   | Phosphate (Ortho as PO4)               | TM184       | mg/l   |     | 0.05               | /               | /                                    |       | <0.05 | <0.05   | <0.05  | <0.05 | <0.05 | <0.05  | <0.05  | <0.05 | <0.05  | <0.05  | <0.05  | <0.05  |
|   | Sulphate                               | TM184       | mg/l   |     | 2                  | /               | 250                                  | 2500  | 378   | 236     | 242    | 292   | 218   | 299    | 23.4   | 182   | 282    | 215    | 182    | -      |
|   | Sulphide                               | TM101       | mg/l   |     | 0.01               | /               | /                                    |       | <0.01 | 0.0119  | 0.0175 | <0.01 | 0.014 | 0.0697 | <0.01  | <0.01 | 0.0289 | 0.0119 | <0.01  | -      |
|   | Chloride                               | TM184       | mg/l   |     | 2                  | /               | 250                                  | 2000  | 48.1  | 51.9    | 47     | 43.3  | 46.7  | 57.7   | 62.3   | 45.6  | 47.6   | 59.4   | 63     | 52.8   |
|   | COD, unfiltered                        | TM107       | mg/l   |     | 7                  | /               | /                                    |       | 27.5  | 28.4    | 41.4   | 14.8  | 8.48  | 21.5   | 79.1   | 21.2  | <7     | <7     | 33.4   | -      |
|   | Nitrogen, Total                        | TM212       | mg/l   |     | 1                  | /               | /                                    |       | <1    | <1      | <1     | <1    | <1    | 1.11   | <1     | <1    | <1     | <1     | 1.33   | -      |
|   | Ammoniacal Nitrogen as NH4             | TM099       | mg/l   |     | 0.3                | /               | 0.5                                  | 5     | 0.301 | 0.311   | 0.306  | 0.327 | 0.333 | <0.3   | 0.369  | <0.3  | <0.3   | <0.3   | <0.3   | <0.3   |
|   | Nitrate as NO3                         | TM184       | mg/l   |     | 0.3                | /               | 50                                   | 500   | 1.67  | 0.701   | <0.3   | 1.58  | 1.64  | 1.7    | <0.3   | 0.987 | 0.482  | 1.74   | 3.32   | -      |
|   | BOD, unfiltered                        | TM045       | mg/l   |     | 1                  | /               | /                                    |       | -     | 6.27    | 7.44   | <1    | <1    | 2.03   | 2.64   | <1    | <1     | <1     | 7.28   | -      |
|   | Alkalinity, Total as CaCO3             | TM043       | mg/l   |     | 2                  | /               | /                                    |       | 378   | 1630    | -      | 395   | 376   | 372    | 1090   | 355   | 381    | 325    | 324    | -      |
|   | Alkalinity, Total as CaCO3 (diss.filt) | TM043       | mg/l   |     | 2                  | /               | /                                    |       | -     | -       | 434    | -     | -     | -      | -      | -     | -      | -      | -      | -      |
|   | Suspended solids, Total                | TM022       | mg/l   |     | 9                  | /               | /                                    |       | 164   | 506     | 2220   | 219   | 586   | 472    | 12300  | 275   | 36.7   | 6.9    | 43.3   | -      |
| <b>Filtered (Dissolved) Metals</b>          |  |             |        |     |                    |                 |                                      |       |       |         |        |       |       |        |        |       |        |        |        |        |
|   | Mercury (diss.filt)                    | TM183       | µg/l   |     | 0.01               | 0.07            | /                                    | 10    | <0.01 | <0.01   | <0.01  | <0.01 | <0.01 | <0.01  | <0.01  | <0.01 | <0.01  | <0.01  | <0.01  | <0.01  |
|   | Arsenic (diss.filt)                    | TM152       | µg/l   |     | 0.5                | 25              | /                                    | 500   | 1.34  | 2.46    | 1.44   | 0.683 | 0.922 | 0.888  | 7.75   | 0.947 | 1.11   | 0.578  | 0.75   | <3     |
|   | Cadmium (diss.filt)                    | TM152       | µg/l   |     | 0.08               | 0.2             | /                                    | 50    | <0.08 | <0.08   | <0.08  | <0.08 | <0.08 | <0.08  | <0.08  | <0.08 | <0.08  | <0.08  | <0.08  | <0.08  |
|   | Chromium (diss.filt)                   | TM152       | µg/l   |     | 1                  | /               | 50                                   | 500   | <1    | <1      | <1     | <1    | <1    | <1     | <1     | <1    | <1     | <1     | <1     | <1     |
|   | Copper (diss.filt)                     | TM152       | µg/l   |     | 0.3                | 3.76            | /                                    | 1000  | <0.3  | <0.3    | 0.903  | 0.54  | 0.381 | 0.462  | 1.5    | 2.29  | 2.5    | 0.739  | 1.43   | -      |
|   | Lead (diss.filt)                       | TM152       | µg/l   |     | 0.2                | 1.3             | /                                    | 500   | <0.2  | <0.2    | <0.2   | <0.2  | <0.2  | <0.2   | <0.2   | 1.6   | <0.2   | <0.2   | <0.2   | <0.2   |
|   | Manganese (diss.filt)                  | TM152       | µg/l   |     | 3                  | /               | 50                                   | 500   | 712   | 663     | 542    | 644   | 581   | 683    | 1190   | 489   | 579    | 507    | 502    | 491    |
|   | Nickel (diss.filt)                     | TM152       | µg/l   |     | 0.4                | 8.6             | /                                    | 500   | 3.2   | 5.74    | 2.89   | 2.66  | 6.15  | 2.31   | 3.37   | 3.16  | 3.56   | 1.93   | 2.74   | <2.4   |
|   | Zinc (diss.filt)                       | TM152       | µg/l   |     | 1                  | 7.9             | /                                    | 1000  | 3.26  | <1      | 1.68   | 1.74  | 28.4  | <1     | 16.6   | 7.35  | 23.3   | 6.45   | 7.41   | <6     |
|   | Sodium (Dis.Filt)                      | TM152       | mg/l   |     | 0.076              | /               | 200                                  | 1500  | 46.9  | 40.4    | 40.4   | 41.6  | 45    | 44.6   | 34.9   | 41.6  | 41.5   | 39.8   | 41.6   | -      |
|   | Magnesium (Dis.Filt)                   | TM152       | mg/l   |     | 0.036              | /               | /                                    | 500   | 38.3  | 28.5    | 26.2   | 30.4  | 30.5  | 35.4   | 18.8   | 23.3  | 34.4   | 29.3   | 22.1   | -      |
|   | Potassium (Dis.Filt)                   | TM152       | mg/l   |     | 0.2                | /               | /                                    | 120   | 6.08  | 5.68    | 5.5    | 6.66  | 5.79  | 6.42   | 4.1    | 5.84  | 5.69   | 5.09   | 5.68   | -      |
|   | Calcium (Dis.Filt)                     | TM152       | mg/l   |     | 0.2                | /               | /                                    | 1000  | 240   | 191     | 190    | 217   | 184   | 253    | 126    | 162   | 194    | 181    | 153    | -      |
|   | Iron (Dis.Filt)                        | TM152       | mg/l   |     | 0.019              | 1               | /                                    | 2     | 0.157 | 2.24    | 0.581  | 0.113 | 0.337 | 0.0744 | 0.308  | 0.211 | 0.0289 | <0.019 | <0.019 | <0.114 |
| <b>Unfiltered (Total) Metals</b>            |  |             |        |     |                    |                 |                                      |       |       |         |        |       |       |        |        |       |        |        |        |        |
|   | Phosphorus (tot.unfilt)                | TM152       | µg/l   |     | 20                 | /               | /                                    | 10000 | <20   | 282     | 448    | 169   | 392   | 460    | 2140   | 340   | 80.1   | 33.8   | 90     | -      |
|   | Hardness, Total as CaCO3 unfiltered    | TM152       | mg/l   |     | 0.35               | /               | /                                    |       | 726   | 599     | 629    | 646   | 638   | 800    | 714    | 547   | 641    | 563    | 535    | -      |
| <b>Gasoline Range Organics (GRO)</b>        |  |             |        |     |                    |                 |                                      |       |       |         |        |       |       |        |        |       |        |        |        |        |
|   | Total Aliphatics >C5-C12               | TM245       | µg/l   |     | 10                 | /               | /                                    |       | <10   | <10     | <10    | <10   | <10   | <10    | <10    | <10   | <10    | <10    | <10    | -      |
|   | Total Aromatics >EC5-EC12              | TM245       | µg/l   |     | 10                 | /               | /                                    |       | <10   | <10     | <10    | <10   | <10   | <10    | <10    | <10   | <10    | <10    | <10    | -      |
| <b>TPH Criteria Working Group (TPH CWG)</b> |  |             |        |     |                    |                 |                                      |       |       |         |        |       |       |        |        |       |        |        |        |        |
|   | GRO Surrogate % recovery**             | TM245       | %      |     | /                  | /               | /                                    |       | 111   | 108     | 70     | 95    | 98    | 103    | 100    | 103   | 97     | 102    | 100    | -      |
|   | GRO >C5-C12                            | TM245       | µg/l   |     | 50                 | /               | /                                    |       | <8    | <8      | <8     | <8    | <8    | <8     | <8     | <8    | <8     | <8     | <8     | -      |
|   | Methyl tertiary butyl ether (MTBE)     | TM245       | µg/l   |     | 3                  | /               | 15                                   |       | <7    | <7      | <7     | <7    | <7    | <7     | <7     | <7    | <7     | <7     | <7     | -      |
|   | Benzene                                | TM245       | µg/l   |     | 7                  | 8               | /                                    |       | <50   | <50     | <50    | <50   | <50   | <50    | <50    | <50   | <50    | <50    | <50    | -      |
|   | Toluene                                | TM245       | µg/l   |     | 4                  | 74              | /                                    |       | <5    | <5      | <5     | <5    | <5    | <5     | <5     | <5    | <5     | <5     | <5     | -      |
|   | Ethylbenzene                           | TM245       | µg/l   |     | 5                  | 20              | /                                    |       | <4    | <4      | <4     | <4    | <4    | <4     | <4     | <4    | <4     | <4     | <4     | -      |
|   | m,p-Xylene                             | TM245       | µg/l   |     | 8                  | 30              | /                                    |       | <3    | <3      | <3     | <3    | <3    | <3     | <3     | <3    | <3     | <3     | <3     | -      |
|   | o-Xylene                               | TM245       | µg/l   |     | 3                  | 30              | /                                    |       | <3    | <3      | <3     | <3    | <3    | <3     | <3     | <3    | <3     | <3     | <3     | -      |
|   | Sum of detected Xylenes                | TM245       | µg/l   |     | 11                 | 30              | /                                    |       | <28   | <28     | <28    | <28   | <28   | <28    | <28    | <28   | <28    | <28    | <28    | -      |
|   | Sum of detected BTEX                   | TM245       | µg/l   |     | 28                 | /               | /                                    |       | <11   | <11     | <11    | <11   | <11   | <11    | <11    | <11   | <11    | <11    | <11    | -      |
|   | Aliphatics >C5-C6                      | TM245       | µg/l   |     | 10                 | /               | /                                    |       | <10   | <10     | <10    | <10   | <10   | <10    | <10    | <10   | <10    | <10    | <10    | -      |
|   | Aliphatics >C6-C8                      | TM245       | µg/l   |     | 10                 | /               | /                                    |       | <10   | <10     | <10    | <10   | <10   | <10    | <10    | <10   | <10    | <10    | <10    | -      |
|   | Aliphatics >C8-C10                     | TM245       | µg/l   |     | 10                 | /               | /                                    |       | <10   | <10     | <10    | <10   | <10   | <10    | <10    | <10   | <10    | <10    | <10    | -      |
|   | Aliphatics >C10-C12                    | TM245       | µg/l   |     | 10                 | /               | /                                    |       | <10   | <10     | <10    | <10   | <10   | <10    | <10    | <10   | <10    | <10    | <10    | -      |
|   | Aliphatics >C12-C16 (aq)               | TM174       | µg/l   |     | 10                 | /               | /                                    |       | <10   | <50     | <10    | <10   | <10   | <10    | <10    | <10   | <10    | <10    | <10    | -      |
|   | Aliphatics >C16-C21 (aq)               | TM174       | µg/l   |     | 10                 | /               | /                                    |       | <10   | 54      | 15     | <10   | <10   | <10    | <10    | <10   | <10    | <10    | <10    | -      |
|   | Aliphatics >C21-C35 (aq)               | TM174       | µg/l   |     | 10                 | /               | /                                    |       | <10   | 150     | 97     | <10   | <10   | <10    | <10    | <10   | <10    | <10    | <10    | 146    |
|   | Total Aliphatics >C12-C35 (aq)         | TM174       |        |     |                    |                 |                                      |       |       |         |        |       |       |        |        |       |        |        |        |        |





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| Customer Sample ID     | BH101A     | 101A       | 101A       | 101A       | 101         | 101A       | 101A       | 101A       | 101A       | 101A       | 101A       | 101A       | 101A        |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 4.69-      | 5.02-      | 5.02-      | 4.58-      | -           | -          | -          | -          | -          | -          | -          | -          | 4.51-       |
| AGS Id                 |            |            |            |            |             |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 12/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |             |
| Lab Sample Number      | 19558456   | 20363925   | 20719345   | 21297982   | 21836340    | 22246290   | 22802696   | 23404139   | 23838532   | 24394421   | 26881754   | 27276246   |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |             |

| Analysis | Test                          | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria | Sample Results |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |   |
|----------|-------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---|
|          |                               |        |          |     |                    |                 |                                      | BH101A         | 101A         | 101A         | 101A         | 101          | 101A         | 101A         | 101A         | 101A         | 101A         | 101A         | 101A         |              |              |              |              |   |
|          | 1,2-Dichlorobenzene           | TM208  | µg/l     | 1   | /                  | /               | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | -            |   |
|          | 1,2-Dibromo-3-chloropropane   | TM208  | µg/l     | 1   | /                  | /               | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | - |
|          | 1,2,4-Trichlorobenzene        | TM208  | µg/l     | 1   | 0.4                | /               | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | - |
|          | Hexachlorobutadiene           | TM208  | µg/l     | 1   | 0.6                | /               | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | - |
|          | tert-Amyl methyl ether (TAME) | TM208  | µg/l     | 1   | /                  | /               |                                      | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | - |
|          | Naphthalene                   | TM208  | µg/l     | 1   | 2                  | /               |                                      | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | - |
|          | 1,2,3-Trichlorobenzene        | TM208  | µg/l     | 1   | 0.4                | /               | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | - |
|          | 1,3,5-Trichlorobenzene        | TM208  | µg/l     | 1   | 0.4                | /               | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | - |
|          | Sum of detected Xylenes       | TM208  | µg/l     | 2   | 30                 | /               |                                      | <2             | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | - |
|          | Sum of BTEX                   | TM208  | µg/l     | 5   |                    |                 |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | <5           | - |
|          | VOC TIC                       | TM208  | No units |     | /                  | /               |                                      | Not Detected   | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | - |
|          | Total VOC TIC                 | TM208  | µg/l     |     | /                  | /               |                                      | <10            | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | - |

| TICS     |   |        |       |     |                    |                 |                                      |         |        |         |         |        |         |         |        |         |        |        |       |      |      |      |   |
|----------|---|--------|-------|-----|--------------------|-----------------|--------------------------------------|---------|--------|---------|---------|--------|---------|---------|--------|---------|--------|--------|-------|------|------|------|---|
| Analysis | Test  | Method | Units | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria | BH101A  | 101A   | 101A    | 101A    | 101    | 101A    | 101A    | 101A   | 101A    | 101A   | 101A   | 101A  | 101A | 101A | 101A |   |
|          | (methylene)bis-phenol                             |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Butylbenzoic acid                                 |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Dibutylhydroxyphenylpropionic acid                |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Dimethylcyclohexanediene                          |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Ditertbutylhydroxyphenylpropionic acid            |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Ethylmethylbenzenesulfonamide                     |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Octadecanoic acid                                 |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | trimethylhexanoic acid                            |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Dimethylheptanoic acid                            | TM176  | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Hexadecanoic acid                                 | TM176  | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Isomers of Hexadecenoic acid                      |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Dimethylethylhydroxybenzoic acid                  |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Hexadecane  |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | mixed hydrocarbons                                |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Phenol(methylene)bis-                             |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Tertbutylbenzoic acid                             |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Benzothiazolone                                   | TM176  | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Tertbutylhydroxyphenylpropionic acid              |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | 2(3H)-Benzothiazolone                             |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | 3,5,5-trimethyl Hexanoic acid                     |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | 4,4'-(1-methylene)bisphenol                       |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Camphor   |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Cyclic octaatomic sulfur                          |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Isomers of Ditertbutylhydroxyphenylpropionic acid |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Isomers of Tertbutylbenzoic acid                  |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | N-ethyl-2-methyl benzenesulfonamide               |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Sulfur  |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Undecane  |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Benzothiazolone                                   | TM176  | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Isomers of Benzothiazolone                        |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Isomer of Bisdimethylethylhydroxy Benzoic acid    |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Isomer of trimethyl hexanoic acid                 |        | µg/l  |     | /                  | /               |                                      | -       | -      | -       | -       | -      | -       | -       | -      | -       | -      | -      | -     | -    | -    | -    | - |
|          | Total VOC   |        | µg/l  | 1   |                    |                 |                                      | <1      | 2.2    | 3.03    | 1.19    | <1     | 4.82    | <1      | 2.28   | <1      | <1     | 1.08   |       |      |      |      | - |
|          | Total PAH   |        | µg/l  |     |                    |                 |                                      | 0.02248 | 0.8379 | 0.38645 | 0.00587 | 0.0349 | 0.01927 | 0.39545 | 0.0575 | 0.00589 | <0.002 | <0.002 | 0.408 |      |      |      |   |



Point of Ayre Landfill's  
Groundwater Sample Results

ALS

SDG(s): 190315-102  
Customer: Waste Management Unit Douglas (12297)  
Client Reference / Point of Ayre  
Order no:

| Customer Sample ID     | BH102A     | 102A       | 102A       | 102A       | 102         | 102A       | 102A       | 102A       | 102A       | 102A       | 102A       | 102A       | 102A        |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 5.00-      | 5.29-      | 5.29-      | 4.89-      | -           | -          | -          | -          | -          | -          | -          | -          | 4.91-       |
| AGS id                 |            |            |            |            |             |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 11/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |             |
| Lab Sample Number      | 19558438   | 20363919   | 20719340   | 21297977   | 21836354    | 22246285   | 22802687   | 23404134   | 23838527   | 24394410   | 26881756   | 27276245   |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |             |

| Analysis                                    | Test                                     | Method      | Units  | LOD   | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria | 13.4   | 17.9   | 21.3  | 18.2  | 16.1   | 17.2   | 22.5  | 18.8   | 12     | 16.7   | 17.8   | 15.8  |
|---|--|-------------|--------|-------|--------------------|-----------------|--------------------------------------|--------|--------|-------|-------|--------|--------|-------|--------|--------|--------|--------|-------|
| <b>Carbon</b>                               |  |             |        |       |                    |                 |                                      |        |        |       |       |        |        |       |        |        |        |        |       |
|   | Carbon, Organic (diss.filt)              | TM090       | mg/l   | 6     | /                  | /               | 10                                   | 13.4   | 17.9   | 21.3  | 18.2  | 16.1   | 17.2   | 22.5  | 18.8   | 12     | 16.7   | 17.8   | 15.8  |
| <b>Inorganics</b>                           |  |             |        |       |                    |                 |                                      |        |        |       |       |        |        |       |        |        |        |        |       |
|   | Fluoride                                 | TM104       | mg/l   | 0.5   | /                  | /               | 10                                   | <0.5   | <0.5   | <0.5  | <0.5  | <0.5   | <0.5   | <0.5  | <0.5   | <0.5   | <0.5   | <0.5   | -     |
|   | Ionic balance                            | Calculation | % Diff |       | /                  | /               |                                      | 8.66   | -0.231 | -1.15 | 1.61  | -0.446 | 5.44   | -4.23 | -0.511 | 0.835  | 3.78   | -      | -     |
|   | Nitrite as NO2                           | TM184       | mg/l   | 0.05  | 0.5                | /               | 1                                    | 0.099  | <0.05  | <0.05 | <0.05 | <0.05  | <0.05  | <0.05 | <0.05  | <0.05  | <0.05  | <0.05  | -     |
|   | Phosphate (Ortho as PO4)                 | TM184       | mg/l   | 0.05  | /                  | /               |                                      | <0.05  | <0.05  | <0.05 | <0.05 | <0.05  | <0.05  | <0.05 | <0.05  | <0.05  | <0.05  | <0.05  | -     |
|   | Sulphate                                 | TM184       | mg/l   | 2     | /                  | 250             | 2500                                 | 5.2    | 13.3   | 18.8  | 19.9  | 19.1   | 29.4   | 19.7  | 11.7   | <2     | 24.2   | 23.6   | -     |
|   | Sulphide                                 | TM101       | mg/l   | 0.01  | /                  | /               |                                      | <0.01  | <0.01  | <0.01 | <0.01 | <0.01  | 0.0692 | <0.01 | 0.0572 | 0.0659 | <0.01  | <0.01  | -     |
|   | Chloride                                 | TM184       | mg/l   | 2     | /                  | 250             | 2000                                 | 66.9   | 87     | 97.6  | 92.8  | 77.9   | 105    | 97.4  | 85     | 51     | 87.2   | 87.4   | 84.3  |
|   | COD, unfiltered                          | TM107       | mg/l   | 7     | /                  | /               |                                      | 45.3   | 76.9   | 65.7  | 68.1  | 58.7   | 82.5   | 63.8  | 68     | 56.9   | 50.9   | 167    | -     |
|   | Nitrogen, Total                          | TM212       | mg/l   | 1     | /                  | /               |                                      | 51.3   | 69.7   | 72.5  | 63    | 50.6   | 50.5   | 55.7  | 59.6   | 57.1   | 60     | 60.5   | -     |
|   | Ammoniacal Nitrogen as NH4               | TM099       | mg/l   | 0.3   | /                  | 0.5             | 5                                    | 81     | 82.3   | 76    | 81.9  | 59.7   | 76.6   | 70.5  | 74.7   | 69.2   | 75.5   | 62.6   | 62.7  |
|   | Nitrate as NO3                           | TM184       | mg/l   | 0.3   | /                  | 50              | 500                                  | 0.877  | <0.3   | <0.3  | <0.3  | <0.3   | <0.3   | <0.3  | <0.3   | <0.3   | <0.3   | <0.3   | -     |
|   | BOD, unfiltered                          | TM045       | mg/l   | 1     | /                  | /               |                                      | -      | <3     | <1    | 2.03  | 1.92   | <1     | 3.58  | 2.43   | 1.93   | <3     | <5     | -     |
|   | Alkalinity, Total as CaCO3               | TM043       | mg/l   | 2     | /                  | /               |                                      | 791    | 907    | 917   | 946   | 886    | 909    | 915   | 908    | 794    | 939    | 910    | -     |
|   | Alkalinity, Total as CaCO3 (diss.filt)   | TM043       | mg/l   | 2     | /                  | /               |                                      | -      | -      | -     | -     | -      | -      | -     | -      | -      | -      | -      | -     |
|   | Suspended solids, Total                  | TM022       | mg/l   | 9     | /                  | /               |                                      | 70.2   | 1650   | 1300  | 733   | 580    | 390    | 293   | 229    | 232    | 226    | 702    | -     |
| <b>Filtered (Dissolved) Metals</b>          |  |             |        |       |                    |                 |                                      |        |        |       |       |        |        |       |        |        |        |        |       |
|   | Mercury (diss.filt)                      | TM183       | µg/l   | 0.01  | 0.07               | /               | 10                                   | <0.01  | 0.0102 | <0.01 | <0.01 | <0.01  | <0.01  | <0.01 | <0.01  | <0.01  | <0.01  | <0.01  | -     |
|   | Arsenic (diss.filt)                      | TM152       | µg/l   | 0.5   | 25                 | /               | 500                                  | 81.6   | 5.76   | 108   | 106   | 100    | 105    | 117   | 117    | 123    | 98.8   | 132    | 140   |
|   | Cadmium (diss.filt)                      | TM152       | µg/l   | 0.08  | 0.2                | /               | 50                                   | <0.08  | <0.08  | <0.08 | <0.08 | <0.08  | <0.08  | <0.08 | <0.08  | <0.08  | <0.08  | <0.08  | -     |
|   | Chromium (diss.filt)                     | TM152       | µg/l   | 1     | /                  | 50              | 500                                  | 1.04   | <1     | <1    | 1.14  | 1.16   | 1.57   | 1.36  | 1.11   | 1.41   | <1     | <1     | -     |
|   | Copper (diss.filt)                       | TM152       | µg/l   | 0.3   | 3.76               | /               | 1000                                 | <0.3   | 1.71   | <0.3  | <0.3  | <0.3   | 0.827  | <0.3  | 0.432  | <0.3   | <0.3   | 1.07   | -     |
|   | Lead (diss.filt)                         | TM152       | µg/l   | 0.2   | 1.3                | /               | 500                                  | <0.2   | <0.2   | <0.2  | <0.2  | <0.2   | <0.2   | <0.2  | <0.2   | <0.2   | <0.2   | <0.2   | -     |
|   | Manganese (diss.filt)                    | TM152       | µg/l   | 3     | /                  | 50              | 500                                  | 341    | 397    | 601   | 412   | 393    | 349    | 856   | 797    | 1060   | 321    | 454    | 1160  |
|   | Nickel (diss.filt)                       | TM152       | µg/l   | 0.4   | 8.6                | /               | 500                                  | 10     | 8.83   | 6.73  | 6.86  | 6.49   | 8.15   | 5.26  | 6.26   | 4.08   | 6.46   | 5.13   | 8.51  |
|   | Zinc (diss.filt)                         | TM152       | µg/l   | 1     | 7.9                | /               | 1000                                 | 3.44   | 41.2   | 5.33  | 3.44  | 29     | 4.87   | 8.66  | 38.7   | 11.7   | 4.04   | 7.24   | 8.92  |
|   | Sodium (Dis.Filt)                        | TM152       | mg/l   | 0.076 | /                  | 200             | 1500                                 | 71.7   | 68.9   | 72.4  | 78.4  | 74.2   | 91.1   | 68.9  | 74.3   | 45.4   | 83.3   | 68.4   | -     |
|   | Magnesium (Dis.Filt)                     | TM152       | mg/l   | 0.036 | /                  | /               | 500                                  | 29.5   | 31     | 31.2  | 33.3  | 30.4   | 38.1   | 28.8  | 31.4   | 19.8   | 37.2   | 28.6   | -     |
|   | Potassium (Dis.Filt)                     | TM152       | mg/l   | 0.2   | /                  | /               | 120                                  | 40.4   | 46.4   | 44    | 44    | 41.5   | 55.3   | 36.4  | 43.2   | 29.5   | 49.9   | 43.7   | -     |
|   | Calcium (Dis.Filt)                       | TM152       | mg/l   | 0.2   | /                  | /               | 1000                                 | 192    | 191    | 200   | 190   | 179    | 213    | 192   | 201    | 171    | 200    | 204    | -     |
|   | Iron (Dis.Filt)                          | TM152       | mg/l   | 0.019 | 1                  | /               | 2                                    | 21.6   | 0.0209 | 23.8  | 24.5  | 25     | 26     | 31.3  | 25.8   | 30.5   | 24.1   | 25.2   | 36.6  |
| <b>Unfiltered (Total) Metals</b>            |  |             |        |       |                    |                 |                                      |        |        |       |       |        |        |       |        |        |        |        |       |
|   | Phosphorus (tot.unfilt)                  | TM152       | µg/l   | 20    | /                  | /               | 10000                                | 62.7   | 2220   | 703   | 492   | 204    | 216    | 285   | 250    | 146    | 252    | 643    | -     |
|   | Hardness, Total as CaCO3 unfiltered      | TM152       | mg/l   | 0.35  | /                  | /               |                                      | 474    | 827    | 713   | 643   | 628    | 693    | 652   | 655    | 515    | 630    | 724    | -     |
| <b>Gasoline Range Organics (GRO)</b>        |  |             |        |       |                    |                 |                                      |        |        |       |       |        |        |       |        |        |        |        |       |
|   | Total Aliphatics >C5-C12                 | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | <10   | <10    | <10    | <10   | 49     | <10    | 13     | -      | -     |
|   | Total Aromatics >EC5-EC12                | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | <10   | <10    | <10    | <10   | 26     | <10    | <10    | -      | -     |
| <b>TPH Criteria Working Group (TPH CWG)</b> |  |             |        |       |                    |                 |                                      |        |        |       |       |        |        |       |        |        |        |        |       |
|   | GRO Surrogate % recovery**               | TM245       | %      | /     | /                  | /               |                                      | 105    | 97     | 90    | 86    | 94     | 98     | 88    | 100    | 95     | 86     | 95     | -     |
|   | GRO >C5-C12                              | TM245       | µg/l   | 50    | /                  | /               |                                      | <50    | <50    | <50   | <50   | <50    | <50    | <50   | 75     | <50    | <50    | <50    | -     |
|   | Methyl tertiary butyl ether (MTBE)       | TM245       | µg/l   | 3     | /                  | 15              |                                      | <3     | <3     | <3    | <3    | <3     | <3     | <3    | <3     | <3     | <3     | <3     | -     |
|   | Benzene                                  | TM245       | µg/l   | 7     | 8                  | /               |                                      | <7     | <7     | <7    | <7    | <7     | <7     | <7    | <7     | <7     | <7     | <7     | -     |
|   | Toluene                                  | TM245       | µg/l   | 4     | 74                 | /               |                                      | <4     | <4     | <4    | <4    | <4     | <4     | <4    | <4     | <4     | <4     | <4     | -     |
|   | Ethylbenzene                             | TM245       | µg/l   | 5     | 20                 | /               |                                      | <5     | <5     | <5    | <5    | <5     | <5     | <5    | <5     | <5     | <5     | <5     | -     |
|   | m,p-Xylene                               | TM245       | µg/l   | 8     | 30                 | /               |                                      | <8     | <8     | <8    | <8    | <8     | <8     | <8    | <8     | <8     | <8     | <8     | -     |
|   | o-Xylene                                 | TM245       | µg/l   | 3     | 30                 | /               |                                      | <3     | <3     | <3    | <3    | <3     | <3     | <3    | <3     | <3     | <3     | <3     | -     |
|   | Sum of detected Xylenes                  | TM245       | µg/l   | 11    | 30                 | /               |                                      | <11    | <11    | <11   | <11   | <11    | <11    | <11   | <11    | <11    | <11    | <11    | -     |
|   | Sum of detected BTEX                     | TM245       | µg/l   | 28    | /                  | /               |                                      | <28    | <28    | <28   | <28   | <28    | <28    | <28   | <28    | <28    | <28    | <28    | -     |
|   | Aliphatics >C5-C6                        | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | <10   | <10    | <10    | <10   | <10    | <10    | <10    | <10    | -     |
|   | Aliphatics >C6-C8                        | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | <10   | <10    | <10    | <10   | <10    | <10    | <10    | <10    | -     |
|   | Aliphatics >C8-C10                       | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | <10   | <10    | <10    | <10   | <10    | 18     | <10    | <10    | -     |
|   | Aliphatics >C10-C12                      | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | <10   | <10    | <10    | <10   | <10    | 19     | <10    | <10    | -     |
|   | Aliphatics >C12-C16 (aq)                 | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <50    | <10   | <10   | <10    | <10    | <10   | <20    | <10    | <10    | <10    | -     |
|   | Aliphatics >C16-C21 (aq)                 | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <50    | <10   | <10   | <10    | <10    | <10   | <20    | <10    | <10    | <10    | -     |
|   | Aliphatics >C21-C35 (aq)                 | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <50    | <10   | <10   | <10    | 13     | <10   | <10    | <20    | <10    | <10    | -     |
|   | Total Aliphatics >C12-C35 (aq)           | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <50    | <10   | <10   | <10    | <10    | <10   | <20    | <10    | <10    | <10    | -     |
|   | Aromatics >EC5-EC7                       | TM245       | µg/l   | 10    | 8                  | /               |                                      | <10    | <10    | <10   | <10   | <10    | <10    | <10   | <10    | <10    | <10    | <10    | -     |
|   | Aromatics >EC7-EC8                       | TM245       | µg/l   | 10    | 74                 | /               |                                      | <10    | <10    | <10   | <10   | <10    | <10    | <10   | <10    | <10    | <10    | <10    | -     |
|   | Aromatics >EC8-EC10                      | TM245       | µg/l   | 10    | 20                 | /               |                                      | <10    | <10    | <10   | <10   | <10    | <10    | <10   | <10    | 12     | <10    | <10    | -     |
|   | Aromatics >EC10-EC12                     | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | <10   | <10    | <10    | <10   | <10    | 13     | <10    | <10    | -     |
|   | Aromatics >EC12-EC16 (aq)                | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <50    | <10   | <10   | <10    | <10    | <10   | <20    | <10    | <10    | <10    | -     |
|   | Aromatics >EC16-EC21 (aq)                | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <50    | <10   | <10   | <10    | <10    | <10   | <20    | <10    | <10    | <10    | -     |
|   | Aromatics >EC21-EC35 (aq)                | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <50    | <10   | <10   | <10    | <10    | <10   | <20    | <10    | <10    | <10    | -     |
|   | Total Aromatics >EC12-EC35 (aq)          | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <50    | <10   | <10   | <10    | <10    | <10   | <20    | <10    | <10    | <10    | -     |
|   | Total Aliphatics & Aromatics >C5-35 (aq) | TM174       | µg/l   | 10    | /                  | /               | 100                                  | <10    | <50    | <10   | <10   | 13     | <10    | <10   | 62     | <10    | <10    | <10    | -     |
| <b>Polyaromatic Hydrocarbons (PAHs)</b>     |  |             |        |       |                    |                 |                                      |        |        |       |       |        |        |       |        |        |        |        |       |
|   | Naphthalene (aq)                         | TM178       | µg/l   | 0.01  | 2                  | /               |                                      | 0.0361 | 0.0603 | <0.04 | <0.04 | <0.01  | <0.01  | <0.01 | 0.0481 | 0.0326 | 0.0162 | 0.0149 | 0.805 |
|   | Acenaphthene (aq)                        |             |        |       |                    |                 |                                      |        |        |       |       |        |        |       |        |        |        |        |       |

Point of Ayre Landfill's  
Groundwater Sample Results

ALS

SDG(s): 190315-102  
Customer: Waste Management Unit Douglas (12297)  
Client Reference / Order no: Point of Ayre

| Customer Sample ID     | BH102A     | 102A       | 102A       | 102A       | 102         | 102A       | 102A       | 102A       | 102A       | 102A       | 102A       | 102A       | 102A       | 102A        |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 5.00-      | 5.29-      | 5.29-      | 4.89-      | -           | -          | -          | -          | -          | -          | -          | -          | -          | 4.91-       |
| AGS id                 |            |            |            |            |             |            |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 11/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |            |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |            |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |            |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |            |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |            |             |
| Lab Sample Number      | 19558438   | 20363919   | 20719340   | 21297977   | 21836354    | 22246285   | 22802687   | 23404134   | 23838527   | 24394410   | 26881756   | 27276245   |            |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |            |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |            |             |

| Analysis | Test                             | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |              |          |              |              |              |              |              |              |     |     |   |
|----------|----------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|--------------|----------|--------------|--------------|--------------|--------------|--------------|--------------|-----|-----|---|
|          | 1,2,4-Trichlorobenzene (aq)      | TM176  | µg/l     | 1   | 0.4                | /               | <1                                   | <20          | <20      | <4           | <4           | <8           | <10          | <8           | <4           | -   |     |   |
|          | 1,2-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <20          | <20      | <4           | <4           | <8           | <10          | <8           | <4           | -   |     |   |
|          | 1,3-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <20          | <20      | <4           | <4           | <8           | <10          | <8           | <4           | -   |     |   |
|          | 1,4-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <20          | <20      | <4           | <4           | <8           | <10          | <8           | <4           | -   |     |   |
|          | 2,4,5-Trichlorophenol (aq)       | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <20          | <20      | <4           | <4           | <8           | <10          | <8           | <4           | -   |     |   |
|          | 2,4,6-Trichlorophenol (aq)       | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | -   |   |
|          | 2,4-Dichlorophenol (aq)          | TM176  | µg/l     | 1   | 0.42               | /               | 5                                    | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | -   |   |
|          | 2,4-Dimethylphenol (aq)          | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | -   |   |
|          | 2,4-Dinitrotoluene (aq)          | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | -   |   |
|          | 2,6-Dinitrotoluene (aq)          | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | -   |   |
|          | 2-Chloronaphthalene (aq)         | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | -   |   |
|          | 2-Chlorophenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | -   |   |
|          | 2-Methylnaphthalene (aq)         | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | -   |   |
|          | 2-Methylphenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | -   |   |
|          | 2-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | -   |   |
|          | 2-Nitrophenol (aq)               | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | -   |   |
|          | 3-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | -   |   |
|          | 4-Bromophenylphenylether (aq)    | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | -   |   |
|          | 4-Chloro-3-methylphenol (aq)     | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | -   |   |
|          | 4-Chloroaniline (aq)             | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | -   |   |
|          | 4-Chlorophenylphenylether (aq)   | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | -   |   |
|          | 4-Methylphenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | -   |   |
|          | 4-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | -   |   |
|          | 4-Nitrophenol (aq)               | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | -   |   |
|          | Azobenzene (aq)                  | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | -   |   |
|          | bis(2-Chloroethyl)ether (aq)     | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | -   |   |
|          | bis(2-Chloroethoxy)methane (aq)  | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | -   |   |
|          | bis(2-Ethylhexyl) phthalate (aq) | TM176  | µg/l     | 2   | /                  | /               | <2                                   | <40          | <40      | <8           | <8           | <16          | <20          | <16          | <16          | <8  | <8  | - |
|          | Butylbenzyl phthalate (aq)       | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | <4  | - |
|          | Benzo(k)fluoranthene (aq)        | TM176  | µg/l     | 1   | /                  | 0.1             | 5                                    | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | <4  | - |
|          | Carbazole (aq)                   | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | <4  | - |
|          | Dibenzofuran (aq)                | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | <4  | - |
|          | n-Butyl phthalate (aq)           | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | <4  | - |
|          | Diethyl phthalate (aq)           | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | <4  | - |
|          | Dimethyl phthalate (aq)          | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | <4  | - |
|          | n-Dioctyl phthalate (aq)         | TM176  | µg/l     | 5   | /                  | /               | <5                                   | <100         | <100     | <20          | <20          | <40          | <50          | <40          | <40          | <20 | <20 | - |
|          | Hexachlorobenzene (aq)           | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | <4  | - |
|          | Hexachlorobutadiene (aq)         | TM176  | µg/l     | 1   | 0.6                | /               | 10                                   | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | <4  | - |
|          | Pentachlorophenol (aq)           | TM176  | µg/l     | 1   | 0.4                | /               | 5                                    | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | <4  | - |
|          | Phenol (aq)                      | TM176  | µg/l     | 1   | 7.7                | /               | 5                                    | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | <4  | - |
|          | n-Nitroso-n-dipropylamine (aq)   | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | <4  | - |
|          | Hexachloroethane (aq)            | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | <4  | - |
|          | Nitrobenzene (aq)                | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | <4  | - |
|          | Isophorone (aq)                  | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | <4  | - |
|          | Hexachlorocyclopentadiene (aq)   | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | <4  | - |
|          | Indeno(1,2,3-cd)pyrene (aq)      | TM176  | µg/l     | 1   | /                  | 0.1             | 5                                    | <1           | <20      | <20          | <4           | <4           | <8           | <10          | <8           | <4  | <4  | - |
|          | SVOC TIC (aq)                    | TM176  | No units |     | /                  | /               | Detected                             | Not Detected | Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | -   | -   | - |
|          | Total SVOC TIC                   | TM176  | µg/l     | 10  | /                  | /               | 38.7                                 | <200         | 375      | <40          | <40          | <80          | <100         | <80          | <80          | <40 | -   | - |

| Volatile Organic Compounds (VOCs) |                                    |       |      |   |     |     |     |      |      |      |      |      |      |      |      |      |      |      |
|-----------------------------------|------------------------------------|-------|------|---|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|
|                                   | Dibromofluoromethane**             | TM208 | %    | / | /   |     | 112 | 115  | 115  | 118  | 122  | 111  | 113  | 113  | 118  | 112  | 117  | 130  |
|                                   | Toluene-d8**                       | TM208 | %    | / | /   |     | 102 | 97.6 | 101  | 99.2 | 100  | 101  | 99.3 | 98.4 | 96.2 | 95   | 101  | 99.5 |
|                                   | 4-Bromofluorobenzene**             | TM208 | %    | / | /   |     | 96  | 97.7 | 102  | 97   | 102  | 104  | 100  | 96.1 | 95.1 | 93.9 | 95.2 | 90.8 |
|                                   | Dichlorodifluoromethane            | TM208 | µg/l | 1 | /   | /   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|                                   | Chloromethane                      | TM208 | µg/l | 1 | /   | /   | 10  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|                                   | Vinyl chloride                     | TM208 | µg/l | 1 | /   | 0.5 | 10  | 1.31 | 5.95 | 2.9  | 3.91 | 3.6  | 7.09 | 4.09 | 3.96 | 2.67 | 5.45 | <1   |
|                                   | Bromomethane                       | TM208 | µg/l | 1 | /   | /   | 10  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|                                   | Chloroethane                       | TM208 | µg/l | 1 | /   | /   | 10  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|                                   | Trichlorofluoromethane             | TM208 | µg/l | 1 | /   | /   | 10  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|                                   | 1,1-Dichloroethene                 | TM208 | µg/l | 1 | /   | /   | 10  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|                                   | Carbon disulphide                  | TM208 | µg/l | 1 | /   | /   | 10  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|                                   | Dichloromethane                    | TM208 | µg/l | 1 | 20  | /   | 10  | <3   | <3   | <3   | <3   | <3   | <3   | <3   | <3   | <3   | <3   | <3   |
|                                   | Methyl tertiary butyl ether (MTBE) | TM208 | µg/l | 1 | /   | 15  | 10  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|                                   | trans-1,2-Dichloroethene           | TM208 | µg/l | 1 | /   | 50  | 10  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|                                   | 1,1-Dichloroethane                 | TM208 | µg/l | 1 | /   | /   | 10  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|                                   | cis-1,2-Dichloroethene             | TM208 | µg/l | 1 | /   | 50  | 10  | 2.07 | 5.89 | 3.7  | 5.7  | 4.21 | 7.17 | 4.22 | 4.01 | <1   | 4.32 | 5.54 |
|                                   | 2,2-Dichloropropane                | TM208 | µg/l | 1 | /   | /   | 10  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|                                   | Bromochloromethane                 | TM208 | µg/l | 1 | /   | /   | 10  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|                                   | Chloroform                         | TM208 | µg/l | 1 | 2.5 | /   | 10  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|                                   | 1,1,1-Trichloroethane              | TM208 | µg/l | 1 | /   | /   | 10  | <1   |      |      |      |      |      |      |      |      |      |      |

Point of Ayre Landfill's  
Groundwater Sample Results

ALS

| Customer Sample ID     | BH102A     | 102A       | 102A       | 102A       | 102         | 102A       | 102A       | 102A       | 102A       | 102A       | 102A       | 102A       | 102A        |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 5.00-      | 5.29-      | 5.29-      | 4.89-      | -           | -          | -          | -          | -          | -          | -          | -          | 4.91-       |
| AGS id                 |            |            |            |            |             |            |            |            |            |            |            |            |             |
| Sample Type            | UND_WATER  | UND_WATER  | UND_WATER  | UND_WATER  | MISC_LIQUID | UND_WATER  | UND_WATER  | UND_WATER  | UND_WATER  | UND_WATER  | UND_WATER  | UND_WATER  | MISC_LIQUID |
| Sampled Date           | 11/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |             |
| Lab Sample Number      | 19558438   | 20363919   | 20719340   | 21297977   | 21836354    | 22246285   | 22802687   | 23404134   | 23838527   | 24394410   | 26881756   | 27276245   |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |             |

| Analysis | Test                          | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |    |              |              |              |              |              |              |              |              |              |              |              |              |              |              |    |
|----------|-------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|----|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----|
|          |                               |        |          |     |                    |                 |                                      | <1 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |              |              |    |
|          | 1,2-Dichlorobenzene           | TM208  | µg/l     |     | 1                  | /               | 10                                   | <1 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 1,2-Dibromo-3-chloropropane   | TM208  | µg/l     |     | 1                  | /               | 10                                   | <1 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 1,2,4-Trichlorobenzene        | TM208  | µg/l     |     | 1                  | 0.4             | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | Hexachlorobutadiene           | TM208  | µg/l     |     | 1                  | 0.6             | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | tert-Amyl methyl ether (TAME) | TM208  | µg/l     |     | 1                  | /               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | Naphthalene                   | TM208  | µg/l     |     | 1                  | 2               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 1,2,3-Trichlorobenzene        | TM208  | µg/l     |     | 1                  | 0.4             | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 1,3,5-Trichlorobenzene        | TM208  | µg/l     |     | 1                  | 0.4             | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | Sum of detected Xylenes       | TM208  | µg/l     |     | 2                  | 30              | /                                    |    | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2 |
|          | Sum of BTEX                   | TM208  | µg/l     |     | 5                  |                 |                                      |    | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | <5 |
|          | VOC TIC                       | TM208  | No units |     |                    |                 |                                      |    | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | -  |
|          | Total VOC TIC                 | TM208  | µg/l     |     |                    |                 |                                      |    | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | -  |

| TICS |   |       |      |  |   |   |  |  |         |        |        |         |       |         |          |        |         |        |        |       |   |   |   |
|------|---|-------|------|--|---|---|--|--|---------|--------|--------|---------|-------|---------|----------|--------|---------|--------|--------|-------|---|---|---|
|      | (methylene)bis-phenol                             |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Butylbenzoic acid                                 |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Dibutylhydroxyphenylpropionic acid                |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Dimethylcyclohexanediol                           |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Ditertbutylhydroxyphenylpropionic acid            |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Ethylmethylbenzenesulfonamide                     |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Octadecanoic acid                                 |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | trimethylhexanoic acid                            |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Dimethylheptanoic acid                            | TM176 | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Hexadecanoic acid                                 | TM176 | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Isomers of Hexadecenoic acid                      |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Dimethylethylhydroxybenzoic acid                  |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Hexadecane  |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | mixed hydrocarbons                                |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Phenol(methylene)bis-                             |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Tertbutylbenzoic acid                             |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Benzothiazolone                                   | TM176 | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Tertbutylhydroxyphenylpropionic acid              |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | 2(3H)-Benzothiazolone                             |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | 3,5,5-trimethyl Hexanoic acid                     |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | 4,4'-(1-methylene)bisphenol                       |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Camphor   |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Cyclic octaatomic sulfur                          |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Isomers of Ditertbutylhydroxyphenylpropionic acid |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Isomers of Tertbutylbenzoic acid                  |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | N-ethyl-2-methyl benzenesulfonamide               |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Sulfur  |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Undecane  |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Benzothiazolone                                   | TM176 | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Isomer of Benzothiazolone                         |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Isomer of Bisdimethylethylhydroxy Benzoic acid    |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | isomer of trimethyl hexanoic acid                 |       | µg/l |  | / | / |  |  | -       | -      | -      | -       | -     | -       | -        | -      | -       | -      | -      | -     | - | - | - |
|      | Total VOC   |       | µg/l |  | 1 |   |  |  | 3.38    | 11.84  | 6.6    | 11.47   | 7.81  | 14.26   | 8.31     | 19.81  | 3.21    | 6.99   | 10.99  | 35.66 |   |   |   |
|      | Total PAH   |       | µg/l |  |   |   |  |  | 0.10629 | 0.4856 | 0.1047 | 0.13496 | 0.022 | 0.05241 | 0.048683 | 0.1505 | 0.08627 | 0.0937 | 0.1874 | 5.441 |   |   |   |



Point of Ayre Landfill's  
Groundwater Sample Results

ALS

SDG(s): 190315-102  
Customer: Waste Management Unit Douglas (12297)  
Client Reference / Point of Ayre  
Order no:

| Customer Sample ID     | BH103A     | 103A       | 103A       | 103A       | 103         | 103A       | 103B       | 103A       | 103A       | 103A       | 103A       | 103A       | 103A        |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 7.42-      | 7.72-      | 7.72-      | 7.41-      | -           | -          | -          | -          | -          | -          | -          | -          | 7.60-       |
| AGS Id                 |            |            |            |            |             |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 11/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |             |
| Lab Sample Number      | 19558440   | 20363917   | 20719339   | 21297976   | 21836352    | 22246284   | 22804214   | 23404133   | 23838526   | 24394408   | 26881757   | 27276244   |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |             |

| Analysis                                    | Test                                   | Method      | Units  | LOD   | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |       |        |       |       |       |        |       |        |       |       |       |      |
|---|--|-------------|--------|-------|--------------------|-----------------|--------------------------------------|-------|--------|-------|-------|-------|--------|-------|--------|-------|-------|-------|------|
| <b>Carbon</b>                               |  |             |        |       |                    |                 |                                      |       |        |       |       |       |        |       |        |       |       |       |      |
|   | Carbon, Organic (diss.filt)            | TM090       | mg/l   | 6     | /                  | /               | 10                                   | 42.3  | 16.3   | 15.2  | 11.4  | 14.8  | 10.9   | 13.7  | 12.9   | 10.7  | 11.4  | 12.5  | 12.8 |
| <b>Inorganics</b>                           |  |             |        |       |                    |                 |                                      |       |        |       |       |       |        |       |        |       |       |       |      |
|   | Fluoride                               | TM104       | mg/l   | 0.5   | /                  | /               | 10                                   | <0.5  | <0.5   | <0.5  | <0.5  | <0.5  | <0.5   | <0.5  | <0.5   | <0.5  | <0.5  | <0.5  | -    |
|   | Ionic balance                          | Calculation | % Diff |       | /                  | /               |                                      | 0.839 | -2.37  | 1.93  | -1.22 | -2.01 | 3.86   | -1.09 | 0.516  | -3.48 | 1.26  | -     | -    |
|   | Nitrite as NO2                         | TM184       | mg/l   | 0.05  | 0.5                | /               | 1                                    | <0.05 | <0.05  | <0.05 | <0.05 | <0.05 | <0.05  | <0.05 | <0.05  | <0.05 | 0.057 | 0.422 | -    |
|   | Phosphate (Ortho as PO4)               | TM184       | mg/l   | 0.05  | /                  | /               |                                      | <0.05 | <0.05  | <0.05 | <0.05 | <0.05 | <0.05  | <0.05 | <0.05  | <0.05 | <0.05 | <0.05 | -    |
|   | Sulphate                               | TM184       | mg/l   | 2     | /                  | 250             | 2500                                 | <2    | <2     | <2    | <2    | <2    | <2     | <2    | <2     | <2    | <2    | 18.2  | -    |
|   | Sulphide                               | TM101       | mg/l   | 0.01  | /                  | /               |                                      | <0.01 | 0.0191 | <0.01 | <0.01 | <0.01 | 0.0469 | <0.01 | 0.0385 | <0.01 | <0.01 | <0.01 | -    |
|   | Chloride                               | TM184       | mg/l   | 2     | /                  | 250             | 2000                                 | 256   | 139    | 113   | 99.1  | 115   | 111    | 110   | 109    | 118   | 107   | 107   | 104  |
|   | COD, unfiltered                        | TM107       | mg/l   | 7     | /                  | /               |                                      | 189   | 57.2   | 45.4  | 47.5  | 57.5  | 44.9   | 47.6  | 64.3   | 54.8  | 44.3  | 73.9  | -    |
|   | Nitrogen, Total                        | TM212       | mg/l   | 1     | /                  | /               |                                      | 160   | 78.7   | 69    | 51.5  | 48.6  | 34.8   | 45.8  | 6.67   | 46.9  | 46.1  | 52.6  | -    |
|   | Ammoniacal Nitrogen as NH4             | TM099       | mg/l   | 0.3   | /                  | 0.5             | 5                                    | 230   | 96.7   | 76.6  | 60.7  | 50.8  | 61.1   | 60.3  | 61.3   | 59.8  | 59    | 63    | 63.3 |
|   | Nitrate as NO3                         | TM184       | mg/l   | 0.3   | /                  | 50              | 500                                  | 0.329 | <0.3   | <0.3  | <0.3  | <0.3  | <0.3   | <0.3  | 1.18   | 0.479 | <0.3  | 11.1  | -    |
|   | BOD, unfiltered                        | TM045       | mg/l   | 1     | /                  | /               |                                      | -     | 2.39   | 2.01  | 3.54  | 2.69  | 1.96   | 2.25  | 2.43   | 2.07  | 2.42  | 5.38  | -    |
|   | Alkalinity, Total as CaCO3             | TM043       | mg/l   | 2     | /                  | /               |                                      | 1470  | 746    | 685   | 640   | 689   | 629    | 655   | 663    | 608   | 635   | 621   | -    |
|   | Alkalinity, Total as CaCO3 (diss.filt) | TM043       | mg/l   | 2     | /                  | /               |                                      | -     | -      | -     | -     | -     | -      | -     | 650    | -     | -     | -     | -    |
|   | Suspended solids, Total                | TM022       | mg/l   | 9     | /                  | /               |                                      | 5120  | 100    | 234   | 471   | 239   | 493    | 240   | 326    | 67.5  | 340   | 143   | -    |
| <b>Filtered (Dissolved) Metals</b>          |  |             |        |       |                    |                 |                                      |       |        |       |       |       |        |       |        |       |       |       |      |
|   | Mercury (diss.filt)                    | TM183       | µg/l   | 0.01  | 0.07               | /               | 10                                   | <0.01 | <0.01  | <0.01 | <0.01 | <0.01 | <0.01  | <0.01 | <0.01  | <0.01 | <0.01 | <0.01 | -    |
|   | Arsenic (diss.filt)                    | TM152       | µg/l   | 0.5   | 25                 | /               | 500                                  | 43.7  | 113    | 135   | 125   | 114   | 134    | 125   | 130    | 125   | 111   | 136   | 143  |
|   | Cadmium (diss.filt)                    | TM152       | µg/l   | 0.08  | 0.2                | /               | 50                                   | <0.08 | <0.08  | <0.08 | <0.08 | <0.08 | <0.08  | <0.08 | <0.08  | <0.08 | <0.08 | <0.08 | -    |
|   | Chromium (diss.filt)                   | TM152       | µg/l   | 1     | /                  | 50              | 500                                  | 1.74  | <1     | 1.03  | <1    | <1    | <1     | 1.05  | <1     | <1    | <1    | <1    | -    |
|   | Copper (diss.filt)                     | TM152       | µg/l   | 0.3   | 3.76               | /               | 1000                                 | <0.3  | <0.3   | <0.3  | 0.378 | <0.3  | <0.3   | 0.628 | <0.3   | <0.3  | <0.3  | 1.42  | -    |
|   | Lead (diss.filt)                       | TM152       | µg/l   | 0.2   | 1.3                | /               | 500                                  | <0.2  | <0.2   | <0.2  | <0.2  | <0.2  | <0.2   | <0.2  | <0.2   | <0.2  | <0.2  | <0.2  | -    |
|   | Manganese (diss.filt)                  | TM152       | µg/l   | 3     | /                  | 50              | 500                                  | 997   | 769    | 977   | 932   | 927   | 1070   | 1050  | 1030   | 998   | 966   | 921   | 1070 |
|   | Nickel (diss.filt)                     | TM152       | µg/l   | 0.4   | 8.6                | /               | 500                                  | 33    | 6.22   | 5.84  | 5.39  | 5.23  | 4.74   | 4.23  | 4.99   | 4.62  | 3.89  | 5.57  | 4.06 |
|   | Zinc (diss.filt)                       | TM152       | µg/l   | 1     | 7.9                | /               | 1000                                 | 2.3   | 3.37   | 3.07  | 4.41  | 16.2  | 3.69   | 5.89  | 20.6   | 6.43  | 4.03  | 17.5  | 8.54 |
|   | Sodium (Dis.Filt)                      | TM152       | mg/l   | 0.076 | /                  | 200             | 1500                                 | 223   | 102    | 84.1  | 67.9  | 82.2  | 82.1   | 76.8  | 82.9   | 78    | 82.4  | 82.1  | -    |
|   | Magnesium (Dis.Filt)                   | TM152       | mg/l   | 0.036 | /                  | /               | 500                                  | 62    | 35.4   | 32.1  | 29    | 32.6  | 34.7   | 32.1  | 33.1   | 29.3  | 31.5  | 31.5  | -    |
|   | Potassium (Dis.Filt)                   | TM152       | mg/l   | 0.2   | /                  | /               | 120                                  | 128   | 58.5   | 49.4  | 38.3  | 39.1  | 43     | 37.8  | 40.2   | 36    | 37.8  | 37.9  | -    |
|   | Calcium (Dis.Filt)                     | TM152       | mg/l   | 0.2   | /                  | /               | 1000                                 | 109   | 89.5   | 105   | 97.2  | 102   | 122    | 111   | 112    | 104   | 106   | 105   | -    |
|   | Iron (Dis.Filt)                        | TM152       | mg/l   | 0.019 | 1                  | /               | 2                                    | 7.29  | 14.3   | 18    | 16.2  | 17.5  | 16.7   | 18.9  | 18.7   | 16.7  | 15.7  | 15.4  | 17.2 |
| <b>Unfiltered (Total) Metals</b>            |  |             |        |       |                    |                 |                                      |       |        |       |       |       |        |       |        |       |       |       |      |
|   | Phosphorus (tot.unfilt)                | TM152       | µg/l   | 20    | /                  | /               | 10000                                | 134   | 150    | 399   | 520   | 275   | 520    | 441   | 396    | 443   | 432   | 278   | -    |
|   | Hardness, Total as CaCO3 unfiltered    | TM152       | mg/l   | 0.35  | /                  | /               |                                      | 540   | 378    | -     | 398   | 416   | 468    | 454   | 431    | 386   | 421   | 419   | -    |
| <b>Gasoline Range Organics (GRO)</b>        |  |             |        |       |                    |                 |                                      |       |        |       |       |       |        |       |        |       |       |       |      |
|   | Total Aliphatics >C5-C12               | TM245       | µg/l   | 10    | /                  | /               |                                      | 89    | 16     | <10   | <10   | <10   | <10    | <10   | 18     | <10   | <10   | -     | -    |
|   | Total Aromatics >EC5-EC12              | TM245       | µg/l   | 10    | /                  | /               |                                      | 86    | 10     | <10   | <10   | <10   | <10    | <10   | 10     | <10   | <10   | -     | -    |
| <b>TPH Criteria Working Group (TPH CWG)</b> |  |             |        |       |                    |                 |                                      |       |        |       |       |       |        |       |        |       |       |       |      |
|   | GRO Surrogate % recovery**             | TM245       | %      | /     | /                  | /               |                                      | 94    | 113    | 101   | 96    | 96    | 108    | 95    | 98     | 95    | 92    | 97    | 86   |
|   | GRO >C5-C12                            | TM245       | µg/l   | 50    | /                  | /               |                                      | 175   | <50    | <50   | <50   | <50   | <50    | <50   | <50    | <50   | <50   | <50   | <50  |
|   | Methyl tertiary butyl ether (MTBE)     | TM245       | µg/l   | 3     | /                  | 15              |                                      | <3    | <3     | <3    | <3    | <3    | <3     | <3    | <3     | <3    | <3    | <3    | -    |
|   | Benzene                                | TM245       | µg/l   | 7     | 8                  | /               |                                      | <7    | <7     | <7    | <7    | <7    | <7     | <7    | <7     | <7    | <7    | <7    | -    |
|   | Toluene                                | TM245       | µg/l   | 4     | 74                 | /               |                                      | 10    | <4     | <4    | <4    | <4    | <4     | <4    | <4     | <4    | <4    | <4    | -    |
|   | Ethylbenzene                           | TM245       | µg/l   | 5     | 20                 | /               |                                      | 14    | <5     | <5    | <5    | <5    | <5     | <5    | <5     | <5    | <5    | <5    | -    |
|   | m,p-Xylene                             | TM245       | µg/l   | 8     | 30                 | /               |                                      | 28    | <8     | <8    | <8    | <8    | <8     | <8    | <8     | <8    | <8    | <8    | -    |
|   | o-Xylene                               | TM245       | µg/l   | 3     | 30                 | /               |                                      | 5     | 3      | <3    | <3    | <3    | <3     | <3    | <3     | <3    | <3    | <3    | -    |
|   | Sum of detected Xylenes                | TM245       | µg/l   | 11    | 30                 | /               |                                      | 33    | <11    | <11   | <11   | <11   | <11    | <11   | <11    | <11   | <11   | <11   | -    |
|   | Sum of detected BTEX                   | TM245       | µg/l   | 28    | /                  | /               |                                      | 57    | <28    | <28   | <28   | <28   | <28    | <28   | <28    | <28   | <28   | <28   | -    |
|   | Aliphatics >C5-C6                      | TM245       | µg/l   | 10    | /                  | /               |                                      | 16    | <10    | <10   | <10   | <10   | <10    | <10   | <10    | <10   | <10   | <10   | <10  |
|   | Aliphatics >C6-C8                      | TM245       | µg/l   | 10    | /                  | /               |                                      | 32    | <10    | <10   | <10   | <10   | <10    | <10   | <10    | <10   | <10   | <10   | <10  |
|   | Aliphatics >C8-C10                     | TM245       | µg/l   | 10    | /                  | /               |                                      | 18    | <10    | <10   | <10   | <10   | <10    | <10   | <10    | <10   | <10   | <10   | <10  |
|   | Aliphatics >C10-C12                    | TM245       | µg/l   | 10    | /                  | /               |                                      | 24    | <10    | <10   | <10   | <10   | <10    | <10   | <10    | <10   | <10   | <10   | <10  |
|   | Aliphatics >C12-C16 (aq)               | TM174       | µg/l   | 10    | /                  | /               |                                      | 44    | <10    | <10   | <10   | <10   | <10    | <10   | <10    | <10   | <10   | <10   | <10  |
|   | Aliphatics >C16-C21 (aq)               | TM174       | µg/l   | 10    | /                  | /               |                                      | 198   | 10     | 16    | 13    | 31    | 13     | <10   | <10    | <10   | <10   | <10   | <10  |
|   | Aliphatics >C21-C35 (aq)               | TM174       | µg/l   | 10    | /                  | /               |                                      | 2320  | 166    | 232   | 135   | 317   | 276    | 108   | 34     | 21    | 154   | 57    | <10  |
|   | Total Aliphatics >C12-C35 (aq)         | TM174       | µg/l   | 10    | /                  | /               |                                      | -     | -      | -     | -     | -     | -      | -     | -      | -     | -     | 57    | <10  |
|   | Aromatics >EC5-EC7                     | TM245       | µg/l   | 10    | 8                  | /               |                                      | <10   | <10    | <10   | <10   | <10   | <10    | <10   | <10    | <10   | <10   | <10   | <10  |
|   | Aromatics >EC7-EC8                     | TM245       | µg/l   | 10    | 74                 | /               |                                      | 10    | <10    | <10   | <10   | <10   |        |       |        |       |       |       |      |



Point of Ayre Landfill's  
Groundwater Sample Results

Customer: Waste Management Unit Douglas (12297)  
Client Reference / Point of Ayre  
Order no:

| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Sampled Date           | 11/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |             |
| Lab Sample Number      | 19558440   | 20363917   | 20719339   | 21297976   | 21836352    | 22246284   | 22804214   | 23404133   | 23838526   | 24394408   | 26881757   | 27276244   |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |             |

| Analysis    | Test  | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria | Sample Results |              |              |              |              |              |              |              |              |              |              |              |              |              |              |    |    |
|-------------|---|--------|----------|-----|--------------------|-----------------|--------------------------------------|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----|----|
|             |   |        |          |     |                    |                 |                                      | 11/03/2019     | 16/07/2019   | 10/09/2019   | 02/12/2019   | 02/03/2020   | 01/06/2020   | 07/09/2020   | 07/12/2020   | 01/03/2021   | 31/05/2021   | 12/09/2022   | 05/12/2022   |              |              |              |    |    |
|             | tert-Amyl methyl ether (TAME)                     | TM208  | µg/l     | 1   | /                  | /               |                                      | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | -            |    |    |
|             | Naphthalene                                       | TM208  | µg/l     | 1   | 2                  | /               |                                      | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | -  |    |
|             | 1,2,3-Trichlorobenzene                            | TM208  | µg/l     | 1   | 0.4                | /               | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | -  |    |
|             | 1,3,5-Trichlorobenzene                            | TM208  | µg/l     | 1   | 0.4                | /               | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | -  |    |
|             | Sum of detected Xylenes                           | TM208  | µg/l     | 2   | 30                 | /               |                                      | 26.5           | 3.35         | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2 |    |
|             | Sum of BTEX                                       | TM208  | µg/l     | 5   |                    |                 |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | <5 |    |
|             | VOC TIC   | TM208  | No units |     | /                  | /               |                                      | Not Detected   | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | -  |    |
|             | Total VOC TIC                                     | TM208  | µg/l     |     | /                  | /               |                                      | <10            | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | -  |    |
| <b>TICS</b> |   |        |          |     |                    |                 |                                      |                |              |              |              |              |              |              |              |              |              |              |              |              |              |              |    |    |
|             | (methylene)bis-phenol                             |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Butylbenzoic acid                                 |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Dibutylhydroxyphenylpropionic acid                |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Dimethylcyclohexanediol                           |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Ditertbutylhydroxyphenylpropionic acid            |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Ethylmethylbenzenesulfonamide                     |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Octadecanoic acid                                 |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | trimethylhexanoic acid                            |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Dimethylheptanoic acid                            | TM176  | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Hexadecanoic acid                                 | TM176  | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Isomers of Hexadecanoic acid                      |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Dimethylethylhydroxybenzoic acid                  |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Hexadecane  |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | mixed hydrocarbons                                |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Phenol(methylene)bis-                             |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Tertbutylbenzoic acid                             |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Benzothiazolone                                   | TM176  | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Tertbutylhydroxyphenylpropionic acid              |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | 2(3H)-Benzothiazolone                             |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | 3,5,5-trimethyl Hexanoic acid                     |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | 4,4'-(1-methylene)bisphenol                       |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Camphor   |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Cyclic octaatomic sulfur                          |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Isomers of Ditertbutylhydroxyphenylpropionic acid |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Isomers of TertbutylBenzoic acid                  |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | N-ethyl-2-methyl benzenesulfonamide               |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Sulfur  |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Undecane  |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Benzothiazolone                                   | TM176  | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Isomer of Benzothiazolone                         |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Isomer of Bisdimethylethylhydroxy Benzoic acid    |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | isomer of trimethyl hexanoic acid                 |        | µg/l     |     | /                  | /               |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -  | -  |
|             | Total VOC   |        | µg/l     |     | 1                  |                 |                                      | 82.18          | 6.7          | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 | <1 |
|             | Total PAH   |        | µg/l     |     |                    |                 |                                      | 13.237         | 1.73734      | 1.9407       | 0.7065       | 2.01747      | 1.54002      | 0.6161       | 0.54777      | 0.1911       | 0.5693       | 0.25667      | 0.0532       |              |              |              |    |    |

Point of Ayre Landfill's  
Groundwater Sample Results

ALS

SDG(s): 190315-102  
Customer: Waste Management Unit Douglas (12297)  
Client Reference / Point of Ayre  
Order no:

| Customer Sample ID     | BH103B     | BH103B     | BH103B     | BH103B     | BH103B     | BH103B     | BH103B     | BH103B     | BH103B     | BH103B     | BH103B     | BH103B     | BH103B | BH103B |
|------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--------|--------|
| Depth                  | 7.30-      |            |            |            |            |            |            |            |            |            |            |            |        |        |
| AGS Id                 |            |            |            |            |            |            |            |            |            |            |            |            |        |        |
| Sample Type            | JUND_WATER |            |            |            |            |            |            |            |            |            |            |            |        |        |
| Sampled Date           | 11/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020 | 01/06/2020 | 07/09/2020 | 07/12/2020 | 04/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |        |        |
| Sample Received Date   | 15/03/2019 |            |            |            |            |            |            |            |            |            |            |            |        |        |
| Final Instruction Date | 25/03/2019 |            |            |            |            |            |            |            |            |            |            |            |        |        |
| Report Completed Date  | 27/03/2019 |            |            |            |            |            |            |            |            |            |            |            |        |        |
| SDG                    | 190315-102 |            |            |            |            |            |            |            |            |            |            |            |        |        |
| Lab Sample Number      | 19558437   |            |            |            |            |            |            |            |            |            |            |            |        |        |
| Sample Temperature     | 9.8        |            |            |            |            |            |            |            |            |            |            |            |        |        |
| Sample Time            |            |            |            |            |            |            |            |            |            |            |            |            |        |        |

| Analysis                                    | Test                                     | Method      | Units  | LOD   | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |        |   |   |   |   |   |   |   |
|---|--|-------------|--------|-------|--------------------|-----------------|--------------------------------------|--------|---|---|---|---|---|---|---|
| <b>Carbon</b>                               |  |             |        |       |                    |                 |                                      |        |   |   |   |   |   |   |   |
|   | Carbon, Organic (diss.filt)              | TM090       | mg/l   | 6     | /                  | /               | 10                                   | 28.5   | - | - | - | - | - | - | - |
| <b>Inorganics</b>                           |  |             |        |       |                    |                 |                                      |        |   |   |   |   |   |   |   |
|   | Fluoride                                 | TM104       | mg/l   | 0.5   | /                  | /               | 10                                   | <0.5   | - | - | - | - | - | - | - |
|   | Ionic balance                            | Calculation | % Diff |       | /                  | /               |                                      | 4.08   | - | - | - | - | - | - | - |
|   | Nitrite as NO2                           | TM184       | mg/l   | 0.05  | 0.5                | /               | 1                                    | <0.05  | - | - | - | - | - | - | - |
|   | Phosphate (Ortho as PO4)                 | TM184       | mg/l   | 0.05  | /                  | /               |                                      | <0.05  | - | - | - | - | - | - | - |
|   | Sulphate                                 | TM184       | mg/l   | 2     | /                  | 250             | 2500                                 | 8.9    | - | - | - | - | - | - | - |
|   | Sulphide                                 | TM101       | mg/l   | 0.01  | /                  | /               |                                      | 0.261  | - | - | - | - | - | - | - |
|   | Chloride                                 | TM184       | mg/l   | 2     | /                  | 250             | 2000                                 | 97.4   | - | - | - | - | - | - | - |
|   | COD, unfiltered                          | TM107       | mg/l   | 7     | /                  | /               |                                      | 91.4   | - | - | - | - | - | - | - |
|   | Nitrogen, Total                          | TM212       | mg/l   | 1     | /                  | /               |                                      | 84.4   | - | - | - | - | - | - | - |
|   | Ammoniacal Nitrogen as NH4               | TM099       | mg/l   | 0.3   | /                  | 0.5             | 5                                    | 129    | - | - | - | - | - | - | - |
|   | Nitrate as NO3                           | TM184       | mg/l   | 0.3   | /                  | 50              | 500                                  | <0.3   | - | - | - | - | - | - | - |
|   | BOD, unfiltered                          | TM045       | mg/l   | 1     | /                  | /               |                                      |        | - | - | - | - | - | - | - |
|   | Alkalinity, Total as CaCO3               | TM043       | mg/l   | 2     | /                  | /               |                                      | 1000   | - | - | - | - | - | - | - |
|   | Alkalinity, Total as CaCO3 (diss.filt)   | TM043       | mg/l   | 2     | /                  | /               |                                      |        | - | - | - | - | - | - | - |
|   | Suspended solids, Total                  | TM022       | mg/l   | 9     | /                  | /               |                                      | 86.2   | - | - | - | - | - | - | - |
| <b>Filtered (Dissolved) Metals</b>          |  |             |        |       |                    |                 |                                      |        |   |   |   |   |   |   |   |
|   | Mercury (diss.filt)                      | TM183       | µg/l   | 0.01  | 0.07               | /               | 10                                   | <0.01  | - | - | - | - | - | - | - |
|   | Arsenic (diss.filt)                      | TM152       | µg/l   | 0.5   | 25                 | /               | 500                                  | 2.42   | - | - | - | - | - | - | - |
|   | Cadmium (diss.filt)                      | TM152       | µg/l   | 0.08  | 0.2                | /               | 50                                   | <0.08  | - | - | - | - | - | - | - |
|   | Chromium (diss.filt)                     | TM152       | µg/l   | 1     | /                  | 50              | 500                                  | 2.57   | - | - | - | - | - | - | - |
|   | Copper (diss.filt)                       | TM152       | µg/l   | 0.3   | 3.76               | /               | 1000                                 | <0.3   | - | - | - | - | - | - | - |
|   | Lead (diss.filt)                         | TM152       | µg/l   | 0.2   | 1.3                | /               | 500                                  | 0.381  | - | - | - | - | - | - | - |
|   | Manganese (diss.filt)                    | TM152       | µg/l   | 3     | /                  | 50              | 500                                  | 1110   | - | - | - | - | - | - | - |
|   | Nickel (diss.filt)                       | TM152       | µg/l   | 0.4   | 8.6                | /               | 500                                  | 3.09   | - | - | - | - | - | - | - |
|   | Zinc (diss.filt)                         | TM152       | µg/l   | 1     | 7.9                | /               | 1000                                 | 7.62   | - | - | - | - | - | - | - |
|   | Sodium (Dis.Filt)                        | TM152       | mg/l   | 0.076 | /                  | 200             | 1500                                 | 70.4   | - | - | - | - | - | - | - |
|   | Magnesium (Dis.Filt)                     | TM152       | mg/l   | 0.036 | /                  | /               | 500                                  | 32.4   | - | - | - | - | - | - | - |
|   | Potassium (Dis.Filt)                     | TM152       | mg/l   | 0.2   | /                  | /               | 120                                  | 52.4   | - | - | - | - | - | - | - |
|   | Calcium (Dis.Filt)                       | TM152       | mg/l   | 0.2   | /                  | /               | 1000                                 | 187    | - | - | - | - | - | - | - |
|   | Iron (Dis.Filt)                          | TM152       | mg/l   | 0.019 | 1                  | /               | 2                                    | 35.2   | - | - | - | - | - | - | - |
| <b>Unfiltered (Total) Metals</b>            |  |             |        |       |                    |                 |                                      |        |   |   |   |   |   |   |   |
|   | Phosphorus (tot.unfilt)                  | TM152       | µg/l   | 20    | /                  | /               | 10000                                | 308    | - | - | - | - | - | - | - |
|   | Hardness, Total as CaCO3 unfiltered      | TM152       | mg/l   | 0.35  | /                  | /               |                                      | 592    | - | - | - | - | - | - | - |
| <b>Gasoline Range Organics (GRO)</b>        |  |             |        |       |                    |                 |                                      |        |   |   |   |   |   |   |   |
|   | Total Aliphatics >C5-C12                 | TM245       | µg/l   | 10    | /                  | /               |                                      | 146    | - | - | - | - | - | - | - |
|   | Total Aromatics >EC5-EC12                | TM245       | µg/l   | 10    | /                  | /               |                                      | 148    | - | - | - | - | - | - | - |
| <b>TPH Criteria Working Group (TPH CWG)</b> |  |             |        |       |                    |                 |                                      |        |   |   |   |   |   |   |   |
|   | GRO Surrogate % recovery**               | TM245       | %      |       | /                  | /               |                                      | 86     | - | - | - | - | - | - | - |
|   | GRO >C5-C12                              | TM245       | µg/l   | 50    | /                  | /               |                                      | 294    | - | - | - | - | - | - | - |
|   | Methyl tertiary butyl ether (MTBE)       | TM245       | µg/l   | 3     | /                  | 15              |                                      | <3     | - | - | - | - | - | - | - |
|   | Benzene                                  | TM245       | µg/l   | 7     | 8                  | /               |                                      | <7     | - | - | - | - | - | - | - |
|   | Toluene                                  | TM245       | µg/l   | 4     | 74                 | /               |                                      | 9      | - | - | - | - | - | - | - |
|   | Ethylbenzene                             | TM245       | µg/l   | 5     | 20                 | /               |                                      | 19     | - | - | - | - | - | - | - |
|   | m,p-Xylene                               | TM245       | µg/l   | 8     | 30                 | /               |                                      | 38     | - | - | - | - | - | - | - |
|   | o-Xylene                                 | TM245       | µg/l   | 3     | 30                 | /               |                                      | 4      | - | - | - | - | - | - | - |
|   | Sum of detected Xylenes                  | TM245       | µg/l   | 11    | 30                 | /               |                                      | 42     | - | - | - | - | - | - | - |
|   | Sum of detected BTEX                     | TM245       | µg/l   | 28    | /                  | /               |                                      | 70     | - | - | - | - | - | - | - |
|   | Aliphatics >C5-C6                        | TM245       | µg/l   | 10    | 10                 | /               |                                      | 11     | - | - | - | - | - | - | - |
|   | Aliphatics >C6-C8                        | TM245       | µg/l   | 10    | 10                 | /               |                                      | 21     | - | - | - | - | - | - | - |
|   | Aliphatics >C8-C10                       | TM245       | µg/l   | 10    | 10                 | /               |                                      | 46     | - | - | - | - | - | - | - |
|   | Aliphatics >C10-C12                      | TM245       | µg/l   | 10    | 10                 | /               |                                      | 68     | - | - | - | - | - | - | - |
|   | Aliphatics >C12-C16 (aq)                 | TM174       | µg/l   | 10    | 10                 | /               |                                      | <10    | - | - | - | - | - | - | - |
|   | Aliphatics >C16-C21 (aq)                 | TM174       | µg/l   | 10    | 10                 | /               |                                      | 10     | - | - | - | - | - | - | - |
|   | Aliphatics >C21-C35 (aq)                 | TM174       | µg/l   | 10    | 10                 | /               |                                      | 94     | - | - | - | - | - | - | - |
|   | Total Aliphatics >C12-C35 (aq)           | TM174       | µg/l   | 10    | 10                 | /               |                                      | -      | - | - | - | - | - | - | - |
|   | Aromatics >EC5-EC7                       | TM245       | µg/l   | 10    | 8                  | /               |                                      | <10    | - | - | - | - | - | - | - |
|   | Aromatics >EC7-EC8                       | TM245       | µg/l   | 10    | 74                 | /               |                                      | <10    | - | - | - | - | - | - | - |
|   | Aromatics >EC8-EC10                      | TM245       | µg/l   | 10    | 20                 | /               |                                      | 93     | - | - | - | - | - | - | - |
|   | Aromatics >EC10-EC12                     | TM245       | µg/l   | 10    | 10                 | /               |                                      | 45     | - | - | - | - | - | - | - |
|   | Aromatics >EC12-EC16 (aq)                | TM174       | µg/l   | 10    | 10                 | /               |                                      | 12     | - | - | - | - | - | - | - |
|   | Aromatics >EC16-EC21 (aq)                | TM174       | µg/l   | 10    | 10                 | /               |                                      | <10    | - | - | - | - | - | - | - |
|   | Aromatics >EC21-EC35 (aq)                | TM174       | µg/l   | 10    | 10                 | /               |                                      | <10    | - | - | - | - | - | - | - |
|   | Total Aromatics >EC12-EC35 (aq)          | TM174       | µg/l   | 10    | 10                 | /               |                                      | 12     | - | - | - | - | - | - | - |
|   | Total Aliphatics & Aromatics >C5-35 (aq) | TM174       | µg/l   | 10    | 10                 | /               | 100                                  | 189    | - | - | - | - | - | - | - |
| <b>Polyaromatic Hydrocarbons (PAHs)</b>     |  |             |        |       |                    |                 |                                      |        |   |   |   |   |   |   |   |
|   | Naphthalene (aq)                         | TM178       | µg/l   | 0.01  | 2                  | /               |                                      | 2.24   | - | - | - | - | - | - | - |
|   | Acenaphthene (aq)                        | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | 0.276  | - | - | - | - | - | - | - |
|   | Acenaphthylene (aq)                      | TM178       | µg/l   | 0.005 | 5.8                | /               |                                      | 0.0246 | - | - | - | - | - | - | - |
|   | Fluoranthene (aq)                        | TM178       | µg/l   | 0.005 | 0.0063             | /               |                                      | 0.264  | - | - | - | - | - | - | - |
|   | Anthracene (aq)                          | TM178       | µg/l   | 0.005 | 0.1                | /               |                                      | 0.0366 | - | - | - | - | - | - | - |
|   | Phenanthrene (aq)                        | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | 0.282  | - | - | - | - | - | - | - |
|   | Fluorene (aq)                            | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | 0.236  | - | - | - | - | - | - | - |
|   | Chrysene (aq)                            | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | 0.0752 | - | - | - | - | - | - | - |
|   | Pyrene (aq)                              | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | 0.214  | - | - | - | - | - | - | - |
|   | Benzo(a)anthracene (aq)                  | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | 0.0365 | - | - | - | - | - | - | - |
|   | Benzo(b)fluoranthene (aq)                | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | 0.0636 | - | - | - | - | - | - | - |
|   | Benzo(k)fluoranthene (aq)                | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | 0.0217 | - | - | - | - | - | - | - |
|   | Benzo(a)pyrene (aq)                      | TM178       | µg/l   | 0.002 | 0.00017            | /               |                                      | 0.0383 | - | - | - | - | - | - | - |
|   | Dibenzo(a,h)anthracene (aq)              | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005 | - | - | - | - | - | - | - |
|   | Benzo(g,h,i)perylene (aq)                | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | 0.0179 | - | - | - | - | - | - | - |
|   | Indeno(1,2,3-cd)pyrene (aq)              | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | 0.0215 | - | - | - | - | - | - | - |
|   | PAH, Total Detected USEPA 16 (aq)        | TM178       | µg/l   | 0.082 | /                  | /               | 2                                    | 3.85   | - | - | - | - | - | - | - |
| <b>PCB's - (Solids)</b>                     |  |             |        |       |                    |                 |                                      |        |   |   |   |   |   |   |   |
|   | PCB congener 28                          | TM197       | µg/l   | 0.015 | /                  | /               |                                      | <0.015 | - | - | - | - | - | - | - |
|   | PCB congener 52                          | TM197       | µg/l   | 0.015 | /                  | /               |                                      | <0.015 | - | - | - | - | - | - | - |
|   | PCB congener 101                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | <0.015 | - | - | - | - | - | - | - |
|   | PCB congener 118                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | <0.015 | - | - | - | - | - | - | - |
|   | PCB congener 138                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | <0.015 | - | - | - | - | - | - | - |
|   | PCB congener 153                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | <0.015 |   |   |   |   |   |   |   |









Point of Ayre Landfill's  
Groundwater Sample Results

ALS

| Customer Sample ID     | BH104A     | 104A       | 104A       | 104A       | 104A        | 104A       | 104A       | 104A       | 104A       | 104A       | 104A       | 104A       | 104A       | 104A       | 104A        |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 6.02-      | 6.34-      | 6.34-      | 6.07-      | -           | -          | -          | -          | -          | -          | -          | -          | -          | -          | 6.22-       |
| AGS id                 |            |            |            |            |             |            |            |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 11/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |            |            |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |            |            |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |            |            |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |            |            |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |            |            |             |
| Lab Sample Number      | 19558439   | 20363916   | 20719338   | 21297975   | 21836356    | 22246283   | 22802679   | 23404132   | 23838524   | 24394403   | 26881758   | 27276243   |            |            |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |            |            |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |            |            |             |

| Analysis                                    | Test                                   | Method      | Units  | LOD   | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |       |        |       |        |       |        |        |        |        |       |        |       |    |
|---|--|-------------|--------|-------|--------------------|-----------------|--------------------------------------|-------|--------|-------|--------|-------|--------|--------|--------|--------|-------|--------|-------|----|
| <b>Carbon</b>                               |  |             |        |       |                    |                 |                                      |       |        |       |        |       |        |        |        |        |       |        |       |    |
|   | Carbon, Organic (diss.filt)            | TM090       | mg/l   | 6     | /                  | /               | 10                                   | 4.81  | 6.4    | 5.34  | 9.18   | 8.1   | 5.06   | 6.2    | 9      | 11.3   | 7.79  | 12.3   | 15.4  |    |
| <b>Inorganics</b>                           |  |             |        |       |                    |                 |                                      |       |        |       |        |       |        |        |        |        |       |        |       |    |
|   | Fluoride                               | TM104       | mg/l   | 0.5   | /                  | /               | 10                                   | <0.5  | <0.5   | <0.5  | <0.5   | <0.5  | <0.5   | <0.5   | <0.5   | <0.5   | <0.5  | <0.5   | <0.5  | -  |
|   | Ionic balance                          | Calculation | % Diff |       | /                  | /               |                                      | 0.758 | -0.865 | -0.65 | -0.219 | -1.98 | 4.57   | 0.459  | -1.66  | -0.564 | 2.86  |        |       | -  |
|   | Nitrite as NO2                         | TM184       | mg/l   | 0.05  | 0.5                | /               | 1                                    | <0.05 | <0.05  | <0.05 | <0.05  | <0.05 | <0.05  | <0.05  | <0.05  | <0.05  | <0.05 | <0.05  | <0.05 | -  |
|   | Phosphate (Ortho as PO4)               | TM184       | mg/l   | 0.05  | /                  | /               |                                      | <0.05 | <0.05  | <0.05 | <0.05  | <0.05 | <0.05  | <0.05  | <0.05  | <0.05  | <0.05 | <0.05  | <0.05 | -  |
|   | Sulphate                               | TM184       | mg/l   | 2     | /                  | 250             | 2500                                 | 100   | 80.7   | 60.7  | 16.7   | 5     | 15.1   | 24.7   | 2.4    | <2     | 4.6   | 12.8   |       | -  |
|   | Sulphide                               | TM101       | mg/l   | 0.01  | /                  | /               |                                      | <0.01 | 0.0466 | <0.01 | 0.0164 | <0.01 | 0.0168 | 0.0338 | 0.0447 | 0.0726 | <0.01 | 0.0159 |       | -  |
|   | Chloride                               | TM184       | mg/l   | 2     | /                  | 250             | 2000                                 | 466   | 322    | 182   | 125    | 92.3  | 87.2   | 92.9   | 87.9   | 99.4   | 80.9  | 79.5   | 92.8  | -  |
|   | COD, unfiltered                        | TM107       | mg/l   | 7     | /                  | /               |                                      | 315   | 30     | 33.1  | 31.8   | 40.4  | 28.9   | 36.2   | 39.4   | 38.8   | 28.9  | 234    |       | -  |
|   | Nitrogen, Total                        | TM212       | mg/l   | 1     | /                  | /               |                                      | 6.77  | 4.18   | 4.98  | 18.9   | 21.6  | 11.4   | 10.5   | 19.2   | 27.7   | 25.2  | 33.8   |       | -  |
|   | Ammoniacal Nitrogen as NH4             | TM099       | mg/l   | 0.3   | /                  | 0.5             | 5                                    | 11.8  | 4.99   | 8.55  | 24.6   | 23.5  | 19.9   | 14     | 24.6   | 37.2   | 33.4  | 41.5   | 29.6  | -  |
|   | Nitrate as NO3                         | TM184       | mg/l   | 0.3   | /                  | 50              | 500                                  | 0.6   | <0.3   | <0.3  | <0.3   | <0.3  | <0.3   | <0.3   | <0.3   | 1.76   | <0.3  | <0.3   |       | -  |
|   | BOD, unfiltered                        | TM045       | mg/l   | 1     | /                  | /               |                                      | -     | <1     | 2.4   | 4.28   | 2.76  | 2.02   | 1.98   | 2.47   | 2.44   | <3    | 66.4   |       | -  |
|   | Alkalinity, Total as CaCO3             | TM043       | mg/l   | 2     | /                  | /               |                                      | 293   | 309    | 390   | 510    | 451   | 374    | 367    | 494    | 529    | 430   | 490    |       | -  |
|   | Alkalinity, Total as CaCO3 (diss.filt) | TM043       | mg/l   | 2     | /                  | /               |                                      | -     | -      | -     | -      | -     | -      | -      | -      | -      | -     | -      |       | -  |
|   | Suspended solids, Total                | TM022       | mg/l   | 9     | /                  | /               |                                      | 3570  | 1110   | 906   | 1720   | 586   | 559    | 362    | 294    | 166    | 119   | 322    |       | -  |
| <b>Filtered (Dissolved) Metals</b>          |  |             |        |       |                    |                 |                                      |       |        |       |        |       |        |        |        |        |       |        |       |    |
|   | Mercury (diss.filt)                    | TM183       | µg/l   | 0.01  | 0.07               | /               | 10                                   | <0.01 | <0.01  | <0.01 | <0.01  | <0.01 | <0.01  | <0.01  | <0.01  | <0.01  | <0.01 | <0.01  | <0.01 | -  |
|   | Arsenic (diss.filt)                    | TM152       | µg/l   | 0.5   | 25                 | /               | 500                                  | 7.79  | 13.1   | 17.6  | 17.4   | 12    | 14.8   | 16     | 13.1   | 14.4   | 12.9  | 8.42   | 14.9  | -  |
|   | Cadmium (diss.filt)                    | TM152       | µg/l   | 0.08  | 0.2                | /               | 50                                   | <0.08 | <0.08  | <0.08 | <0.08  | <0.08 | <0.08  | <0.08  | <0.08  | <0.08  | <0.08 | <0.08  | <0.08 | -  |
|   | Chromium (diss.filt)                   | TM152       | µg/l   | 1     | /                  | 50              | 500                                  | <1    | <1     | <1    | <1     | <1    | <1     | <1     | <1     | 1.33   | 1.11  | 1.08   |       | -  |
|   | Copper (diss.filt)                     | TM152       | µg/l   | 0.3   | 3.76               | /               | 1000                                 | 1.55  | <0.3   | <0.3  | 0.793  | <0.3  | <0.3   | <0.3   | <0.3   | <0.3   | <0.3  | 1.62   |       | -  |
|   | Lead (diss.filt)                       | TM152       | µg/l   | 0.2   | 1.3                | /               | 500                                  | 0.217 | <0.2   | <0.2  | <0.2   | <0.2  | 0.656  | <0.2   | <0.2   | <0.2   | <0.2  | <0.2   |       | -  |
|   | Manganese (diss.filt)                  | TM152       | µg/l   | 3     | /                  | 50              | 500                                  | 1350  | 988    | 1170  | 1360   | 1080  | 1050   | 1060   | 1230   | 1270   | 949   | 1320   | 2070  | -  |
|   | Nickel (diss.filt)                     | TM152       | µg/l   | 0.4   | 8.6                | /               | 500                                  | 11.8  | 0.903  | 1.87  | 1.67   | 2.51  | 0.815  | 1.12   | 1.84   | 2.15   | 1.3   | 4.26   | 3.43  | -  |
|   | Zinc (diss.filt)                       | TM152       | µg/l   | 1     | 7.9                | /               | 1000                                 | 25.3  | 2.38   | 3.89  | 4.68   | 9.66  | 6.9    | 30.6   | 16.7   | 5.48   | 5.38  | 20.9   | 11    | -  |
|   | Sodium (Dis.Filt)                      | TM152       | mg/l   | 0.076 | /                  | 200             | 1500                                 | 214   | 214    | 137   | 92.5   | 63.9  | 67     | 69     | 62.6   | 66.4   | 62.1  | 53.8   |       | -  |
|   | Magnesium (Dis.Filt)                   | TM152       | mg/l   | 0.036 | /                  | /               | 500                                  | 37.3  | 31.2   | 29.2  | 28.5   | 24    | 24.1   | 23.4   | 25.1   | 25.1   | 21.8  | 23.9   |       | -  |
|   | Potassium (Dis.Filt)                   | TM152       | mg/l   | 0.2   | /                  | /               | 120                                  | 14.9  | 10.6   | 11.6  | 17.5   | 17.8  | 15.7   | 11.6   | 15.2   | 18.6   | 19.3  | 15.4   |       | -  |
|   | Calcium (Dis.Filt)                     | TM152       | mg/l   | 0.2   | /                  | /               | 1000                                 | 141   | 83.2   | 87.9  | 105    | 89.4  | 99.4   | 90.7   | 106    | 118    | 91.3  | 106    |       | -  |
|   | Iron (Dis.Filt)                        | TM152       | mg/l   | 0.019 | 1                  | /               | 2                                    | 1.9   | 5.59   | 8.12  | 14.7   | 13.3  | 12.5   | 11.7   | 15.4   | 17.4   | 12.3  | 13.4   | 17.6  | -  |
| <b>Unfiltered (Total) Metals</b>            |  |             |        |       |                    |                 |                                      |       |        |       |        |       |        |        |        |        |       |        |       |    |
|   | Phosphorus (tot.unfilt)                | TM152       | µg/l   | 20    | /                  | /               | 10000                                | 42.5  | 536    | 333   | 651    | 539   | 491    | 475    | 456    | 332    | 351   | 3450   |       | -  |
|   | Hardness, Total as CaCO3 unfiltered    | TM152       | mg/l   | 0.35  | /                  | /               |                                      | 498   | 353    | -     | 376    | 351   | 354    | 328    | 393    | 376    | 308   | 369    |       | -  |
| <b>Gasoline Range Organics (GRO)</b>        |  |             |        |       |                    |                 |                                      |       |        |       |        |       |        |        |        |        |       |        |       |    |
|   | Total Aliphatics >C5-C12               | TM245       | µg/l   | 10    | /                  | /               |                                      | <10   | <10    | <10   | <10    | <10   | <10    | <10    | 25     | 14     | <10   | -      | -     | -  |
|   | Total Aromatics >EC5-EC12              | TM245       | µg/l   | 10    | /                  | /               |                                      | <10   | <10    | <10   | <10    | <10   | <10    | <10    | 12     | <10    | <10   | -      | -     | -  |
| <b>TPH Criteria Working Group (TPH CWG)</b> |  |             |        |       |                    |                 |                                      |       |        |       |        |       |        |        |        |        |       |        |       |    |
|   | GRO Surrogate % recovery**             | TM245       | %      |       | /                  | /               |                                      | 104   | 122    | 106   | 91     | 104   | 105    | 87     | 95     | 104    | 97    | 98     | 87    | -  |
|   | GRO >C5-C12                            | TM245       | µg/l   | 50    | /                  | /               |                                      | <50   | <50    | <50   | <50    | <50   | <50    | <50    | <50    | <50    | <50   | <50    | <50   | -  |
|   | Methyl tertiary butyl ether (MTBE)     | TM245       | µg/l   | 3     | /                  | 15              |                                      | <3    | <3     | <3    | <3     | <3    | <3     | <3     | <3     | <3     | <3    | <3     |       | -  |
|   | Benzene                                | TM245       | µg/l   | 7     | 8                  | /               |                                      | <7    | <7     | <7    | <7     | <7    | <7     | <7     | <7     | <7     | <7    | <7     |       | -  |
|   | Toluene                                | TM245       | µg/l   | 4     | 74                 | /               |                                      | <4    | <4     | <4    | <4     | <4    | <4     | <4     | <4     | <4     | <4    | <4     |       | -  |
|   | Ethylbenzene                           | TM245       | µg/l   | 5     | 20                 | /               |                                      | <5    | <5     | <5    | <5     | <5    | <5     | <5     | <5     | <5     | <5    | <5     |       | -  |
|   | m,p-Xylene                             | TM245       | µg/l   | 8     | 30                 | /               |                                      | <8    | <8     | <8    | <8     | <8    | <8     | <8     | <8     | <8     | <8    | <8     |       | -  |
|   | o-Xylene                               | TM245       | µg/l   | 3     | 30                 | /               |                                      | <3    | <3     | <3    | <3     | <3    | <3     | <3     | <3     | <3     | <3    | <3     |       | -  |
|   | Sum of detected Xylenes                | TM245       | µg/l   | 11    | 30                 | /               |                                      | <11   | <11    | <11   | <11    | <11   | <11    | <11    | <11    | <11    | <11   | <11    |       | -  |
|   | Sum of detected BTEX                   | TM245       | µg/l   | 28    | /                  | /               |                                      | <28   | <28    | <28   | <28    | <28   | <28    | <28    | <28    | <28    | <28   | <28    |       | -  |
|   | Aliphatics >C5-C6                      | TM245       | µg/l   | 10    | /                  | /               |                                      | <10   | <10    | <10   | <10    | <10   | <10    | <10    | <10    | <10    | <10   | <10    | <10   | -  |
|   | Aliphatics >C6-C8                      | TM245       | µg/l   | 10    | /                  | /               |                                      | <10   | <10    | <10   | <10    | <10   | <10    | <10    | <10    | <10    | <10   | <10    | <10   | -  |
|   | Aliphatics >C8-C10                     | TM245       | µg/l   | 10    | /                  | /               |                                      | <10   | <10    | <10   | <10    | <10   | <10    | <10    | <10    | <10    | <10   | <10    | <10   | -  |
|   | Aliphatics >C10-C12                    | TM245       | µg/l   | 10    | /                  | /               |                                      | <10   | <10    | <10   | <10    | <10   | <10    | <10    | <10    | <10    | <10   | <10    | <10   | -  |
|   | Aliphatics >C12-C16 (aq)               | TM174       | µg/l   | 10    | /                  | /               |                                      | <10   | <10    | <10   | <10    | <10   | <10    | <10    | 22     | <10    | <10   | <10    | <10   | -  |
|   | Aliphatics >C16-C21 (aq)               | TM174       | µg/l   | 10    | /                  | /               |                                      | 37    | 11     | <10   | 10     | <10   | <10    | <10    | <10    | <10    | <10   | <10    | <10   | -  |
|   | Aliphatics >C21-C35 (aq)               | TM174       | µg/l   | 10    | /                  | /               |                                      | 166   | 82     | <10   | 45     | 18    | <10    | <10    | <10    | <10    | <10   | <10    | <10   | 79 |
|   | Total Aliphatics >C12-C35 (aq)         | TM174       | µg/l   | 10    | /                  | /               |                                      | -     | -      | -     | -      | -     | -      | -      | -      | -      | -     | -      | 79    | -  |
|   | Aromatics >EC5-EC7                     | TM245       | µg/l   | 10    | 8                  | /               |                                      | <10   | <10    | <10   | <10    |       |        |        |        |        |       |        |       |    |

Point of Ayre Landfill's  
Groundwater Sample Results

ALS

| Customer Sample ID     | BH104A     | 104A       | 104A       | 104A       | 104a        | 104A       | 104A       | 104A       | 104A       | 104A       | 104A       | 104A       | 104A       | 104A        |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 6.02-      | 6.34-      | 6.34-      | 6.07-      | -           | -          | -          | -          | -          | -          | -          | -          | -          | 6.22-       |
| AGS id                 |            |            |            |            |             |            |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 11/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |            |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |            |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |            |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |            |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |            |             |
| Lab Sample Number      | 19558439   | 20363916   | 20719338   | 21297975   | 21836356    | 22246283   | 22802679   | 23404132   | 23838524   | 24394403   | 26881758   | 27276243   |            |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |            |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |            |             |

| Analysis | Test                             | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |              |              |              |              |              |              |              |          |          |     |    |    |    |    |
|----------|----------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------|----------|-----|----|----|----|----|
|          |                                  |        |          |     |                    |                 |                                      | 1            | 2            | 3            | 4            | 5            | 6            | 7            | 8        | 9        | 10  | 11 | 12 | 13 | 14 |
|          | 1,2,4-Trichlorobenzene (aq)      | TM176  | µg/l     | 1   | 0.4                | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | 1,2-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | 1,3-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | 1,4-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | 2,4,5-Trichlorophenol (aq)       | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | 2,4,6-Trichlorophenol (aq)       | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | 2,4-Dichlorophenol (aq)          | TM176  | µg/l     | 1   | 0.42               | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | 2,4-Dimethylphenol (aq)          | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | 2,4-Dinitrotoluene (aq)          | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | 2,6-Dinitrotoluene (aq)          | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | 2-Chloronaphthalene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | 2-Chlorophenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | 2-Methylnaphthalene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | 2-Methylphenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | 2-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | 2-Nitrophenol (aq)               | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | 3-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | 4-Bromophenylphenylether (aq)    | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | 4-Chloro-3-methylphenol (aq)     | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | 4-Chloroaniline (aq)             | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | 4-Chlorophenylphenylether (aq)   | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | 4-Methylphenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | 4-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | 4-Nitrophenol (aq)               | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | Azobenzene (aq)                  | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | bis(2-Chloroethyl)ether (aq)     | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | bis(2-Chloroethoxy)methane (aq)  | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | bis(2-Ethylhexyl) phthalate (aq) | TM176  | µg/l     | 2   | /                  | /               | <40                                  | <20          | <40          | <16          | <20          | <4           | <16          | <16          | <2       | <2       | <16 | -  |    |    |    |
|          | Butylbenzyl phthalate (aq)       | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | Benzofluoranthene (aq)           | TM176  | µg/l     | 1   | /                  | 0.1             | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | Carbazole (aq)                   | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | Dibenzofuran (aq)                | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | n-Dibutyl phthalate (aq)         | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | Diethyl phthalate (aq)           | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | Dimethyl phthalate (aq)          | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | n-Dioctyl phthalate (aq)         | TM176  | µg/l     | 5   | /                  | /               | <100                                 | <50          | <100         | <40          | <50          | <10          | <40          | <40          | <5       | <5       | <40 | -  |    |    |    |
|          | Hexachlorobenzene (aq)           | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | Hexachlorobutadiene (aq)         | TM176  | µg/l     | 1   | 0.6                | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | Pentachlorophenol (aq)           | TM176  | µg/l     | 1   | 0.4                | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | Phenol (aq)                      | TM176  | µg/l     | 1   | 7.7                | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | n-Nitroso-n-dipropylamine (aq)   | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | Hexachloroethane (aq)            | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | Nitrobenzene (aq)                | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | Isophorone (aq)                  | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | Hexachlorocyclopentadiene (aq)   | TM176  | µg/l     | 1   | /                  | /               | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | Indeno(1,2,3-cd)pyrene (aq)      | TM176  | µg/l     | 1   | /                  | 0.1             | <20                                  | <10          | <20          | <8           | <10          | <2           | <8           | <8           | <1       | <1       | <8  | -  |    |    |    |
|          | SVOC TIC (aq)                    | TM176  | No units | /   | /                  | /               | Not Detected                         | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Detected | Detected | -   | -  |    |    |    |
|          | Total SVOC TIC                   | TM176  | µg/l     | 10  | /                  | /               | <200                                 | <400         | <200         | <80          | <100         | <20          | <80          | <80          | 11.7     | 31.6     | -   | -  |    |    |    |

**Volatile Organic Compounds (VOCs)**

|  |                                    |       |      |   |    |     |      |      |     |      |     |      |      |      |      |      |      |      |
|--|------------------------------------|-------|------|---|----|-----|------|------|-----|------|-----|------|------|------|------|------|------|------|
|  | Dibromofluoromethane**             | TM208 | %    | / | /  | /   | 110  | 115  | 117 | 115  | 124 | 110  | 111  | 117  | 111  | 105  | 119  | 126  |
|  | Toluene-d8**                       | TM208 | %    | / | /  | /   | 100  | 98.3 | 101 | 97.3 | 100 | 99.1 | 100  | 99.2 | 98.5 | 95.2 | 98   | 100  |
|  | 4-Bromofluorobenzene**             | TM208 | %    | / | /  | /   | 96.1 | 98.7 | 100 | 96.9 | 101 | 103  | 98.9 | 95.9 | 96   | 93.9 | 94.4 | 94.9 |
|  | Dichlorodifluoromethane            | TM208 | µg/l | 1 | /  | /   | <1   | <1   | <1  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|  | Chloromethane                      | TM208 | µg/l | 1 | /  | /   | <1   | <1   | <1  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|  | Vinyl chloride                     | TM208 | µg/l | 1 | /  | 0.5 | <1   | <1   | <1  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | 5.78 |
|  | Bromomethane                       | TM208 | µg/l | 1 | /  | /   | <1   | <1   | <1  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|  | Chloroethane                       | TM208 | µg/l | 1 | /  | /   | <1   | <1   | <1  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|  | Trichlorofluoromethane             | TM208 | µg/l | 1 | /  | /   | <1   | <1   | <1  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|  | 1,1-Dichloroethene                 | TM208 | µg/l | 1 | /  | /   | <1   | <1   | <1  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|  | Carbon disulphide                  | TM208 | µg/l | 1 | /  | /   | <1   | <1   | <1  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|  | Dichloromethane                    | TM208 | µg/l | 1 | 20 | /   | <3   | <3   | <3  | <3   | <3  | <3   | <3   | <3   | <3   | <3   | <3   | <3   |
|  | Methyl tertiary butyl ether (MTBE) | TM208 | µg/l | 1 | /  | 15  | <1   | <1   | <1  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|  | trans-1,2-Dichloroethene           | TM208 | µg/l | 1 | /  | 50  | <1   | <1   | <1  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|  | 1,1-Dichloroethane                 | TM208 | µg/l | 1 | /  | /   | <1   | <1   | <1  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|  | cis-1,2-Dichloroethene             | TM208 | µg/l | 1 | /  | 50  | <1   | <1   | <1  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | 5.9  |
|  | 2,2-Dichloropropane                | TM208 | µg/l | 1 | /  | /   | <1   | <1   | <1  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|  | Bromochloromethane                 | TM208 | µg/l | 1 | /  | /   | <1   | <1   | <1  | &lt  |     |      |      |      |      |      |      |      |

Point of Ayre Landfill's  
Groundwater Sample Results

ALS

| Customer Sample ID     | BH104A     | 104A       | 104A       | 104A       | 104a        | 104A       | 104A       | 104A       | 104A       | 104A       | 104A       | 104A       | 104A        |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 6.02-      | 6.34-      | 6.34-      | 6.07-      | -           | -          | -          | -          | -          | -          | -          | -          | 6.22-       |
| AGS id                 |            |            |            |            |             |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 11/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |             |
| Lab Sample Number      | 19558439   | 20363916   | 20719338   | 21297975   | 21836356    | 22246283   | 22802679   | 23404132   | 23838524   | 24394403   | 26881758   | 27276243   |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |             |

| Analysis | Test                          | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria | Sample Results |              |              |              |              |              |              |              |              |              |      |      |
|----------|-------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------|------|
|          |                               |        |          |     |                    |                 |                                      | BH104A         | 104A         | 104A         | 104A         | 104a         | 104A         | 104A         | 104A         | 104A         | 104A         | 104A | 104A |
|          | 1,2-Dichlorobenzene           | TM208  | µg/l     | 1   | /                  | /               | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1   | <1   |
|          | 1,2-Dibromo-3-chloropropane   | TM208  | µg/l     | 1   | /                  | /               | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1   | <1   |
|          | 1,2,4-Trichlorobenzene        | TM208  | µg/l     | 1   | 0.4                | /               | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1   | <1   |
|          | Hexachlorobutadiene           | TM208  | µg/l     | 1   | 0.6                | /               | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1   | <1   |
|          | tert-Amyl methyl ether (TAME) | TM208  | µg/l     | 1   | /                  | /               |                                      | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1   | <1   |
|          | Naphthalene                   | TM208  | µg/l     | 1   | 2                  | /               |                                      | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1   | <1   |
|          | 1,2,3-Trichlorobenzene        | TM208  | µg/l     | 1   | 0.4                | /               | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1   | <1   |
|          | 1,3,5-Trichlorobenzene        | TM208  | µg/l     | 1   | 0.4                | /               | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1   | <1   |
|          | Sum of detected Xylenes       | TM208  | µg/l     | 2   | 30                 | /               |                                      | <2             | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2   | <2   |
|          | Sum of BTEX                   | TM208  | µg/l     | 5   |                    |                 |                                      | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | <5   | <5   |
|          | VOC TIC                       | TM208  | No units |     | /                  | /               |                                      | Not Detected   | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | -    | -    |
|          | Total VOC TIC                 | TM208  | µg/l     |     | /                  | /               |                                      | <10            | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | -    | -    |

| TICS     |   |        |       |     |                    |                 |                                      |        |        |        |         |         |         |        |        |        |         |        |        |
|----------|---|--------|-------|-----|--------------------|-----------------|--------------------------------------|--------|--------|--------|---------|---------|---------|--------|--------|--------|---------|--------|--------|
| Analysis | Test  | Method | Units | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria | BH104A | 104A   | 104A   | 104A    | 104a    | 104A    | 104A   | 104A   | 104A   | 104A    | 104A   |        |
|          | (methylene)bis-phenol                             |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | Butylbenzoic acid                                 |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | Dibutylhydroxyphenylpropionic acid                |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | Dimethylcyclohexanediene                          |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | Ditertbutylhydroxyphenylpropionic acid            |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | Ethylmethylbenzenesulfonamide                     |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | Octadecanoic acid                                 |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | trimethylhexanoic acid                            |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | Dimethylheptanoic acid                            | TM176  | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | Hexadecanoic acid                                 | TM176  | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | Isomers of Hexadecenoic acid                      |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | 21.4    | -      |        |
|          | Dimethylethylhydroxybenzoic acid                  |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | Hexadecane  |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | mixed hydrocarbons                                |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | Phenol(methylene)bis-                             |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | Tertbutylbenzoic acid                             |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | Benzothiazolone                                   | TM176  | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | Tertbutylhydroxyphenylpropionic acid              |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | 2(3H)-Benzothiazolone                             |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | 3,5,5-trimethyl Hexanoic acid                     |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | 4,4'-(1-methylene)bisphenol                       |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | Camphor   |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | Cyclic octaatomic sulfur                          |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | Isomers of Ditertbutylhydroxyphenylpropionic acid |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | Isomers of TertbutylBenzoic acid                  |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | N-ethyl-2-methyl benzenesulfonamide               |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | Sulfur  |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | Undecane  |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | Benzothiazolone                                   | TM176  | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | Isomer of Benzothiazolone                         |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | Isomer of Bisdimethylethylhydroxy Benzoic acid    |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | -      | -      | -       | -      |        |
|          | isomer of trimethyl hexanoic acid                 |        | µg/l  |     | /                  | /               |                                      | -      | -      | -      | -       | -       | -       | -      | 11.7   | 10.2   | -       | -      |        |
|          | Total VOC   |        | µg/l  | 1   |                    |                 |                                      | <1     | <1     | <1     | 2.51    | 1.34    | <1      | <1     | 3.72   | 4.5    | 2.51    | <1     | 17.25  |
|          | Total PAH   |        | µg/l  |     |                    |                 |                                      | 3.794  | 1.7791 | 3.0453 | 1.17416 | 0.50821 | 0.35965 | 0.3078 | 0.4479 | 1.2246 | 0.35719 | 0.4106 | 0.2767 |







Point of Ayre Landfill's  
Groundwater Sample Results

ALS

| Customer Sample ID     | BH105A     | 105A       | 105A       | BH105A     | 105         | 105A       | 105A       | 105A       | 105A       | 105A       | 105A       | 105A       | 105A        |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 6.69-      | 7.10-      | 7.10-      | 6.68-      | -           | -          | -          | -          | -          | -          | -          | -          | 6.60-       |
| AGS id                 |            |            |            |            |             |            |            |            |            |            |            |            |             |
| Sample Type            | UND_WATER  | UND_WATER  | UND_WATER  | UND_WATER  | MISC_LIQUID | UND_WATER  | UND_WATER  | UND_WATER  | UND_WATER  | UND_WATER  | UND_WATER  | UND_WATER  | MISC_LIQUID |
| Sampled Date           | 12/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 06/12/2022 |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |             |
| Lab Sample Number      | 19558453   | 20363927   | 20719348   | 21297985   | 21836349    | 22246293   | 22802700   | 23404143   | 23838535   | 24394426   | 26881761   | 27276242   |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |             |

| Analysis | Test                          | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |              |              |              |              |              |              |              |              |              |              |              |              |              |              |    |    |    |
|----------|-------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----|----|----|
|          |                               |        |          |     |                    |                 |                                      | 1            | 2            | 3            | 4            | 5            | 6            | 7            | 8            | 9            | 10           | 11           | 12           | 13           |              |    |    |    |
|          | 1,2-Dichlorobenzene           | TM208  | µg/l     |     | 1                  | /               | 10                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 | <1 |    |
|          | 1,2-Dibromo-3-chloropropane   | TM208  | µg/l     |     | 1                  | /               | 10                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 | <1 |    |
|          | 1,2,4-Trichlorobenzene        | TM208  | µg/l     |     | 1                  | 0.4             | 10                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 | <1 |    |
|          | Hexachlorobutadiene           | TM208  | µg/l     |     | 1                  | 0.6             | 10                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 | <1 |    |
|          | tert-Amyl methyl ether (TAME) | TM208  | µg/l     |     | 1                  | /               | 10                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 | <1 |    |
|          | Naphthalene                   | TM208  | µg/l     |     | 1                  | 2               | 10                                   | 2.45         | 1.57         | <1           | 1.89         | <1           | <1           | <1           | 2.33         | 2.36         | 3.23         | 1.09         | <1           | <1           | <1           | <1 | <1 |    |
|          | 1,2,3-Trichlorobenzene        | TM208  | µg/l     |     | 1                  | 0.4             | 10                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 | <1 |    |
|          | 1,3,5-Trichlorobenzene        | TM208  | µg/l     |     | 1                  | 0.4             | 10                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 | <1 |    |
|          | Sum of detected Xylenes       | TM208  | µg/l     |     | 2                  | 30              | 10                                   | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2 | <2 | <2 |
|          | Sum of BTEX                   | TM208  | µg/l     |     | 5                  |                 | 10                                   | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | <5 | <5 |    |
|          | VOC TIC                       | TM208  | No units |     |                    |                 | 10                                   | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | -  | -  |    |
|          | Total VOC TIC                 | TM208  | µg/l     |     |                    |                 | 10                                   | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | -  | -  |    |

| TICS |   |       |      |   |  |  |  |  |        |         |         |        |        |
|------|---|-------|------|---|--|--|--|--|--------|---------|---------|--------|--------|
|      |   |       |      |   |  |  |  |  |        |         |         |        |        |
|      | (methylene)bis-phenol                             | µg/l  |      |   |  |  |  |  | 14.9   | -       | -       | -      | -      |
|      | Butylbenzoic acid                                 | µg/l  |      |   |  |  |  |  | 11     | -       | 22.3    | -      |        |
|      | Dibutylhydroxyphenylpropionic acid                | µg/l  |      |   |  |  |  |  | -      | -       | 13.8    | -      |        |
|      | Dimethylcyclohexanediol                           | µg/l  |      |   |  |  |  |  | 11.5   | -       | 11.2    | -      |        |
|      | Ditertbutylhydroxyphenylpropionic acid            | µg/l  |      |   |  |  |  |  | 15.2   | -       | 43      | 13.5   |        |
|      | Ethylmethylbenzenesulfonamide                     | µg/l  |      |   |  |  |  |  | -      | -       | 38.4    | -      |        |
|      | Octadecanoic acid                                 | µg/l  |      |   |  |  |  |  | -      | -       | 44      | 22     |        |
|      | trimethylhexanoic acid                            | µg/l  |      |   |  |  |  |  | 22.3   | -       | -       | -      |        |
|      | Dimethylheptanoic acid                            | TM176 | µg/l |   |  |  |  |  | -      | -       | 47.2    | -      |        |
|      | Hexadecanoic acid                                 | TM176 | µg/l |   |  |  |  |  | -      | 13.1    | 48.5    | -      |        |
|      | Isomers of Hexadecenoic acid                      | µg/l  |      |   |  |  |  |  | -      | -       | 171     | -      |        |
|      | Dimethylethylhydroxybenzoic acid                  | µg/l  |      |   |  |  |  |  | -      | -       | -       | -      |        |
|      | Hexadecane  | µg/l  |      |   |  |  |  |  | -      | -       | -       | -      |        |
|      | mixed hydrocarbons                                | µg/l  |      |   |  |  |  |  | 137    | 10.2    | -       | -      |        |
|      | Phenol(methylene)bis-                             | µg/l  |      |   |  |  |  |  | 49.8   | -       | -       | -      |        |
|      | Tertbutylbenzoic acid                             | µg/l  |      |   |  |  |  |  | 22.8   | -       | -       | -      |        |
|      | Benzothiazolone                                   | TM176 | µg/l |   |  |  |  |  | 30.4   | 27.5    | -       | -      |        |
|      | Tertbutylhydroxyphenylpropionic acid              | µg/l  |      |   |  |  |  |  | -      | -       | -       | -      |        |
|      | 2(3H)-Benzothiazolone                             | µg/l  |      |   |  |  |  |  | -      | -       | -       | 22.4   |        |
|      | 3,5,5-trimethyl Hexanoic acid                     | µg/l  |      |   |  |  |  |  | -      | -       | -       | 37.2   |        |
|      | 4,4'-(1-methylene)bisphenol                       | µg/l  |      |   |  |  |  |  | -      | -       | -       | 17.8   |        |
|      | Camphor   | µg/l  |      |   |  |  |  |  | -      | -       | -       | -      |        |
|      | Cyclic octatomic sulfur                           | µg/l  |      |   |  |  |  |  | -      | -       | -       | -      |        |
|      | Isomers of Ditertbutylhydroxyphenylpropionic acid | µg/l  |      |   |  |  |  |  | -      | -       | -       | -      |        |
|      | Isomers of TertbutylBenzoic acid                  | µg/l  |      |   |  |  |  |  | -      | -       | -       | -      |        |
|      | N-ethyl-2-methyl benzenesulfonamide               | µg/l  |      |   |  |  |  |  | -      | -       | -       | 11     |        |
|      | Sulfur  | µg/l  |      |   |  |  |  |  | -      | -       | -       | -      |        |
|      | Undecane  | µg/l  |      |   |  |  |  |  | -      | -       | -       | -      |        |
|      | Isomer of Benzothiazolone                         | µg/l  |      |   |  |  |  |  | -      | -       | -       | 43.8   |        |
|      | Isomer of Bisdimethylethylhydroxy Benzoic acid    | µg/l  |      |   |  |  |  |  | -      | -       | -       | -      |        |
|      | isomer of trimethyl hexanoic acid                 | µg/l  |      |   |  |  |  |  | -      | -       | -       | -      |        |
|      | Total VOC   | µg/l  |      | 1 |  |  |  |  | 19.07  | 9.96    | 8.71    | 19.76  | 16.95  |
|      | Total PAH   | µg/l  |      |   |  |  |  |  | 2.9255 | 2.73665 | 0.12303 | 0.3267 | 2.2835 |



ALS

|                        |             |
|------------------------|-------------|
| Customer Sample ID     | QAQC1       |
| Depth                  |             |
| AGS id                 |             |
| Sample Type            | MISC_LIQUID |
| Sampled Date           | 06/12/2022  |
| Sample Received Date   | 07/12/2022  |
| Final Instruction Date | 09/12/2022  |
| Report Completed Date  | 09/01/2023  |
| SDG                    | 221207-97   |
| Lab Sample Number      | 27276242    |
| Sample Temperature     | 6.5         |
| Sample Time            |             |

| Analysis                                       | Test                                     | Method      | Units  | LOD   | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |        |
|--|--|-------------|--------|-------|--------------------|-----------------|--------------------------------------|--------|
| <b>Carbon</b>                                  |  |             |        |       |                    |                 |                                      |        |
|  | Carbon, Organic (diss.filt)              | TM090       | mg/l   | 6     | /                  | /               | 10                                   | 18.1   |
| <b>Inorganics</b>                              |  |             |        |       |                    |                 |                                      |        |
|  | Fluoride                                 | TM104       | mg/l   | 0.5   | /                  | /               | 10                                   | -      |
|  | Ionic balance                            | Calculation | % Diff |       | /                  | /               |                                      | -      |
|  | Nitrite as NO2                           | TM184       | mg/l   | 0.05  | 0.5                | /               | 1                                    | -      |
|  | Phosphate (Ortho as PO4)                 | TM184       | mg/l   | 0.05  | /                  | /               |                                      | -      |
|  | Sulphate                                 | TM184       | mg/l   | 2     | /                  | 250             | 2500                                 | -      |
|  | Sulphide                                 | TM101       | mg/l   | 0.01  | /                  | /               |                                      | -      |
|  | Chloride                                 | TM184       | mg/l   | 2     | /                  | 250             | 2000                                 | 90.4   |
|  | COD, unfiltered                          | TM107       | mg/l   | 7     | /                  | /               |                                      | -      |
|  | Nitrogen, Total                          | TM212       | mg/l   | 1     | /                  | /               |                                      | -      |
|  | Ammoniacal Nitrogen as NH4               | TM099       | mg/l   | 0.3   | /                  | 0.5             | 5                                    | 76.4   |
|  | Nitrate as NO3                           | TM184       | mg/l   | 0.3   | /                  | 50              | 500                                  | -      |
|  | BOD, unfiltered                          | TM045       | mg/l   | 1     | /                  | /               |                                      | -      |
|  | Alkalinity, Total as CaCO3               | TM043       | mg/l   | 2     | /                  | /               |                                      | -      |
|  | Alkalinity, Total as CaCO3 (diss.filt)   | TM043       | mg/l   | 2     | /                  | /               |                                      | -      |
|  | Suspended solids, Total                  | TM022       | mg/l   | 9     | /                  | /               |                                      | -      |
| <b>Filtered (Dissolved) Metals</b>             |  |             |        |       |                    |                 |                                      |        |
|  | Mercury (diss.filt)                      | TM183       | µg/l   | 0.01  | 0.07               | /               | 10                                   | -      |
|  | Arsenic (diss.filt)                      | TM152       | µg/l   | 0.5   | 25                 | /               | 500                                  | 40.2   |
|  | Cadmium (diss.filt)                      | TM152       | µg/l   | 0.08  | 0.2                | /               | 50                                   | -      |
|  | Chromium (diss.filt)                     | TM152       | µg/l   | 1     | /                  | 50              | 500                                  | -      |
|  | Copper (diss.filt)                       | TM152       | µg/l   | 0.3   | 3.76               | /               | 1000                                 | -      |
|  | Lead (diss.filt)                         | TM152       | µg/l   | 0.2   | 1.3                | /               | 500                                  | -      |
|  | Manganese (diss.filt)                    | TM152       | µg/l   | 3     | /                  | 50              | 500                                  | 1940   |
|  | Nickel (diss.filt)                       | TM152       | µg/l   | 0.4   | 8.6                | /               | 500                                  | 9.94   |
|  | Zinc (diss.filt)                         | TM152       | µg/l   | 1     | 7.9                | /               | 1000                                 | 3.87   |
|  | Sodium (Dis.Filt)                        | TM152       | mg/l   | 0.076 | /                  | 200             | 1500                                 | -      |
|  | Magnesium (Dis.Filt)                     | TM152       | mg/l   | 0.036 | /                  | /               | 500                                  | -      |
|  | Potassium (Dis.Filt)                     | TM152       | mg/l   | 0.2   | /                  | /               | 120                                  | -      |
|  | Calcium (Dis.Filt)                       | TM152       | mg/l   | 0.2   | /                  | /               | 1000                                 | -      |
|  | Iron (Dis.Filt)                          | TM152       | mg/l   | 0.019 | 1                  | /               | 2                                    | 36.9   |
| <b>Unfiltered (Total) Metals</b>               |  |             |        |       |                    |                 |                                      |        |
|  | Phosphorus (tot.unfilt)                  | TM152       | µg/l   | 20    | /                  | /               | 10000                                | -      |
|  | Hardness, Total as CaCO3 unfiltered      | TM152       | mg/l   | 0.35  | /                  | /               |                                      | -      |
| <b>Gasoline Range Organics (GRO)</b>           |  |             |        |       |                    |                 |                                      |        |
|  | Total Aliphatics >C5-C12                 | TM245       | µg/l   | 10    | /                  | /               |                                      | -      |
|  | Total Aromatics >EC5-EC12                | TM245       | µg/l   | 10    | /                  | /               |                                      | -      |
| <b>TPH Criteria Working Group (TPH CWG)</b>    |  |             |        |       |                    |                 |                                      |        |
|  | GRO Surrogate % recovery**               | TM245       | %      |       | /                  | /               |                                      | 81     |
|  | GRO >C5-C12                              | TM245       | µg/l   | 50    | /                  | /               |                                      | <50    |
|  | Methyl tertiary butyl ether (MTBE)       | TM245       | µg/l   | 3     | /                  | 15              |                                      | -      |
|  | Benzene                                  | TM245       | µg/l   | 7     | 8                  | /               |                                      | -      |
|  | Toluene                                  | TM245       | µg/l   | 4     | 74                 | /               |                                      | -      |
|  | Ethylbenzene                             | TM245       | µg/l   | 5     | 20                 | /               |                                      | -      |
|  | m,p-Xylene                               | TM245       | µg/l   | 8     | 30                 | /               |                                      | -      |
|  | o-Xylene                                 | TM245       | µg/l   | 3     | 30                 | /               |                                      | -      |
|  | Sum of detected Xylenes                  | TM245       | µg/l   | 11    | 30                 | /               |                                      | -      |
|  | Sum of detected BTEX                     | TM245       | µg/l   | 28    | /                  | /               |                                      | -      |
|  | Aliphatics >C5-C6                        | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    |
|  | Aliphatics >C6-C8                        | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    |
|  | Aliphatics >C8-C10                       | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    |
|  | Aliphatics >C10-C12                      | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    |
|  | Aliphatics >C12-C16 (aq)                 | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    |
|  | Aliphatics >C16-C21 (aq)                 | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    |
|  | Aliphatics >C21-C35 (aq)                 | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    |
|  | Total Aliphatics >C12-C35 (aq)           | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    |
|  | Aromatics >EC5-EC7                       | TM245       | µg/l   | 10    | 8                  | /               |                                      | <10    |
|  | Aromatics >EC7-EC8                       | TM245       | µg/l   | 10    | 74                 | /               |                                      | <10    |
|  | Aromatics >EC8-EC10                      | TM245       | µg/l   | 10    | 20                 | /               |                                      | <10    |
|  | Aromatics >EC10-EC12                     | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    |
|  | Aromatics >EC12-EC16 (aq)                | TM174       | µg/l   | 10    | /                  | /               |                                      | 174    |
|  | Aromatics >EC16-EC21 (aq)                | TM174       | µg/l   | 10    | /                  | /               |                                      | 98     |
|  | Aromatics >EC21-EC35 (aq)                | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    |
|  | Total Aromatics >EC12-EC35 (aq)          | TM174       | µg/l   | 10    | /                  | /               |                                      | 272    |
|  | Total Aliphatics & Aromatics >C5-35 (aq) | TM174       | µg/l   | 10    | /                  | /               | 100                                  | 272    |
| <b>Polyaromatic Hydrocarbons (PAHs)</b>        |  |             |        |       |                    |                 |                                      |        |
|  | Naphthalene (aq)                         | TM178       | µg/l   | 0.01  | 2                  | /               |                                      | 0.567  |
|  | Acenaphthene (aq)                        | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | 0.144  |
|  | Acenaphthylene (aq)                      | TM178       | µg/l   | 0.005 | 5.8                | /               |                                      | <0.005 |
|  | Fluoranthene (aq)                        | TM178       | µg/l   | 0.005 | 0.0063             | /               |                                      | <0.005 |
|  | Anthracene (aq)                          | TM178       | µg/l   | 0.005 | 0.1                | /               |                                      | <0.005 |
|  | Phenanthrene (aq)                        | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | 0.0489 |
|  | Fluorene (aq)                            | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | 0.0707 |
|  | Chrysene (aq)                            | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005 |
|  | Pyrene (aq)                              | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005 |
|  | Benzo(a)anthracene (aq)                  | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005 |
|  | Benzo(b)fluoranthene (aq)                | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005 |
|  | Benzo(k)fluoranthene (aq)                | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005 |
|  | Benzo(a)pyrene (aq)                      | TM178       | µg/l   | 0.002 | 0.00017            | /               |                                      | <0.002 |
|  | Dibenzo(a,h)anthracene (aq)              | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005 |
|  | Benzo(g,h,i)perylene (aq)                | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005 |
|  | Indeno(1,2,3-cd)pyrene (aq)              | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005 |
|  | PAH, Total Detected USEPA 16 (aq)        | TM178       | µg/l   | 0.082 | /                  | /               | 2                                    | 0.831  |
| <b>PCB's - (Solids)</b>                        |  |             |        |       |                    |                 |                                      |        |
|  | PCB congener 28                          | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 52                          | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 101                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 118                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 138                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 153                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 180                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | Sum of detected EC7 PCB's                | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 77                          | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 81                          | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 105                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 114                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 123                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 126                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 156                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 157                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 167                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 169                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 189                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
| <b>Semi-Volatile Organic Compounds (SVOCs)</b> |  |             |        |       |                    |                 |                                      |        |

Point of Ayre Landfill's  
Groundwater Sample Results

ALS

|                        |              |
|------------------------|--------------|
| Customer Sample ID     | QAQC1        |
| Depth                  |              |
| AGS id                 |              |
| Sample Type            | ALISC_LIQUID |
| Sampled Date           | 06/12/2022   |
| Sample Received Date   | 07/12/2022   |
| Final Instruction Date | 09/12/2022   |
| Report Completed Date  | 09/01/2023   |
| SDG                    | 221207-97    |
| Lab Sample Number      | 27276242     |
| Sample Temperature     | 6.5          |
| Sample Time            |              |

| Analysis | Test                             | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |
|----------|----------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|
|          | 1,2,4-Trichlorobenzene (aq)      | TM176  | µg/l     |     | 1 0.4              | /               | -                                    |
|          | 1,2-Dichlorobenzene (aq)         | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | 1,3-Dichlorobenzene (aq)         | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | 1,4-Dichlorobenzene (aq)         | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | 2,4,5-Trichlorophenol (aq)       | TM176  | µg/l     |     | 1 /                | /               | 5 -                                  |
|          | 2,4,6-Trichlorophenol (aq)       | TM176  | µg/l     |     | 1 /                | /               | 5 -                                  |
|          | 2,4-Dichlorophenol (aq)          | TM176  | µg/l     |     | 1 0.42             | /               | 5 -                                  |
|          | 2,4-Dimethylphenol (aq)          | TM176  | µg/l     |     | 1 /                | /               | 5 -                                  |
|          | 2,4-Dinitrotoluene (aq)          | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | 2,6-Dinitrotoluene (aq)          | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | 2-Chloronaphthalene (aq)         | TM176  | µg/l     |     | 1 /                | /               | 10 -                                 |
|          | 2-Chlorophenol (aq)              | TM176  | µg/l     |     | 1 /                | /               | 5 -                                  |
|          | 2-Methylnaphthalene (aq)         | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | 2-Methylphenol (aq)              | TM176  | µg/l     |     | 1 /                | /               | 5 -                                  |
|          | 2-Nitroaniline (aq)              | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | 2-Nitrophenol (aq)               | TM176  | µg/l     |     | 1 /                | /               | 5 -                                  |
|          | 3-Nitroaniline (aq)              | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | 4-Bromophenylphenylether (aq)    | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | 4-Chloro-3-methylphenol (aq)     | TM176  | µg/l     |     | 1 /                | /               | 5 -                                  |
|          | 4-Chloroaniline (aq)             | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | 4-Chlorophenylphenylether (aq)   | TM176  | µg/l     |     | 1 /                | /               | 10 -                                 |
|          | 4-Methylphenol (aq)              | TM176  | µg/l     |     | 1 /                | /               | 5 -                                  |
|          | 4-Nitroaniline (aq)              | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | 4-Nitrophenol (aq)               | TM176  | µg/l     |     | 1 /                | /               | 5 -                                  |
|          | Azobenzene (aq)                  | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | bis(2-Chloroethyl)ether (aq)     | TM176  | µg/l     |     | 1 /                | /               | 10 -                                 |
|          | bis(2-Chloroethoxy)methane (aq)  | TM176  | µg/l     |     | 1 /                | /               | 10 -                                 |
|          | bis(2-Ethylhexyl) phthalate (aq) | TM176  | µg/l     |     | 2 /                | /               | -                                    |
|          | Butylbenzyl phthalate (aq)       | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | Benzo(k)fluoranthene (aq)        | TM176  | µg/l     |     | 1 /                | 0.1             | -                                    |
|          | Carbazole (aq)                   | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | Dibenzofuran (aq)                | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | n-Dibutyl phthalate (aq)         | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | Diethyl phthalate (aq)           | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | Dimethyl phthalate (aq)          | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | n-Dioctyl phthalate (aq)         | TM176  | µg/l     |     | 5 /                | /               | -                                    |
|          | Hexachlorobenzene (aq)           | TM176  | µg/l     |     | 1 /                | /               | 10 -                                 |
|          | Hexachlorobutadiene (aq)         | TM176  | µg/l     |     | 1 0.6              | /               | 10 -                                 |
|          | Pentachlorophenol (aq)           | TM176  | µg/l     |     | 1 0.4              | /               | 5 -                                  |
|          | Phenol (aq)                      | TM176  | µg/l     |     | 1 7.7              | /               | 5 -                                  |
|          | n-Nitroso-n-dipropylamine (aq)   | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | Hexachloroethane (aq)            | TM176  | µg/l     |     | 1 /                | /               | 10 -                                 |
|          | Nitrobenzene (aq)                | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | Isophorone (aq)                  | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | Hexachlorocyclopentadiene (aq)   | TM176  | µg/l     |     | 1 /                | /               | 10 -                                 |
|          | Indeno(1,2,3-cd)pyrene (aq)      | TM176  | µg/l     |     | 1 /                | 0.1             | -                                    |
|          | SVOC TIC (aq)                    | TM176  | No units |     | /                  | /               | -                                    |
|          | Total SVOC TIC                   | TM176  | µg/l     |     | 10 /               | /               | -                                    |

**Volatile Organic Compounds (VOCs)**

|                                    |       |      |  |       |        |    |      |
|------------------------------------|-------|------|--|-------|--------|----|------|
| Dibromofluoromethane**             | TM208 | %    |  | /     | /      |    | 107  |
| Toluene-d8**                       | TM208 | %    |  | /     | /      |    | 99.2 |
| 4-Bromofluorobenzene**             | TM208 | %    |  | /     | /      |    | 97.8 |
| Dichlorodifluoromethane            | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| Chloromethane                      | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| Vinyl chloride                     | TM208 | µg/l |  | 1 /   | 0.5    | 10 | <1   |
| Bromomethane                       | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| Chloroethane                       | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| Trichlorofluoromethane             | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| 1,1-Dichloroethene                 | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| Carbon disulphide                  | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| Dichloromethane                    | TM208 | µg/l |  | 1 20  | /      | 10 | <3   |
| Methyl tertiary butyl ether (MTBE) | TM208 | µg/l |  | 1 /   | 15     |    | <1   |
| trans-1,2-Dichloroethene           | TM208 | µg/l |  | 1 /   | 50     | 10 | <1   |
| 1,1-Dichloroethane                 | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| cis-1,2-Dichloroethene             | TM208 | µg/l |  | 1 /   | 50     | 10 | <1   |
| 2,2-Dichloropropane                | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| Bromochloromethane                 | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| Chloroform                         | TM208 | µg/l |  | 1 2.5 | /      | 10 | <1   |
| 1,1,1-Trichloroethane              | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| 1,1-Dichloropropene                | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| Carbon tetrachloride               | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| 1,2-Dichloroethane                 | TM208 | µg/l |  | 1 10  | /      | 10 | <1   |
| Benzene                            | TM208 | µg/l |  | 1 8   | /      |    | <1   |
| Trichloroethene                    | TM208 | µg/l |  | 1 10  | /      | 10 | <1   |
| 1,2-Dichloropropane                | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| Dibromomethane                     | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| Bromodichloromethane               | TM208 | µg/l |  | 1 /   | 100    | 10 | <1   |
| cis-1,3-Dichloropropene            | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| Toluene                            | TM208 | µg/l |  | 1 74  | /      |    | <1   |
| trans-1,3-Dichloropropene          | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| 1,1,2-Trichloroethane              | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| 1,3-Dichloropropane                | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| Tetrachloroethene                  | TM208 | µg/l |  | 1 10  | /      | 10 | <1   |
| Dibromochloromethane               | TM208 | µg/l |  | 1 /   | 100    | 10 | <1   |
| 1,2-Dibromoethane                  | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| Chlorobenzene                      | TM208 | µg/l |  | 1 /   | /      | 10 | 3.63 |
| 1,1,1,2-Tetrachloroethane          | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| Ethylbenzene                       | TM208 | µg/l |  | 1 20  | /      |    | <1   |
| m,p-Xylene                         | TM208 | µg/l |  | 1 30  | /      |    | <1   |
| o-Xylene                           | TM208 | µg/l |  | 1 30  | /      |    | <1   |
| Styrene                            | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| Bromoform                          | TM208 | µg/l |  | 1 /   | 100    |    | <1   |
| Isopropylbenzene                   | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| 1,1,2,2-Tetrachloroethane          | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| 1,2,3-Trichloropropane             | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| Bromobenzene                       | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| Propylbenzene                      | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| 2-Chlorotoluene                    | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| 1,3,5-Trimethylbenzene             | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| 4-Chlorotoluene                    | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| tert-Butylbenzene                  | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| 1,2,4-Trimethylbenzene             | TM208 | µg/l |  | 1 /   | 175000 |    | <1   |
| sec-Butylbenzene                   | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| 4-iso-Propyltoluene                | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| 1,3-Dichlorobenzene                | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| 1,4-Dichlorobenzene                | TM208 | µg/l |  | 1 /   | /      | 10 | 1.14 |
| n-Butylbenzene                     | TM208 | µg/l |  | 1 /   | /      |    | <1   |

Point of Ayre Landfill's  
Groundwater Sample Results

ALS

|                        |             |
|------------------------|-------------|
| Customer Sample ID     | QAQC1       |
| Depth                  |             |
| AGS id                 |             |
| Sample Type            | MISC_LIQUID |
| Sampled Date           | 06/12/2022  |
| Sample Received Date   | 07/12/2022  |
| Final Instruction Date | 09/12/2022  |
| Report Completed Date  | 09/01/2023  |
| SDG                    | 221207-97   |
| Lab Sample Number      | 27276242    |
| Sample Temperature     | 6.5         |
| Sample Time            |             |

| Analysis | Test                          | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |    |
|----------|-------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|----|
|          | 1,2-Dichlorobenzene           | TM208  | µg/l     |     | 1 / /              | /               | 10                                   | <1 |
|          | 1,2-Dibromo-3-chloropropane   | TM208  | µg/l     |     | 1 / /              | /               | 10                                   | <1 |
|          | 1,2,4-Trichlorobenzene        | TM208  | µg/l     |     | 1 0.4 /            | /               | 10                                   | <1 |
|          | Hexachlorobutadiene           | TM208  | µg/l     |     | 1 0.6 /            | /               | 10                                   | <1 |
|          | tert-Amyl methyl ether (TAME) | TM208  | µg/l     |     | 1 / /              | /               |                                      | <1 |
|          | Naphthalene                   | TM208  | µg/l     |     | 1 2 /              | /               |                                      | <1 |
|          | 1,2,3-Trichlorobenzene        | TM208  | µg/l     |     | 1 0.4 /            | /               | 10                                   | <1 |
|          | 1,3,5-Trichlorobenzene        | TM208  | µg/l     |     | 1 0.4 /            | /               | 10                                   | <1 |
|          | Sum of detected Xylenes       | TM208  | µg/l     |     | 2 30 /             | /               |                                      | <2 |
|          | Sum of BTEX                   | TM208  | µg/l     |     | 5 / /              | /               |                                      | <5 |
|          | VOC TIC                       | TM208  | No units |     | / / /              | /               |                                      | -  |
|          | Total VOC TIC                 | TM208  | µg/l     |     | / / /              | /               |                                      | -  |

| TICS |   |       |      |  |       |   |  |        |
|------|---|-------|------|--|-------|---|--|--------|
|      | (methylene)bis-phenol                             |       | µg/l |  | / / / | / |  | -      |
|      | Butylbenzoic acid                                 |       | µg/l |  | / / / | / |  | -      |
|      | Dibutylhydroxyphenylpropionic acid                |       | µg/l |  | / / / | / |  | -      |
|      | Dimethylcyclohexanediol                           |       | µg/l |  | / / / | / |  | -      |
|      | Ditertbutylhydroxyphenylpropionic acid            |       | µg/l |  | / / / | / |  | -      |
|      | Ethylmethylbenzenesulfonamide                     |       | µg/l |  | / / / | / |  | -      |
|      | Octadecanoic acid                                 |       | µg/l |  | / / / | / |  | -      |
|      | trimethylhexanoic acid                            |       | µg/l |  | / / / | / |  | -      |
|      | Dimethylheptanoic acid                            | TM176 | µg/l |  | / / / | / |  | -      |
|      | Hexadecanoic acid                                 | TM176 | µg/l |  | / / / | / |  | -      |
|      | Isomers of Hexadecenoic acid                      |       | µg/l |  | / / / | / |  | -      |
|      | Dimethylethylhydroxybenzoic acid                  |       | µg/l |  | / / / | / |  | -      |
|      | Hexadecane  |       | µg/l |  | / / / | / |  | -      |
|      | mixed hydrocarbons                                |       | µg/l |  | / / / | / |  | -      |
|      | Phenol(methylene)bis-                             |       | µg/l |  | / / / | / |  | -      |
|      | Tertbutylbenzoic acid                             |       | µg/l |  | / / / | / |  | -      |
|      | Benzothiazolone                                   | TM176 | µg/l |  | / / / | / |  | -      |
|      | Tertbutylhydroxyphenylpropionic acid              |       | µg/l |  | / / / | / |  | -      |
|      | 2(3H)-Benzothiazolone                             |       | µg/l |  | / / / | / |  | -      |
|      | 3,5,5-trimethyl Hexanoic acid                     |       | µg/l |  | / / / | / |  | -      |
|      | 4,4'-(1-methylene)bisphenol                       |       | µg/l |  | / / / | / |  | -      |
|      | Camphor   |       | µg/l |  | / / / | / |  | -      |
|      | Cyclic octatomic sulfur                           |       | µg/l |  | / / / | / |  | -      |
|      | Isomers of Ditertbutylhydroxyphenylpropionic acid |       | µg/l |  | / / / | / |  | -      |
|      | Isomers of TertbutylBenzoic acid                  |       | µg/l |  | / / / | / |  | -      |
|      | N-ethyl-2-methyl benzenesulfonamide               |       | µg/l |  | / / / | / |  | -      |
|      | Sulfur  |       | µg/l |  | / / / | / |  | -      |
|      | Undecane  |       | µg/l |  | / / / | / |  | -      |
|      | Isomer of Benzothiazolone                         |       | µg/l |  | / / / | / |  | -      |
|      | Isomer of Bisdimethylethylhydroxy Benzoic acid    |       | µg/l |  | / / / | / |  | -      |
|      | isomer of trimethyl hexanoic acid                 |       | µg/l |  | / / / | / |  | -      |
|      | Total VOC   |       | µg/l |  | 1 / / | / |  | 4.77   |
|      | Total PAH   |       | µg/l |  | / / / | / |  | 0.8306 |







Point of Ayre Landfill's  
Groundwater Sample Results

ALS

| Customer Sample ID     | BH106A     | 106A       | 106A       | BH106A     | 106         | 106A       | 106A       | 106A       | 106A       | 106A       | 106A       | 106A       | 106A        |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 6.95-      | 7.42-      | 7.42-      | 7.17-      | -           | -          | -          | -          | -          | -          | -          | -          | 7.05-       |
| AGS id                 |            |            |            |            |             |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 12/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 06/12/2022 |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |             |
| Lab Sample Number      | 19558452   | 20363926   | 20719346   | 21297984   | 21836348    | 22246292   | 22802699   | 23404141   | 23838534   | 24394424   | 26881762   | 27276241   |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |             |

| Analysis | Test                          | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria | Sample Results |              |              |              |              |              |              |              |              |              |              |              |              |              |              |    |
|----------|-------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----|
|          |                               |        |          |     |                    |                 |                                      | BH106A         | 106A         | 106A         | BH106A       | 106          | 106A         | 106A         | 106A         | 106A         | 106A         | 106A         | 106A         |              |              |              |    |
|          | 1,2-Dichlorobenzene           | TM208  | µg/l     |     | 1                  | /               | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | -  |
|          | 1,2-Dibromo-3-chloropropane   | TM208  | µg/l     |     | 1                  | /               | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | -  |
|          | 1,2,4-Trichlorobenzene        | TM208  | µg/l     |     | 1                  | 0.4             | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | -  |
|          | Hexachlorobutadiene           | TM208  | µg/l     |     | 1                  | 0.6             | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | -  |
|          | tert-Amyl methyl ether (TAME) | TM208  | µg/l     |     | 1                  | /               | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | -  |
|          | Naphthalene                   | TM208  | µg/l     |     | 1                  | 2               | 10                                   | <1             | <1           | <1           | <1           | 3.36         | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | -  |
|          | 1,2,3-Trichlorobenzene        | TM208  | µg/l     |     | 1                  | 0.4             | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | -  |
|          | 1,3,5-Trichlorobenzene        | TM208  | µg/l     |     | 1                  | 0.4             | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | -  |
|          | Sum of detected Xylenes       | TM208  | µg/l     |     | 2                  | 30              | 10                                   | 4.41           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2 |
|          | Sum of BTEX                   | TM208  | µg/l     |     | 5                  |                 | 10                                   | -              | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | <5 |
|          | VOC TIC                       | TM208  | No units |     |                    |                 |                                      | Not Detected   | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | -  |
|          | Total VOC TIC                 | TM208  | µg/l     |     |                    |                 |                                      | 0              | 0            | <10          | <10          | <10          | 12           | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | -  |

| TICS |   | Method | Units | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria | Sample Results |        |         |         |        |        |         |         |        |        |        |        |      |      |      |    |
|------|---|--------|-------|-----|--------------------|-----------------|--------------------------------------|----------------|--------|---------|---------|--------|--------|---------|---------|--------|--------|--------|--------|------|------|------|----|
|      |   |        |       |     |                    |                 |                                      | BH106A         | 106A   | 106A    | BH106A  | 106    | 106A   | 106A    | 106A    | 106A   | 106A   | 106A   | 106A   | 106A | 106A | 106A |    |
|      | (methylene)bis-phenol                             |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | Butylbenzoic acid                                 |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | Dibutylhydroxyphenylpropionic acid                |        | µg/l  |     | /                  | /               | 10                                   | -              | 12.4   | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | Dimethylcyclohexanedione                          |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | Ditertbutylhydroxyphenylpropionic acid            |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | Ethylmethylbenzenesulfonamide                     |        | µg/l  |     | /                  | /               | 10                                   | -              | 10.2   | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | Octadecanoic acid                                 |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | trimethylhexanoic acid                            |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | 53.6    | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | Dimethylheptanoic acid                            | TM176  | µg/l  |     | /                  | /               | 10                                   | -              | 22.4   | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | Hexadecanoic acid                                 | TM176  | µg/l  |     | /                  | /               | 10                                   | -              | 10.7   | 28.4    | -       | -      | 40     | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | Isomers of Hexadecenoic acid                      |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | 11.8 | -    | -  |
|      | Dimethylethylhydroxybenzoic acid                  |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | Hexadecane  |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | mixed hydrocarbons                                |        | µg/l  |     | /                  | /               | 10                                   | 199            | 27.6   | 70.4    | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | Phenol(methylene)bis-                             |        | µg/l  |     | /                  | /               | 10                                   | 20.3           | -      | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | Tertbutylbenzoic acid                             |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | Benzothiazolone                                   | TM176  | µg/l  |     | /                  | /               | 10                                   | 58.5           | 45.6   | 78.2    | -       | -      | 38.6   | -       | 25.3    | -      | -      | -      | -      | -    | -    | -    | -  |
|      | Tertbutylhydroxyphenylpropionic acid              |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | 45.5    | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | trimethyl silanol                                 |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | -       | -       | -      | 12     | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | 2(3H)-Benzothiazolone                             |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | 3,5,5-trimethyl Hexanoic acid                     |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | 4,4'-(1-methylene)bisphenol                       |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | Camphor   |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | 10.4 | -    | -  |
|      | Cyclic octatomic sulfur                           |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | Isomers of Ditertbutylhydroxyphenylpropionic acid |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | 13.3 | -    | -  |
|      | Isomers of TertbutylBenzoic acid                  |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | 13.8 | -    | -  |
|      | N-ethyl-2-methyl benzenesulfonamide               |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | Sulfur  |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | Undecane  |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | Isomer of Benzothiazolone                         |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | 51.5 | 18.1 | -  |
|      | Isomer of Bisdimethylethylhydroxy Benzoic acid    |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | isomer of trimethyl hexanoic acid                 |        | µg/l  |     | /                  | /               | 10                                   | -              | -      | -       | -       | -      | -      | -       | -       | -      | -      | -      | -      | -    | -    | -    | -  |
|      | Total VOC   |        | µg/l  |     | 1                  |                 | 10                                   | 18.15          | 4.37   | 6.42    | 1.65    | <1     | 26.53  | <1      | 1.1     | 1.91   | <1     | <1     | <1     | <1   | <1   | <1   | <1 |
|      | Total PAH   |        | µg/l  |     |                    |                 | 10                                   | 1.0647         | 0.1067 | 0.00873 | 0.06627 | <0.002 | 1.3679 | 0.05537 | 0.16842 | 0.3413 | 0.1848 | 0.0812 | 0.1012 |      |      |      |    |

Point of Ayre Landfill's  
Groundwater Sample Results

ALS

SDG(s): 190315-102  
 Customer: Waste Management Unit Douglas (12297)  
 Client Reference / Point of Ayre  
 Order no:

| Customer Sample ID     | BH107      | 107        | 107        | 107        | 107         | 107        | 107        | 107        | 107        | 107        | 107        | 107        | 107        | 107        | 107        | 107        | 107         |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 5.80-      | 6.20-      | 6.20-      | 5.90-      | -           | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | 6.02-       |
| AGS id                 |            |            |            |            |             |            |            |            |            |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 11/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |            |            |            |            |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |            |            |            |            |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |            |            |            |            |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |            |            |            |            |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |            |            |            |            |             |
| Lab Sample Number      | 19558428   | 20363921   | 20719341   | 21297978   | 21836355    | 22246286   | 22802689   | 23404135   | 23838528   | 24394412   | 26881763   | 27276240   |            |            |            |            |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |            |            |            |            |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |            |            |            |            |             |

| Analysis                                    | Test                                   | Method      | Units  | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |       |        |        |       |        |        |       |        |        |        |       |       |       |
|---|--|-------------|--------|-----|--------------------|-----------------|--------------------------------------|-------|--------|--------|-------|--------|--------|-------|--------|--------|--------|-------|-------|-------|
| <b>Carbon</b>                               |  |             |        |     |                    |                 |                                      |       |        |        |       |        |        |       |        |        |        |       |       |       |
|   | Carbon, Organic (diss.filt)            | TM090       | mg/l   |     | 6                  | /               | /                                    | 10    | <3     | 4.67   | <3    | 3.46   | 3.55   | 4.81  | <3     | <3     | 3.47   | 5.02  | 7.02  | <3    |
| <b>Inorganics</b>                           |  |             |        |     |                    |                 |                                      |       |        |        |       |        |        |       |        |        |        |       |       |       |
|   | Fluoride                               | TM104       | mg/l   |     | 0.5                | /               | /                                    | 10    | <0.5   | <0.5   | <0.5  | <0.5   | <0.5   | <0.5  | <0.5   | <0.5   | <0.5   | <0.5  | <0.5  | -     |
|   | Ionic balance                          | Calculation | % Diff |     |                    | /               | /                                    |       | 1.84   | -0.515 | 4.44  | -0.767 | 7.41   | 3.54  | -2.27  | -2.37  | -5.53  | 3.62  | <0.05 | -     |
|   | Nitrite as NO2                         | TM184       | mg/l   |     | 0.05               | 0.5             | /                                    | 1     | <0.05  | <0.05  | 0.313 | <0.05  | <0.05  | <0.05 | <0.05  | <0.05  | 0.059  | <0.05 | <0.05 | -     |
|   | Phosphate (Ortho as PO4)               | TM184       | mg/l   |     | 0.05               | /               | /                                    |       | <0.05  | <0.05  | <0.05 | <0.05  | <0.05  | <0.05 | <0.05  | <0.05  | <0.05  | <0.05 | 12.4  | -     |
|   | Sulphate                               | TM184       | mg/l   |     | 2                  | /               | 250                                  | 2500  | 17.4   | 14.6   | 8.7   | 16.9   | 12.5   | 8.7   | 11.2   | 6.4    | 7.5    | 7.5   | <0.01 | -     |
|   | Sulphide                               | TM101       | mg/l   |     | 0.01               | /               | /                                    |       | <0.01  | <0.01  | <0.01 | <0.01  | 0.0342 | <0.01 | <0.01  | <0.01  | <0.01  | <0.01 | 82.6  | -     |
|   | Chloride                               | TM184       | mg/l   |     | 2                  | /               | 250                                  | 2000  | 58.8   | 115    | 28.9  | 63.5   | 93     | 111   | 35.1   | 33.6   | 72.6   | 82.6  | 27.6  | 19    |
|   | COD, unfiltered                        | TM107       | mg/l   |     | 7                  | /               | /                                    |       | 78.1   | 13.5   | <7    | 11.1   | 17.2   | 18.6  | 22.2   | <7     | 10.7   | 17.5  | 12.4  | -     |
|   | Nitrogen, Total                        | TM212       | mg/l   |     | 1                  | /               | /                                    |       | 5.07   | 10.8   | 4.8   | 5.73   | 7.44   | 8.41  | 5      | 3.45   | 6      | 9.21  | -     | -     |
|   | Ammoniacal Nitrogen as NH4             | TM099       | mg/l   |     | 0.3                | /               | 0.5                                  | 5     | 0.404  | 9.98   | 1.71  | 0.409  | 8.47   | 12.1  | 0.375  | 2.03   | 6.18   | 10.2  | 14.9  | 1.07  |
|   | Nitrate as NO3                         | TM184       | mg/l   |     | 0.3                | /               | 50                                   | 500   | 19.6   | 12.7   | 17.1  | 27.3   | 9.9    | 7.89  | 23.6   | 9.42   | 9.99   | 7.09  | 4.65  | -     |
|   | BOD, unfiltered                        | TM045       | mg/l   |     | 1                  | /               | /                                    |       | -      | 2.08   | <1    | <1     | -      | <1    | <1     | <1     | <1     | <1    | 5.16  | -     |
|   | Alkalinity, Total as CaCO3             | TM043       | mg/l   |     | 2                  | /               | /                                    |       | 270    | 408    | 207   | 210    | 281    | 423   | 135    | 185    | -      | 384   | 424   | -     |
|   | Alkalinity, Total as CaCO3 (diss.filt) | TM043       | mg/l   |     | 2                  | /               | /                                    |       | -      | -      | -     | -      | -      | -     | -      | -      | 330    | -     | -     | -     |
|   | Suspended solids, Total                | TM022       | mg/l   |     | 9                  | /               | /                                    |       | 33.9   | 157    | 4.45  | 12.9   | 14.6   | 34    | 314    | <2     | 24.6   | 3     | 2.2   | -     |
| <b>Filtered (Dissolved) Metals</b>          |  |             |        |     |                    |                 |                                      |       |        |        |       |        |        |       |        |        |        |       |       |       |
|   | Mercury (diss.filt)                    | TM183       | µg/l   |     | 0.01               | 0.07            | /                                    | 10    | <0.01  | <0.01  | <0.01 | <0.01  | <0.01  | <0.01 | <0.01  | <0.01  | <0.01  | <0.01 | <0.01 | -     |
|   | Arsenic (diss.filt)                    | TM152       | µg/l   |     | 0.5                | 25              | /                                    | 500   | 0.708  | 0.815  | 0.836 | 0.541  | 0.744  | 1.19  | 1.09   | <0.5   | 0.695  | 1.37  | 2.35  | 1.3   |
|   | Cadmium (diss.filt)                    | TM152       | µg/l   |     | 0.08               | 0.2             | /                                    | 50    | <0.08  | 0.0923 | <0.08 | <0.08  | <0.08  | <0.08 | <0.08  | <0.08  | <0.08  | <0.08 | <0.08 | -     |
|   | Chromium (diss.filt)                   | TM152       | µg/l   |     | 1                  | /               | 50                                   | 500   | <1     | <1     | <1    | <1     | <1     | <1    | <1     | <1     | <1     | <1    | <1    | -     |
|   | Copper (diss.filt)                     | TM152       | µg/l   |     | 0.3                | 3.76            | /                                    | 1000  | <0.3   | 2.85   | 0.556 | 0.894  | 1.39   | 2.34  | 2.05   | 0.481  | 1.59   | 1.97  | 2.42  | -     |
|   | Lead (diss.filt)                       | TM152       | µg/l   |     | 0.2                | 1.3             | /                                    | 500   | 0.319  | 0.707  | <0.2  | <0.2   | <0.2   | <0.2  | <0.2   | <0.2   | <0.2   | <0.2  | <0.2  | -     |
|   | Manganese (diss.filt)                  | TM152       | µg/l   |     | 3                  | /               | 50                                   | 500   | 250    | 2770   | 292   | 121    | 1830   | 1580  | 43.9   | 332    | 1090   | 1790  | 2120  | 32.6  |
|   | Nickel (diss.filt)                     | TM152       | µg/l   |     | 0.4                | 8.6             | /                                    | 500   | 1.37   | 6.54   | 0.888 | 0.988  | 4.1    | 4.22  | 1.1    | 1.08   | 3.37   | 4.57  | 5.29  | 1.33  |
|   | Zinc (diss.filt)                       | TM152       | µg/l   |     | 1                  | 7.9             | /                                    | 1000  | 1.91   | 18.2   | 1.51  | 2.27   | 2.4    | 2.03  | 23.2   | 1.51   | 8.75   | 115   | 15.1  | 22.3  |
|   | Sodium (Dis.Filt)                      | TM152       | mg/l   |     | 0.076              | /               | 200                                  | 1500  | 50.6   | 74.1   | 35.1  | 41.6   | 64.8   | 83.2  | 23.8   | 23.4   | 40.4   | 65.5  | 51.5  | -     |
|   | Magnesium (Dis.Filt)                   | TM152       | mg/l   |     | 0.036              | /               | /                                    | 500   | 21.8   | 27.2   | 13.7  | 19     | 24.3   | 29.3  | 11.5   | 12.3   | 20.2   | 26.8  | 23.7  | -     |
|   | Potassium (Dis.Filt)                   | TM152       | mg/l   |     | 0.2                | /               | /                                    | 120   | 3.77   | 13.5   | 5.05  | 2.95   | 10.5   | 15.1  | 1.95   | 4.64   | 7.14   | 12.7  | 14.4  | -     |
|   | Calcium (Dis.Filt)                     | TM152       | mg/l   |     | 0.2                | /               | /                                    | 1000  | 76.3   | 112    | 60.9  | 66.3   | 93.9   | 117   | 91.2   | 54.8   | 82     | 107   | 108   | -     |
|   | Iron (Dis.Filt)                        | TM152       | mg/l   |     | 0.019              | 1               | /                                    | 2     | 0.0493 | 0.228  | 0.189 | 0.0421 | 0.02   | 0.241 | <0.019 | 0.0323 | 0.0698 | 0.375 | 0.907 | 0.263 |
| <b>Unfiltered (Total) Metals</b>            |  |             |        |     |                    |                 |                                      |       |        |        |       |        |        |       |        |        |        |       |       |       |
|   | Phosphorus (tot.unfilt)                | TM152       | µg/l   |     | 20                 | /               | /                                    | 10000 | 27.8   | 26.6   | 50    | 43.8   | 261    | 29.7  | 181    | 34.2   | 21.9   | 35.5  | <20   | -     |
|   | Hardness, Total as CaCO3 unfiltered    | TM152       | mg/l   |     | 0.35               | /               | /                                    |       | 277    | 414    | 213   | 251    | 371    | 416   | 307    | 194    | 277    | 360   | 383   | -     |
| <b>Gasoline Range Organics (GRO)</b>        |  |             |        |     |                    |                 |                                      |       |        |        |       |        |        |       |        |        |        |       |       |       |
|   | Total Aliphatics >C5-C12               | TM245       | µg/l   |     | 10                 | /               | /                                    |       | <10    | <10    | <10   | <10    | <10    | <10   | <10    | <10    | <10    | <10   | <10   | -     |
|   | Total Aromatics >EC5-EC12              | TM245       | µg/l   |     | 10                 | /               | /                                    |       | <10    | <10    | <10   | <10    | <10    | <10   | <10    | <10    | <10    | <10   | <10   | -     |
| <b>TPH Criteria Working Group (TPH CWG)</b> |  |             |        |     |                    |                 |                                      |       |        |        |       |        |        |       |        |        |        |       |       |       |
|   | GRO Surrogate % recovery**             | TM245       | %      |     |                    | /               | /                                    |       | 100    | 90     | 106   | 98     | 89     | 108   | 89     | 98     | 104    | 102   | 101   | -     |
|   | GRO >C5-C12                            | TM245       | µg/l   |     | 50                 | /               | /                                    |       | <50    | <50    | <50   | <50    | <50    | <50   | <50    | <50    | <50    | <50   | <50   | -     |
|   | Methyl tertiary butyl ether (MTBE)     | TM245       | µg/l   |     | 3                  | /               | 15                                   |       | <3     | <3     | <3    | <3     | <3     | <3    | <3     | <3     | <3     | <3    | <3    | -     |
|   | Benzene                                | TM245       | µg/l   |     | 7                  | 8               | /                                    |       | <7     | <7     | <7    | <7     | <7     | <7    | <7     | <7     | <7     | <7    | <7    | -     |
|   | Toluene                                | TM245       | µg/l   |     | 4                  | 74              | /                                    |       | <4     | <4     | <4    | <4     | <4     | <4    | <4     | <4     | <4     | <4    | <4    | -     |
|   | Ethylbenzene                           | TM245       | µg/l   |     | 5                  | 20              | /                                    |       | <5     | <5     | <5    | <5     | <5     | <5    | <5     | <5     | <5     | <5    | <5    | -     |
|   | m,p-Xylene                             | TM245       | µg/l   |     | 8                  | 30              | /                                    |       | <8     | <8     | <8    | <8     | <8     | <8    | <8     | <8     | <8     | <8    | <8    | -     |
|   | o-Xylene                               | TM245       | µg/l   |     | 3                  | 30              | /                                    |       | <3     | <3     | <3    | <3     | <3     | <3    | <3     | <3     | <3     | <3    | <3    | -     |
|   | Sum of detected Xylenes                | TM245       | µg/l   |     | 11                 | 30              | /                                    |       | <11    | <11    | <11   | <11    | <11    | <11   | <11    | <11    | <11    | <11   | <11   | -     |
|   | Sum of detected BTEX                   | TM245       | µg/l   |     | 28                 | /               | /                                    |       | <28    | <28    | <28   | <28    | <28    | <28   | <28    | <28    | <28    | <28   | <28   | -     |
|   | Aliphatics >C5-C6                      | TM245       | µg/l   |     | 10                 | /               | /                                    |       | <10    | <10    | <10   | <10    | <10    | <10   | <10    | <10    | <10    | <10   | <10   | -     |
|   | Aliphatics >C6-C8                      | TM245       | µg/l   |     | 10                 | /               | /                                    |       | <10    | <10    | <10   | <10    | <10    | <10   | <10    | <10    | <10    | <10   | <10   | -     |
|   | Aliphatics >C8-C10                     | TM245       | µg/l   |     | 10                 | /               | /                                    |       | <10    | <10    | <10   | <10    | <10    | <10   | <10    | <10    | <10    | <10   | <10   | -     |
|   | Aliphatics >C10-C12                    | TM245       | µg/l   |     | 10                 | /               | /                                    |       | <10    | <10    | <10   | <10    | <10    | <10   | <10    | <10    | <10    | <10   | <10   | -     |
|   | Aliphatics >C12-C16 (aq)               | TM174       | µg/l   |     | 10                 | /               | /                                    |       | <10    | <10    | <10   | <10    | <10    | <10   | <10    | <10    | <10    | <10   | <10   | -     |
|   | Aliphatics >C16-C21 (aq)               | TM174       | µg/l   |     | 10                 | /               | /                                    |       | <10    | <10    | <10   | <10    | <10    | <10   | <10    | <10    | <10    | <10   | <10   | -     |
|   | Aliphatics >C21-C35 (aq)               | TM174       | µg/l   |     | 10                 | /               | /                                    |       | <10    | <10    | <10   | <10    | <10    | <10   | <10    | <10    | <10    | <10   | <10   | -     |
|   | Total Aliphatics >C12-C3               |             |        |     |                    |                 |                                      |       |        |        |       |        |        |       |        |        |        |       |       |       |









Point of Ayre Landfill's  
Groundwater Sample Results

ALS

| Customer Sample ID     | BH108      | 108        | 108        | 108        | 108         | 108        | 108        | 108        | 108        | 108        | 108        | 108        | 108        | 108         |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 4.86-      | 5.02-      | 5.02-      | 4.87-      | -           | -          | -          | -          | -          | -          | -          | -          | -          | 4.82-       |
| AGS Id                 |            |            |            |            |             |            |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 12/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |            |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |            |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |            |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |            |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |            |             |
| Lab Sample Number      | 19558443   | 20363928   | 20719349   | 21297986   | 21836333    | 22246294   | 22802701   | 23404144   | 23838536   | 24394427   | 26881765   | 27276239   |            |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |            |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |            |             |

| Analysis | Test                             | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|----------|----------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----|---|
|          | 1,2,4-Trichlorobenzene (aq)      | TM176  | µg/l     | 1   | 0.4                | /               |                                      | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | 1,2-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | 1,3-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | 1,4-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | 2,4,5-Trichlorophenol (aq)       | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | 2,4,6-Trichlorophenol (aq)       | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | 2,4-Dichlorophenol (aq)          | TM176  | µg/l     | 1   | 0.42               | /               | 5                                    | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | 2,4-Dimethylphenol (aq)          | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | 2,4-Dinitrotoluene (aq)          | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | 2,6-Dinitrotoluene (aq)          | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | 2-Chloronaphthalene (aq)         | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | 2-Chlorophenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | 2-Methylnaphthalene (aq)         | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | 2-Methylphenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | 2-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | 2-Nitrophenol (aq)               | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | 3-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | 4-Bromophenylphenylether (aq)    | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | 4-Chloro-3-methylphenol (aq)     | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | 4-Chloroaniline (aq)             | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | 4-Chlorophenylphenylether (aq)   | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | 4-Methylphenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | 4-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | 4-Nitrophenol (aq)               | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | Azobenzene (aq)                  | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | bis(2-Chloroethyl)ether (aq)     | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | bis(2-Chloroethoxy)methane (aq)  | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | bis(2-Ethylhexyl) phthalate (aq) | TM176  | µg/l     | 2   | /                  | /               |                                      | <2           | <2           | <2           | <2           | <4           | <8           | <2           | <2           | <2           | <4  | - |
|          | Butylbenzyl phthalate (aq)       | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | Benzo(k)fluoranthene (aq)        | TM176  | µg/l     | 1   | /                  | 0.1             |                                      | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | Carbazole (aq)                   | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | Dibenzofuran (aq)                | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | n-Dibutyl phthalate (aq)         | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | Diethyl phthalate (aq)           | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | Dimethyl phthalate (aq)          | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | n-Dioctyl phthalate (aq)         | TM176  | µg/l     | 5   | /                  | /               |                                      | <5           | <5           | <5           | <5           | <10          | <20          | <5           | <5           | <5           | <20 | - |
|          | Hexachlorobenzene (aq)           | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | Hexachlorobutadiene (aq)         | TM176  | µg/l     | 1   | 0.6                | /               | 10                                   | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | Pentachlorophenol (aq)           | TM176  | µg/l     | 1   | 0.4                | /               | 5                                    | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | Phenol (aq)                      | TM176  | µg/l     | 1   | 7.7                | /               | 5                                    | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | n-Nitroso-n-dipropylamine (aq)   | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | Hexachloroethane (aq)            | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | Nitrobenzene (aq)                | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | Isophorone (aq)                  | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | Hexachlorocyclopentadiene (aq)   | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | Indeno(1,2,3-cd)pyrene (aq)      | TM176  | µg/l     | 1   | /                  | 0.1             |                                      | <1           | <1           | <1           | <1           | <2           | <4           | <1           | <1           | <1           | <4  | - |
|          | SVOC TIC (aq)                    | TM176  | No units | /   | /                  | /               |                                      | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | -   | - |
|          | Total SVOC TIC                   | TM176  | µg/l     | 10  | /                  | /               |                                      | <10          | <10          | <10          | <10          | <20          | <40          | <10          | <10          | <10          | -   | - |

**Volatile Organic Compounds (VOCs)**

|                                    |       |      |   |     |     |    |      |      |     |      |      |     |      |      |      |      |     |   |
|------------------------------------|-------|------|---|-----|-----|----|------|------|-----|------|------|-----|------|------|------|------|-----|---|
| Dibromofluoromethane**             | TM208 | %    | / | /   |     |    | 113  | 112  | 111 | 117  | 109  | 108 | 116  | 115  | 112  | 112  | 112 | - |
| Toluene-d8**                       | TM208 | %    | / | /   |     |    | 102  | 97.4 | 100 | 96.7 | 99   | 98  | 99.7 | 98.8 | 96.7 | 96.7 | 100 | - |
| 4-Bromofluorobenzene**             | TM208 | %    | / | /   |     |    | 95.8 | 99.2 | 101 | 93.9 | 98.8 | 104 | 99.1 | 95.6 | 95.3 | 95.3 | 94  | - |
| Dichlorodifluoromethane            | TM208 | µg/l | 1 | /   | /   |    | <1   | <1   | <1  | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1  | - |
| Chloromethane                      | TM208 | µg/l | 1 | /   | /   | 10 | <1   | <1   | <1  | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1  | - |
| Vinyl chloride                     | TM208 | µg/l | 1 | /   | 0.5 | 10 | <1   | <1   | <1  | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1  | - |
| Bromomethane                       | TM208 | µg/l | 1 | /   | /   |    | <1   | <1   | <1  | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1  | - |
| Chloroethane                       | TM208 | µg/l | 1 | /   | /   | 10 | <1   | <1   | <1  | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1  | - |
| Trichlorofluoromethane             | TM208 | µg/l | 1 | /   | /   | 10 | <1   | <1   | <1  | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1  | - |
| 1,1-Dichloroethene                 | TM208 | µg/l | 1 | /   | /   | 10 | <1   | <1   | <1  | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1  | - |
| Carbon disulphide                  | TM208 | µg/l | 1 | /   | /   |    | <1   | <1   | <1  | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1  | - |
| Dichloromethane                    | TM208 | µg/l | 1 | 20  | /   | 10 | <3   | <3   | <3  | <3   | <3   | <3  | <3   | <3   | <3   | <3   | <3  | - |
| Methyl tertiary butyl ether (MTBE) | TM208 | µg/l | 1 | /   | 15  |    | <1   | <1   | <1  | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1  | - |
| trans-1,2-Dichloroethene           | TM208 | µg/l | 1 | /   | 50  | 10 | <1   | <1   | <1  | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1  | - |
| 1,1-Dichloroethane                 | TM208 | µg/l | 1 | /   | /   | 10 | <1   | <1   | <1  | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1  | - |
| cis-1,2-Dichloroethene             | TM208 | µg/l | 1 | /   | 50  | 10 | <1   | <1   | <1  | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1  | - |
| 2,2-Dichloropropane                | TM208 | µg/l | 1 | /   | /   | 10 | <1   | <1   | <1  | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1  | - |
| Bromochloromethane                 | TM208 | µg/l | 1 | /   | /   | 10 | <1   | <1   | <1  | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1  | - |
| Chloroform                         | TM208 | µg/l | 1 | 2.5 | /   | 10 | <1   | <1   | <1  | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1  | - |
| 1,1,1-Trichloroethane              | TM208 | µg/l | 1 | /   | /   | 10 | <1   | <1   | <1  | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1  | - |
| 1,1-Dichloropropene                | TM208 | µg/l | 1 | /   | /   |    |      |      |     |      |      |     |      |      |      |      |     |   |



Point of Ayre Landfill's  
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| Customer Sample ID     | BH108      | 108        | 108        | 108        | 108         | 108        | 108        | 108        | 108        | 108        | 108        | 108        | 108         |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 4.86-      | 5.02-      | 5.02-      | 4.87-      | -           | -          | -          | -          | -          | -          | -          | -          | 4.82-       |
| AGS Id                 |            |            |            |            |             |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 12/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |             |
| Lab Sample Number      | 19558443   | 20363928   | 20719349   | 21297986   | 21836333    | 22246294   | 22802701   | 23404144   | 23838536   | 24394427   | 26881765   | 27276239   |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |             |

| Analysis | Test                          | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |              |              |              |              |              |              |              |              |     |
|----------|-------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----|
|          | 1,2-Dichlorobenzene           | TM208  | µg/l     |     | 1                  | /               | 10                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | 1,2-Dibromo-3-chloropropane   | TM208  | µg/l     |     | 1                  | /               | 10                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | 1,2,4-Trichlorobenzene        | TM208  | µg/l     |     | 1                  | 0.4             | 10                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | Hexachlorobutadiene           | TM208  | µg/l     |     | 1                  | 0.6             | 10                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | tert-Amyl methyl ether (TAME) | TM208  | µg/l     |     | 1                  | /               |                                      | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | Naphthalene                   | TM208  | µg/l     |     | 1                  | 2               |                                      | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | 1,2,3-Trichlorobenzene        | TM208  | µg/l     |     | 1                  | 0.4             | 10                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | 1,3,5-Trichlorobenzene        | TM208  | µg/l     |     | 1                  | 0.4             | 10                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | Sum of detected Xylenes       | TM208  | µg/l     |     | 2                  | 30              |                                      | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2  |
|          | Sum of BTEX                   | TM208  | µg/l     |     | 5                  |                 |                                      | -            | -            | -            | -            | -            | -            | -            | -            | <5  |
|          | VOC TIC                       | TM208  | No units |     |                    |                 |                                      | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | -   |
|          | Total VOC TIC                 | TM208  | µg/l     |     |                    |                 |                                      | 0            | 0            | 0            | <10          | <10          | <10          | <10          | <10          | <10 |

| TICS |   |       |      |  |   |   |  |         |        |        |        |        |         |         |         |        |
|------|---|-------|------|--|---|---|--|---------|--------|--------|--------|--------|---------|---------|---------|--------|
|      | (methylene)bis-phenol                             |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | Butylbenzoic acid                                 |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | Dibutylhydroxyphenylpropionic acid                |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | Dimethylcyclohexanediene                          |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | Ditertbutylhydroxyphenylpropionic acid            |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | Ethylmethylbenzenesulfonamide                     |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | Octadecanoic acid                                 |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | trimethylhexanoic acid                            |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | Dimethylheptanoic acid                            | TM176 | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | 11.4    | -      |
|      | Hexadecanoic acid                                 | TM176 | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | Isomers of Hexadecenoic acid                      |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | Dimethylethylhydroxybenzoic acid                  |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | Hexadecane  |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | mixed hydrocarbons                                |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | Phenol(methylene)bis-                             |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | Tertbutylbenzoic acid                             |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | Benzothiazolone                                   | TM176 | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | Tertbutylhydroxyphenylpropionic acid              |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | 2(3H)-Benzothiazolone                             |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | 3,5,5-trimethyl Hexanoic acid                     |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | 4,4'-(1-methylene)bisphenol                       |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | Camphor   |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | Cyclic octaatomic sulfur                          |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | Isomers of Ditertbutylhydroxyphenylpropionic acid |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | Isomers of TertbutylBenzoic acid                  |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | N-ethyl-2-methyl benzenesulfonamide               |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | Sulfur  |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | Undecane  |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | Benzothiazolone                                   | TM176 | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | Isomer of Benzothiazolone                         |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | Isomer of Bisdimethylethylhydroxy Benzoic acid    |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | isomer of trimethyl hexanoic acid                 |       | µg/l |  | / | / |  | -       | -      | -      | -      | -      | -       | -       | -       | -      |
|      | Total VOC   |       | µg/l |  | 1 |   |  | <1      | <1     | <1     | <1     | <1     | <1      | <1      | <1      | <1     |
|      | Total PAH   |       | µg/l |  |   |   |  | 0.02364 | <0.002 | <0.002 | <0.002 | <0.002 | 0.01395 | 0.49673 | 0.00115 | <0.002 |

Point of Ayre Landfill's  
Groundwater Sample Results

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| Customer Sample ID     | BH109      | BH109      | BH109      | BH109      | BH109    | BH109      | BH109      | BH109      | BH109      | BH109      | BH109      | BH109      | BH109 | BH109 |
|------------------------|------------|------------|------------|------------|----------|------------|------------|------------|------------|------------|------------|------------|-------|-------|
| Depth                  | 5.79-      |            |            |            |          |            |            |            |            |            |            |            |       |       |
| AGS id                 |            |            |            |            |          |            |            |            |            |            |            |            |       |       |
| Sample Type            | UND_WATER  |            |            |            |          |            |            |            |            |            |            |            |       |       |
| Sampled Date           | 11/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 3/2/2020 | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 15/09/2022 | 05/12/2022 |       |       |
| Sample Received Date   | 15/03/2019 |            |            |            |          |            |            |            |            |            |            |            |       |       |
| Final Instruction Date | 25/03/2019 |            |            |            |          |            |            |            |            |            |            |            |       |       |
| Report Completed Date  | 27/03/2019 |            |            |            |          |            |            |            |            |            |            |            |       |       |
| SDG                    | 190315-102 |            |            |            |          |            |            |            |            |            |            |            |       |       |
| Lab Sample Number      | 19558445   |            |            |            |          |            |            |            |            |            |            |            |       |       |
| Sample Temperature     | 9.8        |            |            |            |          |            |            |            |            |            |            |            |       |       |
| Sample Time            |            |            |            |            |          |            |            |            |            |            |            |            |       |       |

| Analysis                                    | Test                                     | Method      | Units  | LOD   | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |         |   |   |   |   |   |   |   |
|---|--|-------------|--------|-------|--------------------|-----------------|--------------------------------------|---------|---|---|---|---|---|---|---|
| <b>Carbon</b>                               |  |             |        |       |                    |                 |                                      |         |   |   |   |   |   |   |   |
|   | Carbon, Organic (diss.filt)              | TM090       | mg/l   | 6     | /                  | /               | 10                                   | 20.8    | - | - | - | - | - | - | - |
| <b>Inorganics</b>                           |  |             |        |       |                    |                 |                                      |         |   |   |   |   |   |   |   |
|   | Fluoride                                 | TM104       | mg/l   | 0.5   | /                  | /               | 10                                   | <0.5    | - | - | - | - | - | - | - |
|   | Ionic balance                            | Calculation | % Diff |       | /                  | /               |                                      | 2.3     | - | - | - | - | - | - | - |
|   | Nitrite as NO2                           | TM184       | mg/l   | 0.05  | 0.5                | /               | 1                                    | <0.05   | - | - | - | - | - | - | - |
|   | Phosphate (Ortho as PO4)                 | TM184       | mg/l   | 0.05  | /                  | /               |                                      | <0.05   | - | - | - | - | - | - | - |
|   | Sulphate                                 | TM184       | mg/l   | 2     | /                  | 250             | 2500                                 | 31      | - | - | - | - | - | - | - |
|   | Sulphide                                 | TM101       | mg/l   | 0.01  | /                  | /               |                                      | <0.01   | - | - | - | - | - | - | - |
|   | Chloride                                 | TM184       | mg/l   | 2     | /                  | 250             | 2000                                 | 74      | - | - | - | - | - | - | - |
|   | COD, unfiltered                          | TM107       | mg/l   | 7     | /                  | /               |                                      | 133     | - | - | - | - | - | - | - |
|   | Nitrogen, Total                          | TM212       | mg/l   | 1     | /                  | /               |                                      | 2.57    | - | - | - | - | - | - | - |
|   | Ammoniacal Nitrogen as NH4               | TM099       | mg/l   | 0.3   | /                  | 0.5             | 5                                    | 1.06    | - | - | - | - | - | - | - |
|   | Nitrate as NO3                           | TM184       | mg/l   | 0.3   | /                  | 50              | 500                                  | <0.3    | - | - | - | - | - | - | - |
|   | BOD, unfiltered                          | TM045       | mg/l   | 1     | /                  | /               |                                      |         | - | - | - | - | - | - | - |
|   | Alkalinity, Total as CaCO3               | TM043       | mg/l   | 2     | /                  | /               |                                      | 683     | - | - | - | - | - | - | - |
|   | Alkalinity, Total as CaCO3 (diss.filt)   | TM043       | mg/l   | 2     | /                  | /               |                                      |         | - | - | - | - | - | - | - |
|   | Suspended solids, Total                  | TM022       | mg/l   | 9     | /                  | /               |                                      | 285     | - | - | - | - | - | - | - |
| <b>Filtered (Dissolved) Metals</b>          |  |             |        |       |                    |                 |                                      |         |   |   |   |   |   |   |   |
|   | Mercury (diss.filt)                      | TM183       | µg/l   | 0.01  | 0.07               | /               | 10                                   | <0.01   | - | - | - | - | - | - | - |
|   | Arsenic (diss.filt)                      | TM152       | µg/l   | 0.5   | 25                 | /               | 500                                  | 12.5    | - | - | - | - | - | - | - |
|   | Cadmium (diss.filt)                      | TM152       | µg/l   | 0.08  | 0.2                | /               | 50                                   | <0.08   | - | - | - | - | - | - | - |
|   | Chromium (diss.filt)                     | TM152       | µg/l   | 1     | /                  | 50              | 500                                  | <1      | - | - | - | - | - | - | - |
|   | Copper (diss.filt)                       | TM152       | µg/l   | 0.3   | 3.76               | /               | 1000                                 | <0.3    | - | - | - | - | - | - | - |
|   | Lead (diss.filt)                         | TM152       | µg/l   | 0.2   | 1.3                | /               | 500                                  | <0.2    | - | - | - | - | - | - | - |
|   | Manganese (diss.filt)                    | TM152       | µg/l   | 3     | /                  | 50              | 500                                  | 4830    | - | - | - | - | - | - | - |
|   | Nickel (diss.filt)                       | TM152       | µg/l   | 0.4   | 8.6                | /               | 500                                  | 8.05    | - | - | - | - | - | - | - |
|   | Zinc (diss.filt)                         | TM152       | µg/l   | 1     | 7.9                | /               | 1000                                 | 6.51    | - | - | - | - | - | - | - |
|   | Sodium (Dis.Filt)                        | TM152       | mg/l   | 0.076 | /                  | 200             | 1500                                 | 37.8    | - | - | - | - | - | - | - |
|   | Magnesium (Dis.Filt)                     | TM152       | mg/l   | 0.036 | /                  | /               | 500                                  | 27.8    | - | - | - | - | - | - | - |
|   | Potassium (Dis.Filt)                     | TM152       | mg/l   | 0.2   | /                  | /               | 120                                  | 5.61    | - | - | - | - | - | - | - |
|   | Calcium (Dis.Filt)                       | TM152       | mg/l   | 0.2   | /                  | /               | 1000                                 | 235     | - | - | - | - | - | - | - |
|   | Iron (Dis.Filt)                          | TM152       | mg/l   | 0.019 | 1                  | /               | 2                                    | 5.01    | - | - | - | - | - | - | - |
| <b>Unfiltered (Total) Metals</b>            |  |             |        |       |                    |                 |                                      |         |   |   |   |   |   |   |   |
|   | Phosphorus (tot.unfilt)                  | TM152       | µg/l   | 20    | /                  | /               | 10000                                | 92.6    | - | - | - | - | - | - | - |
|   | Hardness, Total as CaCO3 unfiltered      | TM152       | mg/l   | 0.35  | /                  | /               |                                      | 666     | - | - | - | - | - | - | - |
| <b>Gasoline Range Organics (GRO)</b>        |  |             |        |       |                    |                 |                                      |         |   |   |   |   |   |   |   |
|   | Total Aliphatics >C5-C12                 | TM245       | µg/l   | 10    | /                  | /               |                                      | <10     | - | - | - | - | - | - | - |
|   | Total Aromatics >EC5-EC12                | TM245       | µg/l   | 10    | /                  | /               |                                      | <10     | - | - | - | - | - | - | - |
| <b>TPH Criteria Working Group (TPH CWG)</b> |  |             |        |       |                    |                 |                                      |         |   |   |   |   |   |   |   |
|   | GRO Surrogate % recovery**               | TM245       | %      |       | /                  | /               |                                      | 100     | - | - | - | - | - | - | - |
|   | GRO >C5-C12                              | TM245       | µg/l   | 50    | /                  | /               |                                      | <50     | - | - | - | - | - | - | - |
|   | Methyl tertiary butyl ether (MTBE)       | TM245       | µg/l   | 3     | /                  | 15              |                                      | <3      | - | - | - | - | - | - | - |
|   | Benzene                                  | TM245       | µg/l   | 7     | 8                  | /               |                                      | <7      | - | - | - | - | - | - | - |
|   | Toluene                                  | TM245       | µg/l   | 4     | 74                 | /               |                                      | <4      | - | - | - | - | - | - | - |
|   | Ethylbenzene                             | TM245       | µg/l   | 5     | 20                 | /               |                                      | <5      | - | - | - | - | - | - | - |
|   | m,p-Xylene                               | TM245       | µg/l   | 8     | 30                 | /               |                                      | <8      | - | - | - | - | - | - | - |
|   | o-Xylene                                 | TM245       | µg/l   | 3     | 30                 | /               |                                      | <3      | - | - | - | - | - | - | - |
|   | Sum of detected Xylenes                  | TM245       | µg/l   | 11    | 30                 | /               |                                      | <11     | - | - | - | - | - | - | - |
|   | Sum of detected BTEX                     | TM245       | µg/l   | 28    | /                  | /               |                                      | <28     | - | - | - | - | - | - | - |
|   | Aliphatics >C5-C6                        | TM245       | µg/l   | 10    | /                  | /               |                                      | <10     | - | - | - | - | - | - | - |
|   | Aliphatics >C6-C8                        | TM245       | µg/l   | 10    | /                  | /               |                                      | <10     | - | - | - | - | - | - | - |
|   | Aliphatics >C8-C10                       | TM245       | µg/l   | 10    | /                  | /               |                                      | <10     | - | - | - | - | - | - | - |
|   | Aliphatics >C10-C12                      | TM245       | µg/l   | 10    | /                  | /               |                                      | <10     | - | - | - | - | - | - | - |
|   | Aliphatics >C12-C16 (aq)                 | TM174       | µg/l   | 10    | /                  | /               |                                      | <10     | - | - | - | - | - | - | - |
|   | Aliphatics >C16-C21 (aq)                 | TM174       | µg/l   | 10    | /                  | /               |                                      | 40      | - | - | - | - | - | - | - |
|   | Aliphatics >C21-C35 (aq)                 | TM174       | µg/l   | 10    | /                  | /               |                                      | <10     | - | - | - | - | - | - | - |
|   | Total Aliphatics >C12-C35 (aq)           | TM174       | µg/l   | 10    | /                  | /               |                                      | -       | - | - | - | - | - | - | - |
|   | Aromatics >EC5-EC7                       | TM245       | µg/l   | 10    | 8                  | /               |                                      | <10     | - | - | - | - | - | - | - |
|   | Aromatics >EC7-EC8                       | TM245       | µg/l   | 10    | 74                 | /               |                                      | <10     | - | - | - | - | - | - | - |
|   | Aromatics >EC8-EC10                      | TM245       | µg/l   | 10    | 20                 | /               |                                      | <10     | - | - | - | - | - | - | - |
|   | Aromatics >EC10-EC12                     | TM245       | µg/l   | 10    | /                  | /               |                                      | <10     | - | - | - | - | - | - | - |
|   | Aromatics >EC12-EC16 (aq)                | TM174       | µg/l   | 10    | /                  | /               |                                      | <10     | - | - | - | - | - | - | - |
|   | Aromatics >EC16-EC21 (aq)                | TM174       | µg/l   | 10    | /                  | /               |                                      | <10     | - | - | - | - | - | - | - |
|   | Aromatics >EC21-EC35 (aq)                | TM174       | µg/l   | 10    | /                  | /               |                                      | <10     | - | - | - | - | - | - | - |
|   | Total Aromatics >EC12-EC35 (aq)          | TM174       | µg/l   | 10    | /                  | /               |                                      | <10     | - | - | - | - | - | - | - |
|   | Total Aliphatics & Aromatics >C5-35 (aq) | TM174       | µg/l   | 10    | /                  | /               | 100                                  | 40      | - | - | - | - | - | - | - |
| <b>Polyaromatic Hydrocarbons (PAHs)</b>     |  |             |        |       |                    |                 |                                      |         |   |   |   |   |   |   |   |
|   | Naphthalene (aq)                         | TM178       | µg/l   | 0.01  | 2                  | /               |                                      | 0.04    | - | - | - | - | - | - | - |
|   | Acenaphthene (aq)                        | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005  | - | - | - | - | - | - | - |
|   | Acenaphthylene (aq)                      | TM178       | µg/l   | 0.005 | 5.8                | /               |                                      | <0.005  | - | - | - | - | - | - | - |
|   | Fluoranthene (aq)                        | TM178       | µg/l   | 0.005 | 0.0063             | /               |                                      | <0.005  | - | - | - | - | - | - | - |
|   | Anthracene (aq)                          | TM178       | µg/l   | 0.005 | 0.1                | /               |                                      | <0.005  | - | - | - | - | - | - | - |
|   | Phenanthrene (aq)                        | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005  | - | - | - | - | - | - | - |
|   | Fluorene (aq)                            | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005  | - | - | - | - | - | - | - |
|   | Chrysene (aq)                            | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005  | - | - | - | - | - | - | - |
|   | Pyrene (aq)                              | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | 0.00519 | - | - | - | - | - | - | - |
|   | Benzo(a)anthracene (aq)                  | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005  | - | - | - | - | - | - | - |
|   | Benzo(b)fluoranthene (aq)                | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005  | - | - | - | - | - | - | - |
|   | Benzo(k)fluoranthene (aq)                | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005  | - | - | - | - | - | - | - |
|   | Benzo(a)pyrene (aq)                      | TM178       | µg/l   | 0.002 | 0.00017            | /               |                                      | <0.002  | - | - | - | - | - | - | - |
|   | Dibenzo(a,h)anthracene (aq)              | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005  | - | - | - | - | - | - | - |
|   | Benzo(g,h,i)perylene (aq)                | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005  | - | - | - | - | - | - | - |
|   | Indeno(1,2,3-cd)pyrene (aq)              | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005  | - | - | - | - | - | - | - |
|   | PAH, Total Detected USEPA 16 (aq)        | TM178       | µg/l   | 0.082 | /                  | /               | 2                                    | <0.082  | - | - | - | - | - | - | - |
| <b>PCB's - (Solids)</b>                     |  |             |        |       |                    |                 |                                      |         |   |   |   |   |   |   |   |
|   | PCB congener 28                          | TM197       | µg/l   | 0.015 | /                  | /               |                                      | <0.015  | - | - | - | - | - | - | - |
|   | PCB congener 52                          | TM197       | µg/l   | 0.015 | /                  | /               |                                      | <0.015  | - | - | - | - | - | - | - |
|   | PCB congener 101                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | <0.015  | - | - | - | - | - | - | - |
|   | PCB congener 118                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | <0.015  | - | - | - | - | - | - | - |
|   | PCB congener 138                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | <0.015  | - | - | - | - | - | - | - |
|   | PCB congener 153                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | <0.015  | - | - | - | - | - | - | - |
|   | PCB congener 180                         | TM197       |        |       |                    |                 |                                      |         |   |   |   |   |   |   |   |

Point of Ayre Landfill's  
Groundwater Sample Results

ALS

| Customer Sample ID     | BH109      | BH109      | BH109      | BH109      | BH109    | BH109      | BH109      | BH109      | BH109      | BH109      | BH109      | BH109      | BH109 | BH109 | BH109 |
|------------------------|------------|------------|------------|------------|----------|------------|------------|------------|------------|------------|------------|------------|-------|-------|-------|
| Depth                  | 5.79-      |            |            |            |          |            |            |            |            |            |            |            |       |       |       |
| AGS id                 |            |            |            |            |          |            |            |            |            |            |            |            |       |       |       |
| Sample Type            | UND_WATER  |            |            |            |          |            |            |            |            |            |            |            |       |       |       |
| Sampled Date           | 11/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 3/2/2020 | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 15/09/2022 | 05/12/2022 |       |       |       |
| Sample Received Date   | 15/03/2019 |            |            |            |          |            |            |            |            |            |            |            |       |       |       |
| Final Instruction Date | 25/03/2019 |            |            |            |          |            |            |            |            |            |            |            |       |       |       |
| Report Completed Date  | 27/03/2019 |            |            |            |          |            |            |            |            |            |            |            |       |       |       |
| SDG                    | 190315-102 |            |            |            |          |            |            |            |            |            |            |            |       |       |       |
| Lab Sample Number      | 19558445   |            |            |            |          |            |            |            |            |            |            |            |       |       |       |
| Sample Temperature     | 9.8        |            |            |            |          |            |            |            |            |            |            |            |       |       |       |
| Sample Time            |            |            |            |            |          |            |            |            |            |            |            |            |       |       |       |

| Analysis | Test                             | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |      |   |   |   |   |   |   |   |   |
|----------|----------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|------|---|---|---|---|---|---|---|---|
|          | 1,2,4-Trichlorobenzene (aq)      | TM176  | µg/l     | 1   | 0.4                | /               | <1                                   | -    | - | - | - | - | - | - | - | - |
|          | 1,2-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <1                                   | -    | - | - | - | - | - | - | - | - |
|          | 1,3-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <1                                   | -    | - | - | - | - | - | - | - | - |
|          | 1,4-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <1                                   | -    | - | - | - | - | - | - | - | - |
|          | 2,4,5-Trichlorophenol (aq)       | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1   | - | - | - | - | - | - | - | - |
|          | 2,4,6-Trichlorophenol (aq)       | TM176  | µg/l     | 1   | /                  | /               | 5                                    | 4.61 | - | - | - | - | - | - | - | - |
|          | 2,4-Dichlorophenol (aq)          | TM176  | µg/l     | 1   | 0.42               | /               | 5                                    | <1   | - | - | - | - | - | - | - | - |
|          | 2,4-Dimethylphenol (aq)          | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1   | - | - | - | - | - | - | - | - |
|          | 2,4-Dinitrotoluene (aq)          | TM176  | µg/l     | 1   | /                  | /               | <1                                   | -    | - | - | - | - | - | - | - | - |
|          | 2,6-Dinitrotoluene (aq)          | TM176  | µg/l     | 1   | /                  | /               | <1                                   | -    | - | - | - | - | - | - | - | - |
|          | 2-Chloronaphthalene (aq)         | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1   | - | - | - | - | - | - | - | - |
|          | 2-Chlorophenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1   | - | - | - | - | - | - | - | - |
|          | 2-Methylnaphthalene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <1                                   | -    | - | - | - | - | - | - | - | - |
|          | 2-Methylphenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1   | - | - | - | - | - | - | - | - |
|          | 2-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               | <1                                   | -    | - | - | - | - | - | - | - | - |
|          | 2-Nitrophenol (aq)               | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1   | - | - | - | - | - | - | - | - |
|          | 3-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               | <1                                   | -    | - | - | - | - | - | - | - | - |
|          | 4-Bromophenylphenylether (aq)    | TM176  | µg/l     | 1   | /                  | /               | <1                                   | -    | - | - | - | - | - | - | - | - |
|          | 4-Chloro-3-methylphenol (aq)     | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1   | - | - | - | - | - | - | - | - |
|          | 4-Chloroaniline (aq)             | TM176  | µg/l     | 1   | /                  | /               | <1                                   | -    | - | - | - | - | - | - | - | - |
|          | 4-Chlorophenylphenylether (aq)   | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1   | - | - | - | - | - | - | - | - |
|          | 4-Methylphenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1   | - | - | - | - | - | - | - | - |
|          | 4-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               | <1                                   | -    | - | - | - | - | - | - | - | - |
|          | 4-Nitrophenol (aq)               | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1   | - | - | - | - | - | - | - | - |
|          | Azobenzene (aq)                  | TM176  | µg/l     | 1   | /                  | /               | <1                                   | -    | - | - | - | - | - | - | - | - |
|          | bis(2-Chloroethyl)ether (aq)     | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1   | - | - | - | - | - | - | - | - |
|          | bis(2-Chloroethoxy)methane (aq)  | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1   | - | - | - | - | - | - | - | - |
|          | bis(2-Ethylhexyl) phthalate (aq) | TM176  | µg/l     | 2   | /                  | /               | <2                                   | -    | - | - | - | - | - | - | - | - |
|          | Butylbenzyl phthalate (aq)       | TM176  | µg/l     | 1   | /                  | /               | <1                                   | -    | - | - | - | - | - | - | - | - |
|          | Benzo(k)fluoranthene (aq)        | TM176  | µg/l     | 1   | /                  | 0.1             | <1                                   | -    | - | - | - | - | - | - | - | - |
|          | Carbazole (aq)                   | TM176  | µg/l     | 1   | /                  | /               | <1                                   | -    | - | - | - | - | - | - | - | - |
|          | Dibenzofuran (aq)                | TM176  | µg/l     | 1   | /                  | /               | <1                                   | -    | - | - | - | - | - | - | - | - |
|          | n-Dibutyl phthalate (aq)         | TM176  | µg/l     | 1   | /                  | /               | <1                                   | -    | - | - | - | - | - | - | - | - |
|          | Diethyl phthalate (aq)           | TM176  | µg/l     | 1   | /                  | /               | <1                                   | -    | - | - | - | - | - | - | - | - |
|          | Dimethyl phthalate (aq)          | TM176  | µg/l     | 1   | /                  | /               | <1                                   | -    | - | - | - | - | - | - | - | - |
|          | n-Dioctyl phthalate (aq)         | TM176  | µg/l     | 5   | /                  | /               | <5                                   | -    | - | - | - | - | - | - | - | - |
|          | Hexachlorobenzene (aq)           | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1   | - | - | - | - | - | - | - | - |
|          | Hexachlorobutadiene (aq)         | TM176  | µg/l     | 1   | 0.6                | /               | 10                                   | <1   | - | - | - | - | - | - | - | - |
|          | Pentachlorophenol (aq)           | TM176  | µg/l     | 1   | 0.4                | /               | 5                                    | <1   | - | - | - | - | - | - | - | - |
|          | Phenol (aq)                      | TM176  | µg/l     | 1   | 7.7                | /               | 5                                    | <1   | - | - | - | - | - | - | - | - |
|          | n-Nitroso-n-dipropylamine (aq)   | TM176  | µg/l     | 1   | /                  | /               | <1                                   | -    | - | - | - | - | - | - | - | - |
|          | Hexachloroethane (aq)            | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1   | - | - | - | - | - | - | - | - |
|          | Nitrobenzene (aq)                | TM176  | µg/l     | 1   | /                  | /               | <1                                   | -    | - | - | - | - | - | - | - | - |
|          | Isophorone (aq)                  | TM176  | µg/l     | 1   | /                  | /               | <1                                   | -    | - | - | - | - | - | - | - | - |
|          | Hexachlorocyclopentadiene (aq)   | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1   | - | - | - | - | - | - | - | - |
|          | Indeno(1,2,3-cd)pyrene (aq)      | TM176  | µg/l     | 1   | /                  | 0.1             | <1                                   | -    | - | - | - | - | - | - | - | - |
|          | SVOC TIC (aq)                    | TM176  | No units | /   | /                  | /               | Not Detected                         | -    | - | - | - | - | - | - | - | - |
|          | Total SVOC TIC                   | TM176  | µg/l     | 10  | /                  | /               | <10                                  | -    | - | - | - | - | - | - | - | - |

**Volatile Organic Compounds (VOCs)**

|  |                                    |       |      |   |     |     |     |      |   |   |   |   |   |   |   |   |
|--|------------------------------------|-------|------|---|-----|-----|-----|------|---|---|---|---|---|---|---|---|
|  | Dibromofluoromethane**             | TM208 | %    | / | /   | /   | 136 | -    | - | - | - | - | - | - | - | - |
|  | Toluene-d8**                       | TM208 | %    | / | /   | /   | 103 | -    | - | - | - | - | - | - | - | - |
|  | 4-Bromofluorobenzene**             | TM208 | %    | / | /   | /   | 101 | -    | - | - | - | - | - | - | - | - |
|  | Dichlorodifluoromethane            | TM208 | µg/l | 1 | /   | /   | <1  | -    | - | - | - | - | - | - | - | - |
|  | Chloromethane                      | TM208 | µg/l | 1 | /   | /   | 10  | <1   | - | - | - | - | - | - | - | - |
|  | Vinyl chloride                     | TM208 | µg/l | 1 | /   | 0.5 | 10  | <1   | - | - | - | - | - | - | - | - |
|  | Bromomethane                       | TM208 | µg/l | 1 | /   | /   | <1  | -    | - | - | - | - | - | - | - | - |
|  | Chloroethane                       | TM208 | µg/l | 1 | /   | /   | 10  | <1   | - | - | - | - | - | - | - | - |
|  | Trichlorofluoromethane             | TM208 | µg/l | 1 | /   | /   | 10  | <1   | - | - | - | - | - | - | - | - |
|  | 1,1-Dichloroethene                 | TM208 | µg/l | 1 | /   | /   | 10  | <1   | - | - | - | - | - | - | - | - |
|  | Carbon disulphide                  | TM208 | µg/l | 1 | /   | /   | <1  | -    | - | - | - | - | - | - | - | - |
|  | Dichloromethane                    | TM208 | µg/l | 1 | 20  | /   | 10  | <3   | - | - | - | - | - | - | - | - |
|  | Methyl tertiary butyl ether (MTBE) | TM208 | µg/l | 1 | /   | 15  | <1  | -    | - | - | - | - | - | - | - | - |
|  | trans-1,2-Dichloroethene           | TM208 | µg/l | 1 | /   | 50  | 10  | <1   | - | - | - | - | - | - | - | - |
|  | 1,1-Dichloroethane                 | TM208 | µg/l | 1 | /   | /   | 10  | <1   | - | - | - | - | - | - | - | - |
|  | cis-1,2-Dichloroethene             | TM208 | µg/l | 1 | /   | 50  | 10  | <1   | - | - | - | - | - | - | - | - |
|  | 2,2-Dichloropropane                | TM208 | µg/l | 1 | /   | /   | 10  | <1   | - | - | - | - | - | - | - | - |
|  | Bromochloromethane                 | TM208 | µg/l | 1 | /   | /   | 10  | <1   | - | - | - | - | - | - | - | - |
|  | Chloroform                         | TM208 | µg/l | 1 | 2.5 | /   | 10  | 4.4  | - | - | - | - | - | - | - | - |
|  | 1,1,1-Trichloroethane              | TM208 | µg/l | 1 | /   | /   | 10  | <1   | - | - | - | - | - | - | - | - |
|  | 1,1-Dichloropropene                | TM208 | µg/l | 1 | /   | /   | 10  | <1   | - | - | - | - | - | - | - | - |
|  | Carbon tetrachloride               | TM208 | µg/l | 1 | /   | /   | 10  | <1   | - | - | - | - | - | - | - | - |
|  | 1,2-Dichloroethane                 | TM208 | µg/l | 1 | 10  | /   | 10  | <1   | - | - | - | - | - | - | - | - |
|  | Benzene                            | TM208 | µg/l | 1 | 8   | /   | <1  | -    | - | - | - | - | - | - | - | - |
|  | Trichloroethene                    | TM208 | µg/l | 1 | 10  | /   | 10  | <1   | - | - | - | - | - | - | - | - |
|  | 1,2-Dichloropropane                | TM208 | µg/l | 1 | /   | /   | 10  | <1   | - | - | - | - | - | - | - | - |
|  | Dibromomethane                     | TM208 | µg/l | 1 | /   | /   | <1  | -    | - | - | - | - | - | - | - | - |
|  | Bromodichloromethane               | TM208 | µg/l | 1 | /   | 100 | 10  | 1.34 | - | - | - | - | - | - | - | - |
|  | cis-1,3-Dichloropropene            | TM208 | µg/l | 1 | /   | /   | 10  | <1   | - | - | - | - | - | - | - | - |
|  | Toluene                            | TM208 | µg/l | 1 | 74  | /   | <1  | -    | - | - | - | - | - | - | - | - |
|  | trans-1,3-Dichloropropene          | TM208 | µg/l | 1 | /   | /   | 10  | <1   | - | - | - | - | - | - | - | - |
|  | 1,1,2-Trichloroethane              | TM208 | µg/l | 1 | /   | /   | 10  | <1   | - | - | - | - | - | - | - | - |
|  | 1,3-Dichloropropane                | TM208 | µg/l | 1 | /   | /   | 10  | <1   | - | - | - | - | - | - | - | - |
|  | Tetrachloroethene                  | TM208 | µg/l | 1 | 10  | /   | 10  | <1   | - | - | - | - | - | - | - | - |
|  | Dibromochloromethane               | TM208 | µg/l | 1 | /   | 100 | 10  | <1   | - | - | - | - | - | - | - | - |
|  | 1,2-Dibromoethane                  | TM208 | µg/l | 1 | /   | /   | <1  | -    | - | - | - | - | - | - | - | - |
|  | Chlorobenzene                      | TM208 | µg/l | 1 | /   | /   | 10  | <1   | - | - | - | - | - | - | - | - |
|  | 1,1,1,2-Tetrachloroethane          | TM208 | µg/l | 1 | /   | /   | 10  | <1   | - | - | - | - | - | - | - | - |
|  | Ethylbenzene                       | TM208 | µg/l | 1 | 20  | /   | <1  | -    | - | - | - | - | - | - | - | - |
|  | m,p-Xylene                         | TM208 | µg/l | 1 | 30  | /   | <1  | -    | - | - | - | - | - | - | - | - |
|  | o-Xylene                           | TM208 | µg/l | 1 | 30  | /   | <1  | -    | - | - | - | - | - | - | - | - |
|  | Styrene                            | TM208 | µg/l | 1 | /   | /   | <1  | -    | - | - | - | - | - | - | - | - |
|  | Bromoform                          | TM208 | µg/l | 1 | /   | 100 | <1  | -    | - | - | - | - | - | - | - | - |
|  | Isopropylbenzene                   | TM208 | µg/l | 1 | /   | /   | <1  | -    | - | - | - | - | - | - | - | - |
|  | 1,1,2,2-Tetrachloroethane          | TM208 | µg/l | 1 | /   | /   | 10  | <1   | - | - | - | - | - | - | - | - |
|  | 1,2,3-Trichloropropane             | TM208 | µg/l | 1 | /   | /   | 10  | <1   | - | - | - | - | - | - | - | - |
|  | Bromobenzene                       | TM208 | µg/l | 1 | /   | /   | <1  | -    | - | - | - | - | - | - | - | - |
|  | Propylbenzene                      | TM208 | µg/l | 1 | /   | /   | <1  | -    | - | - | - | - | - | - | - | - |
|  | 2-Chlorotoluene                    | TM208 | µg/l | 1 | /   | /   | 10  | <1   | - | - | - | - | - | - | - | - |
|  |                                    |       |      |   |     |     |     |      |   |   |   |   |   |   |   |   |











Point of Ayre Landfill's  
Groundwater Sample Results

ALS

| Customer Sample ID     | BH89/10    | BH 89/10   | BH 89/10   | BH89/10    | 89/10       | BH89/10    | BH89/10    | BH 89/10   | BH 89/10   | BH 89/10   | BH 89/10   | 89/10      | 89/10       |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 0.95-      | 1.25-      | 1.25-      | 0.89-      | -           | -          | -          | -          | -          | -          | -          | -          | 1.10-       |
| AGS Id                 |            |            |            |            |             |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 11/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |             |
| Lab Sample Number      | 19558432   | 20363904   | 20719329   | 21297966   | 21836341    | 22246269   | 22802664   | 23404113   | 23838513   | 24394374   | 26881767   | 27276237   |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |             |

| Analysis                                    | Test                                   | Method      | Units  | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |       |        |        |        |        |        |        |        |        |        |       |        |        |     |
|---|--|-------------|--------|-----|--------------------|-----------------|--------------------------------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|-----|
| <b>Carbon</b>                               |  |             |        |     |                    |                 |                                      |       |        |        |        |        |        |        |        |        |        |       |        |        |     |
|   | Carbon, Organic (diss.filt)            | TM090       | mg/l   |     | 6                  | /               | /                                    | 10    | <3     | <3     | <3     | <3     | <3     | <3     | 3.26   | <3     | <3     | 4.12  | <3     | 5.19   |     |
| <b>Inorganics</b>                           |  |             |        |     |                    |                 |                                      |       |        |        |        |        |        |        |        |        |        |       |        |        |     |
|   | Fluoride                               | TM104       | mg/l   |     | 0.5                | /               | /                                    | 10    | <0.5   | <0.5   | <0.5   | <0.5   | <0.5   | <0.5   | <0.5   | <0.5   | <0.5   | <0.5  | <0.5   | <0.5   | -   |
|   | Ionic balance                          | Calculation | % Diff |     |                    | /               | /                                    |       | 2.11   | -1.08  | 3.15   | 0.795  | 0.108  | 4.55   | -4.32  | -2.87  | 1.61   | -6.55 | -      | -      | -   |
|   | Nitrite as NO2                         | TM184       | mg/l   |     | 0.05               | 0.5             | /                                    | 1     | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05 | <0.05  | <0.05  | -   |
|   | Phosphate (Ortho as PO4)               | TM184       | mg/l   |     | 0.05               | /               | /                                    |       | <0.05  | <0.05  | <0.05  | 0.069  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | 0.952 | 1.92   | -      | -   |
|   | Sulphate                               | TM184       | mg/l   |     | 2                  | /               | 250                                  | 2500  | 3.8    | 10.4   | 6.3    | 5.2    | 2.2    | 5.3    | 4.3    | 5.3    | 4.4    | <2    | 19.2   | -      | -   |
|   | Sulphide                               | TM101       | mg/l   |     | 0.01               | /               | /                                    |       | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | 1.35  | <0.01  | -      | -   |
|   | Chloride                               | TM184       | mg/l   |     | 2                  | /               | 250                                  | 2000  | 23.2   | 37.9   | 31     | 27     | 21     | 27.8   | 21.8   | 28.7   | 25.1   | 28.1  | 29.9   | 40.6   | -   |
|   | COD, unfiltered                        | TM107       | mg/l   |     | 7                  | /               | /                                    |       | <7     | <7     | 14     | <7     | 10.5   | 18.8   | 8.17   | <7     | <7     | 7.08  | 35.3   | -      | -   |
|   | Nitrogen, Total                        | TM212       | mg/l   |     | 1                  | /               | /                                    |       | 1      | <1     | <1     | <1     | <1     | <1     | <1     | <1     | <1     | 23    | 6.84   | -      | -   |
|   | Ammoniacal Nitrogen as NH4             | TM099       | mg/l   |     | 0.3                | /               | 0.5                                  | 5     | <0.3   | <0.3   | <0.3   | <0.3   | 0.285  | <0.3   | <0.3   | <0.3   | <0.3   | 7.19  | 5.41   | 2.2    | -   |
|   | Nitrate as NO3                         | TM184       | mg/l   |     | 0.3                | /               | 50                                   | 500   | 1.3    | 1.46   | 1.7    | 1.28   | 0.552  | 1.67   | 1.33   | 1.02   | 0.902  | 74    | 15.2   | -      | -   |
|   | BOD, unfiltered                        | TM045       | mg/l   |     | 1                  | /               | /                                    |       | -      | <1     | <1     | <1     | <1     | <1     | <1     | <1     | <1     | 6.32  | 5.35   | -      | -   |
|   | Alkalinity, Total as CaCO3             | TM043       | mg/l   |     | 2                  | /               | /                                    |       | 147    | 203    | 193    | 175    | 153    | 174    | 195    | 200    | 159    | 139   | 175    | -      | -   |
|   | Alkalinity, Total as CaCO3 (diss.filt) | TM043       | mg/l   |     | 2                  | /               | /                                    |       | -      | -      | -      | -      | -      | -      | -      | -      | -      | -     | -      | -      | -   |
|   | Suspended solids, Total                | TM022       | mg/l   |     | 9                  | /               | /                                    |       | <2     | <2     | <2     | <2     | <2     | <2     | <2     | <2     | <2     | 29.8  | 11.3   | -      | -   |
| <b>Filtered (Dissolved) Metals</b>          |  |             |        |     |                    |                 |                                      |       |        |        |        |        |        |        |        |        |        |       |        |        |     |
|   | Mercury (diss.filt)                    | TM183       | µg/l   |     | 0.01               | 0.07            | /                                    | 10    | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01 | <0.01  | <0.01  | -   |
|   | Arsenic (diss.filt)                    | TM152       | µg/l   |     | 0.5                | 25              | /                                    | 500   | 0.979  | 0.619  | 1.09   | 0.768  | 0.552  | 0.754  | 0.852  | 0.63   | 0.887  | 0.915 | 0.95   | 1.1    | -   |
|   | Cadmium (diss.filt)                    | TM152       | µg/l   |     | 0.08               | 0.2             | /                                    | 50    | <0.08  | <0.08  | <0.08  | <0.08  | <0.08  | <0.08  | <0.08  | <0.08  | <0.08  | <0.08 | <0.08  | <0.08  | -   |
|   | Chromium (diss.filt)                   | TM152       | µg/l   |     | 1                  | /               | 50                                   | 500   | <1     | <1     | <1     | <1     | <1     | <1     | <1     | <1     | <1     | <1    | <1     | <1     | -   |
|   | Copper (diss.filt)                     | TM152       | µg/l   |     | 0.3                | 3.76            | /                                    | 1000  | <0.3   | 0.473  | 0.623  | 1.53   | 5.8    | 6.11   | 0.673  | 0.83   | 1.76   | 0.377 | <0.3   | -      | -   |
|   | Lead (diss.filt)                       | TM152       | µg/l   |     | 0.2                | 1.3             | /                                    | 500   | 0.428  | 0.23   | 0.242  | 0.426  | 0.384  | 0.425  | <0.2   | 0.211  | 0.473  | <0.2  | <0.2   | -      | -   |
|   | Manganese (diss.filt)                  | TM152       | µg/l   |     | 3                  | /               | 50                                   | 500   | <3     | <3     | <3     | <3     | <3     | <3     | <3     | <3     | <3     | 76.5  | 36.6   | 56.2   | -   |
|   | Nickel (diss.filt)                     | TM152       | µg/l   |     | 0.4                | 8.6             | /                                    | 500   | <0.4   | <0.4   | <0.4   | 0.739  | 0.546  | <0.4   | 0.703  | 0.702  | 1.04   | 1     | <0.4   | -      | -   |
|   | Zinc (diss.filt)                       | TM152       | µg/l   |     | 1                  | 7.9             | /                                    | 1000  | 2.78   | 2.74   | 1.76   | 4.43   | 9.99   | 4.39   | 7.41   | 37.2   | 12     | 7.92  | 2.28   | <1     | -   |
|   | Sodium (Dis.Filt)                      | TM152       | mg/l   |     | 0.076              | /               | 200                                  | 1500  | 12.2   | 20     | 17.5   | 14.3   | 13.2   | 16.3   | 14     | 16.1   | 13.5   | 15.8  | 14.3   | -      | -   |
|   | Magnesium (Dis.Filt)                   | TM152       | mg/l   |     | 0.036              | /               | /                                    | 500   | 8.54   | 12.9   | 12.3   | 10.1   | 8.79   | 11.5   | 9.98   | 10.7   | 9.77   | 10.4  | 9.41   | -      | -   |
|   | Potassium (Dis.Filt)                   | TM152       | mg/l   |     | 0.2                | /               | /                                    | 120   | 1.3    | 1.56   | 1.64   | 1.64   | 1.57   | 1.61   | 1.28   | 1.51   | 1.42   | 3.01  | 2.96   | -      | -   |
|   | Calcium (Dis.Filt)                     | TM152       | mg/l   |     | 0.2                | /               | /                                    | 1000  | 51.9   | 68.6   | 68.7   | 59.4   | 48     | 65.3   | 55.7   | 61     | 56.5   | 62.7  | 61.2   | -      | -   |
|   | Iron (Dis.Filt)                        | TM152       | mg/l   |     | 0.019              | 1               | /                                    | 2     | <0.019 | <0.019 | 0.0262 | <0.019 | <0.019 | <0.019 | 0.0364 | <0.019 | <0.019 | 0.161 | 0.0834 | 0.0875 | -   |
| <b>Unfiltered (Total) Metals</b>            |  |             |        |     |                    |                 |                                      |       |        |        |        |        |        |        |        |        |        |       |        |        |     |
|   | Phosphorus (tot.unfilt)                | TM152       | µg/l   |     | 20                 | /               | /                                    | 10000 | <20    | 29     | 25.8   | 22.2   | 32.4   | 21.5   | 21.5   | 34.2   | <20    | 476   | 981    | -      | -   |
|   | Hardness, Total as CaCO3 unfiltered    | TM152       | mg/l   |     | 0.35               | /               | /                                    |       | 160    | 221    | -      | 194    | 162    | 199    | 213    | 212    | 173    | 191   | 206    | -      | -   |
| <b>Gasoline Range Organics (GRO)</b>        |  |             |        |     |                    |                 |                                      |       |        |        |        |        |        |        |        |        |        |       |        |        |     |
|   | Total Aliphatics >C5-C12               | TM245       | µg/l   |     | 10                 | /               | /                                    |       | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10   | <10    | <10    | -   |
|   | Total Aromatics >EC5-EC12              | TM245       | µg/l   |     | 10                 | /               | /                                    |       | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | 23    | -      | -      | -   |
| <b>TPH Criteria Working Group (TPH CWG)</b> |  |             |        |     |                    |                 |                                      |       |        |        |        |        |        |        |        |        |        |       |        |        |     |
|   | GRO Surrogate % recovery**             | TM245       | %      |     | /                  | /               | /                                    |       | 106    | 106    | 103    | 88     | 99     | 109    | 87     | 123    | 98     | 94    | 95     | 95     | -   |
|   | GRO >C5-C12                            | TM245       | µg/l   |     | 50                 | /               | /                                    |       | <50    | <50    | <50    | <50    | <50    | <50    | <50    | <50    | <50    | <50   | <50    | <50    | <50 |
|   | Methyl tertiary butyl ether (MTBE)     | TM245       | µg/l   |     | 3                  | /               | 15                                   |       | <3     | <3     | <3     | <3     | <3     | <3     | <3     | <3     | <3     | <3    | <3     | <3     | -   |
|   | Benzene                                | TM245       | µg/l   |     | 7                  | 8               | /                                    |       | <7     | <7     | <7     | <7     | <7     | <7     | <7     | <7     | <7     | <7    | <7     | <7     | -   |
|   | Toluene                                | TM245       | µg/l   |     | 4                  | 74              | /                                    |       | <4     | <4     | <4     | <4     | <4     | <4     | <4     | <4     | <4     | 23    | -      | -      | -   |
|   | Ethylbenzene                           | TM245       | µg/l   |     | 5                  | 20              | /                                    |       | <5     | <5     | <5     | <5     | <5     | <5     | <5     | <5     | <5     | <5    | <5     | <5     | -   |
|   | m,p-Xylene                             | TM245       | µg/l   |     | 8                  | 30              | /                                    |       | <8     | <8     | <8     | <8     | <8     | <8     | <8     | <8     | <8     | <8    | <8     | <8     | -   |
|   | o-Xylene                               | TM245       | µg/l   |     | 3                  | 30              | /                                    |       | <3     | <3     | <3     | <3     | <3     | <3     | <3     | <3     | <3     | <3    | <3     | <3     | -   |
|   | Sum of detected Xylenes                | TM245       | µg/l   |     | 11                 | 30              | /                                    |       | <11    | <11    | <11    | <11    | <11    | <11    | <11    | <11    | <11    | <11   | <11    | <11    | -   |
|   | Sum of detected BTEX                   | TM245       | µg/l   |     | 28                 | /               | /                                    |       | <28    | <28    | <28    | <28    | <28    | <28    | <28    | <28    | <28    | <28   | <28    | <28    | -   |
|   | Aliphatics >C5-C6                      | TM245       | µg/l   |     | 10                 | /               | /                                    |       | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10   | <10    | <10    | <10 |
|   | Aliphatics >C6-C8                      | TM245       | µg/l   |     | 10                 | /               | /                                    |       | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10   | <10    | <10    | <10 |
|   | Aliphatics >C8-C10                     | TM245       | µg/l   |     | 10                 | /               | /                                    |       | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10   | <10    | <10    | <10 |
|   | Aliphatics >C10-C12                    | TM245       | µg/l   |     | 10                 | /               | /                                    |       | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10   | <10    | <10    | <10 |
|   | Aliphatics >C12-C16 (aq)               | TM174       | µg/l   |     | 10                 | /               | /                                    |       | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10   | <10    | <10    | <10 |
|   | Aliphatics >C16-C21 (aq)               | TM174       | µg/l   |     | 10                 | /               | /                                    |       | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10   | 20     | <10    | <10 |
|   | Aliphatics >C21-C35 (aq)               | TM174       | µg/l   |     | 10                 | /               | /                                    |       | <10    | <10    | <10    | <10    |        |        |        |        |        |       |        |        |     |



Point of Ayre Landfill's  
Groundwater Sample Results

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| Customer Sample ID     | BH89/10    | BH 89/10   | BH 89/10   | BH89/10    | 89/10       | BH89/10    | BH89/10    | BH 89/10   | BH 89/10   | BH 89/10   | 89/10      | 89/10       |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 0.95-      | 1.25-      | 1.25-      | 0.89-      | -           | -          | -          | -          | -          | -          | -          | 1.10-       |
| AGS Id                 |            |            |            |            |             |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 11/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022  |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022  |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022  |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023  |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97   |
| Lab Sample Number      | 19558432   | 20363904   | 20719329   | 21297966   | 21836341    | 22246269   | 22802664   | 23404113   | 23838513   | 24394374   | 26881767   | 27276237    |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5         |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |             |

| Analysis | Test                          | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |    |              |              |              |              |              |              |              |              |     |
|----------|-------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|----|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----|
|          | 1,2-Dichlorobenzene           | TM208  | µg/l     |     | 1                  | /               | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | 1,2-Dibromo-3-chloropropane   | TM208  | µg/l     |     | 1                  | /               | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | 1,2,4-Trichlorobenzene        | TM208  | µg/l     |     | 1                  | 0.4             | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | Hexachlorobutadiene           | TM208  | µg/l     |     | 1                  | 0.6             | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | tert-Amyl methyl ether (TAME) | TM208  | µg/l     |     | 1                  | /               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | Naphthalene                   | TM208  | µg/l     |     | 1                  | 2               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | 1,2,3-Trichlorobenzene        | TM208  | µg/l     |     | 1                  | 0.4             | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | 1,3,5-Trichlorobenzene        | TM208  | µg/l     |     | 1                  | 0.4             | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | Sum of detected Xylenes       | TM208  | µg/l     |     | 2                  | 30              | /                                    |    | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2  |
|          | Sum of BTEX                   | TM208  | µg/l     |     | 5                  |                 |                                      |    | -            | -            | -            | -            | -            | -            | -            | -            | <5  |
|          | VOC TIC                       | TM208  | No units |     | /                  | /               |                                      |    | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | -   |
|          | Total VOC TIC                 | TM208  | µg/l     |     | /                  | /               |                                      |    | 0            | 0            | 0            | <10          | <10          | <10          | <10          | <10          | <10 |

| TICS |  |       |      |  |   |   |  |  |        |        |        |        |         |        |        |        |         |
|------|--|-------|------|--|---|---|--|--|--------|--------|--------|--------|---------|--------|--------|--------|---------|
|      | Benzeneacetic acid                             |       | µg/l |  |   |   |  |  |        |        |        |        |         |        |        |        | 52.8    |
|      | Dimethyl trisulfide                            |       | µg/l |  |   |   |  |  |        |        |        |        |         |        |        |        | 12.7    |
|      | Isomer of Dihydro Indolone                     |       | µg/l |  |   |   |  |  |        |        |        |        |         |        |        |        | 14.3    |
|      | (methyl ethylene)bis-phenol                    |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | Butylbenzoic acid                              |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | Dibutylhydroxypropionic acid                   |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | Dimethylcyclohexanedione                       |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | Ditertbutylhydroxypropionic acid               |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | Ethylmethylbenzenesulfonamide                  |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | Octadecanoic acid                              |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | trimethylhexanoic acid                         |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | Dimethylheptanoic acid                         | TM176 | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | Hexadecanoic acid                              | TM176 | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | Isomers of Hexadecenoic acid                   |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | Dimethylethylhydroxybenzoic acid               |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | Hexadecane                                     |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | mixed hydrocarbons                             |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | Phenol(methylethylene)bis-                     |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | Tertbutylbenzoic acid                          |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | Benzothiazolone                                | TM176 | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | Tertbutylhydroxypropionic acid                 |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | 2(3H)-Benzothiazolone                          |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | 3,5,5-trimethyl Hexanoic acid                  |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | 4,4'-(1-methylethylene)bisphenol               |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | Camphor  |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | Cyclic octaatomic sulfur                       |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | Isomers of Ditertbutylhydroxypropionic acid    |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | Isomers of Tertbutylbenzoic acid               |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | N-ethyl-2-methyl benzenesulfonamide            |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | Sulfur   |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | Undecane                                       |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | Isomer of Benzothiazolone                      |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | Isomer of Bisdimethylethylhydroxy Benzoic acid |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | isomer of trimethyl hexanoic acid              |       | µg/l |  | / | / |  |  |        |        |        |        |         |        |        |        | -       |
|      | Total VOC                                      |       | µg/l |  | 1 |   |  |  | <1     | <1     | <1     | <1     | <1      | <1     | <1     | 24.1   | <1      |
|      | Total PAH                                      |       | µg/l |  |   |   |  |  | <0.002 | <0.002 | <0.002 | <0.002 | 0.02129 | <0.002 | <0.002 | <0.002 | 0.02268 |



Point of Ayre Landfill's  
Groundwater Sample Results

ALS

| Customer Sample ID     | BH89/11    | BH 89/11   | BH 89/11   | BH89/11    | 89/11       | BH 89/11   | BH89/11    | BH89/11    | BH89/11    | BH 89/11   | BH 89/11   | 89/11      | 89/11       |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 1.37-      | 1.70-      | 1.70-      | 1.34-      | -           | -          | -          | -          | -          | -          | -          | -          | 1.59-       |
| AGS Id                 |            |            |            |            |             |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 11/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |             |
| Lab Sample Number      | 19558436   | 20363902   | 20719327   | 21297964   | 21836342    | 22246264   | 22802659   | 23404108   | 23838511   | 24394371   | 26881768   | 27276236   |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |             |

| Analysis                                    | Test                                   | Method      | Units  | LOD   | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |        |        |        |        |        |        |        |        |        |        |        |        |
|---|--|-------------|--------|-------|--------------------|-----------------|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| <b>Carbon</b>                               |  |             |        |       |                    |                 |                                      |        |        |        |        |        |        |        |        |        |        |        |        |
|   | Carbon, Organic (diss.filt)            | TM090       | mg/l   | 6     | /                  | /               | 10                                   | 4.38   | 6.51   | <3     | 4.94   | 5.35   | 5.38   | 6.33   | 5.67   | 3.35   | 3.75   | 4.9    | 4.06   |
| <b>Inorganics</b>                           |  |             |        |       |                    |                 |                                      |        |        |        |        |        |        |        |        |        |        |        |        |
|   | Fluoride                               | TM104       | mg/l   | 0.5   | /                  | /               | 10                                   | <0.5   | <0.5   | <0.5   | <0.5   | <0.5   | <0.5   | <0.5   | <0.5   | <0.5   | <0.5   | <0.5   | -      |
|   | Ionic balance                          | Calculation | % Diff |       | /                  | /               |                                      | 0.38   | -0.752 | 11.6   | 1.76   | -0.974 | 6.09   | -4.32  | -0.709 | 3.94   | 4.29   | -      | -      |
|   | Nitrite as NO2                         | TM184       | mg/l   | 0.05  | 0.5                | /               | 1                                    | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | -      |
|   | Phosphate (Ortho as PO4)               | TM184       | mg/l   | 0.05  | /                  | /               |                                      | <0.05  | <0.05  | 0.066  | 0.06   | <0.05  | <0.05  | 0.05   | <0.05  | <0.05  | <0.05  | <0.05  | -      |
|   | Sulphate                               | TM184       | mg/l   | 2     | /                  | 250             | 2500                                 | 8.5    | 8.4    | 9.8    | 2.3    | <2     | 4.6    | 4.3    | 5.1    | <2     | <2     | 2.8    | -      |
|   | Sulphide                               | TM101       | mg/l   | 0.01  | /                  | /               |                                      | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | 0.0267 | <0.01  | -      |
|   | Chloride                               | TM184       | mg/l   | 2     | /                  | 250             | 2000                                 | 42.6   | 39.1   | 34     | 33.9   | 23     | 30.1   | 33.4   | 40     | 15.4   | 23.2   | 48.3   | 74.9   |
|   | COD, unfiltered                        | TM107       | mg/l   | 7     | /                  | /               |                                      | 16.2   | 15.4   | 17.9   | 16.2   | 11.7   | -      | 8.9    | 26.3   | <7     | <7     | 16     | -      |
|   | Nitrogen, Total                        | TM212       | mg/l   | 1     | /                  | /               |                                      | 1.6    | <1     | <1     | <1     | <1     | <1     | <1     | <1     | <1     | <1     | 1.87   | -      |
|   | Ammoniacal Nitrogen as NH4             | TM099       | mg/l   | 0.3   | /                  | 0.5             | 5                                    | <0.3   | <0.3   | <0.3   | <0.3   | <0.2   | <0.3   | <0.3   | <0.3   | <0.3   | <0.3   | <0.3   | <0.3   |
|   | Nitrate as NO3                         | TM184       | mg/l   | 0.3   | /                  | 50              | 500                                  | 2.22   | 0.941  | 0.568  | <0.3   | 1.06   | 0.822  | <0.3   | 0.774  | 0.467  | 0.665  | 7.33   | -      |
|   | BOD, unfiltered                        | TM045       | mg/l   | 1     | /                  | /               |                                      | -      | <1     | <1     | <1     | <1     | <1     | <1     | <1     | <1     | <1     | <1     | -      |
|   | Alkalinity, Total as CaCO3             | TM043       | mg/l   | 2     | /                  | /               |                                      | 226    | 239    | 218    | 270    | 243    | 250    | 230    | 220    | -      | 204    | 232    | -      |
|   | Alkalinity, Total as CaCO3 (diss.filt) | TM043       | mg/l   | 2     | /                  | /               |                                      | -      | -      | -      | -      | -      | -      | -      | -      | 155    | -      | -      | -      |
|   | Suspended solids, Total                | TM022       | mg/l   | 9     | /                  | /               |                                      | <4     | <2     | <2     | <2     | <2     | 11.8   | <4     | 2.55   | 2.65   | <2     | <2     | -      |
| <b>Filtered (Dissolved) Metals</b>          |  |             |        |       |                    |                 |                                      |        |        |        |        |        |        |        |        |        |        |        |        |
|   | Mercury (diss.filt)                    | TM183       | µg/l   | 0.01  | 0.07               | /               | 10                                   | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | -      |
|   | Arsenic (diss.filt)                    | TM152       | µg/l   | 0.5   | 25                 | /               | 500                                  | 1.43   | 1.62   | 1.63   | 1.52   | 0.997  | 1.33   | 1.53   | 1.4    | 1.01   | 1.13   | 1.62   | 1.07   |
|   | Cadmium (diss.filt)                    | TM152       | µg/l   | 0.08  | 0.2                | /               | 50                                   | <0.08  | <0.08  | <0.08  | <0.08  | <0.08  | <0.08  | <0.08  | <0.08  | <0.08  | <0.08  | <0.08  | -      |
|   | Chromium (diss.filt)                   | TM152       | µg/l   | 1     | /                  | 50              | 500                                  | <1     | <1     | <1     | <1     | <1     | <1     | <1     | <1     | <1     | <1     | <1     | -      |
|   | Copper (diss.filt)                     | TM152       | µg/l   | 0.3   | 3.76               | /               | 1000                                 | 1.99   | 2.81   | 3.23   | 4.44   | 2.19   | 2.45   | 2.1    | 2.81   | 2.06   | 3.75   | 3.03   | -      |
|   | Lead (diss.filt)                       | TM152       | µg/l   | 0.2   | 1.3                | /               | 500                                  | <0.2   | <0.2   | <0.2   | 0.386  | <0.2   | <0.2   | <0.2   | <0.2   | <0.2   | 0.568  | 0.393  | -      |
|   | Manganese (diss.filt)                  | TM152       | µg/l   | 3     | /                  | 50              | 500                                  | <3     | 62.9   | 16.6   | 20.5   | <3     | 12.2   | 20.6   | 22.8   | <3     | 6.9    | 27.3   | 22     |
|   | Nickel (diss.filt)                     | TM152       | µg/l   | 0.4   | 8.6                | /               | 500                                  | 0.432  | 0.679  | 0.843  | 1.33   | 0.403  | 0.646  | 0.47   | 0.903  | 0.447  | 1.29   | 1.52   | <0.4   |
|   | Zinc (diss.filt)                       | TM152       | µg/l   | 1     | 7.9                | /               | 1000                                 | 1.65   | 1.95   | 4.1    | 12.3   | 1.49   | <1     | 10.9   | 10.4   | 2.66   | 540    | 9.57   | 1.08   |
|   | Sodium (Dis.Filt)                      | TM152       | mg/l   | 0.076 | /                  | 200             | 1500                                 | 23.4   | 27.9   | 28.2   | 24.7   | 18.9   | 26.5   | 28     | 24.3   | 10.7   | 19.7   | 26.8   | -      |
|   | Magnesium (Dis.Filt)                   | TM152       | mg/l   | 0.036 | /                  | /               | 500                                  | 8.94   | 9.8    | 10.8   | 10.9   | 10.4   | 11.8   | 8.63   | 9.26   | 6.53   | 8.36   | 9.73   | -      |
|   | Potassium (Dis.Filt)                   | TM152       | mg/l   | 0.2   | /                  | /               | 120                                  | 1.62   | 2.54   | 2.67   | 2.17   | 1.96   | 2.82   | 2.74   | 2.24   | 2.04   | 2.76   | 3.27   | -      |
|   | Calcium (Dis.Filt)                     | TM152       | mg/l   | 0.2   | /                  | /               | 1000                                 | 83.5   | 84.4   | 95.6   | 90.3   | 76.8   | 93.2   | 65.4   | 74     | 55.7   | 70.8   | 82     | -      |
|   | Iron (Dis.Filt)                        | TM152       | mg/l   | 0.019 | 1                  | /               | 2                                    | <0.019 | <0.019 | <0.019 | <0.019 | <0.019 | <0.019 | <0.019 | <0.019 | <0.019 | <0.019 | <0.019 | <0.019 |
| <b>Unfiltered (Total) Metals</b>            |  |             |        |       |                    |                 |                                      |        |        |        |        |        |        |        |        |        |        |        |        |
|   | Phosphorus (tot.unfilt)                | TM152       | µg/l   | 20    | /                  | /               | 10000                                | 22.9   | 26.1   | 20.8   | 34.9   | 23.8   | 26.9   | 43.8   | 30.4   | <20    | 26.6   | 31.9   | -      |
|   | Hardness, Total as CaCO3 unfiltered    | TM152       | mg/l   | 0.35  | /                  | /               |                                      | 250    | 261    | 276    | 276    | 251    | 260    | 223    | 235    | 170    | 203    | 253    | -      |
| <b>Gasoline Range Organics (GRO)</b>        |  |             |        |       |                    |                 |                                      |        |        |        |        |        |        |        |        |        |        |        |        |
|   | Total Aliphatics >C5-C12               | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10    | <10    | <10    | <10    | <10    | 18     | <10    | <10    | -      | -      |
|   | Total Aromatics >EC5-EC12              | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | -      | -      |
| <b>TPH Criteria Working Group (TPH CWG)</b> |  |             |        |       |                    |                 |                                      |        |        |        |        |        |        |        |        |        |        |        |        |
|   | GRO Surrogate % recovery**             | TM245       | %      |       | /                  | /               |                                      | 108    | 102    | 94     | 97     | 95     | 117    | 100    | 122    | 101    | 91     | 92     | -      |
|   | GRO >C5-C12                            | TM245       | µg/l   | 50    | /                  | /               |                                      | <50    | <50    | <50    | <50    | <50    | <50    | <50    | <50    | <50    | <50    | <50    | -      |
|   | Methyl tertiary butyl ether (MTBE)     | TM245       | µg/l   | 3     | /                  | 15              |                                      | <3     | <3     | <3     | <3     | <3     | <3     | <3     | <3     | <3     | <3     | <3     | -      |
|   | Benzene                                | TM245       | µg/l   | 7     | 8                  | /               |                                      | <7     | <7     | <7     | <7     | <7     | <7     | <7     | <7     | <7     | <7     | <7     | -      |
|   | Toluene                                | TM245       | µg/l   | 4     | 74                 | /               |                                      | <4     | <4     | <4     | <4     | <4     | <4     | <4     | <4     | <4     | <4     | <4     | -      |
|   | Ethylbenzene                           | TM245       | µg/l   | 5     | 20                 | /               |                                      | <5     | <5     | <5     | <5     | <5     | <5     | <5     | <5     | <5     | <5     | <5     | -      |
|   | m,p-Xylene                             | TM245       | µg/l   | 8     | 30                 | /               |                                      | <8     | <8     | <8     | <8     | <8     | <8     | <8     | <8     | <8     | <8     | <8     | -      |
|   | o-Xylene                               | TM245       | µg/l   | 3     | 30                 | /               |                                      | <3     | <3     | <3     | <3     | <3     | <3     | <3     | <3     | <3     | <3     | <3     | -      |
|   | Sum of detected Xylenes                | TM245       | µg/l   | 11    | 30                 | /               |                                      | <11    | <11    | <11    | <11    | <11    | <11    | <11    | <11    | <11    | <11    | <11    | -      |
|   | Sum of detected BTEX                   | TM245       | µg/l   | 28    | /                  | /               |                                      | <28    | <28    | <28    | <28    | <28    | <28    | <28    | <28    | <28    | <28    | <28    | -      |
|   | Aliphatics >C6-C6                      | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | -      |
|   | Aliphatics >C6-C8                      | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | -      |
|   | Aliphatics >C8-C10                     | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | -      |
|   | Aliphatics >C10-C12                    | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | -      |
|   | Aliphatics >C12-C16 (aq)               | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | -      |
|   | Aliphatics >C16-C21 (aq)               | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | -      |
|   | Aliphatics >C21-C35 (aq)               | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | -      |
|   | Total Aliphatics >C12-C35 (aq)         | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | -      |
|   | Aromatics >EC5-EC7                     | TM245       | µg/l   | 10    | 8                  | /               |                                      | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | <10    | -      |
|   | Aromatics >EC7-EC8                     | TM245       | µg/l   | 1     |                    |                 |                                      |        |        |        |        |        |        |        |        |        |        |        |        |



Point of Ayre Landfill's  
Groundwater Sample Results

ALS

| Customer Sample ID     | BH89/11    | BH 89/11   | BH 89/11   | BH89/11    | 89/11       | BH 89/11   | BH89/11    | BH89/11    | BH 89/11   | BH 89/11   | 89/11      | 89/11       |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 1.37-      | 1.70-      | 1.70-      | 1.34-      | -           | -          | -          | -          | -          | -          | -          | 1.59-       |
| AGS Id                 |            |            |            |            |             |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 11/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022  |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022  |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022  |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023  |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97   |
| Lab Sample Number      | 19558436   | 20363902   | 20719327   | 21297964   | 21836342    | 22246264   | 22802659   | 23404108   | 23838511   | 24394371   | 26881768   | 27276236    |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5         |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |             |

| Analysis | Test                             | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria | <1 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|----------|----------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|----|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----|
|          | 1,2,4-Trichlorobenzene (aq)      | TM176  | µg/l     |     | 1                  | 0.4             | /                                    | <1 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 1,2-Dichlorobenzene (aq)         | TM176  | µg/l     |     | 1                  | /               | /                                    | <1 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 1,3-Dichlorobenzene (aq)         | TM176  | µg/l     |     | 1                  | /               | /                                    | <1 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 1,4-Dichlorobenzene (aq)         | TM176  | µg/l     |     | 1                  | /               | /                                    | <1 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 2,4,5-Trichlorophenol (aq)       | TM176  | µg/l     |     | 1                  | /               | /                                    | 5  | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 2,4,6-Trichlorophenol (aq)       | TM176  | µg/l     |     | 1                  | /               | /                                    | 5  | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 2,4-Dichlorophenol (aq)          | TM176  | µg/l     |     | 1                  | 0.42            | /                                    | 5  | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 2,4-Dimethylphenol (aq)          | TM176  | µg/l     |     | 1                  | /               | /                                    | 5  | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 2,4-Dinitrotoluene (aq)          | TM176  | µg/l     |     | 1                  | /               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 2,6-Dinitrotoluene (aq)          | TM176  | µg/l     |     | 1                  | /               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 2-Chloronaphthalene (aq)         | TM176  | µg/l     |     | 1                  | /               | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 2-Chlorophenol (aq)              | TM176  | µg/l     |     | 1                  | /               | /                                    | 5  | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 2-Methylnaphthalene (aq)         | TM176  | µg/l     |     | 1                  | /               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 2-Methylphenol (aq)              | TM176  | µg/l     |     | 1                  | /               | /                                    | 5  | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 2-Nitroaniline (aq)              | TM176  | µg/l     |     | 1                  | /               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 2-Nitrophenol (aq)               | TM176  | µg/l     |     | 1                  | /               | /                                    | 5  | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 3-Nitroaniline (aq)              | TM176  | µg/l     |     | 1                  | /               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 4-Bromophenylphenylether (aq)    | TM176  | µg/l     |     | 1                  | /               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 4-Chloro-3-methylphenol (aq)     | TM176  | µg/l     |     | 1                  | /               | /                                    | 5  | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 4-Chloroaniline (aq)             | TM176  | µg/l     |     | 1                  | /               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 4-Chlorophenylphenylether (aq)   | TM176  | µg/l     |     | 1                  | /               | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 4-Methylphenol (aq)              | TM176  | µg/l     |     | 1                  | /               | /                                    | 5  | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 4-Nitroaniline (aq)              | TM176  | µg/l     |     | 1                  | /               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | 4-Nitrophenol (aq)               | TM176  | µg/l     |     | 1                  | /               | /                                    | 5  | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | Azobenzene (aq)                  | TM176  | µg/l     |     | 1                  | /               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | bis(2-Chloroethyl)ether (aq)     | TM176  | µg/l     |     | 1                  | /               | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | bis(2-Chloroethoxy)methane (aq)  | TM176  | µg/l     |     | 1                  | /               | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | bis(2-Ethylhexyl) phthalate (aq) | TM176  | µg/l     |     | 2                  | /               | /                                    |    | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2 |
|          | Butylbenzyl phthalate (aq)       | TM176  | µg/l     |     | 1                  | /               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | Benzo(k)fluoranthene (aq)        | TM176  | µg/l     |     | 1                  | /               | 0.1                                  |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | Carbazole (aq)                   | TM176  | µg/l     |     | 1                  | /               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | Dibenzofuran (aq)                | TM176  | µg/l     |     | 1                  | /               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | n-Dibutyl phthalate (aq)         | TM176  | µg/l     |     | 1                  | /               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | Diethyl phthalate (aq)           | TM176  | µg/l     |     | 1                  | /               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | Dimethyl phthalate (aq)          | TM176  | µg/l     |     | 1                  | /               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | n-Dioctyl phthalate (aq)         | TM176  | µg/l     |     | 5                  | /               | /                                    |    | <5           | <5           | <5           | <5           | <5           | <5           | <5           | <5           | <5 |
|          | Hexachlorobenzene (aq)           | TM176  | µg/l     |     | 1                  | /               | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | Hexachlorobutadiene (aq)         | TM176  | µg/l     |     | 1                  | 0.6             | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | Pentachlorophenol (aq)           | TM176  | µg/l     |     | 1                  | 0.4             | /                                    | 5  | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | Phenol (aq)                      | TM176  | µg/l     |     | 1                  | 7.7             | /                                    | 5  | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | n-Nitroso-n-dipropylamine (aq)   | TM176  | µg/l     |     | 1                  | /               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | Hexachloroethane (aq)            | TM176  | µg/l     |     | 1                  | /               | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | Nitrobenzene (aq)                | TM176  | µg/l     |     | 1                  | /               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | Isophorone (aq)                  | TM176  | µg/l     |     | 1                  | /               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | Hexachlorocyclopentadiene (aq)   | TM176  | µg/l     |     | 1                  | /               | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | Indeno(1,2,3-cd)pyrene (aq)      | TM176  | µg/l     |     | 1                  | /               | 0.1                                  |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1 |
|          | SVOC TIC (aq)                    | TM176  | No units |     |                    | /               | /                                    |    | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | -  |
|          | Total SVOC TIC                   | TM176  | µg/l     |     | 10                 | /               | /                                    |    | <10          | <10          | <10          | <10          | <10          | <10          | <10          | <10          | -  |

| Volatile Organic Compounds (VOCs) |                                    |       |      |   |    |     |    |      |      |     |      |      |      |      |      |      |      |      |
|-----------------------------------|------------------------------------|-------|------|---|----|-----|----|------|------|-----|------|------|------|------|------|------|------|------|
|                                   | Dibromofluoromethane**             | TM208 | %    | / | /  |     |    | 111  | 110  | 117 | 112  | 113  | 114  | 114  | 102  | 114  | 114  | 107  |
|                                   | Toluene-d8**                       | TM208 | %    | / | /  |     |    | 102  | 97.1 | 101 | 100  | 101  | 98.2 | 100  | 96.3 | 98.5 | 99.3 | 98.2 |
|                                   | 4-Bromofluorobenzene**             | TM208 | %    | / | /  |     |    | 97.8 | 98.8 | 100 | 98.7 | 98.9 | 105  | 96.6 | 95.8 | 96   | 100  | 96.4 |
|                                   | Dichlorodifluoromethane            | TM208 | µg/l | 1 | /  | /   |    | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|                                   | Chloromethane                      | TM208 | µg/l | 1 | /  | /   | 10 | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|                                   | Vinyl chloride                     | TM208 | µg/l | 1 | /  | 0.5 | 10 | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|                                   | Bromomethane                       | TM208 | µg/l | 1 | /  | /   |    | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|                                   | Chloroethane                       | TM208 | µg/l | 1 | /  | /   | 10 | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|                                   | Trichlorofluoromethane             | TM208 | µg/l | 1 | /  | /   | 10 | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|                                   | 1,1-Dichloroethene                 | TM208 | µg/l | 1 | /  | /   | 10 | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|                                   | Carbon disulphide                  | TM208 | µg/l | 1 | /  | /   |    | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|                                   | Dichloromethane                    | TM208 | µg/l | 1 | 20 | /   | 10 | <3   | <3   | <3  | <3   | <3   | <3   | <3   | <3   | <3   | <3   | <3   |
|                                   | Methyl tertiary butyl ether (MTBE) | TM208 | µg/l | 1 | /  | 15  |    | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|                                   | trans-1,2-Dichloroethene           | TM208 | µg/l | 1 | /  | 50  | 10 | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|                                   | 1,1-Dichloroethane                 | TM208 | µg/l | 1 | /  | /   | 10 | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
|                                   | cis-1,2-Dichloroethene             | TM208 | µg/l | 1 | /  | 50  |    |      |      |     |      |      |      |      |      |      |      |      |

Point of Ayre Landfill's  
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| Customer Sample ID     | BH89/11    | BH 89/11   | BH 89/11   | BH89/11    | 89/11       | BH 89/11   | BH89/11    | BH89/11    | BH 89/11   | BH 89/11   | 89/11      | 89/11       |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 1.37-      | 1.70-      | 1.70-      | 1.34-      | -           | -          | -          | -          | -          | -          | -          | 1.59-       |
| AGS Id                 |            |            |            |            |             |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 11/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022  |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022  |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022  |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023  |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97   |
| Lab Sample Number      | 19558436   | 20363902   | 20719327   | 21297964   | 21836342    | 22246264   | 22802659   | 23404108   | 23838511   | 24394371   | 26881768   | 27276236    |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5         |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |             |

| Analysis | Test                          | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |    |              |              |              |              |              |              |              |              |     |
|----------|-------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|----|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----|
|          | 1,2-Dichlorobenzene           | TM208  | µg/l     |     | 1                  | /               | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | 1,2-Dibromo-3-chloropropane   | TM208  | µg/l     |     | 1                  | /               | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | 1,2,4-Trichlorobenzene        | TM208  | µg/l     |     | 1                  | 0.4             | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | Hexachlorobutadiene           | TM208  | µg/l     |     | 1                  | 0.6             | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | tert-Amyl methyl ether (TAME) | TM208  | µg/l     |     | 1                  | /               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | Naphthalene                   | TM208  | µg/l     |     | 1                  | 2               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | 1,2,3-Trichlorobenzene        | TM208  | µg/l     |     | 1                  | 0.4             | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | 1,3,5-Trichlorobenzene        | TM208  | µg/l     |     | 1                  | 0.4             | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | Sum of detected Xylenes       | TM208  | µg/l     |     | 2                  | 30              | /                                    |    | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2  |
|          | Sum of BTEX                   | TM208  | µg/l     |     | 5                  |                 |                                      |    | -            | -            | -            | -            | -            | -            | -            | -            | <5  |
|          | VOC TIC                       | TM208  | No units |     |                    |                 |                                      |    | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | -   |
|          | Total VOC TIC                 | TM208  | µg/l     |     |                    |                 |                                      |    | 0            | 0            | <10          | <10          | <10          | <10          | <10          | <10          | <10 |

| TICS |   |       |      |  |   |   |  |  |        |        |        |        |        |        |        |         |        |
|------|---|-------|------|--|---|---|--|--|--------|--------|--------|--------|--------|--------|--------|---------|--------|
|      | (methylene)bis-phenol                             |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | Butylbenzoic acid                                 |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | Dibutylhydroxyphenylpropionic acid                |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | Dimethylcyclohexanedione                          |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | Ditertbutylhydroxyphenylpropionic acid            |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | Ethylmethylbenzenesulfonamide                     |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | Octadecanoic acid                                 |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | trimethylhexanoic acid                            |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | Dimethylheptanoic acid                            | TM176 | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | Hexadecanoic acid                                 | TM176 | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | Isomers of Hexadecenoic acid                      |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | Dimethylethylhydroxybenzoic acid                  |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | Hexadecane  |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | mixed hydrocarbons                                |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | Phenol(methylene)bis-                             |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | Tertbutylbenzoic acid                             |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | Benzothiazolone                                   | TM176 | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | Tertbutylhydroxyphenylpropionic acid              |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | 3,5-trimethyl Hexanoic acid                       |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | 4,4'-(1-methylene)bisphenol                       |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | Camphor   |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | Cyclic octaatomic sulfur                          |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | Isomers of Ditertbutylhydroxyphenylpropionic acid |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | Isomers of TertbutylBenzoic acid                  |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | N-ethyl-2-methyl benzenesulfonamide               |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | Sulfur  |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | Undecane  |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | Isomer of Benzothiazolone                         |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | Isomer of Bisdimethylethylhydroxy Benzoic acid    |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | isomer of trimethyl hexanoic acid                 |       | µg/l |  | / | / |  |  | -      | -      | -      | -      | -      | -      | -      | -       | -      |
|      | Total VOC   |       | µg/l |  | 1 |   |  |  | <1     | <1     | <1     | <1     | <1     | <1     | <1     | <1      | <1     |
|      | Total PAH   |       | µg/l |  |   |   |  |  | <0.002 | 0.1021 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | 0.08132 | <0.002 |







Point of Ayre Landfill's  
Groundwater Sample Results

ALS

| Customer Sample ID     | BH96/4     | BH 96/4    | BH 96/4    | BH96/4     | 96/4        | BH96/4     | BH96/4     | BH 96/4    | BH 96/4    | BH 96/4    | BH 96/4    | BH 96/4    | BH 96/4    | 96/4        |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 0.76-      | 1.05-      | 1.05-      | 0.89-      | -           | -          | -          | -          | -          | -          | -          | -          | -          | 1.07-       |
| AGS Id                 |            |            |            |            |             |            |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 11/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 | 05/12/2022 |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 07/12/2022 | 07/12/2022 |            |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 09/12/2022 | 09/12/2022 |            |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 09/01/2023 | 09/01/2023 |            |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 221207-97  | 221207-97  |            |             |
| Lab Sample Number      | 19558434   | 20363903   | 20719328   | 21297965   | 21836343    | 22246266   | 22802661   | 23404110   | 23838512   | 24394372   | 27276234   | 27276234   |            |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 6.5        | 6.5        |            |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |            |             |

| Analysis                                    | Test                                   | Method      | Units  | LOD   | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |        |        |        |        |        |        |        |        |        |       |   |        |
|---|--|-------------|--------|-------|--------------------|-----------------|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|---|--------|
| <b>Carbon</b>                               |  |             |        |       |                    |                 |                                      |        |        |        |        |        |        |        |        |        |       |   |        |
|   | Carbon, Organic (diss.filt)            | TM090       | mg/l   | 6     | /                  | /               | 10                                   | <3     | 3.43   | 3.2    | 3.03   | 4.51   | <3     | 4.36   | 3.14   | 3.86   | 3.4   | - | 4.26   |
| <b>Inorganics</b>                           |  |             |        |       |                    |                 |                                      |        |        |        |        |        |        |        |        |        |       |   |        |
|   | Fluoride                               | TM104       | mg/l   | 0.5   | /                  | /               | 10                                   | <0.5   | <0.5   | <0.5   | <0.5   | <0.5   | <0.5   | <0.5   | <0.5   | <0.5   | <0.5  | - | -      |
|   | Ionic balance                          | Calculation | % Diff |       | /                  | /               |                                      | 0.891  | -1.28  | 3.17   | 0.282  | -5.84  | 4.42   | -      | -0.681 | 2.19   | 0.634 | - | -      |
|   | Nitrite as NO2                         | TM184       | mg/l   | 0.05  | 0.5                | /               | 1                                    | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05 | - | -      |
|   | Phosphate (Ortho as PO4)               | TM184       | mg/l   | 0.05  | /                  | /               |                                      | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | 0.051  | <0.05  | <0.05  | <0.05 | - | -      |
|   | Sulphate                               | TM184       | mg/l   | 2     | /                  | 250             | 2500                                 | 14.4   | 46     | 41.3   | 14.5   | 27     | 27.5   | 41.3   | 56.2   | 30.3   | 33.4  | - | -      |
|   | Sulphide                               | TM101       | mg/l   | 0.01  | /                  | /               |                                      | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | 0.0176 | 0.0538 | <0.01  | <0.01  | <0.01 | - | -      |
|   | Chloride                               | TM184       | mg/l   | 2     | /                  | 250             | 2000                                 | 33.8   | 47.6   | 41.3   | 31.3   | 62.6   | 47.4   | 69.4   | 57.2   | 41     | 46.7  | - | 154    |
|   | COD, unfiltered                        | TM107       | mg/l   | 7     | /                  | /               |                                      | <7     | <7     | 21.6   | 17.7   | <7     | <7     | -      | 9.55   | 19.4   | <7    | - | -      |
|   | Nitrogen, Total                        | TM212       | mg/l   | 1     | /                  | /               |                                      | <1     | <1     | <1     | <1     | <1     | <1     | <1     | <1     | 1.47   | <1    | - | -      |
|   | Ammoniacal Nitrogen as NH4             | TM099       | mg/l   | 0.3   | /                  | 0.5             | 5                                    | <0.3   | <0.3   | <0.3   | <0.3   | <0.2   | <0.3   | <0.3   | <0.3   | <0.3   | <0.3  | - | <0.3   |
|   | Nitrate as NO3                         | TM184       | mg/l   | 0.3   | /                  | 50              | 500                                  | <0.3   | 1.19   | <0.3   | <0.3   | 2.1    | 1.37   | <0.3   | <0.3   | 2.87   | 1     | - | -      |
|   | BOD, unfiltered                        | TM045       | mg/l   | 1     | /                  | /               |                                      | -      | <1     | <1     | <1     | 1.7    | <1     | <1     | <1     | 2.72   | <1    | - | -      |
|   | Alkalinity, Total as CaCO3             | TM043       | mg/l   | 2     | /                  | /               |                                      | 131    | 178    | 175    | 175    | 182    | 176    | 192    | 186    | 118    | 150   | - | -      |
|   | Alkalinity, Total as CaCO3 (diss.filt) | TM043       | mg/l   | 2     | /                  | /               |                                      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -     | - | -      |
|   | Suspended solids, Total                | TM022       | mg/l   | 9     | /                  | /               |                                      | <2     | 12.2   | 5.06   | 2.3    | <2     | 7.84   | -      | 4.8    | 5.3    | 4.55  | - | -      |
| <b>Filtered (Dissolved) Metals</b>          |  |             |        |       |                    |                 |                                      |        |        |        |        |        |        |        |        |        |       |   |        |
|   | Mercury (diss.filt)                    | TM183       | µg/l   | 0.01  | 0.07               | /               | 10                                   | 0.0112 | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01 | - | -      |
|   | Arsenic (diss.filt)                    | TM152       | µg/l   | 0.5   | 25                 | /               | 500                                  | 1.56   | 1.16   | 2.33   | 1.02   | <0.5   | 1.23   | 1.95   | 1.26   | 1.25   | 0.689 | - | 1.6    |
|   | Cadmium (diss.filt)                    | TM152       | µg/l   | 0.08  | 0.2                | /               | 50                                   | <0.08  | <0.08  | <0.08  | <0.08  | <0.08  | <0.08  | <0.08  | <0.08  | <0.08  | <0.08 | - | -      |
|   | Chromium (diss.filt)                   | TM152       | µg/l   | 1     | /                  | 50              | 500                                  | <1     | <1     | <1     | <1     | 1.46   | <1     | <1     | <1     | <1     | <1    | - | -      |
|   | Copper (diss.filt)                     | TM152       | µg/l   | 0.3   | 3.76               | /               | 1000                                 | <0.3   | 1.86   | 1.18   | 2.04   | 1.72   | 1.29   | 1.76   | 1.44   | 0.538  | 11.3  | - | -      |
|   | Lead (diss.filt)                       | TM152       | µg/l   | 0.2   | 1.3                | /               | 500                                  | <0.2   | 0.533  | <0.2   | <0.2   | 0.341  | 0.734  | <0.2   | 0.427  | <0.2   | 0.822 | - | -      |
|   | Manganese (diss.filt)                  | TM152       | µg/l   | 3     | /                  | 50              | 500                                  | 176    | <3     | 238    | 4.1    | 6.28   | <3     | 4.57   | <3     | <3     | 5.31  | - | <3     |
|   | Nickel (diss.filt)                     | TM152       | µg/l   | 0.4   | 8.6                | /               | 500                                  | 0.573  | 1.1    | 0.704  | 0.983  | 0.802  | 0.431  | 0.588  | 0.62   | 0.507  | 2.17  | - | 0.539  |
|   | Zinc (diss.filt)                       | TM152       | µg/l   | 1     | 7.9                | /               | 1000                                 | 1.81   | 5.01   | 2.16   | 12.6   | 11.4   | 1.34   | 2.13   | 7.31   | 1.07   | 120   | - | 1.33   |
|   | Sodium (Dis.Filt)                      | TM152       | mg/l   | 0.076 | /                  | 200             | 1500                                 | 21     | 26.7   | 25.5   | 18.3   | 28.1   | 29.3   | 30.7   | 33     | 23.4   | 27.1  | - | -      |
|   | Magnesium (Dis.Filt)                   | TM152       | mg/l   | 0.036 | /                  | /               | 500                                  | 8.6    | 14.5   | 13.9   | 12.1   | 15     | 13.8   | 17.1   | 15.5   | 11.3   | 13.1  | - | -      |
|   | Potassium (Dis.Filt)                   | TM152       | mg/l   | 0.2   | /                  | /               | 120                                  | 1.55   | 2.19   | 2.35   | 2.06   | 0.693  | 0.554  | 2.16   | 2.29   | 2.11   | 3.52  | - | -      |
|   | Calcium (Dis.Filt)                     | TM152       | mg/l   | 0.2   | /                  | /               | 1000                                 | 46.3   | 71.2   | 71     | 57.5   | 63.8   | 72.6   | 78.6   | 74.7   | 46.4   | 59.1  | - | -      |
|   | Iron (Dis.Filt)                        | TM152       | mg/l   | 0.019 | 1                  | /               | 2                                    | 0.023  | <0.019 | 0.0642 | <0.019 | 0.0332 | <0.019 | <0.019 | <0.019 | <0.019 | 0.031 | - | <0.019 |
| <b>Unfiltered (Total) Metals</b>            |  |             |        |       |                    |                 |                                      |        |        |        |        |        |        |        |        |        |       |   |        |
|   | Phosphorus (tot.unfilt)                | TM152       | µg/l   | 20    | /                  | /               | 10000                                | <20    | 24.6   | <20    | 22.5   | <20    | 45.5   | 116    | 32.4   | 25.1   | 45.9  | - | -      |
|   | Hardness, Total as CaCO3 unfiltered    | TM152       | mg/l   | 0.35  | /                  | /               |                                      | 146    | 244    | 236    | 198    | 244    | 232    | 276    | 266    | 156    | 197   | - | -      |
| <b>Gasoline Range Organics (GRO)</b>        |  |             |        |       |                    |                 |                                      |        |        |        |        |        |        |        |        |        |       |   |        |
|   | Total Aliphatics >C5-C12               | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10    | <10    | <10    | <10    | -      | 40     | <10    | <10   | - | -      |
|   | Total Aromatics >EC5-EC12              | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10    | <10    | <10    | <10    | -      | 24     | <10    | <10   | - | -      |
| <b>TPH Criteria Working Group (TPH CWG)</b> |  |             |        |       |                    |                 |                                      |        |        |        |        |        |        |        |        |        |       |   |        |
|   | GRO Surrogate % recovery**             | TM245       | %      |       | /                  | /               |                                      | 102    | 114    | 112    | 94     | 92     | 105    | -      | 120    | 103    | 99    | - | -      |
|   | GRO >C5-C12                            | TM245       | µg/l   | 50    | /                  | /               |                                      | <50    | <50    | <50    | <50    | <50    | <50    | -      | 64     | <50    | <50   | - | -      |
|   | Methyl tertiary butyl ether (MTBE)     | TM245       | µg/l   | 3     | /                  | 15              |                                      | <3     | <3     | <3     | <3     | <3     | <3     | -      | <3     | <3     | <3    | - | -      |
|   | Benzene                                | TM245       | µg/l   | 7     | 8                  | /               |                                      | <7     | <7     | <7     | <7     | <7     | <7     | -      | <7     | <7     | <7    | - | -      |
|   | Toluene                                | TM245       | µg/l   | 4     | 74                 | /               |                                      | <4     | <4     | <4     | <4     | <4     | <4     | -      | <4     | <4     | <4    | - | -      |
|   | Ethylbenzene                           | TM245       | µg/l   | 5     | 20                 | /               |                                      | <5     | <5     | <5     | <5     | <5     | <5     | -      | <5     | <5     | <5    | - | -      |
|   | m,p-Xylene                             | TM245       | µg/l   | 8     | 30                 | /               |                                      | <8     | <8     | <8     | <8     | <8     | <8     | -      | <8     | <8     | <8    | - | -      |
|   | o-Xylene                               | TM245       | µg/l   | 3     | 30                 | /               |                                      | <3     | <3     | <3     | <3     | <3     | <3     | -      | <3     | <3     | <3    | - | -      |
|   | Sum of detected Xylenes                | TM245       | µg/l   | 11    | 30                 | /               |                                      | <11    | <11    | <11    | <11    | <11    | <11    | -      | <11    | <11    | <11   | - | -      |
|   | Sum of detected BTEX                   | TM245       | µg/l   | 28    | /                  | /               |                                      | <28    | <28    | <28    | <28    | <28    | <28    | -      | <28    | <28    | <28   | - | -      |
|   | Aliphatics >C5-C6                      | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10    | <10    | <10    | <10    | -      | <10    | <10    | <10   | - | -      |
|   | Aliphatics >C6-C8                      | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10    | <10    | <10    | <10    | -      | <10    | <10    | <10   | - | -      |
|   | Aliphatics >C8-C10                     | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10    | <10    | <10    | <10    | -      | 22     | <10    | <10   | - | -      |
|   | Aliphatics >C10-C12                    | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10    | <10    | <10    | <10    | -      | 12     | <10    | <10   | - | -      |
|   | Aliphatics >C12-C16 (aq)               | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10    | <10    | <10    | <10    | -      | 18     | <10    | <10   | - | -      |
|   | Aliphatics >C16-C21 (aq)               | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10    | <10    | <10    | <10    | -      | <10    | <10    | <10   | - | -      |
|   | Aliphatics >C21-C35 (aq)               | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10    | <10    | <10    | <10    | -      | <10    | <10    | <10   | - | -      |
|   | Total Aliphatics >C12-C35 (aq)         | TM174       | µg/l   | 10    | /                  | /               |                                      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -     | - | -      |
|   | Aromatics >EC5-EC7                     | TM245       | µg/l   | 10    | 8                  | /               |                                      | <10    | <10    | <10    | <10    | <10    | <10    | -      | <10    | <10    | <10   | - | -      |
|   | Aromatics >EC7-EC8                     | TM245       | µg/l   | 10    | 74                 | /               |                                      | <10    | <10    | <10    | <10    | <10    | <10    | -      | <10    | <10    | <10   | - | -      |
|   | Aromatics >EC8-EC10                    | TM245       | µg/l   | 10    | 20                 | /               |                                      | <10    | <10    | <10    | <10    | <10    | <10    | -      | 15     | <10    | <10   | - | -      |
|   | Aromatics >EC10-EC12                   | TM245       | µg/l   | 10    | /                  | /               |                                      |        |        |        |        |        |        |        |        |        |       |   |        |

Point of Ayre Landfill's  
Groundwater Sample Results

ALS

| Customer Sample ID     | BH96/4     | BH 96/4    | BH 96/4    | BH96/4     | 96/4        | BH96/4     | BH96/4     | BH 96/4    | BH 96/4    | BH 96/4    | BH 96/4    | BH 96/4    | 96/4        |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 0.76-      | 1.05-      | 1.05-      | 0.89-      | -           | -          | -          | -          | -          | -          | -          | -          | 1.07-       |
| AGS Id                 |            |            |            |            |             |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 11/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 |            | 07/12/2022 |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 |            | 09/12/2022 |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 |            | 09/01/2023 |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 |            | 221207-97  |             |
| Lab Sample Number      | 19558434   | 20363903   | 20719328   | 21297965   | 21836343    | 22246266   | 22802661   | 23404110   | 23838512   | 24394372   |            | 27276234   |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       |            | 6.5        |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |             |

| Analysis | Test                             | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria | Sample Results |          |              |              |              |        |              |              |              |         |         |      |   |
|----------|----------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|----------------|----------|--------------|--------------|--------------|--------|--------------|--------------|--------------|---------|---------|------|---|
|          |                                  |        |          |     |                    |                 |                                      | BH96/4         | BH 96/4  | BH 96/4      | BH96/4       | 96/4         | BH96/4 | BH96/4       | BH 96/4      | BH 96/4      | BH 96/4 | BH 96/4 | 96/4 |   |
|          | 1,2,4-Trichlorobenzene (aq)      | TM176  | µg/l     | 1   | 0.4                | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | 1,2-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | 1,3-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | 1,4-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | 2,4,5-Trichlorophenol (aq)       | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | 2,4,6-Trichlorophenol (aq)       | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | 2,4-Dichlorophenol (aq)          | TM176  | µg/l     | 1   | 0.42               | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | 2,4-Dimethylphenol (aq)          | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | 2,4-Dinitrotoluene (aq)          | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | 2,6-Dinitrotoluene (aq)          | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | 2-Chloronaphthalene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | 2-Chlorophenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | 2-Methylnaphthalene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | 2-Methylphenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | 2-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | 2-Nitrophenol (aq)               | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | 3-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | 4-Bromophenylphenylether (aq)    | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | 4-Chloro-3-methylphenol (aq)     | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | 4-Chloroaniline (aq)             | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | 4-Chlorophenylphenylether (aq)   | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | 4-Methylphenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | 4-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | 4-Nitrophenol (aq)               | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | Azobenzene (aq)                  | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | bis(2-Chloroethyl)ether (aq)     | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | bis(2-Chloroethoxy)methane (aq)  | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | bis(2-Ethylhexyl) phthalate (aq) | TM176  | µg/l     | 2   | /                  | /               | <2                                   | <2             | <8       | <2           | <2           | <2           | -      | <2           | <2           | <2           | <2      | <2      | -    | - |
|          | Butylbenzyl phthalate (aq)       | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | Benzo(k)fluoranthene (aq)        | TM176  | µg/l     | 1   | /                  | 0.1             | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | Carbazole (aq)                   | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | Dibenzofuran (aq)                | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | n-Dibutyl phthalate (aq)         | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | Diethyl phthalate (aq)           | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | Dimethyl phthalate (aq)          | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | n-Dioctyl phthalate (aq)         | TM176  | µg/l     | 5   | /                  | /               | <5                                   | <5             | <20      | <5           | <5           | <5           | -      | <5           | <5           | <5           | <5      | <5      | -    | - |
|          | Hexachlorobenzene (aq)           | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | Hexachlorobutadiene (aq)         | TM176  | µg/l     | 1   | 0.6                | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | Pentachlorophenol (aq)           | TM176  | µg/l     | 1   | 0.4                | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | Phenol (aq)                      | TM176  | µg/l     | 1   | 7.7                | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | n-Nitroso-n-dipropylamine (aq)   | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | Hexachloroethane (aq)            | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | Nitrobenzene (aq)                | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | Isophorone (aq)                  | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | Hexachlorocyclopentadiene (aq)   | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | Indeno(1,2,3-cd)pyrene (aq)      | TM176  | µg/l     | 1   | /                  | 0.1             | <1                                   | <1             | <4       | <1           | <1           | <1           | -      | <1           | <1           | <1           | <1      | <1      | -    | - |
|          | SVOC TIC (aq)                    | TM176  | No units |     | /                  | /               | Not Detected                         | Not Detected   | Detected | Not Detected | Not Detected | Not Detected | -      | Not Detected | Not Detected | Not Detected |         |         |      |   |
|          | Total SVOC TIC                   | TM176  | µg/l     | 10  | /                  | /               | <10                                  | <10            | 46.3     | <10          | <10          | <10          | -      | <10          | <10          | <10          | <10     | <10     | -    | - |

**Volatile Organic Compounds (VOCs)**

|  |                                    |       |      |   |    |     |      |      |     |      |      |     |   |      |      |      |   |   |   |   |
|--|------------------------------------|-------|------|---|----|-----|------|------|-----|------|------|-----|---|------|------|------|---|---|---|---|
|  | Dibromofluoromethane**             | TM208 | %    | / | /  | /   | 109  | 108  | 119 | 110  | 106  | 108 | - | 102  | 114  | 114  | - | - | - | - |
|  | Toluene-d8**                       | TM208 | %    | / | /  | /   | 102  | 98.4 | 102 | 99.5 | 99.4 | 99  | - | 95.4 | 97.4 | 98.6 | - | - | - | - |
|  | 4-Bromofluorobenzene**             | TM208 | %    | / | /  | /   | 96.7 | 97.6 | 101 | 99.3 | 96.5 | 106 | - | 96.8 | 95   | 98.5 | - | - | - | - |
|  | Dichlorodifluoromethane            | TM208 | µg/l | 1 | /  | /   | <1   | <1   | <1  | <1   | <1   | <1  | - | <1   | <1   | <1   | - | - | - | - |
|  | Chloromethane                      | TM208 | µg/l | 1 | /  | /   | <1   | <1   | <1  | <1   | <1   | <1  | - | <1   | <1   | <1   | - | - | - | - |
|  | Vinyl chloride                     | TM208 | µg/l | 1 | /  | 0.5 | <1   | <1   | <1  | <1   | <1   | <1  | - | <1   | <1   | <1   | - | - | - | - |
|  | Bromomethane                       | TM208 | µg/l | 1 | /  | /   | <1   | <1   | <1  | <1   | <1   | <1  | - | <1   | <1   | <1   | - | - | - | - |
|  | Chloroethane                       | TM208 | µg/l | 1 | /  | /   | <1   | <1   | <1  | <1   | <1   | <1  | - | <1   | <1   | <1   | - | - | - | - |
|  | Trichlorofluoromethane             | TM208 | µg/l | 1 | /  | /   | <1   | <1   | <1  | <1   | <1   | <1  | - | <1   | <1   | <1   | - | - | - | - |
|  | 1,1-Dichloroethene                 | TM208 | µg/l | 1 | /  | /   | <1   | <1   | <1  | <1   | <1   | <1  | - | <1   | <1   | <1   | - | - | - | - |
|  | Carbon disulphide                  | TM208 | µg/l | 1 | /  | /   | <1   | <1   | <1  | <1   | <1   | <1  | - | <1   | <1   | <1   | - | - | - | - |
|  | Dichloromethane                    | TM208 | µg/l | 1 | 20 | /   | <3   | <3   | <3  | <3   | <3   | <3  | - | <3   | <3   | <3   | - | - | - | - |
|  | Methyl tertiary butyl ether (MTBE) | TM208 | µg/l | 1 | /  | 15  | <1   | <1   | <1  | <1   | <1   | <1  | - | <1   | <1   | <1   | - | - | - | - |
|  | trans-1,2-Dichloroethene           | TM208 | µg/l | 1 | /  | 50  | <1   | <1   | <1  | <1   | <1   | <1  | - | <1   | <1   | <1   | - | - | - | - |
|  | 1,1-Dichloroethane                 | TM208 | µg/l | 1 | /  | /   | <1   | <1   | <1  | <1   | <1   | <1  | - | <1   | <1   | <1   | - | - | - | - |
|  | cis-1,2-Dichloroethene             | TM208 | µg/l | 1 | /  | 50  | <1   | <1   | <1  | <1   | <1   | <1  | - | <1   | <1   | <1   | - | - | - | - |



Point of Ayre Landfill's  
Groundwater Sample Results

ALS

| Customer Sample ID            | BH96/4     | BH 96/4    | BH 96/4    | BH96/4     | 96/4        | BH96/4     | BH96/4     | BH 96/4    | BH 96/4    | BH 96/4    | BH 96/4    | BH 96/4    | 96/4        |
|-------------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| <b>Depth</b>                  | 0.76-      | 1.05-      | 1.05-      | 0.89-      | -           | -          | -          | -          | -          | -          | -          | -          | 1.07-       |
| <b>AGS Id</b>                 |            |            |            |            |             |            |            |            |            |            |            |            |             |
| <b>Sample Type</b>            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| <b>Sampled Date</b>           | 11/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |             |
| <b>Sample Received Date</b>   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 |            | 07/12/2022 |             |
| <b>Final Instruction Date</b> | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 |            | 09/12/2022 |             |
| <b>Report Completed Date</b>  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 |            | 09/01/2023 |             |
| <b>SDG</b>                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 |            | 221207-97  |             |
| <b>Lab Sample Number</b>      | 19558434   | 20363903   | 20719328   | 21297965   | 21836343    | 22246266   | 22802661   | 23404110   | 23838512   | 24394372   |            | 27276234   |             |
| <b>Sample Temperature</b>     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       |            | 6.5        |             |
| <b>Sample Time</b>            |            |            |            |            |             |            |            |            |            |            |            |            |             |

| Analysis | Test                          | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria | Sample Results |              |              |              |              |              |              |         |              |              |              |      |   |
|----------|-------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|----------------|--------------|--------------|--------------|--------------|--------------|--------------|---------|--------------|--------------|--------------|------|---|
|          |                               |        |          |     |                    |                 |                                      | BH96/4         | BH 96/4      | BH 96/4      | BH96/4       | 96/4         | BH96/4       | BH96/4       | BH 96/4 | BH 96/4      | BH 96/4      | BH 96/4      | 96/4 |   |
|          | 1,2-Dichlorobenzene           | TM208  | µg/l     | 1   | /                  | /               | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | -       | <1           | <1           | <1           | -    | - |
|          | 1,2-Dibromo-3-chloropropane   | TM208  | µg/l     | 1   | /                  | /               | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | -       | <1           | <1           | <1           | -    | - |
|          | 1,2,4-Trichlorobenzene        | TM208  | µg/l     | 1   | 0.4                | /               | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | -       | <1           | <1           | <1           | -    | - |
|          | Hexachlorobutadiene           | TM208  | µg/l     | 1   | 0.6                | /               | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | -       | <1           | <1           | <1           | -    | - |
|          | tert-Amyl methyl ether (TAME) | TM208  | µg/l     | 1   | /                  | /               |                                      | <1             | <1           | <1           | <1           | <1           | <1           | <1           | -       | <1           | <1           | <1           | -    | - |
|          | Naphthalene                   | TM208  | µg/l     | 1   | 2                  | /               |                                      | <1             | <1           | <1           | <1           | <1           | <1           | <1           | -       | <1           | <1           | <1           | -    | - |
|          | 1,2,3-Trichlorobenzene        | TM208  | µg/l     | 1   | 0.4                | /               | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | -       | <1           | <1           | <1           | -    | - |
|          | 1,3,5-Trichlorobenzene        | TM208  | µg/l     | 1   | 0.4                | /               | 10                                   | <1             | <1           | <1           | <1           | <1           | <1           | <1           | -       | <1           | <1           | <1           | -    | - |
|          | Sum of detected Xylenes       | TM208  | µg/l     | 2   | 30                 | /               |                                      | <2             | <2           | <2           | <2           | <2           | <2           | <2           | -       | <2           | <2           | <2           | -    | - |
|          | Sum of BTEX                   | TM208  | µg/l     | 5   |                    |                 |                                      | -              | -            | -            | -            | -            | -            | -            | -       | -            | -            | -            | -    | - |
|          | VOC TIC                       | TM208  | No units |     | /                  | /               |                                      | Not Detected   | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | -       | Not Detected | Not Detected | Not Detected | -    | - |
|          | Total VOC TIC                 | TM208  | µg/l     |     | /                  | /               |                                      | 0              | 0            | <10          | <10          | <10          | <10          | <10          | -       | <10          | <10          | <10          | -    | - |

| TICS |   |       |      |   |   |   |  |        |        |        |        |        |        |         |        |        |        |    |   |   |
|------|---|-------|------|---|---|---|--|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|----|---|---|
|      | (methylene)bis-phenol                             |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | Butylbenzoic acid                                 |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | Dibutylhydroxyphenylpropionic acid                |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | Dimethylcyclohexanediol                           |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | Ditertbutylhydroxyphenylpropionic acid            |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | Ethylmethylbenzenesulfonamide                     |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | Octadecanoic acid                                 |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | trimethylhexanoic acid                            |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | Dimethylheptanoic acid                            | TM176 | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | Hexadecanoic acid                                 | TM176 | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | Isomers of Hexadecenoic acid                      |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | Dimethylethylhydroxybenzoic acid                  |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | Hexadecane  |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | mixed hydrocarbons                                |       | µg/l |   | / | / |  | -      | -      | 46.3   | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | Phenol(methylene)bis-                             |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | Tertbutylbenzoic acid                             |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | Benzothiazolone                                   | TM176 | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | Tertbutylhydroxyphenylpropionic acid              |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | 2(3H)-Benzothiazolone                             |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | 3,5,5-trimethyl Hexanoic acid                     |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | 4,4'-(1-methylene)bisphenol                       |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | Camphor   |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | Cyclic octatomic sulfur                           |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | Isomers of Ditertbutylhydroxyphenylpropionic acid |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | Isomers of Tertbutylbenzoic acid                  |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | N-ethyl-2-methyl benzenesulfonamide               |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | Sulfur  |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | Undecane  |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | Isomer of Benzothiazolone                         |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | Isomer of Bisdimethylethylhydroxy Benzoic acid    |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | isomer of trimethyl hexanoic acid                 |       | µg/l |   | / | / |  | -      | -      | -      | -      | -      | -      | -       | -      | -      | -      | -  | - | - |
|      | Total VOC   |       | µg/l | 1 |   |   |  | <1     | <1     | <1     | <1     | <1     | <1     | <1      | 8.62   | <1     | <1     | <1 | - | - |
|      | Total PAH   |       | µg/l |   |   |   |  | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | 0.01775 | <0.002 | <0.002 | <0.002 | -  | - | - |







Point of Ayre Landfill's  
Groundwater Sample Results

ALS

SDG(s): 190315-102

Customer: Waste Management Unit Douglas (12297)

Client Reference: / Point of Ayre

Order no.:

| Customer Sample ID     | P3A                                     | P3A                                     | P3A                                     | P3A                                     | P3A                                     | P3A                                     | P3A                                     | P3A                                     | P3A                                     | P3A                                     | P3A                                     | P3A                                     |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Depth                  | 4.84-                                   | 5.22-                                   | 5.22-                                   | 4.86-                                   | -                                       | -                                       | -                                       | -                                       | -                                       | -                                       | -                                       | 4.97-                                   |
| AGS Id                 |   |   |   |   |   |   |   |   |   |   |   |   |
| Sample Type            | JND_WATER/JND_WATER/JND_WATER/JND_WATER | JND_WATER/JND_WATER/JND_WATER/JND_WATER | JND_WATER/JND_WATER/JND_WATER/JND_WATER | JND_WATER/JND_WATER/JND_WATER/JND_WATER | JND_WATER/JND_WATER/JND_WATER/JND_WATER | JND_WATER/JND_WATER/JND_WATER/JND_WATER | JND_WATER/JND_WATER/JND_WATER/JND_WATER | JND_WATER/JND_WATER/JND_WATER/JND_WATER | JND_WATER/JND_WATER/JND_WATER/JND_WATER | JND_WATER/JND_WATER/JND_WATER/JND_WATER | JND_WATER/JND_WATER/JND_WATER/JND_WATER | JND_WATER/JND_WATER/JND_WATER/JND_WATER |
| Sample Date            | 11/03/2019                              | 16/07/2019                              | 10/09/2019                              | 02/12/2019                              | 02/03/2020                              | 01/06/2020                              | 07/09/2020                              | 07/12/2020                              | 01/03/2021                              | 3/10/2021                               | 12/09/2022                              | 05/12/2022                              |
| Sample Received Date   | 15/03/2019                              | 19/07/2019                              | 13/09/2019                              | 05/12/2019                              | 06/03/2020                              | 03/06/2020                              | 10/09/2020                              | 10/12/2020                              | 04/03/2021                              | 04/06/2021                              | 15/09/2022                              | 07/12/2022                              |
| Final Instruction Date | 25/03/2019                              | 29/07/2019                              | 26/09/2019                              | 13/12/2019                              | 3/19/2020                               | 03/06/2020                              | 17/09/2020                              | 18/12/2020                              | 11/03/2021                              | 04/06/2021                              | 15/09/2022                              | 09/12/2022                              |
| Report Completed Date  | 27/03/2019                              | 30/07/2019                              | 30/09/2019                              | 16/12/2019                              | 3/23/2020                               | 16/06/2020                              | 21/09/2020                              | 21/12/2020                              | 23/03/2021                              | 16/06/2021                              | 27/09/2022                              | 09/12/2022                              |
| SDG                    | 190315-102                              | 190719-73                               | 190913-125                              | 191205-111                              | 200306-148                              | 200603-178                              | 200910-118                              | 201210-95                               | 210304-123                              | 210604-112                              | 220915-96                               | 221207-67                               |
| Lab Sample Number      | 19558442                                | 20363907                                | 20719332                                | 21297969                                | 21836347                                | 22246274                                | 22802669                                | 23404118                                | 23838516                                | 24394383                                | 26881770                                | 27272622                                |
| Sample Temperature     | 9.8                                     | 15                                      | 17.2                                    | 5.2                                     | 6                                       | 16.2                                    | 14.8                                    | 6.5                                     | 8.6                                     | 15.2                                    | 13.2                                    | 6.5                                     |
| Sample Time            |   |   |   |   |   |   |   |   |   |   |   |   |

| Analysis                                    | Test                                   | Method      | Units  | LOD   | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria | 10.1  | 8.16  | 11.1  | 11.2  | 12.3  | 10    | 12.5  | 10.9  | 10.5  | 9.32  | 9.41  | 9.8   |
|---|--|-------------|--------|-------|--------------------|-----------------|--------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>Carbon</b>                               | Carbon, Organic (diss.filt)            | TM090       | mg/l   | 6     | /                  | /               | 10                                   |       |       |       |       |       |       |       |       |       |       |       |       |
| <b>Inorganics</b>                           | Fluoride                               | TM104       | mg/l   | 0.5   | /                  | /               | 10                                   | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  |
|   | ionic balance                          | Calculation | % Diff |       | /                  | /               |                                      | 3.89  | -1.33 | 3.18  | -1.51 | -1.31 | -3.68 | -2.21 | -2.29 | 1.06  | 1.77  |       |       |
|   | Nitrite as NO2                         | TM184       | mg/l   | 0.05  | 0.5                | /               | 1                                    | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
|   | Phosphate (Ortho as PO4)               | TM184       | mg/l   | 0.05  | /                  | /               |                                      | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
|   | Sulphate                               | TM184       | mg/l   | 2     | /                  | 250             | 2500                                 | 8.5   | <2    | <2    | <2    | 7.7   | 2.8   | 4.4   | <2    | <2    | 6.7   | 9.3   |       |
|   | Sulphide                               | TM101       | mg/l   | 0.01  | /                  | /               |                                      | 2.51  | 0.444 | <0.01 | 0.153 | 0.269 | 1.37  | <0.01 | <0.01 | 0.125 | 0.51  | <0.01 |       |
|   | Chloride                               | TM184       | mg/l   | 2     | /                  | 250             | 2000                                 | 123   | 110   | 108   | 119   | 115   | 129   | 133   | 113   | 115   | 98.2  | 117   | 104   |
|   | COD, unfiltered                        | TM107       | mg/l   | 7     | /                  | /               |                                      | 87.7  | 31.5  | 31.8  | 34.2  | 36.6  | 33.5  | 31.8  | 35    | 44.4  | 20.7  | 51    |       |
|   | Nitrogen, Total                        | TM212       | mg/l   | 1     | /                  | /               |                                      | 41.1  | 44.9  | 35    | 41.5  | 37.5  | 36.3  | 40.2  | 39.2  | 41.9  | 34.6  | 40.3  |       |
|   | Ammoniacal Nitrogen as NH4             | TM099       | mg/l   | 0.3   | /                  | 0.5             | 5                                    | 55.5  | 56.7  | 55.7  | 56.4  | 41.8  | 52.6  | 51.7  | 50.5  | 56.2  | 43.3  | 48.7  | 53    |
|   | Nitrate as NO3                         | TM184       | mg/l   | 0.3   | /                  | 50              | 500                                  | <0.3  | <0.3  | <0.3  | <0.3  | <0.3  | 0.386 | <0.3  | <0.3  | <0.3  | <0.3  | 9.38  |       |
|   | BOD, unfiltered                        | TM045       | mg/l   | 1     | /                  | /               |                                      | -     | <3    | <1    | 1.45  | 2.25  | <1    | 2.44  | <1    | 1.96  | 1.92  | <5    |       |
|   | Alkalinity, Total as CaCO3             | TM043       | mg/l   | 2     | /                  | /               |                                      | 606   | 553   | 602   | 602   | 582   | 582   | 579   | 621   | 531   | 562   |       |       |
|   | Alkalinity, Total as CaCO3 (diss.filt) | TM043       | mg/l   | 2     | /                  | /               |                                      | 9     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     |       |
|   | Suspended solids, Total                | TM022       | mg/l   | 9     | /                  | /               |                                      | 228   | 35.9  | 32.3  | 33.1  | 18.8  | 63.4  | 63    | 84    | 71    | 36.8  | 77.3  |       |
| <b>Filtered (Dissolved) Metals</b>          | Mercury (diss.filt)                    | TM183       | µg/l   | 0.01  | 0.07               | /               | 10                                   | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
|   | Arsenic (diss.filt)                    | TM152       | µg/l   | 0.5   | 25                 | /               | 500                                  | 113   | 116   | 111   | 126   | 96.5  | 98.5  | 102   | 104   | 125   | 74.8  | 114   | 141   |
|   | Cadmium (diss.filt)                    | TM152       | µg/l   | 0.08  | 0.2                | /               | 50                                   | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | 1.02  | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 |
|   | Chromium (diss.filt)                   | TM152       | µg/l   | 1     | /                  | 50              | 500                                  | <1    | <1    | <1    | <1    | <1    | <1    | <1    | <1    | <1    | <1    | <1    | <1    |
|   | Copper (diss.filt)                     | TM152       | µg/l   | 0.3   | 3.76               | /               | 1000                                 | <0.3  | 0.57  | <0.3  | 0.477 | <0.3  | <0.3  | <0.3  | 0.462 | 1.68  | 1.19  | <0.3  |       |
|   | Lead (diss.filt)                       | TM152       | µg/l   | 0.2   | 1.3                | /               | 500                                  | 0.216 | 0.323 | <0.2  | <0.2  | <0.2  | <0.2  | <0.2  | <0.2  | 0.407 | <0.2  | <0.2  |       |
|   | Manganese (diss.filt)                  | TM152       | µg/l   | 3     | /                  | 50              | 500                                  | 1420  | 1400  | 1360  | 1400  | 1430  | 1380  | 1400  | 1230  | 1370  | 1210  | 1290  | 1110  |
|   | Nickel (diss.filt)                     | TM152       | µg/l   | 0.4   | 8.6                | /               | 500                                  | 2.6   | 2.27  | 1.99  | 1.98  | 2.04  | 2.03  | 1.93  | 2.63  | 3.84  | 2.76  | 2.29  | 2.04  |
|   | Zinc (diss.filt)                       | TM152       | µg/l   | 1     | 7.9                | /               | 1000                                 | 4.75  | 3.17  | 1.63  | 1.81  | 1.65  | 2.18  | 15.8  | 15.4  | 13.3  | 321   | 7.27  | 1.64  |
|   | Sodium (Dis.Fil)                       | TM152       | mg/l   | 0.076 | /                  | 200             | 1500                                 | 89.9  | 72.7  | 75.4  | 74.9  | 82    | 90.6  | 86.7  | 86.3  | 85.7  | 76.8  | 78.1  |       |
|   | Magnesium (Dis.Fil)                    | TM152       | mg/l   | 0.036 | /                  | /               | 500                                  | 31.4  | 29.9  | 30.9  | 30.5  | 30.5  | 32.4  | 30.2  | 29.4  | 31    | 28    | 27.2  |       |
|   | Potassium (Dis.Fil)                    | TM152       | mg/l   | 0.2   | /                  | /               | 120                                  | 35.9  | 36.1  | 36.8  | 34.6  | 33.4  | 38.8  | 33.1  | 34.4  | 32.7  | 31.1  | 32.4  |       |
|   | Calcium (Dis.Fil)                      | TM152       | mg/l   | 0.2   | /                  | /               | 1000                                 | 110   | 106   | 110   | 106   | 102   | 118   | 107   | 103   | 117   | 102   | 97.7  |       |
|   | Iron (Dis.Fil)                         | TM152       | mg/l   | 0.019 | 1                  | /               | 2                                    | 13.7  | 14.3  | 14.7  | 14.2  | 15.1  | 13.5  | 14.2  | 13.3  | 14.3  | 13.8  | 13.4  | 14.9  |
| <b>Unfiltered (Total) Metals</b>            | Phosphorus (tot.unfilt)                | TM152       | µg/l   | 20    | /                  | /               | 10000                                | 353   | 92.9  | 93.7  | 89.7  | 138   | 127   | 143   | 139   | 870   | 106   | 289   |       |
|   | Hardness, Total as CaCO3 unfiltered    | TM152       | mg/l   | 0.35  | /                  | /               |                                      | 425   | 391   | 421   | 407   | 384   | 428   | 394   | 384   | 404   | 358   | 403   |       |
| <b>Gasoline Range Organics (GRO)</b>        | Total Aliphatics >C5-C12               | TM245       | µg/l   | 10    | /                  | /               |                                      | <10   | <10   | <10   | <10   | <10   | <10   | <10   | 11    | <10   | <10   | -     |       |
|   | Total Aromatics >EC5-EC12              | TM245       | µg/l   | 10    | /                  | /               |                                      | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | -     |       |
| <b>TPH Criteria Working Group (TPH CWG)</b> | GRO Surrogate % recovery**             | TM245       | %      |       | /                  | /               |                                      | 110   | 100   | 99    | 92    | 97    | 104   | 100   | 114   | 101   | 98    | 90    |       |
|   | GRO >C5-C12                            | TM245       | µg/l   | 50    | /                  | /               |                                      | <50   | <50   | <50   | <50   | <50   | <50   | <50   | <50   | <50   | <50   | <50   |       |
|   | Methyl tertiary butyl ether (MTBE)     | TM245       | µg/l   | 3     | /                  | 15              |                                      | <3    | <3    | <3    | <3    | <3    | <3    | <3    | <3    | <3    | <3    | <3    |       |
|   | Benzene                                | TM245       | µg/l   | 7     | 8                  | /               |                                      | <7    | <7    | <7    | <7    | <7    | <7    | <7    | <7    | <7    | <7    | <7    |       |
|   | Toluene                                | TM245       | µg/l   | 4     | 74                 | /               |                                      | <4    | <4    | <4    | <4    | <4    | <4    | <4    | <4    | <4    | <4    | <4    |       |
|   | Ethylbenzene                           | TM245       | µg/l   | 5     | 20                 | /               |                                      | <5    | <5    | <5    | <5    | <5    | <5    | <5    | <5    | <5    | <5    | <5    |       |
|   | m,p-Xylene                             | TM245       | µg/l   | 8     | 30                 | /               |                                      | <8    | <8    | <8    | <8    | <8    | <8    | <8    | <8    | <8    | <8    | <8    |       |
|   | o-Xylene                               | TM245       | µg/l   | 3     | 30                 | /               |                                      | <3    | <3    | <3    | <3    | <3    | <3    | <3    | <3    | <3    | <3    | <3    |       |
|   | Sum of detected Xylenes                | TM245       | µg/l   | 11    | 30                 | /               |                                      | <11   | <11   | <11   | <11   | <11   | <11   | <11   | <11   | <11   | <11   | <11   |       |
|   | Sum of detected BTEX                   | TM245       | µg/l   | 28    | /                  | /               |                                      | <28   | <28   | <28   | <28   | <28   | <28   | <28   | <28   | <28   | <28   | <28   |       |
|   | Aliphatics >C5-C6                      | TM245       | µg/l   | 10    | /                  | /               |                                      | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   |       |
|   | Aliphatics >C6-C8                      | TM245       | µg/l   | 10    | /                  | /               |                                      | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   |       |
|   | Aliphatics >C8-C10                     | TM245       | µg/l   | 10    | /                  | /               |                                      | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   |       |
|   | Aliphatics >C10-C12                    | TM245       | µg/l   | 10    | /                  | /               |                                      | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   |       |
|   | Aliphatics >C12-C16 (aq)               | TM174       | µg/l   | 10    | /                  | /               |                                      | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | 150   |       |
|   | Aliphatics >C16-C21 (aq)               | TM174       | µg/l   | 10    | /                  | /               |                                      | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | 151   |       |
|   | Aliphatics >C21-C25 (aq)               | TM174       | µg/l   | 10    | /                  | /               |                                      | 125   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   |       |
|   | Total Aliphatics >C12-C25 (aq)         | TM174       | µg/l   | 10    | /                  | /               |                                      | 10    | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     |       |
|   | Aromatics >EC5-EC7                     | TM245       | µg/l   | 10    | 8                  | /               |                                      | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10   |       |
|   | Aromatics >EC7-EC8                     | TM245       | µg/l   | 10    | 74                 | /               |                                      | <10   | <10   | <10   | &     |       |       |       |       |       |       |       |       |

Point of Ayre Landfill's  
Groundwater Sample Results

ALS

SDG(s): 190315-102

Customer: Waste Management Unit Douglas (12297)

Client Reference / Point of Ayre

Order no.

| Customer Sample ID     | P3A        | P3A        | P3A        | P3A        | P3A         | P3A        | P3A        | P3A        | P3A        | P3A        | P3A        | P3A        | P3A         |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 4.84-      | 5.22-      | 5.22-      | 4.86-      | -           | -          | -          | -          | -          | -          | -          | -          | 4.97-       |
| AGS Id                 |            |            |            |            |             |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 11/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 3/19/2020   | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 3/23/2020   | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/12/2022 |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-67  |             |
| Lab Sample Number      | 19558442   | 20363907   | 20719332   | 21297969   | 21836347    | 22246274   | 22802669   | 23404118   | 23838516   | 24394383   | 26881770   | 27276222   |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |             |

| Analysis | Test                               | Method | Units | LOD | RPV Coastal Waters EGS (if no EGS) | WMP 26A Landfill Completion Criteria | Sample Results |      |      |      |     |      |     |      |     |      |     |     |    |    |    |    |     |
|----------|------------------------------------|--------|-------|-----|------------------------------------|--------------------------------------|----------------|------|------|------|-----|------|-----|------|-----|------|-----|-----|----|----|----|----|-----|
|          |                                    |        |       |     |                                    |                                      | P3A            | P3A  | P3A  | P3A  | P3A | P3A  | P3A | P3A  | P3A | P3A  | P3A | P3A |    |    |    |    |     |
|          | Vinyl chloride                     | TM208  | µg/l  | 1   | 0.5                                | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | Bromomethane                       | TM208  | µg/l  | 1   | /                                  | /                                    | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | Chloroethane                       | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | Trichlorofluoromethane             | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | 1,1-Dichloroethene                 | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | Carbon disulphide                  | TM208  | µg/l  | 1   | /                                  | /                                    | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | Dichloromethane                    | TM208  | µg/l  | 1   | 20                                 | 10                                   | <3             | <3   | <3   | <3   | <3  | <3   | <3  | <3   | <3  | <3   | <3  | <3  | <3 | <3 | <3 | <3 | <3  |
|          | Methyl tertiary butyl ether (MTBE) | TM208  | µg/l  | 1   | /                                  | 15                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | trans-1,2-Dichloroethene           | TM208  | µg/l  | 1   | /                                  | 50                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | 1,1-Dichloroethane                 | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | cis-1,2-Dichloroethene             | TM208  | µg/l  | 1   | /                                  | 50                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | 2,2-Dichloropropane                | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | Bromochloromethane                 | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | Chloroform                         | TM208  | µg/l  | 1   | 2.5                                | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | 1,1,1-Trichloroethane              | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | 1,1-Dichloropropene                | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | Carbon tetrachloride               | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | 1,2-Dichloroethane                 | TM208  | µg/l  | 1   | 10                                 | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | Benzene                            | TM208  | µg/l  | 1   | 5                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | Trichloroethene                    | TM208  | µg/l  | 1   | 10                                 | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | 1,2-Dichloropropane                | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | Dibromomethane                     | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | Bromodichloromethane               | TM208  | µg/l  | 1   | /                                  | 100                                  | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | cis-1,3-Dichloropropene            | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | Toluene                            | TM208  | µg/l  | 1   | 74                                 | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | trans-1,3-Dichloropropene          | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | 1,1,2-Trichloroethane              | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | 1,3-Dichloropropane                | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | Tetrachloroethene                  | TM208  | µg/l  | 1   | 10                                 | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | Dibromochloromethane               | TM208  | µg/l  | 1   | /                                  | 100                                  | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | 1,2-Dibromoethane                  | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | Chlorobenzene                      | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | 1.35 | 1.22 | 1.38 | <1  | 1.08 | <1  | 1.51 | <1  | 1.11 | <1  | <1  | <1 | <1 | <1 | <1 | 1.5 |
|          | 1,1,1,2-Tetrachloroethane          | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | Ethylbenzene                       | TM208  | µg/l  | 1   | 20                                 | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | m,p-Xylene                         | TM208  | µg/l  | 1   | 30                                 | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | o-Xylene                           | TM208  | µg/l  | 1   | 30                                 | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | Styrene                            | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | Bromoform                          | TM208  | µg/l  | 1   | /                                  | 100                                  | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | Isopropylbenzene                   | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | 1,1,2,2-Tetrachloroethane          | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | 1,2,3-Trichloropropane             | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | Bromobenzene                       | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | Propylbenzene                      | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | 2-Chlorotoluene                    | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | 1,3,5-Trimethylbenzene             | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   | <1   | <1  | <1   | <1  | <1   | <1  | <1   | <1  | <1  | <1 | <1 | <1 | <1 | <1  |
|          | 4-Chlorotoluene                    | TM208  | µg/l  | 1   | /                                  | 10                                   | <1             | <1   | <1   |      |     |      |     |      |     |      |     |     |    |    |    |    |     |



Point of Ayre Landfill's  
Groundwater Sample Results

ALS

SDG(s): 190315-102  
Customer: Waste Management Unit Douglas (12297)  
Client Reference / Point of Ayre  
Order no:

| Customer Sample ID     | P3B        | P3B        | P3B        | P3B        | P3B        | P3B        | P3B        | P3B        | P3B        | P3B        | P3B        | P3B         |
|------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 5.00-      | 5.40-      |            |            |            |            |            |            |            |            |            | 5.10-       |
| AGS Id                 |            |            |            |            |            |            |            |            |            |            |            |             |
| Sample Type            | UND_WAT    | UND_WAT    | UND_WAT    | UND_WAT    | UND_WAT    | UND_WAT    | UND_WAT    | UND_WAT    | UND_WAT    | UND_WAT    | UND_WAT    | MISC_LIQUID |
| Sampled Date           | 11/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020 | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022  |
| Sample Received Date   | 15/03/2019 | 19/07/2019 |            |            |            | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 |            | 07/12/2022  |
| Final Instruction Date | 25/03/2019 | 29/07/2019 |            |            |            | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 |            | 09/12/2022  |
| Report Completed Date  | 27/03/2019 | 30/07/2019 |            |            |            | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 |            | 09/12/2022  |
| SDG                    | 190315-102 | 190719-73  |            |            |            | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 |            | 221207-97   |
| Lab Sample Number      | 19558441   | 20363908   |            |            |            | 22246275   | 22802671   | 23404119   | 23838517   | 24394386   |            | 27276231    |
| Sample Temperature     | 9.8        | 15         |            |            |            | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       |            | 6.5         |
| Sample Time            |            |            |            |            |            |            |            |            |            |            |            |             |

| Analysis                                    | Test                                     | Method      | Units  | LOD   | Coastal Waters EQS | RPV (if no EQS) | WMP 2&A Landfill Completion Criteria |        |       |   |   |       |       |       |        |        |   |      |
|---|--|-------------|--------|-------|--------------------|-----------------|--------------------------------------|--------|-------|---|---|-------|-------|-------|--------|--------|---|------|
| <b>Carbon</b>                               | Carbon, Organic (diss.filt)              | TM090       | mg/l   | 6     | /                  | /               | 10                                   | 9.06   | 8.91  | - | - | 9.06  | 11.8  | 8.35  | <3     | 9.81   | - | 3.86 |
| <b>Inorganics</b>                           | Fluoride                                 | TM104       | mg/l   | 0.5   | /                  | /               | 10                                   | <0.5   | <0.5  | - | - | <0.5  | <0.5  | <0.5  | <0.5   | <0.5   | - | -    |
|   | Ionic balance                            | Calculation | % Diff | /     | /                  | /               |                                      | 1.47   | -1.27 | - | - | 2.47  | -1.72 | -2.02 | -1.02  | 2.44   | - | -    |
|   | Nitrite as NO2                           | TM184       | mg/l   | 0.05  | 0.5                | /               | 1                                    | <0.05  | <0.05 | - | - | <0.05 | <0.05 | <0.05 | <0.05  | <0.05  | - | -    |
|   | Phosphate (Ortho as PO4)                 | TM184       | mg/l   | 0.05  | /                  | /               |                                      | <0.05  | <0.05 | - | - | <0.05 | <0.05 | <0.05 | <0.05  | <0.05  | - | -    |
|   | Sulphate                                 | TM184       | mg/l   | 2     | /                  | 250             | 2500                                 | <2     | 2.3   | - | - | 3.6   | 2.1   | 2.9   | 6.8    | <2     | - | -    |
|   | Sulphide                                 | TM101       | mg/l   | 0.01  | /                  | /               |                                      | 0.0795 | 0.105 | - | - | 0.191 | 0.016 | <0.01 | <0.01  | 0.0172 | - | -    |
|   | Chloride                                 | TM184       | mg/l   | 2     | /                  | 250             | 2000                                 | 123    | 131   | - | - | 127   | 126   | 98.9  | 41.6   | 101    | - | 76.3 |
|   | COD, unfiltered                          | TM107       | mg/l   | 7     | /                  | /               |                                      | 37.9   | 33.1  | - | - | 42.7  | 34.5  | 18.9  | 26.1   | 20.7   | - | -    |
|   | Nitrogen, Total                          | TM212       | mg/l   | 1     | /                  | /               |                                      | 39.4   | 45.6  | - | - | 36.9  | 40.6  | 22.2  | 1.4    | 37.6   | - | -    |
|   | Ammoniacal Nitrogen as NH4               | TM099       | mg/l   | 0.3   | /                  | 0.5             | 5                                    | 56.3   | 56.8  | - | - | 55.4  | 52.7  | 21.7  | 0.688  | 44.6   | - | 16.7 |
|   | Nitrate as NO3                           | TM184       | mg/l   | 0.3   | /                  | 50              | 500                                  | 1.7    | <0.3  | - | - | 1.5   | 1.09  | 2.64  | 4.78   | 2.5    | - | -    |
|   | BOD, unfiltered                          | TM045       | mg/l   | 1     | /                  | /               |                                      | -      | <1    | - | - | 2.62  | <1    | <1    | <1     | <1     | - | -    |
|   | Alkalinity, Total as CaCO3               | TM043       | mg/l   | 2     | /                  | /               |                                      | 583    | 579   | - | - | 578   | 595   | 435   | 201    | 560    | - | -    |
|   | Alkalinity, Total as CaCO3 (diss.filt)   | TM043       | mg/l   | 2     | /                  | /               |                                      | -      | -     | - | - | -     | -     | 205   | -      | -      | - | -    |
|   | Suspended solids, Total                  | TM022       | mg/l   | 9     | /                  | /               |                                      | 44.5   | 30.8  | - | - | 403   | 77.8  | 29.2  | 8.45   | 51.7   | - | -    |
| <b>Filtered (Dissolved) Metals</b>          | Mercury (diss.filt)                      | TM183       | µg/l   | 0.01  | 0.07               | /               | 10                                   | <0.01  | <0.01 | - | - | <0.01 | <0.01 | <0.01 | <0.01  | <0.01  | - | -    |
|   | Arsenic (diss.filt)                      | TM152       | µg/l   | 0.5   | 25                 | /               | 500                                  | 47     | 96.6  | - | - | 64.5  | 62.1  | 4.61  | 1.85   | 26.8   | - | 4.91 |
|   | Cadmium (diss.filt)                      | TM152       | µg/l   | 0.08  | 0.2                | /               | 50                                   | <0.08  | <0.08 | - | - | <0.08 | <0.08 | <0.08 | <0.08  | <0.08  | - | -    |
|   | Chromium (diss.filt)                     | TM152       | µg/l   | 1     | /                  | 50              | 500                                  | <1     | <1    | - | - | <1    | <1    | <1    | <1     | <1     | - | -    |
|   | Copper (diss.filt)                       | TM152       | µg/l   | 0.3   | 3.76               | /               | 1000                                 | <0.3   | <0.3  | - | - | 1.07  | 0.491 | 1.95  | 1.4    | 5.53   | - | -    |
|   | Lead (diss.filt)                         | TM152       | µg/l   | 0.2   | 1.3                | /               | 500                                  | <0.2   | <0.2  | - | - | 0.696 | <0.2  | 0.201 | <0.2   | 0.395  | - | -    |
|   | Manganese (diss.filt)                    | TM152       | µg/l   | 3     | /                  | 50              | 500                                  | 1730   | 1620  | - | - | 1800  | 1710  | 647   | 24.4   | 1580   | - | 593  |
|   | Nickel (diss.filt)                       | TM152       | µg/l   | 0.4   | 8.6                | /               | 500                                  | 5.36   | 4.94  | - | - | 6.14  | 5.25  | 5.94  | 0.593  | 7.78   | - | 3.09 |
|   | Zinc (diss.filt)                         | TM152       | µg/l   | 1     | 7.9                | /               | 1000                                 | 3.29   | 2.27  | - | - | 14.7  | 21.6  | 16    | 3.9    | 2750   | - | 2.39 |
|   | Sodium (Dis.Filt)                        | TM152       | mg/l   | 0.076 | /                  | 200             | 1500                                 | 82.4   | 86.6  | - | - | 93.5  | 83.7  | 62.1  | 31     | 82.7   | - | -    |
|   | Magnesium (Dis.Filt)                     | TM152       | mg/l   | 0.036 | /                  | /               | 500                                  | 30     | 29.7  | - | - | 35.1  | 31.1  | 23.3  | 12.1   | 30.4   | - | -    |
|   | Potassium (Dis.Filt)                     | TM152       | mg/l   | 0.2   | /                  | /               | 120                                  | 35.2   | 36.4  | - | - | 41.1  | 33.7  | 16.3  | 2.23   | 33.9   | - | -    |
|   | Calcium (Dis.Filt)                       | TM152       | mg/l   | 0.2   | /                  | /               | 1000                                 | 109    | 103   | - | - | 121   | 104   | 98    | 58.9   | 105    | - | -    |
|   | Iron (Dis.Filt)                          | TM152       | mg/l   | 0.019 | 1                  | /               | 2                                    | 6.03   | 11.6  | - | - | 7.65  | 7.21  | 0.896 | <0.019 | 3.33   | - | 0.3  |
| <b>Unfiltered (Total) Metals</b>            | Phosphorus (tot.unfilt)                  | TM152       | µg/l   | 20    | /                  | /               | 10000                                | 36.2   | 406   | - | - | 311   | 73.4  | 74.9  | 50.1   | 101    | - | -    |
|   | Hardness, Total as CaCO3 unfiltered      | TM152       | mg/l   | 0.35  | /                  | /               |                                      | 392    | 443   | - | - | 505   | 413   | 368   | 204    | 378    | - | -    |
| <b>Gasoline Range Organics (GRO)</b>        | Total Aliphatics >C5-C12                 | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10   | - | - | <10   | <10   | 10    | <10    | <10    | - | -    |
|   | Total Aromatics >EC5-EC12                | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10   | - | - | <10   | <10   | <10   | <10    | <10    | - | -    |
| <b>TPH Criteria Working Group (TPH CWG)</b> | GRO Surrogate % recovery*                | TM245       | %      | 50    | /                  | /               |                                      | 100    | 98    | - | - | 102   | 96    | 126   | 94     | 97     | - | -    |
|   | GRO >C5-C12                              | TM245       | µg/l   | 50    | /                  | /               |                                      | <50    | <50   | - | - | <50   | <50   | <50   | <50    | <50    | - | -    |
|   | Methyl tertiary butyl ether (MTBE)       | TM245       | µg/l   | 3     | /                  | 15              |                                      | <3     | <3    | - | - | <3    | <3    | <3    | <3     | <3     | - | -    |
|   | Benzene                                  | TM245       | µg/l   | 7     | 8                  | /               |                                      | <7     | <7    | - | - | <7    | <7    | <7    | <7     | <7     | - | -    |
|   | Toluene                                  | TM245       | µg/l   | 4     | 74                 | /               |                                      | <4     | <4    | - | - | <4    | <4    | <4    | <4     | <4     | - | -    |
|   | Ethylbenzene                             | TM245       | µg/l   | 5     | 20                 | /               |                                      | <5     | <5    | - | - | <5    | <5    | <5    | <5     | <5     | - | -    |
|   | m,p-Xylene                               | TM245       | µg/l   | 8     | 30                 | /               |                                      | <8     | <8    | - | - | <8    | <8    | <8    | <8     | <8     | - | -    |
|   | o-Xylene                                 | TM245       | µg/l   | 3     | 30                 | /               |                                      | <3     | <3    | - | - | <3    | <3    | <3    | <3     | <3     | - | -    |
|   | Sum of detected Xylenes                  | TM245       | µg/l   | 11    | 30                 | /               |                                      | <11    | <11   | - | - | <11   | <11   | <11   | <11    | <11    | - | -    |
|   | Sum of detected BTEX                     | TM245       | µg/l   | 28    | /                  | /               |                                      | <28    | <28   | - | - | <28   | <28   | <28   | <28    | <28    | - | -    |
|   | Aliphatics >C8-C8                        | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10   | - | - | <10   | <10   | <10   | <10    | <10    | - | -    |
|   | Aliphatics >C8-C8                        | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10   | - | - | <10   | <10   | <10   | <10    | <10    | - | -    |
|   | Aliphatics >C8-C10                       | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10   | - | - | <10   | <10   | <10   | <10    | <10    | - | -    |
|   | Aliphatics >C10-C12                      | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10   | - | - | <10   | <10   | <10   | <10    | <10    | - | -    |
|   | Aliphatics >C12-C16 (aq)                 | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <10   | - | - | <10   | <10   | <10   | <10    | <10    | - | -    |
|   | Aliphatics >C16-C21 (aq)                 | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <10   | - | - | <10   | <10   | <10   | <10    | <10    | - | -    |
|   | Aliphatics >C21-C35 (aq)                 | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <10   | - | - | <10   | <10   | <10   | <10    | <10    | - | -    |
|   | Total Aliphatics >C12-C35 (aq)           | TM174       | µg/l   | 10    | /                  | /               |                                      | -      | -     | - | - | -     | -     | -     | -      | -      | - | -    |
|   | Aromatics >EC5-EC7                       | TM245       | µg/l   | 10    | 8                  | /               |                                      | <10    | <10   | - | - | <10   | <10   | <10   | <10    | <10    | - | -    |
|   | Aromatics >EC7-EC8                       | TM245       | µg/l   | 10    | 74                 | /               |                                      | <10    | <10   | - | - | <10   | <10   | <10   | <10    | <10    | - | -    |
|   | Aromatics >EC8-EC10                      | TM245       | µg/l   | 10    | 20                 | /               |                                      | <10    | <10   | - | - | <10   | <10   | <10   | <10    | <10    | - | -    |
|   | Aromatics >EC10-EC12                     | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10   | - | - | <10   | <10   | <10   | <10    | <10    | - | -    |
|   | Aromatics >EC12-EC16 (aq)                | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <10   | - | - | <10   | <10   | <10   | <10    | <10    | - | -    |
|   | Aromatics >EC16-EC21 (aq)                | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <10   | - | - | <10   | <10   | <10   | <10    | <10    | - | -    |
|   | Aromatics >EC21-EC35 (aq)                | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <10   | - | - | <10   | <10   | <10   | <10    | <10    | - | -    |
|   | Total Aromatics >EC12-EC35 (aq)          | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <10   | - | - | <10   | <10   | <10   | <10    | <10    | - | -    |
|   | Total Aliphatics & Aromatics >C5-35 (aq) | TM174       | µg/l   | 10    | /                  | /               | 100                                  | <10    | <10   | - | - | <10   | <10   | <10   | <10    | <10    | - | -    |
| <b>Polyaromatic Hydrocarbons (PAHs)</b>     | Naphthalene (aq)                         | TM178       | µg/l   | 0.01  | 2                  | /               |                                      | <0.01  | <0.01 | - | - | <0.01 | <0.01 | <0.01 | <0.01  | <0.01  | - | -    |
|   | Acenaphthene (aq)                        | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <      |       |   |   |       |       |       |        |        |   |      |



Point of Ayre Landfill's  
Groundwater Sample Results

ALS

SDG(s): 190315-102  
Customer: Waste Management Unit Douglas (12297)  
Client Reference / Point of Ayre  
Order no:

| Customer Sample ID     | P3B                 | P3B        | P3B        | P3B        | P3B        | P3B        | P3B  | P3B        | P3B        | P3B        | P3B        | P3B        | P3B         |
|------------------------|---------------------|------------|------------|------------|------------|------------|--|------------|------------|------------|------------|------------|-------------|
| Depth                  | 5.00-               | 5.40-      |            |            |            |            |  |            |            |            |            |            | 5.10-       |
| AGS Id                 |                     |            |            |            |            |            |  |            |            |            |            |            |             |
| Sample Type            | UND_WATER/UND_WATER |            |            |            |            |            | GROUND_WATER/UND_WATER/UND_WATER/UND_WATER/UND_WATER |            |            |            |            |            | MISC_LIQUID |
| Sampled Date           | 11/03/2019          | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020 | 01/06/2020 | 07/09/2020   | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |             |
| Sample Received Date   | 15/03/2019          | 29/07/2019 |            |            |            | 03/06/2020 | 10/09/2020   | 10/12/2020 | 04/03/2021 | 04/06/2021 |            | 07/12/2022 |             |
| Final Instruction Date | 25/03/2019          | 29/07/2019 |            |            |            | 03/06/2020 | 17/09/2020   | 18/12/2020 | 11/03/2021 | 04/06/2021 |            | 09/12/2022 |             |
| Report Completed Date  | 27/03/2019          | 30/07/2019 |            |            |            | 16/06/2020 | 21/09/2020   | 21/12/2020 | 23/03/2021 | 16/06/2021 |            | 09/12/2022 |             |
| SDG                    | 190315-102          | 190719-73  |            |            |            | 200603-78  | 200910-118   | 201210-95  | 210304-123 | 210604-112 |            | 221207-97  |             |
| Lab Sample Number      | 19558441            | 20363908   |            |            |            | 22246275   | 22802671   | 23404119   | 23838517   | 24394386   |            | 27276231   |             |
| Sample Temperature     | 9.8                 | 15         |            |            |            | 16.2       | 14.8   | 6.5        | 8.6        | 15.2       |            | 6.5        |             |
| Sample Time            |                     |            |            |            |            |            |  |            |            |            |            |            |             |

| Analysis                                 | Test                               | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 2&A Landfill Completion Criteria | Detection Results |              |              |              |              |              |              |              |              |              |      |  |  |  |  |  |  |
|--|------------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------|--|--|--|--|--|--|
|  |                                    |        |          |     |                    |                 |                                      | Not Detected      | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected |      |  |  |  |  |  |  |
| <b>Volatile Organic Compounds (VOCs)</b> |                                    |        |          |     |                    |                 |                                      |                   |              |              |              |              |              |              |              |              |              |      |  |  |  |  |  |  |
|  | SVOC TIC (ug)                      | TM176  | No units |     | /                  | /               |                                      | Not Detected      | Not Detected |              |              |              |              |              |              |              |              |      |  |  |  |  |  |  |
|  | Total SVOC TIC                     | TM176  | ug/l     | 10  | /                  | /               |                                      | <10               | <10          |              |              |              |              |              |              |              |              |      |  |  |  |  |  |  |
|  | Dibromofluoromethane**             | TM208  | %        | /   | /                  | /               |                                      | 107               | 109          |              |              |              |              | 105          | 110          | 111          | 113          | 117  |  |  |  |  |  |  |
|  | Toluene-d8**                       | TM208  | %        | /   | /                  | /               |                                      | 102               | 97.8         |              |              |              |              | 98.3         | 98.9         | 97.6         | 97.5         | 99.2 |  |  |  |  |  |  |
|  | 4-Bromofluorobenzene**             | TM208  | %        | /   | /                  | /               |                                      | 96.5              | 98.8         |              |              |              |              | 104          | 99.2         | 96.7         | 95.6         | 99.5 |  |  |  |  |  |  |
|  | Dichlorodifluoromethane            | TM208  | ug/l     | 1   | /                  | /               |                                      | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Chloromethane                      | TM208  | ug/l     | 1   | /                  | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Vinyl chloride                     | TM208  | ug/l     | 1   | /                  | 0.5             | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Bromomethane                       | TM208  | ug/l     | 1   | /                  | /               |                                      | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Chloroethane                       | TM208  | ug/l     | 1   | /                  | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Trichlorofluoromethane             | TM208  | ug/l     | 1   | /                  | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | 1,1-Dichloroethene                 | TM208  | ug/l     | 1   | /                  | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Carbon disulphide                  | TM208  | ug/l     | 1   | /                  | /               |                                      | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Dichloromethane                    | TM208  | ug/l     | 1   | 20                 | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Methyl tertiary butyl ether (MTBE) | TM208  | ug/l     | 1   | /                  | 15              |                                      | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | trans-1,2-Dichloroethene           | TM208  | ug/l     | 1   | /                  | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | 1,1-Dichloroethane                 | TM208  | ug/l     | 1   | /                  | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | cis-1,2-Dichloroethene             | TM208  | ug/l     | 1   | /                  | 50              | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | 2,2-Dichloropropane                | TM208  | ug/l     | 1   | /                  | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Bromochloromethane                 | TM208  | ug/l     | 1   | /                  | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Chloroform                         | TM208  | ug/l     | 1   | 2.5                | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | 1,1,1-Trichloroethane              | TM208  | ug/l     | 1   | /                  | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | 1,1-Dichloropropene                | TM208  | ug/l     | 1   | /                  | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Carbon tetrachloride               | TM208  | ug/l     | 1   | /                  | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | 1,2-Dichloroethane                 | TM208  | ug/l     | 1   | 10                 | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Benzene                            | TM208  | ug/l     | 1   | 8                  | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Trichloroethene                    | TM208  | ug/l     | 1   | 10                 | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | 1,2-Dichloropropane                | TM208  | ug/l     | 1   | /                  | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Dibromomethane                     | TM208  | ug/l     | 1   | /                  | /               |                                      | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Bromodichloromethane               | TM208  | ug/l     | 1   | /                  | 100             | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | cis-1,3-Dichloropropene            | TM208  | ug/l     | 1   | /                  | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Toluene                            | TM208  | ug/l     | 1   | 74                 | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | trans-1,3-Dichloropropene          | TM208  | ug/l     | 1   | /                  | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | 1,1,2-Trichloroethane              | TM208  | ug/l     | 1   | /                  | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | 1,3-Dichloropropane                | TM208  | ug/l     | 1   | /                  | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Tetrachloroethene                  | TM208  | ug/l     | 1   | 10                 | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Dibromochloromethane               | TM208  | ug/l     | 1   | /                  | 100             | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | 1,2-Dibromoethane                  | TM208  | ug/l     | 1   | /                  | /               |                                      | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Chlorobenzene                      | TM208  | ug/l     | 1   | /                  | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | 1,1,1,2-Tetrachloroethane          | TM208  | ug/l     | 1   | /                  | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Ethylbenzene                       | TM208  | ug/l     | 1   | 20                 | /               |                                      | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | m,p-Xylene                         | TM208  | ug/l     | 1   | 30                 | /               |                                      | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | o-Xylene                           | TM208  | ug/l     | 1   | 30                 | /               |                                      | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Styrene                            | TM208  | ug/l     | 1   | /                  | /               |                                      | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Bromofrom                          | TM208  | ug/l     | 1   | /                  | 100             |                                      | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Isopropylbenzene                   | TM208  | ug/l     | 1   | /                  | /               |                                      | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | 1,1,2,2-Tetrachloroethane          | TM208  | ug/l     | 1   | /                  | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | 1,2,3-Trichloropropane             | TM208  | ug/l     | 1   | /                  | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Bromobenzene                       | TM208  | ug/l     | 1   | /                  | /               |                                      | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | Propylbenzene                      | TM208  | ug/l     | 1   | /                  | /               |                                      | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | 2-Chlorotoluene                    | TM208  | ug/l     | 1   | /                  | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | 1,3,5-Trimethylbenzene             | TM208  | ug/l     | 1   | /                  | /               |                                      | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | 4-Chlorotoluene                    | TM208  | ug/l     | 1   | /                  | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | tert-Butylbenzene                  | TM208  | ug/l     | 1   | /                  | /               |                                      | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | 1,2,4-Trimethylbenzene             | TM208  | ug/l     | 1   | /                  | 175000          |                                      | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | sec-Butylbenzene                   | TM208  | ug/l     | 1   | /                  | /               |                                      | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | 4-iso-Propyltoluene                | TM208  | ug/l     | 1   | /                  | /               |                                      | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |
|  | 1,3-Dichlorobenzene                | TM208  | ug/l     | 1   | /                  | /               | 10                                   | <1                | <1           |              |              |              |              | <1           | <1           | <1           | <1           | <1   |  |  |  |  |  |  |

Point of Ayre Landfill's  
Groundwater Sample Results

ALS

SDG(s): 19035-102

Customer: Waste Management Unit Douglas (12297)

Client Reference / Point of Ayre

Order no.

| Customer Sample ID     | P4A        | P4A        | P4A        | P4A        | P4a        | P4A        | P4A        | P4A        | P4A        | P4A        | P4A        | P4A         |
|------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 5.92-      | 6.48-      | 6.48-      |            |            |            |            |            |            |            |            | 5.95-       |
| AGS Id                 |            |            |            |            |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 12/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020 | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/06/2021 | 06/12/2022  |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 |            | 06/03/2020 | 03/06/2020 | 10/09/2020 | 18/12/2020 | 04/03/2021 | 04/06/2021 | 15/06/2021 | 07/12/2022  |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 |            | 19/03/2020 | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/06/2021 | 09/12/2022  |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 |            | 14/05/2020 | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2021 | 09/01/2023  |
| SDG                    | 19035-102  | 190719-73  | 190913-125 |            | 200306-148 | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97   |
| Lab Sample Number      | 19558455   | 20363909   | 20719333   |            | 21836336   | 22246277   | 22802672   | 23404121   | 23838518   | 24394387   | 26881771   | 27276631    |
| Sample Temperature     | 9.8        | 15         | 17.2       |            | 6          | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5         |
| Sample Time            |            |            |            |            |            |            |            |            |            |            |            |             |

| Analysis                                    | Test                                 | Method      | Units  | LOD   | Coastal Waters EGS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |        |        |       |     |        |        |        |        |        |        |       |       |
|---|--------------------------------------|-------------|--------|-------|--------------------|-----------------|--------------------------------------|--------|--------|-------|-----|--------|--------|--------|--------|--------|--------|-------|-------|
| <b>Carbon</b>                               |                                      |             |        |       |                    |                 |                                      |        |        |       |     |        |        |        |        |        |        |       |       |
|   | Carbon, Organic (diss.ft)            | TM090       | mg/l   | 6     | /                  | /               | 10                                   | 8.09   | 9.39   | 10.9  | -   | 9.44   | 9.24   | 10.2   | 9.67   | 9.41   | 11.2   | 13.4  | 8.38  |
| <b>Inorganics</b>                           |                                      |             |        |       |                    |                 |                                      |        |        |       |     |        |        |        |        |        |        |       |       |
|   | Fluoride                             | TM104       | mg/l   | 0.5   | /                  | /               | 10                                   | <0.5   | <0.5   | <0.5  | -   | <0.5   | <0.5   | <0.5   | <0.5   | <0.5   | <0.5   | <0.5  | <0.5  |
|   | Ionic balance                        | Calculation | % Diff |       | /                  | /               |                                      | 5.43   | -1.63  | 1.41  | -   | -2.43  | 0.716  | -4.56  | -0.886 | -0.63  | 3.06   |       |       |
|   | Nitrite as NO2                       | TM184       | mg/l   | 0.05  | 0.5                | /               | 1                                    | <0.05  | <0.05  | <0.05 | -   | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05 | <0.05 |
|   | Phosphate (Ortho as PO4)             | TM184       | mg/l   | 0.05  | /                  | /               |                                      | <0.05  | <0.05  | <0.05 | -   | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05 | <0.05 |
|   | Sulphate                             | TM184       | mg/l   | 2     | /                  | 250             | 2500                                 | 3.4    | 3.6    |       | -   | 3      | <2     | 6.3    | <2     | <2     | <2     | 14.6  |       |
|   | Sulphide                             | TM101       | mg/l   | 0.01  | /                  | /               |                                      | 0.0282 | <0.01  | <0.01 | -   | 0.0962 | 0.0374 | <0.01  | <0.01  | 0.0212 | 0.0117 | <0.01 |       |
|   | Chloride                             | TM184       | mg/l   | 2     | /                  | 250             | 2000                                 | 127    | 120    | 134   | 109 | 111    | 110    | 104    | 107    |        |        |       |       |
|   | COD, unfiltered                      | TM107       | mg/l   | 7     | /                  | /               |                                      | 34.7   | 23.8   | 23.2  | -   | 30.7   | 29.9   | 18.2   | 35.2   | 31.3   | 21.2   | 39.6  |       |
|   | Nitrogen, Total                      | TM212       | mg/l   | 1     | /                  | /               |                                      | 35.1   | 30.6   | 39.1  | -   | 29.9   | 27.1   | 21.2   | 28.9   | 32.6   | 34.7   | 33.1  |       |
|   | Ammoniacal Nitrogen as NH4           | TM099       | mg/l   | 0.3   | /                  | 0.5             | 5                                    | 41.7   | 37.3   | 44.7  | -   | 33.2   | 40.2   | 21.1   | 40.2   | 43.5   | 44.1   | 41.0  | 41.6  |
|   | Nitrate as NO3                       | TM184       | mg/l   | 0.3   | /                  | 50              | 500                                  | 0.347  | 1.7    | <0.3  | -   | <0.3   | 1.43   | 8.19   | <0.3   | <0.3   | <0.3   | 0.547 |       |
|   | BOD, unfiltered                      | TM045       | mg/l   | 1     | /                  | /               |                                      | -      | <1     | <1    | -   | 1.47   | <1     | 2.83   | <1     | <1     | <1     | <1    | <1    |
|   | Alkalinity, Total as CaCO3           | TM043       | mg/l   | 2     | /                  | /               |                                      | 582    | 555    | 567   | -   | 584    | 536    | 573    | 599    | 620    | 543    |       |       |
|   | Alkalinity, Total as CaCO3 (diss.ft) | TM043       | mg/l   | 2     | /                  | /               |                                      | -      | -      | -     | -   | -      | -      | -      | -      | -      | -      | -     | -     |
|   | Suspended solids, Total              | TM022       | mg/l   | 9     | /                  | /               |                                      | 77.6   | 7.2    | 33.5  | -   | 43.4   | 38     | 13     | 34.3   | 31.1   | 34.6   | 37.3  |       |
| <b>Filtered (Dissolved) Metals</b>          |                                      |             |        |       |                    |                 |                                      |        |        |       |     |        |        |        |        |        |        |       |       |
|   | Mercury (diss.ft)                    | TM183       | µg/l   | 0.01  | 0.07               | /               | 10                                   | <0.01  | <0.01  | <0.01 | -   | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  | <0.01 | <0.01 |
|   | Arsenic (diss.ft)                    | TM152       | µg/l   | 0.5   | 25                 | /               | 500                                  | 14     | 1.39   | 36.1  | -   | 84.4   | 30.3   | 3.01   | 97.4   | 85.9   | 101    | 119   | 118   |
|   | Cadmium (diss.ft)                    | TM152       | µg/l   | 0.08  | 0.2                | /               | 50                                   | <0.08  | <0.08  | <0.08 | -   | <0.08  | <0.08  | <0.08  | <0.08  | <0.08  | <0.08  | <0.08 | <0.08 |
|   | Chromium (diss.ft)                   | TM152       | µg/l   | 1     | /                  | 50              | 500                                  | <1     | <1     | <1    | -   | <1     | <1     | <1     | <1     | <1     | <1     | <1    | <1    |
|   | Copper (diss.ft)                     | TM152       | µg/l   | 0.3   | 3.76               | /               | 1000                                 | <0.3   | 2.27   | 2.46  | -   | 1.12   | <0.3   | 4.46   | <0.3   | 2.24   | 1.4    | 0.317 |       |
|   | Lead (diss.ft)                       | TM152       | µg/l   | 0.2   | 1.3                | /               | 500                                  | <0.2   | <0.2   | <0.2  | -   | 0.218  | <0.2   | <0.2   | 0.418  | 0.379  | <0.2   | <0.2  |       |
|   | Manganese (diss.ft)                  | TM152       | µg/l   | 3     | /                  | 50              | 500                                  | 1190   | 714    | 1150  | -   | 1130   | 1240   | 448    | 1120   | 1180   | 1160   | 968   | 1000  |
|   | Nickel (diss.ft)                     | TM152       | µg/l   | 0.4   | 8.6                | /               | 500                                  | 7.29   | 5.35   | 4.95  | -   | 6.54   | 5.13   | 4.28   | 4.99   | 6.48   | 9.12   | 5.19  | 4.67  |
|   | Zinc (diss.ft)                       | TM152       | µg/l   | 1     | 7.9                | /               | 1000                                 | 4.11   | 8.24   | 1.99  | -   | 36.1   | 1.99   | 22.2   | 8.12   | 16.4   | 64.1   | 7.77  | 1.98  |
|   | Sodium (Dis.Fil)                     | TM152       | mg/l   | 0.076 | 1                  | 200             | 1500                                 | 97.8   | 79.8   | 73.7  | -   | 80.6   | 82.8   | 80.4   | 77     | 75.3   | 86     | 68.4  |       |
|   | Magnesium (Dis.Fil)                  | TM152       | mg/l   | 0.036 | 1                  | /               | 500                                  | 34     | 30.4   | 30    | -   | 33.5   | 35.6   | 32.7   | 33.1   | 33     | 37.3   | 28.4  |       |
|   | Potassium (Dis.Fil)                  | TM152       | mg/l   | 0.2   | /                  | 120             | 1000                                 | 30.4   | 29.5   | 28.7  | -   | 26.9   | 32     | 25.7   | 28.5   | 27.7   | 32     | 28.7  |       |
|   | Calcium (Dis.Fil)                    | TM152       | mg/l   | 0.2   | /                  | 1000            | 1000                                 | 118    | 114    | 108   | -   | 110    | 130    | 118    | 114    | 121    | 128    | 104   |       |
|   | Iron (Dis.Fil)                       | TM152       | mg/l   | 0.019 | 1                  | /               | 2                                    | 0.026  | 0.0481 | 14.4  | -   | 14.6   | 11.8   | 0.0203 | 14.6   | 14.5   | 16.9   | 15.6  | 14.8  |
| <b>Unfiltered (Total) Metals</b>            |                                      |             |        |       |                    |                 |                                      |        |        |       |     |        |        |        |        |        |        |       |       |
|   | Phosphorus (tot.unfilt)              | TM152       | µg/l   | 20    | /                  | /               | 10000                                | 39.4   | 30.6   | 66.5  | -   | 80.4   | 79.9   | 115    | 68.1   | 57.9   | 57     | 77    |       |
|   | Hardness, Total as CaCO3 unfiltered  | TM152       | mg/l   | 0.35  | /                  | /               |                                      | 430    | 428    | 450   | -   | 444    | 484    | 481    | 422    | 423    | 449    | 431   |       |
| <b>Gasoline Range Organics (GRO)</b>        |                                      |             |        |       |                    |                 |                                      |        |        |       |     |        |        |        |        |        |        |       |       |
|   | Total Aliphatics >C5-C12             | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | -   | <10    | <10    | <10    | <10    | <10    | <10    | <10   | <10   |
|   | Total Aromatics >EC5-EC12            | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | -   | <10    | <10    | <10    | <10    | <10    | <10    | <10   | <10   |
| <b>TPH Criteria Working Group (TPH CWG)</b> |                                      |             |        |       |                    |                 |                                      |        |        |       |     |        |        |        |        |        |        |       |       |
|   | GRO Surrogate % recovery**           | TM245       | %      |       | /                  | /               |                                      | 98     | 92     | 113   | -   | 100    | 102    | 100    | 117    | 94     | 88     | 87    |       |
|   | GRO >C5-C12                          | TM245       | µg/l   | 50    | /                  | /               |                                      | <50    | <50    | <50   | -   | <50    | <50    | <50    | <50    | <50    | <50    | <50   | <50   |
|   | Methyl tertiary butyl ether (MTBE)   | TM245       | µg/l   | 3     | /                  | 15              |                                      | <3     | <3     | <3    | -   | <3     | <3     | <3     | <3     | <3     | <3     | <3    | <3    |
|   | Benzene                              | TM245       | µg/l   | 7     | 8                  | /               |                                      | <7     | <7     | <7    | -   | <7     | <7     | <7     | <7     | <7     | <7     | <7    | <7    |
|   | Toluene                              | TM245       | µg/l   | 4     | 74                 | /               |                                      | <4     | <4     | <4    | -   | <4     | <4     | <4     | <4     | <4     | <4     | <4    | <4    |
|   | Ethylbenzene                         | TM245       | µg/l   | 5     | 20                 | /               |                                      | <5     | <5     | <5    | -   | <5     | <5     | <5     | <5     | <5     | <5     | <5    | <5    |
|   | m,p-Xylene                           | TM245       | µg/l   | 8     | 30                 | /               |                                      | <8     | <8     | <8    | -   | <8     | <8     | <8     | <8     | <8     | <8     | <8    | <8    |
|   | o-Xylene                             | TM245       | µg/l   | 3     | 30                 | /               |                                      | <3     | <3     | <3    | -   | <3     | <3     | <3     | <3     | <3     | <3     | <3    | <3    |
|   | Sum of detected Xylenes              | TM245       | µg/l   | 11    | 30                 | /               |                                      | <11    | <11    | <11   | -   | <11    | <11    | <11    | <11    | <11    | <11    | <11   | <11   |
|   | Sum of detected BTEX                 | TM245       | µg/l   | 28    | /                  | /               |                                      | <28    | <28    | <28   | -   | <28    | <28    | <28    | <28    | <28    | <28    | <28   | <28   |
|   | Aliphatics >C5-C8                    | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | -   | <10    | <10    | <10    | <10    | <10    | <10    | <10   | <10   |
|   | Aliphatics >C6-C8                    | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | -   | <10    | <10    | <10    | <10    | <10    | <10    | <10   | <10   |
|   | Aliphatics >C8-C10                   | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | -   | <10    | <10    | <10    | <10    | <10    | <10    | <10   | <10   |
|   | Aliphatics >C10-C12                  | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | -   | <10    | <10    | <10    | <10    | <10    | <10    | <10   | <10   |
|   | Aliphatics >C12-C16 (aq)             | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | -   | <10    | <10    | <10    | <10    | <10    | <10    | <10   | <10   |
|   | Aliphatics >C16-C21 (aq)             | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | -   | <10    | <10    | <10    | <10    | <10    | <10    | <10   | <10   |
|   | Aliphatics >C21-C25 (aq)             | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | -   | <10    | <10    | <10    | <10    | <10    | <10    | <10   | <10   |
|   | Total Aliphatics >C12-C25 (aq)       | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | -   | <      |        |        |        |        |        |       |       |





Point of Ayre Landfill's  
Groundwater Sample Results

ALS

SDG(s): 190315-102

Customer: Waste Management Unit Douglas (12297)

Client Reference / Point of Ayre

Order no.

| Customer Sample ID     | P4B        | P4B        | P4B        | P4B        | P4B   | P4B  | P4B   | P4B  | P4B   | P4B  | P4B   | P4B   |
|------------------------|------------|------------|------------|------------|-------|------|-------|------|-------|------|-------|-------|
| Sample Type            | WATER      | JUND       | WATER      | JUND       | WATER | JUND | WATER | JUND | WATER | JUND | WATER | JUND  |
| Depth                  | 5.95-      | 6.46-      | 6.46-      |            |       |      |       |      |       |      |       | 5.90- |
| AGS Id                 |            |            |            |            |       |      |       |      |       |      |       |       |
| Sample Date            | 12/03/2019 | 16/07/2019 | 10/09/2019 |            |       |      |       |      |       |      |       |       |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 02/12/2019 |       |      |       |      |       |      |       |       |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 |            |       |      |       |      |       |      |       |       |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 |            |       |      |       |      |       |      |       |       |
| SDG                    | 190315-102 | 190719-73  | 190913-125 |            |       |      |       |      |       |      |       |       |
| Lab Sample Number      | 1955454    | 20363910   | 20719334   |            |       |      |       |      |       |      |       |       |
| Sample Temperature     | 9.8        | 15         | 17.2       |            |       |      |       |      |       |      |       |       |
| Sample Time            |            |            |            |            |       |      |       |      |       |      |       |       |

| Analysis                                    | Test                                 | Method | Units | LOD   | Coastal Waters EGS | RPV (If no EQS) | WMP 28A Landfill Completion Criteria |       |       |        |  |       |       |       |       |       |        |       |       |
|---|--------------------------------------|--------|-------|-------|--------------------|-----------------|--------------------------------------|-------|-------|--------|--|-------|-------|-------|-------|-------|--------|-------|-------|
| <b>Carbon</b>                               | Carbon, Organic (diss.ft)            | TM090  | mg/l  | 6     | /                  | /               | 10                                   | 11.4  | 11.1  | 10.9   |  | 10.3  | 11.6  | 14.1  | 10.6  | 8.23  | 10.9   | 13.1  | 10    |
| <b>Inorganics</b>                           | Fluoride                             | TM104  | mg/l  | 0.5   | /                  | /               | 10                                   | <0.5  | <0.5  | <0.5   |  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5   | <0.5  | <0.5  |
|   | Calcium                              | TM184  | mg/l  | 0.05  | 0.5                | /               | 1                                    | 2.44  | 1.28  | 5.26   |  | 0.055 | 9.66  | 3.08  | 1.56  | 2.25  | 5.39   |       |       |
|   | Nitrite as NO2                       | TM184  | mg/l  | 0.05  | 0.5                | /               | 1                                    | <0.05 | <0.05 | <0.05  |  | 0.071 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069  | 0.152 |       |
|   | Phosphate (Ortho as PO4)             | TM184  | mg/l  | 0.05  | /                  | /               |                                      | <0.05 | <0.05 | <0.05  |  | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05  | 0.308 |       |
|   | Sulphate                             | TM184  | mg/l  | 2     | /                  | 250             | 2500                                 | 3.7   | <2    | <2     |  | <2    | <2    | 8.3   | 3     | 8     | <2     | 50.7  |       |
|   | Sulphide                             | TM101  | mg/l  | 0.01  | /                  | /               |                                      | <0.01 | 0.255 | 0.0028 |  | 0.217 | 0.374 | <0.01 | <0.01 | 0.138 | 0.0555 | 0.935 |       |
|   | Chloride                             | TM184  | mg/l  | 2     | /                  | 250             | 2000                                 | 146   | 154   | 154    |  | 132   | 128   | 130   | 117   | 133   | 111    | 112   | 122   |
|   | COD, unfiltered                      | TM107  | mg/l  | 7     | /                  | /               |                                      | 37.1  | 39.6  | 34.1   |  | 32.5  | 32.2  | 58.4  | 26.9  | 31.4  | 33.8   | 1090  |       |
|   | Nitrogen, Total                      | TM212  | mg/l  | 1     | /                  | /               |                                      | 41    | 56.8  | 63     |  | 37.4  | 42.8  | 46.4  | 40.2  | 44.5  | 43.5   | 41.6  |       |
|   | Ammoniacal Nitrogen as NH4           | TM099  | mg/l  | 0.3   | /                  | 0.5             | 5                                    | 51.7  | 75.2  | 72.6   |  | 44.5  | 56.4  | 55.9  | 53    | 59.3  | 58.5   | 53.1  | 56    |
|   | Nitrate as NO3                       | TM184  | mg/l  | 0.3   | /                  | 50              | 500                                  | <0.3  | <0.3  | <0.3   |  | <0.3  | <0.3  | 8.64  | 2.13  | 6.51  | 0.424  | 18.7  |       |
|   | BOD, unfiltered                      | TM045  | mg/l  | 1     | /                  | /               |                                      |       | 3.32  | 5.62   |  | 2.16  | 3.08  | >41.2 | <1    | 2.05  | <1     | 274   |       |
|   | Alkalinity, Total as CaCO3           | TM043  | mg/l  | 2     | /                  | /               |                                      | 724   | 727   | 682    |  | 644   | 660   | 704   | 666   | 636   | 671    | 618   |       |
|   | Alkalinity, Total as CaCO3 (diss.ft) | TM043  | mg/l  | 2     | /                  | /               |                                      |       |       |        |  |       |       |       | 605   |       |        |       |       |
|   | Suspended solids, Total              | TM022  | mg/l  | 9     | /                  | /               |                                      | 42.5  | 46.1  | 112    |  | 27.4  | 48.8  | 348   | 32.5  | 20.6  | 37.9   |       |       |
| <b>Filtered (Dissolved) Metals</b>          | Mercury (diss.ft)                    | TM183  | µg/l  | 0.01  | 0.07               | /               | 10                                   | <0.01 | <0.01 | <0.01  |  | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01  | <0.01 | <0.01 |
|   | Arsenic (diss.ft)                    | TM152  | µg/l  | 0.5   | 25                 | /               | 500                                  | 31.3  | 317   | 172    |  | 99.8  | 332   | 30.5  | 34    | 37.9  | 102    | 187   | 87.2  |
|   | Cadmium (diss.ft)                    | TM152  | µg/l  | 0.08  | 0.2                | /               | 50                                   | <0.08 | <0.08 | <0.08  |  | <0.08 | 1.27  | <0.08 | <0.08 | <0.08 | <0.08  | <0.08 | <0.08 |
|   | Chromium (diss.ft)                   | TM152  | µg/l  | 1     | /                  | 50              | 500                                  | <1    | <1    | <1     |  | <1    | <1    | <1    | <1    | <1    | <1     | <1    | <1    |
|   | Copper (diss.ft)                     | TM152  | µg/l  | 0.3   | 3.76               | /               | 1000                                 | <0.3  | 1.11  | <0.3   |  | <0.3  | <0.3  | 1.41  | 0.399 | 1.7   | 0.699  | 2.07  |       |
|   | Lead (diss.ft)                       | TM152  | µg/l  | 0.2   | 1.3                | /               | 500                                  | <0.2  | <0.2  | <0.2   |  | <0.2  | <0.2  | 0.234 | 0.292 | <0.2  | 0.21   | <0.2  |       |
|   | Manganese (diss.ft)                  | TM152  | µg/l  | 3     | /                  | 50              | 500                                  | 1290  | 1190  | 1020   |  | 1130  | 1260  | 1190  | 979   | 853   | 1210   | 1050  | 1010  |
|   | Nickel (diss.ft)                     | TM152  | µg/l  | 0.4   | 8.6                | /               | 500                                  | 7.88  | 6.31  | 5.45   |  | 5.51  | 3.93  | 5.81  | 4.32  | 4.6   | 5.33   | 12.4  | 4.21  |
|   | Zinc (diss.ft)                       | TM152  | µg/l  | 1     | 7.9                | /               | 1000                                 | 4.72  | 12.1  | 3.6    |  | 15.6  | 1.68  | 17.1  | 9.95  | 229   | 4.2    | 14.8  | 1.73  |
|   | Sodium (Dis.Fil)                     | TM152  | mg/l  | 0.076 | /                  | 200             | 1500                                 | 110   | 102   | 99.5   |  | 90.9  | 94.6  | 87.7  | 87.4  | 85.2  | 91     | 75.2  |       |
|   | Magnesium (Dis.Fil)                  | TM152  | mg/l  | 0.036 | /                  | /               | 500                                  | 37.7  | 36.4  | 32     |  | 34.6  | 39.9  | 34.7  | 35.7  | 33.4  | 38.3   | 30.9  |       |
|   | Potassium (Dis.Fil)                  | TM152  | mg/l  | 0.2   | /                  | /               | 120                                  | 33.5  | 40.2  | 41.1   |  | 31.9  | 39.2  | 34    | 34.7  | 32    | 35.6   | 34.2  |       |
|   | Calcium (Dis.Fil)                    | TM152  | mg/l  | 0.2   | /                  | /               | 1000                                 | 143   | 141   | 121    |  | 123   | 144   | 127   | 122   | 127   | 135    | 127   |       |
|   | Iron (Dis.Fil)                       | TM152  | mg/l  | 0.019 | 1                  | /               | 2                                    | 11.6  | 16    | 30.5   |  | 13.1  | 20    | 17.3  | 12.5  | 6.91  | 18.5   | 9.82  | 11.2  |
| <b>Unfiltered (Total) Metals</b>            | Phosphorus (tot.unfil)               | TM152  | µg/l  | 20    | /                  | /               | 10000                                | 70.9  | 2410  | 369    |  | 121   | 400   | 1320  | 171   | 121   | 148    | 9240  |       |
|   | Hardness, Total as CaCO3 unfiltered  | TM152  | mg/l  | 0.35  | /                  | /               |                                      | 517   | 813   | 434    |  | 485   | 522   | 495   | 451   | 437   | 459    | 537   |       |
| <b>Gasoline Range Organics (GRO)</b>        | Total Aliphatics >C5-C12             | TM245  | µg/l  | 10    | /                  | /               |                                      | <10   | <10   | <10    |  | <10   | <10   | <10   | 14    | <10   | <10    | <10   |       |
|   | Total Aromatics >EC5-EC12            | TM245  | µg/l  | 10    | /                  | /               |                                      | <10   | <10   | <10    |  | <10   | <10   | <10   | <10   | <10   | <10    | <10   |       |
| <b>TPH Criteria Working Group (TPH CWG)</b> | GRO Surrogate % recovery**           | TM245  | %     |       | /                  | /               |                                      | 98    | 102   | 99     |  | 97    | 100   | 92    | 120   | 101   | 108    | 89    |       |
|   | GRO >C5-C12                          | TM245  | µg/l  | 50    | /                  | /               |                                      | <50   | <50   | <50    |  | <50   | <50   | <50   | <50   | <50   | <50    | <50   |       |
|   | Methyl tertiary butyl ether (MTBE)   | TM245  | µg/l  | 3     | /                  | 15              |                                      | <3    | <3    | <3     |  | <3    | <3    | <3    | <3    | <3    | <3     | <3    |       |
|   | Benzene                              | TM245  | µg/l  | 7     | /                  | 8               |                                      | <7    | <7    | <7     |  | <7    | <7    | <7    | <7    | <7    | <7     | <7    |       |
|   | Toluene                              | TM245  | µg/l  | 4     | /                  | 74              |                                      | <4    | <4    | <4     |  | <4    | <4    | <4    | <4    | <4    | <4     | <4    |       |
|   | Ethylbenzene                         | TM245  | µg/l  | 5     | /                  | 20              |                                      | <5    | <5    | <5     |  | <5    | <5    | <5    | <5    | <5    | <5     | <5    |       |
|   | m,p-Xylene                           | TM245  | µg/l  | 8     | /                  | 30              |                                      | <8    | <8    | <8     |  | <8    | <8    | <8    | <8    | <8    | <8     | <8    |       |
|   | o-Xylene                             | TM245  | µg/l  | 3     | /                  | 30              |                                      | <3    | <3    | <3     |  | <3    | <3    | <3    | <3    | <3    | <3     | <3    |       |
|   | Sum of detected Xylenes              | TM245  | µg/l  | 11    | /                  | 30              |                                      | <11   | <11   | <11    |  | <11   | <11   | <11   | <11   | <11   | <11    | <11   |       |
|   | Sum of detected BTEX                 | TM245  | µg/l  | 28    | /                  | /               |                                      | <28   | <28   | <28    |  | <28   | <28   | <28   | <28   | <28   | <28    | <28   |       |
|   | Aliphatics >C5-C6                    | TM245  | µg/l  | 10    | /                  | /               |                                      | <10   | <10   | <10    |  | <10   | <10   | <10   | <10   | <10   | <10    | <10   |       |
|   | Aliphatics >C6-C8                    | TM245  | µg/l  | 10    | /                  | /               |                                      | <10   | <10   | <10    |  | <10   | <10   | <10   | <10   | <10   | <10    | <10   |       |
|   | Aliphatics >C8-C10                   | TM245  | µg/l  | 10    | /                  | /               |                                      | <10   | <10   | <10    |  | <10   | <10   | <10   | <10   | <10   | <10    | <10   |       |
|   | Aliphatics >C10-C12                  | TM245  | µg/l  | 10    | /                  | /               |                                      | <10   | <10   | <10    |  | <10   | <10   | <10   | <10   | <10   | <10    | <10   |       |
|   | Aliphatics >C12-C16 (aq)             | TM174  | µg/l  | 10    | /                  | /               |                                      | <10   | <10   | <10    |  | <10   | <10   | 19    | <10   | <10   | <10    | <10   |       |
|   | Aliphatics >C16-C21 (aq)             | TM174  | µg/l  | 10    | /                  | /               |                                      | <10   | <10   | <10    |  | <10   | <10   | <10   | <10   | <10   | <10    | <10   |       |
|   | Aliphatics >C21-C25 (aq)             | TM174  | µg/l  | 10    | /                  | /               |                                      | <10   | <10   | <10    |  | <10   | <10   | 103   | <10   | <10   | <10    | <10   |       |
|   | Total Aliphatics >C12-C25 (aq)       | TM174  | µg/l  | 10    | /                  | /               |                                      | <10   | <10   | <10    |  | <10   | <10   | <10   | <10   | <10   | <10    | <10   |       |
|   | Aromatics >EC5-EC7                   | TM245  | µg/l  | 10    | /                  | 8               |                                      | <10   | <10   | <10    |  | <10   | <10   | <10   | <10   | <10   | <10    | <10   |       |
|   | Aromatics >EC7-EC8                   | TM245  | µg/l  | 10    | /                  | 74              |                                      | <10   | <10   | <10    |  | <10   | <10   | <10   | <10   | <10   | <10    | <10   |       |
|   | Aromatics >EC8-EC10                  | TM245  | µg/l  | 10    | /                  | 20              |                                      | <10   | <10   | <10    |  | <10   | <10   | <10   | <10   | <10   | <10    | <10   |       |
|   | Aromatics >EC10-EC12                 | TM245  | µg/l  | 10    | /                  | /               |                                      | <10   | <10   | <10    |  | <10   | <10   | <10   | <10   | <10   | <10    | <10   |       |
|   | Aromatics >EC12-EC16 (aq)            | TM174  | µg/l  | 10    | /                  | /               |                                      | <10   | <10   | <10    |  | <10   | <10   | <10   | <10   | <10   | <10    | <10   |       |
|   | Aromatics >EC16-EC21 (aq)            | TM174  | µg/l  | 10    | /                  | /               |                                      | <10   | <10   | <10    |  | <10   | <10   | <10   | <10   | <10   | <10    | <10   |       |
|   | Aromatics >EC21-EC35 (aq)            | TM174  | µg/l  | 10    | /                  | /               |                                      | <10   | <10   | <10    |  | <10   | <10   | 33    | <10   | <10   | &      |       |       |





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SDG(s): 190315-102

Customer: Waste Management Unit Douglas (12297)

Client Reference / Point of Ayre

Order no.

| Customer Sample ID     | P6A                | P6A        | P6A        | P6A        | P6A         | P6A                | P6A                | P6A                | P6A                | P6A                | P6A                | P6A         |
|------------------------|--------------------|------------|------------|------------|-------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------|
| Depth                  | 6.68-              | 6.93-      |            |            |             |                    |                    |                    |                    |                    |                    | 6.34-       |
| AGS Id                 |                    |            |            |            |             |                    |                    |                    |                    |                    |                    |             |
| Sample Type            | JND_WATERJND_WATER |            |            |            |             |                    |                    |                    |                    |                    |                    |             |
| Sampled Date           | 12/03/2019         | 16/07/2019 | 10/09/2019 | 02/12/2019 | MISC LIQUID | JND_WATERJND_WATER | JND_WATERJND_WATER | JND_WATERJND_WATER | JND_WATERJND_WATER | JND_WATERJND_WATER | JND_WATERJND_WATER | MISC LIQUID |
| Sample Received Date   | 15/03/2019         | 19/07/2019 |            |            | 02/03/2020  | 03/06/2020         | 10/09/2020         | 10/12/2020         | 04/03/2021         | 04/06/2021         | 15/09/2022         | 07/12/2022  |
| Final Instruction Date | 25/03/2019         | 29/07/2019 |            |            | 19/03/2020  | 03/06/2020         | 17/09/2020         | 18/12/2020         | 11/03/2021         | 04/06/2021         | 15/09/2022         | 09/12/2022  |
| Report Completed Date  | 27/03/2019         | 30/07/2019 |            |            | 14/05/2020  | 16/06/2020         | 21/09/2020         | 21/12/2020         | 23/03/2021         | 16/06/2021         | 27/09/2022         | 09/12/2022  |
| SDG                    | 190315-102         | 190719-73  |            |            | 200306-148  | 200603-78          | 200910-118         | 201210-95          | 210304-123         | 210604-112         | 220915-96          | 221207-97   |
| Lab Sample Number      | 1955429            | 20363911   |            |            | 21836350    | 22246279           | 22802674           | 23404123           | 23838520           | 24394390           | 26881773           | 27276229    |
| Sample Temperature     | 9.8                | 15         |            |            | 6           | 16.2               | 14.8               | 6.5                | 8.6                | 15.2               | 13.2               | 6.5         |
| Sample Time            |                    |            |            |            |             |                    |                    |                    |                    |                    |                    |             |

| Analysis                                    | Test                                 | Method | Units | LOD   | Coastal Waters EGS | RPV (If no EQS) | WMP 26A Landfill Completion Criteria |        |        |   |   |       |        |       |        |        |       |       |       |
|---|--------------------------------------|--------|-------|-------|--------------------|-----------------|--------------------------------------|--------|--------|---|---|-------|--------|-------|--------|--------|-------|-------|-------|
| <b>Carbon</b>                               | Carbon, Organic (diss.ft)            | TM090  | mg/l  | 6     | /                  | /               | 10                                   | 9.45   | 20.2   | - | - | 26.5  | 21.7   | 23.8  | 9.33   | 3.39   | 12.3  | 14.4  | 13.3  |
| <b>Inorganics</b>                           | Fluoride                             | TM104  | mg/l  | 0.5   | /                  | /               | 10                                   | <0.5   | <0.5   | - | - | <0.5  | <0.5   | <0.5  | <0.5   | <0.5   | <0.5  | <0.5  | <0.5  |
|   | Ammonia                              | TM104  | mg/l  | 0.5   | /                  | /               | 10                                   | 4.01   | 1.01   | - | - | 4.01  | 1.01   | 4.01  | 1.01   | 4.01   | 1.01  | 4.01  | 1.01  |
|   | Nitrite as NO2                       | TM184  | mg/l  | 0.05  | 0.5                | /               | 1                                    | 0.204  | 0.061  | - | - | 0.206 | 0.063  | 0.073 | 0.065  | 0.109  | <0.05 | <0.05 | <0.05 |
|   | Phosphate (Ortho as PO4)             | TM184  | mg/l  | 0.05  | /                  | /               | 1                                    | <0.05  | <0.05  | - | - | <0.05 | <0.05  | <0.05 | <0.05  | <0.05  | <0.05 | <0.05 | <0.05 |
|   | Sulphate                             | TM184  | mg/l  | 2     | /                  | 250             | 2500                                 | 42.4   | 25.6   | - | - | 217   | 12.4   | 64.7  | 22.3   | 35.3   | 12.6  | 310   | -     |
|   | Sulphide                             | TM101  | mg/l  | 0.01  | /                  | /               | 1                                    | <0.01  | 0.205  | - | - | <0.01 | 0.0882 | <0.01 | 0.0628 | <0.01  | <0.01 | <0.01 | <0.01 |
|   | Chloride                             | TM184  | mg/l  | 2     | /                  | 250             | 2000                                 | 362    | 309    | - | - | 1956  | 249    | 652   | 210    | 251    | 138   | 2660  | 2780  |
|   | COD, unfiltered                      | TM107  | mg/l  | 7     | /                  | /               | 1                                    | 33.3   | 69     | - | - | 31.7  | 63.9   | 82.9  | 27.4   | <7     | 30.5  | 113   | -     |
|   | Nitrogen, Total                      | TM212  | mg/l  | 1     | /                  | /               | 1                                    | 57.6   | 107    | - | - | 70.1  | 83.1   | 95.9  | 45     | 29.6   | 48.9  | 58.8  | -     |
|   | Ammoniacal Nitrogen as NH4           | TM099  | mg/l  | 0.3   | /                  | 0.5             | 5                                    | 54.8   | 132    | - | - | 60.5  | 122    | 120   | 49.4   | 36     | 66.3  | 71.7  | 80.6  |
|   | Nitrate as NO3                       | TM184  | mg/l  | 0.3   | /                  | 50              | 500                                  | 19.3   | 1.78   | - | - | <0.3  | <0.3   | 14.2  | 41.3   | 12.1   | 1.29  | 0.759 | -     |
|   | BOD, unfiltered                      | TM045  | mg/l  | 1     | /                  | /               | 1                                    | -      | <1     | - | - | 3.22  | 4.43   | 3.36  | <1     | <1     | <1    | 2.86  | -     |
|   | Alkalinity, Total as CaCO3           | TM043  | mg/l  | 2     | /                  | /               | 1                                    | 581    | 1030   | - | - | 1170  | 1060   | 1010  | 540    | 404    | 806   | 828   | -     |
|   | Alkalinity, Total as CaCO3 (diss.ft) | TM043  | mg/l  | 2     | /                  | /               | 1                                    | -      | -      | - | - | -     | -      | -     | -      | -      | -     | -     | -     |
|   | Suspended solids, Total              | TM022  | mg/l  | 9     | /                  | /               | 1                                    | 4.2    | 9.55   | - | - | 7.65  | 32.2   | 42.1  | 13.3   | <2     | 31    | 15.8  | -     |
| <b>Filtered (Dissolved) Metals</b>          | Mercury (diss.ft)                    | TM183  | µg/l  | 0.01  | 0.07               | /               | 10                                   | <0.01  | 0.0103 | - | - | <0.01 | <0.01  | <0.01 | <0.01  | <0.01  | <0.01 | <0.01 | <0.01 |
|   | Arsenic (diss.ft)                    | TM152  | µg/l  | 0.5   | 25                 | /               | 500                                  | 1.65   | 22.5   | - | - | 4.43  | 98     | 10.2  | 1.03   | 1.33   | 11.4  | 5.2   | 7.65  |
|   | Cadmium (diss.ft)                    | TM152  | µg/l  | 0.08  | 0.2                | /               | 50                                   | <0.08  | <0.08  | - | - | <0.08 | <0.08  | <0.08 | <0.08  | <0.08  | <0.08 | <0.08 | <0.08 |
|   | Chromium (diss.ft)                   | TM152  | µg/l  | 1     | /                  | 50              | 500                                  | <1     | <1     | - | - | <1    | 1.17   | 1.19  | <1     | <1     | <1    | <1    | <1    |
|   | Copper (diss.ft)                     | TM152  | µg/l  | 0.3   | 3.76               | /               | 1000                                 | <0.3   | <0.3   | - | - | 2.01  | <0.3   | 1.98  | 1.77   | 4.74   | <0.3  | 1.51  | -     |
|   | Lead (diss.ft)                       | TM152  | µg/l  | 0.2   | 1.3                | /               | 500                                  | <0.2   | <0.2   | - | - | <0.2  | 0.353  | 0.273 | 0.223  | 0.437  | <0.2  | 0.268 | -     |
|   | Manganese (diss.ft)                  | TM152  | µg/l  | 3     | /                  | 50              | 500                                  | 1700   | 4140   | - | - | 4310  | 4590   | 4750  | 1680   | 1040   | 3050  | 715   | 909   |
|   | Nickel (diss.ft)                     | TM152  | µg/l  | 0.4   | 8.6                | /               | 500                                  | 10.9   | 17.3   | - | - | 13.6  | 19.3   | 18.7  | 9.19   | 5.45   | 9.09  | 22    | 10    |
|   | Zinc (diss.ft)                       | TM152  | µg/l  | 1     | 7.9                | /               | 1000                                 | 5.49   | 2.63   | - | - | 12.3  | 2.38   | 11.1  | 34.8   | 35     | 2.21  | 3.08  | <1    |
|   | Sodium (Dis.Fil)                     | TM152  | mg/l  | 0.076 | /                  | 200             | 1500                                 | 197    | 187    | - | - | 168   | 182    | 206   | 120    | 123    | 111   | 1120  | -     |
|   | Magnesium (Dis.Fil)                  | TM152  | mg/l  | 0.036 | /                  | 500             | 500                                  | 55.4   | 59     | - | - | 48.6  | 67.9   | 74.2  | 36.4   | 21.5   | 42.8  | 239   | -     |
|   | Potassium (Dis.Fil)                  | TM152  | mg/l  | 0.2   | /                  | 120             | 120                                  | 49.6   | 70.6   | - | - | 47.4  | 79.6   | 69.5  | 40.7   | 25.5   | 42.2  | 81.5  | -     |
|   | Calcium (Dis.Fil)                    | TM152  | mg/l  | 0.2   | /                  | 1000            | 1000                                 | 177    | 169    | - | - | 159   | 201    | 229   | 131    | 92.3   | 162   | 226   | -     |
|   | Iron (Dis.Fil)                       | TM152  | mg/l  | 0.019 | 1                  | /               | 2                                    | <0.019 | 4.56   | - | - | 0.827 | 24     | 4.08  | 1.07   | 0.0906 | 4.66  | 1.68  | 2.26  |
| <b>Unfiltered (Total) Metals</b>            | Phosphorus (tot.unfilt)              | TM152  | µg/l  | 20    | /                  | /               | 10000                                | <20    | 228    | - | - | 24.2  | 82.7   | 98.1  | 34.4   | <20    | 31.1  | 68.6  | -     |
|   | Hardness, Total as CaCO3 unfiltered  | TM152  | mg/l  | 0.35  | /                  | /               | 1                                    | 669    | 697    | - | - | 622   | 786    | 905   | 493    | 318    | 580   | 1680  | -     |
| <b>Gasoline Range Organics (GRO)</b>        | Total Aliphatics >C5-C12             | TM245  | µg/l  | 10    | /                  | /               | 1                                    | <10    | 17     | - | - | <10   | 18     | <10   | <10    | <10    | 10    | -     | -     |
|   | Total Aromatics >EC5-EC12            | TM245  | µg/l  | 10    | /                  | /               | 1                                    | <10    | <10    | - | - | <10   | <10    | <10   | <10    | <10    | <10   | <10   | <10   |
| <b>TPH Criteria Working Group (TPH CWG)</b> | GRO Surrogate % recovery**           | TM245  | %     |       | /                  | /               | 1                                    | 105    | 93     | - | - | 108   | 99     | 90    | 121    | 100    | 92    | 87    | -     |
|   | GRO >C5-C12                          | TM245  | µg/l  | 50    | /                  | /               | 1                                    | <50    | <50    | - | - | <50   | <50    | <50   | <50    | <50    | <50   | <50   | <50   |
|   | Methyl tertiary butyl ether (MTBE)   | TM245  | µg/l  | 3     | /                  | 15              | 15                                   | <3     | <3     | - | - | <3    | <3     | <3    | <3     | <3     | <3    | <3    | <3    |
|   | Benzene                              | TM245  | µg/l  | 7     | 8                  | /               | 1                                    | <7     | <7     | - | - | <7    | <7     | <7    | <7     | <7     | <7    | <7    | <7    |
|   | Toluene                              | TM245  | µg/l  | 4     | 74                 | /               | 1                                    | <4     | <4     | - | - | <4    | <4     | <4    | <4     | <4     | <4    | <4    | <4    |
|   | Ethylbenzene                         | TM245  | µg/l  | 5     | 20                 | /               | 1                                    | <5     | <5     | - | - | <5    | <5     | <5    | <5     | <5     | <5    | <5    | <5    |
|   | m,p-Xylene                           | TM245  | µg/l  | 8     | 30                 | /               | 1                                    | <8     | <8     | - | - | <8    | <8     | <8    | <8     | <8     | <8    | <8    | <8    |
|   | o-Xylene                             | TM245  | µg/l  | 3     | 30                 | /               | 1                                    | <3     | <3     | - | - | <3    | <3     | <3    | <3     | <3     | <3    | <3    | <3    |
|   | Sum of detected Xylenes              | TM245  | µg/l  | 11    | 30                 | /               | 1                                    | <11    | <11    | - | - | <11   | <11    | <11   | <11    | <11    | <11   | <11   | <11   |
|   | Sum of detected BTEX                 | TM245  | µg/l  | 28    | /                  | /               | 1                                    | <28    | <28    | - | - | <28   | <28    | <28   | <28    | <28    | <28   | <28   | <28   |
|   | Aliphatics >C5-C6                    | TM245  | µg/l  | 10    | /                  | /               | 1                                    | <10    | <10    | - | - | <10   | <10    | <10   | <10    | <10    | <10   | <10   | <10   |
|   | Aliphatics >C6-C8                    | TM245  | µg/l  | 10    | /                  | /               | 1                                    | <10    | <10    | - | - | <10   | <10    | <10   | <10    | <10    | <10   | <10   | <10   |
|   | Aliphatics >C8-C10                   | TM245  | µg/l  | 10    | /                  | /               | 1                                    | <10    | <10    | - | - | <10   | <10    | <10   | <10    | <10    | <10   | <10   | <10   |
|   | Aliphatics >C10-C12                  | TM245  | µg/l  | 10    | /                  | /               | 1                                    | <10    | <10    | - | - | <10   | <10    | <10   | <10    | <10    | <10   | <10   | <10   |
|   | Aliphatics >C12-C16 (aq)             | TM174  | µg/l  | 10    | /                  | /               | 1                                    | <10    | <10    | - | - | <10   | <10    | <10   | 23     | <10    | <10   | <10   | <10   |
|   | Aliphatics >C16-C21 (aq)             | TM174  | µg/l  | 10    | /                  | /               | 1                                    | <10    | <10    | - | - | <10   | <10    | <10   | <10    | <10    | <10   | <10   | <10   |
|   | Aliphatics >C21-C25 (aq)             | TM174  | µg/l  | 10    | /                  | /               | 1                                    | <10    | <10    | - | - | <10   | <10    | <10   | <10    | <10    | <10   | <10   | <10   |
|   | Total Aliphatics >C12-C25 (aq)       | TM174  | µg/l  | 10    | /                  | /               | 1                                    | <10    | <10    | - | - | <10   | <10    | <10   | <10    | <10    | <10   | <10   | <10   |
|   | Aromatics >EC5-EC7                   | TM245  | µg/l  | 10    | 8                  | /               | 1                                    | <10    | <10    | - | - | <10   | <10    | <10   | <10    | <10    | <10   | <10   | <10   |
|   | Aromatics >EC7-EC8                   | TM245  | µg/l  | 10    | 74                 | /               | 1                                    | <10    | <10    | - | - | <10   | <10    | <10   | <10    | <10    | <10   | <10   | <10   |
|   | Aromatics >EC8-EC10                  | TM245  | µg/l  | 10    | 20                 | /               | 1                                    | <10    | <10    | - | - | <10   | <10    | <10   | <10    | <10    | <10   | <10   | <10   |
|   | Aromatics >EC10-EC12                 | TM245  | µg/l  | 10    | /                  | /               | 1                                    | <10    | <10    | - | - | <10   | <10    | <10   | <10    | <10    | <10   | <10   | <10   |
|   | Aromatics >EC12-EC16 (aq)            | TM174  | µg/l  | 10    | /                  | /               | 1                                    | <10    |        |   |   |       |        |       |        |        |       |       |       |



Point of Ayre Landfill's  
Groundwater Sample Results

ALS

SDG(s): 190315-102  
Customer: Waste Management Unit Douglas (12297)  
Client Reference / Point of Ayre  
Order no.

| Customer Sample ID     | P6A        | P6A        | P6A        | P6A        | P6A        | P6A        | P6A        | P6A        | P6A        | P6A        | P6A        | P6A        | P6A         |
|------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 6.68-      | 6.93-      |            |            |            |            |            |            |            |            |            |            | 6.34-       |
| AGS Id                 |            |            |            |            |            |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 12/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020 | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 |            |            | 06/03/2020 | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 |            |            | 19/03/2020 | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 |            |            | 14/05/2020 | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/12/2022 |             |
| SDG                    | 190315-102 | 190719-73  |            |            | 200306-148 | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |             |
| Lab Sample Number      | 19558429   | 20363911   |            |            | 21836350   | 22246279   | 22802674   | 23404123   | 23838520   | 24394390   | 26881773   | 27276229   |             |
| Sample Temperature     | 9.8        | 15         |            |            | 6          | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |             |

| Analysis | Test                               | Method  | Units | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria | Sample Results |    |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----------|------------------------------------|---------|-------|-----|--------------------|-----------------|--------------------------------------|----------------|----|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|
|          |                                    |         |       |     |                    |                 |                                      | 1              | 2  | 3 | 4 | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 |    |    |    |    |    |
|          | Vinyl chloride                     | TM208   | µg/l  | 1   | /                  | 0.5             | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | Bromomethane                       | TM208   | µg/l  | 1   | /                  | /               | /                                    | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | Chloroethane                       | TM208   | µg/l  | 1   | /                  | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | Trichlorofluoromethane             | TM208   | µg/l  | 1   | /                  | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | 1,1-Dichloroethene                 | TM208   | µg/l  | 1   | /                  | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | Carbon disulphide                  | TM208   | µg/l  | 1   | /                  | /               | /                                    | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | Dichloromethane                    | TM208   | µg/l  | 1   | 20                 | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | Methyl tertiary butyl ether (MTBE) | TM208   | µg/l  | 1   | /                  | 15              | /                                    | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | trans-1,2-Dichloroethene           | TM208   | µg/l  | 1   | /                  | 50              | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | 1,1-Dichloroethane                 | TM208   | µg/l  | 1   | /                  | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | cis-1,2-Dichloroethene             | TM208   | µg/l  | 1   | /                  | 50              | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | 2,2-Dichloropropane                | TM208   | µg/l  | 1   | /                  | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | Bromochloromethane                 | TM208   | µg/l  | 1   | /                  | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | Chloroform                         | TM208   | µg/l  | 1   | 2.5                | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | 1,1,1-Trichloroethane              | TM208   | µg/l  | 1   | /                  | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | 1,1-Dichloropropene                | TM208   | µg/l  | 1   | /                  | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | Carbon tetrachloride               | TM208   | µg/l  | 1   | /                  | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | 1,2-Dichloroethane                 | TM208   | µg/l  | 1   | 10                 | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | Benzene                            | TM208   | µg/l  | 1   | 8                  | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | Trichloroethene                    | TM208   | µg/l  | 1   | 10                 | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | 1,2-Dichloropropane                | TM208   | µg/l  | 1   | /                  | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | Dibromomethane                     | TM208   | µg/l  | 1   | /                  | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | Bromodichloromethane               | TM208   | µg/l  | 1   | /                  | 100             | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | cis-1,3-Dichloropropene            | TM208   | µg/l  | 1   | /                  | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | Toluene                            | TM208   | µg/l  | 1   | 74                 | /               | /                                    | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | trans-1,3-Dichloropropene          | TM208   | µg/l  | 1   | /                  | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | 1,1,2-Trichloroethane              | TM208   | µg/l  | 1   | /                  | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | 1,3-Dichloropropane                | TM208   | µg/l  | 1   | /                  | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | Tetrachloroethene                  | TM208   | µg/l  | 1   | 10                 | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | Dibromochloromethane               | TM208   | µg/l  | 1   | /                  | 100             | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | 1,2-Dibromoethane                  | TM208   | µg/l  | 1   | /                  | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | Chlorobenzene                      | TM208   | µg/l  | 1   | /                  | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | 1,1,1,2-Tetrachloroethane          | TM208   | µg/l  | 1   | /                  | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | Ethylbenzene                       | TM208   | µg/l  | 1   | 20                 | /               | /                                    | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | m,p-Xylene                         | TM208   | µg/l  | 1   | 30                 | /               | /                                    | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | o-Xylene                           | TM208   | µg/l  | 1   | 30                 | /               | /                                    | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | Styrene                            | TM208   | µg/l  | 1   | /                  | /               | /                                    | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | Bromoform                          | TM208   | µg/l  | 1   | /                  | 100             | /                                    | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | Isopropylbenzene                   | TM208   | µg/l  | 1   | /                  | /               | /                                    | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | 1,1,2,2-Tetrachloroethane          | TM208   | µg/l  | 1   | /                  | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | 1,2,3-Trichloropropane             | TM208   | µg/l  | 1   | /                  | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | Bromobenzene                       | TM208   | µg/l  | 1   | /                  | /               | /                                    | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | Propylbenzene                      | TM208   | µg/l  | 1   | /                  | /               | /                                    | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | 2-Chlorotoluene                    | TM208   | µg/l  | 1   | /                  | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | 1,3,5-Trimethylbenzene             | TM208   | µg/l  | 1   | /                  | /               | /                                    | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | 4-Chlorotoluene                    | TM208   | µg/l  | 1   | /                  | /               | 10                                   | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | tert-Butylbenzene                  | TM208   | µg/l  | 1   | /                  | /               | /                                    | <1             | <1 | - | - | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
|          | 1,2,4-Trimethylbenzene             | TM208</ |       |     |                    |                 |                                      |                |    |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |

Point of Ayre Landfill's  
Groundwater Sample Results

ALS

| Customer Sample ID     | P6B        | P6B        | P6B        | P6B        | P6b         | P6B        | P6B        | P6B        | P6B        | P6B        | P6B        | P6B        | P6B        | P6B         |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 6.37-      | 6.87-      | 6.87-      |            |             |            |            |            |            |            |            |            |            | 6.34-       |
| AGS id                 |            |            |            |            |             |            |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER |            | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 12/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |            |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 |            | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |            |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 |            | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |            |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 |            | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |            |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 |            | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |            |             |
| Lab Sample Number      | 19558451   | 20363912   | 20719335   |            | 21836359    | 22246280   | 22802675   | 23404127   | 23838521   | 24394393   | 26881774   | 27276228   |            |             |
| Sample Temperature     | 9.8        | 15         | 17.2       |            | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |            |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |            |             |

| Analysis                                    | Test                                   | Method      | Units  | LOD   | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |        |        |       |   |        |        |       |       |       |        |       |       |  |
|---|--|-------------|--------|-------|--------------------|-----------------|--------------------------------------|--------|--------|-------|---|--------|--------|-------|-------|-------|--------|-------|-------|--|
| <b>Carbon</b>                               | Carbon, Organic (diss.filt)            | TM090       | mg/l   | 6     | /                  | /               | 10                                   | 28.4   | 25.2   | 27.7  | - | 34     | 27.8   | 7.31  | 27.3  | 29.8  | 31.6   | 21.5  | 16.2  |  |
| <b>Inorganics</b>                           | Fluoride                               | TM104       | mg/l   | 0.5   | /                  | /               | 10                                   | <0.5   | <0.5   | <0.5  | - | <0.5   | <0.5   | <0.5  | <0.5  | <0.5  | <0.5   | <0.5  | -     |  |
|   | Ionic balance                          | Calculation | % Diff |       | /                  | /               |                                      | -2.92  | -6.05  | -4.56 | - | -3.46  | -1.09  | 20.7  | -4.7  | -2.38 | -0.716 | -     | -     |  |
|   | Nitrite as NO2                         | TM184       | mg/l   | 0.05  | 0.5                | /               | 1                                    | <0.05  | <0.05  | <0.05 | - | <0.05  | <0.05  | <0.05 | <0.05 | <0.05 | <0.05  | <0.05 | -     |  |
|   | Phosphate (Ortho as PO4)               | TM184       | mg/l   | 0.05  | /                  | /               |                                      | <0.05  | <0.05  | <0.05 | - | <0.05  | <0.05  | 0.418 | <0.05 | <0.05 | <0.05  | <0.05 | -     |  |
|   | Sulphate                               | TM184       | mg/l   | 2     | /                  | 250             | 2500                                 | 174    | 277    | 239   | - | 65.8   | 141    | 30.2  | 83.1  | 25.4  | 16     | 179   | -     |  |
|   | Sulphide                               | TM101       | mg/l   | 0.01  | /                  | /               |                                      | <0.01  | <0.01  | 0.011 | - | 0.0477 | 0.0465 | <0.01 | <0.01 | 0.385 | 0.0714 | <0.01 | -     |  |
|   | Chloride                               | TM184       | mg/l   | 2     | /                  | 250             | 2000                                 | 1510   | 2250   | 1930  | - | 681    | 1430   | 175   | 936   | 484   | 337    | 1460  | 1320  |  |
|   | COD, unfiltered                        | TM107       | mg/l   | 7     | /                  | /               |                                      | 139    | 134    | 143   | - | 95.5   | 142    | 36.5  | 93.8  | 78.8  | 89.4   | 173   | -     |  |
|   | Nitrogen, Total                        | TM212       | mg/l   | 1     | /                  | /               |                                      | 122    | 118    | 96.6  | - | 129    | 101    | 11.3  | 101   | 91.3  | 124    | 88.5  | -     |  |
|   | Ammoniacal Nitrogen as NH4             | TM099       | mg/l   | 0.3   | /                  | 0.5             | 5                                    | 152    | 130    | 148   | - | 138    | 148    | 28.3  | 132   | 122   | 144    | 112   | 89.7  |  |
|   | Nitrate as NO3                         | TM184       | mg/l   | 0.3   | /                  | 50              | 500                                  | 1.65   | <0.3   | <0.3  | - | <0.3   | <0.3   | 26.2  | <0.3  | <0.3  | <0.3   | 2.52  | -     |  |
|   | BOD, unfiltered                        | TM045       | mg/l   | 1     | /                  | /               |                                      | -      | <5     | 2.78  | - | 2.58   | <1     | <1    | 3.32  | <1    | 2.4    | 3.2   | -     |  |
|   | Alkalinity, Total as CaCO3             | TM043       | mg/l   | 2     | /                  | /               |                                      | 1160   | 1050   | 1100  | - | 1400   | 1090   | 260   | 1100  | 1240  | 1420   | 942   | -     |  |
|   | Alkalinity, Total as CaCO3 (diss.filt) | TM043       | mg/l   | 2     | /                  | /               |                                      | -      | -      | -     | - | -      | -      | -     | -     | -     | -      | -     | -     |  |
|   | Suspended solids, Total                | TM022       | mg/l   | 9     | /                  | /               |                                      | 175    | 108    | 149   | - | 37.4   | 43.4   | 60.1  | 85.1  | 27.8  | 16.7   | 83.8  | -     |  |
| <b>Filtered (Dissolved) Metals</b>          |  |             |        |       |                    |                 |                                      |        |        |       |   |        |        |       |       |       |        |       |       |  |
|   | Mercury (diss.filt)                    | TM183       | µg/l   | 0.01  | 0.07               | /               | 10                                   | <0.01  | 0.0107 | <0.01 | - | <0.01  | <0.01  | <0.01 | <0.01 | <0.01 | <0.01  | <0.01 | <0.01 |  |
|   | Arsenic (diss.filt)                    | TM152       | µg/l   | 0.5   | 25                 | /               | 500                                  | 3.66   | 17.6   | 20.7  | - | 23.8   | 19.9   | 4.14  | 21.2  | 21.4  | 23.4   | 26.7  | 25    |  |
|   | Cadmium (diss.filt)                    | TM152       | µg/l   | 0.08  | 0.2                | /               | 50                                   | <0.08  | <0.08  | <0.08 | - | <0.08  | <0.08  | <0.08 | <0.08 | <0.08 | <0.08  | <0.08 | -     |  |
|   | Chromium (diss.filt)                   | TM152       | µg/l   | 1     | /                  | 50              | 500                                  | <1     | <1     | <1    | - | 1.3    | 1.09   | <1    | <1    | 1.18  | 1.19   | <1    | -     |  |
|   | Copper (diss.filt)                     | TM152       | µg/l   | 0.3   | 3.76               | /               | 1000                                 | 0.375  | <0.3   | 0.663 | - | 0.568  | 0.461  | 1.67  | 0.311 | 0.818 | <0.3   | <0.3  | -     |  |
|   | Lead (diss.filt)                       | TM152       | µg/l   | 0.2   | 1.3                | /               | 500                                  | 0.22   | <0.2   | <0.2  | - | <0.2   | <0.2   | 0.281 | <0.2  | 0.227 | <0.2   | <0.2  | -     |  |
|   | Manganese (diss.filt)                  | TM152       | µg/l   | 3     | /                  | 50              | 500                                  | 1600   | 1900   | 1750  | - | 1260   | 1480   | 216   | 1160  | 1250  | 1200   | 1130  | 902   |  |
|   | Nickel (diss.filt)                     | TM152       | µg/l   | 0.4   | 8.6                | /               | 500                                  | 30.8   | 21.5   | 21.4  | - | 29.4   | 23.5   | 9.16  | 23    | 32.3  | 35.3   | 20    | 17.6  |  |
|   | Zinc (diss.filt)                       | TM152       | µg/l   | 1     | 7.9                | /               | 1000                                 | 6.15   | 1.03   | 1.86  | - | 7.56   | 2.3    | 10    | 2.09  | 11.2  | 2.38   | 1.73  | 1.52  |  |
|   | Sodium (Dis.Filt)                      | TM152       | mg/l   | 0.076 | /                  | 200             | 1500                                 | 779    | 1080   | 901   | - | 424    | 683    | 185   | 470   | 303   | 237    | 723   | -     |  |
|   | Magnesium (Dis.Filt)                   | TM152       | mg/l   | 0.036 | /                  | /               | 500                                  | 147    | 177    | 170   | - | 101    | 162    | 38.2  | 123   | 117   | 108    | 126   | -     |  |
|   | Potassium (Dis.Filt)                   | TM152       | mg/l   | 0.2   | /                  | /               | 120                                  | 94.7   | 99.4   | 98.6  | - | 76.5   | 88.1   | 36    | 70.1  | 50.1  | 57.5   | 72.2  | -     |  |
|   | Calcium (Dis.Filt)                     | TM152       | mg/l   | 0.2   | /                  | /               | 1000                                 | 183    | 200    | 190   | - | 145    | 219    | 79.6  | 149   | 155   | 157    | 200   | -     |  |
|   | Iron (Dis.Filt)                        | TM152       | mg/l   | 0.019 | 1                  | /               | 2                                    | 0.0529 | 14.1   | 15.1  | - | 9.76   | 11.7   | 0.19  | 10.5  | 6.12  | 5.54   | 15.4  | 11    |  |
| <b>Unfiltered (Total) Metals</b>            |  |             |        |       |                    |                 |                                      |        |        |       |   |        |        |       |       |       |        |       |       |  |
|   | Phosphorus (tot.unfilt)                | TM152       | µg/l   | 20    | /                  | /               | 10000                                | 30.9   | 224    | 81.5  | - | 75.8   | 58.7   | 255   | 104   | 111   | 52.3   | 113   | -     |  |
|   | Hardness, Total as CaCO3 unfiltered    | TM152       | mg/l   | 0.35  | /                  | /               |                                      | 1070   | 1250   | 1280  | - | 793    | 1220   | 361   | 885   | 893   | 778    | 1070  | -     |  |
| <b>Gasoline Range Organics (GRO)</b>        |  |             |        |       |                    |                 |                                      |        |        |       |   |        |        |       |       |       |        |       |       |  |
|   | Total Aliphatics >C5-C12               | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | - | <10    | 16     | <10   | 15    | <10   | 15     | -     | -     |  |
|   | Total Aromatics >EC5-EC12              | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | - | <10    | <10    | <10   | <10   | <10   | <10    | <10   | -     |  |
| <b>TPH Criteria Working Group (TPH CWG)</b> |  |             |        |       |                    |                 |                                      |        |        |       |   |        |        |       |       |       |        |       |       |  |
|   | GRO Surrogate % recovery**             | TM245       | %      | /     | /                  | /               |                                      | 97     | 97     | 101   | - | 97     | 91     | 92    | 111   | 100   | 80     | 87    | -     |  |
|   | GRO >C5-C12                            | TM245       | µg/l   | 50    | /                  | /               |                                      | <50    | <50    | <50   | - | <50    | <50    | <50   | <50   | <50   | <50    | <50   | -     |  |
|   | Methyl tertiary butyl ether (MTBE)     | TM245       | µg/l   | 3     | /                  | 15              |                                      | <3     | <3     | <3    | - | <3     | <3     | <3    | <3    | <3    | <3     | <3    | -     |  |
|   | Benzene                                | TM245       | µg/l   | 7     | 8                  | /               |                                      | <7     | <7     | <7    | - | <7     | <7     | <7    | <7    | <7    | <7     | <7    | -     |  |
|   | Toluene                                | TM245       | µg/l   | 4     | 74                 | /               |                                      | <4     | <4     | <4    | - | <4     | <4     | <4    | <4    | <4    | <4     | <4    | -     |  |
|   | Ethylbenzene                           | TM245       | µg/l   | 5     | 20                 | /               |                                      | <5     | <5     | <5    | - | <5     | <5     | <5    | <5    | <5    | <5     | <5    | -     |  |
|   | m,p-Xylene                             | TM245       | µg/l   | 8     | 30                 | /               |                                      | <8     | <8     | <8    | - | <8     | <8     | <8    | <8    | <8    | <8     | <8    | -     |  |
|   | o-Xylene                               | TM245       | µg/l   | 3     | 30                 | /               |                                      | <3     | <3     | <3    | - | <3     | <3     | <3    | <3    | <3    | <3     | <3    | -     |  |
|   | Sum of detected Xylenes                | TM245       | µg/l   | 11    | 30                 | /               |                                      | <11    | <11    | <11   | - | <11    | <11    | <11   | <11   | <11   | <11    | <11   | -     |  |
|   | Sum of detected BTEX                   | TM245       | µg/l   | 28    | /                  | /               |                                      | <28    | <28    | <28   | - | <28    | <28    | <28   | <28   | <28   | <28    | <28   | -     |  |
|   | Aliphatics >C5-C6                      | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | - | <10    | <10    | <10   | <10   | <10   | <10    | <10   | -     |  |
|   | Aliphatics >C6-C8                      | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | - | <10    | <10    | <10   | <10   | <10   | <10    | <10   | -     |  |
|   | Aliphatics >C8-C10                     | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | - | <10    | <10    | <10   | <10   | <10   | <10    | <10   | -     |  |
|   | Aliphatics >C10-C12                    | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | - | <10    | <10    | <10   | <10   | <10   | <10    | <10   | -     |  |
|   | Aliphatics >C12-C16 (aq)               | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | - | <10    | <10    | <10   | <10   | <10   | <10    | <10   | -     |  |
|   | Aliphatics >C16-C21 (aq)               | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <10    | <10   | - | <10    | <10    | <10   | <10   | <10   | <10    | <10   | -     |  |
|   | Aliphatics >C21-C35 (aq)               | TM174       | µg/l   | 10    | /                  | /               |                                      | 87     | <10    | <10   | - | <10    | <10    | 19    | <10   | <10   | <10    | <10   | -     |  |
|   | Total Aliphatics >C12-C35 (aq)         | TM174       | µg/l   | 10    | /                  | /               |                                      | -      | -      | -     | - | -      | -      | -     | -     | -     | -      | <10   | -     |  |
|   | Aromatics >EC5-EC7                     | TM245       | µg/l   | 10    | 8                  | /               |                                      | <10    | <10    | <10   | - | <10    | <10    | <10   | <10   | <10   | <10    | <10   | -     |  |
|   | Aromatics >EC7-EC8                     | TM245       | µg/l   | 10    | 74                 | /               |                                      |        |        |       |   |        |        |       |       |       |        |       |       |  |

Point of Ayre Landfill's  
Groundwater Sample Results

ALS

| Customer Sample ID     | P6B        | P6B        | P6B        | P6B        | P6b         | P6B        | P6B        | P6B        | P6B        | P6B        | P6B        | P6B        | P6B        | P6B         |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | 6.37-      | 6.87-      | 6.87-      |            |             |            |            |            |            |            |            |            |            | 6.34-       |
| AGS id                 |            |            |            |            |             |            |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER |            | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 12/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |            |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 |            | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |            |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 |            | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |            |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 |            | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |            |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 |            | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |            |             |
| Lab Sample Number      | 19558451   | 20363912   | 20719335   |            | 21836359    | 22246280   | 22802675   | 23404127   | 23838521   | 24394393   | 26881774   | 27276228   |            |             |
| Sample Temperature     | 9.8        | 15         | 17.2       |            | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |            |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |            |             |

| Analysis | Test                             | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |          |          |    |              |              |              |          |              |
|----------|----------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|----------|----------|----|--------------|--------------|--------------|----------|--------------|
|          | 1,2,4-Trichlorobenzene (aq)      | TM176  | µg/l     | 1   | 0.4                | /               | <1                                   | <1       | <1       | -  | <1           | <1           | <1           | <1       | <1           |
|          | 1,2-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1       | <1       | -  | <1           | <1           | <1           | <1       | <1           |
|          | 1,3-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1       | <1       | -  | <1           | <1           | <1           | <1       | <1           |
|          | 1,4-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1       | <1       | -  | <1           | <1           | <1           | <1       | <1           |
|          | 2,4,5-Trichlorophenol (aq)       | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1       | <1       | <1 | <1           | <1           | <1           | <1       | <1           |
|          | 2,4,6-Trichlorophenol (aq)       | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1       | <1       | <1 | <1           | <1           | <1           | <1       | <1           |
|          | 2,4-Dichlorophenol (aq)          | TM176  | µg/l     | 1   | 0.42               | /               | 5                                    | <1       | <1       | <1 | <1           | <1           | <1           | <1       | <1           |
|          | 2,4-Dimethylphenol (aq)          | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1       | <1       | <1 | <1           | <1           | <1           | <1       | <1           |
|          | 2,4-Dinitrotoluene (aq)          | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1       | <1       | -  | <1           | <1           | <1           | <1       | <1           |
|          | 2,6-Dinitrotoluene (aq)          | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1       | <1       | -  | <1           | <1           | <1           | <1       | <1           |
|          | 2-Chloronaphthalene (aq)         | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1       | <1       | <1 | <1           | <1           | <1           | <1       | <1           |
|          | 2-Chlorophenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1       | <1       | <1 | <1           | <1           | <1           | <1       | <1           |
|          | 2-Methylnaphthalene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1       | <1       | -  | <1           | <1           | <1           | <1       | <1           |
|          | 2-Methylphenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1       | <1       | <1 | <1           | <1           | <1           | <1       | <1           |
|          | 2-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1       | <1       | -  | <1           | <1           | <1           | <1       | <1           |
|          | 2-Nitrophenol (aq)               | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1       | <1       | <1 | <1           | <1           | <1           | <1       | <1           |
|          | 3-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1       | <1       | -  | <1           | <1           | <1           | <1       | <1           |
|          | 4-Bromophenylphenylether (aq)    | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1       | <1       | -  | <1           | <1           | <1           | <1       | <1           |
|          | 4-Chloro-3-methylphenol (aq)     | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1       | <1       | <1 | <1           | <1           | <1           | <1       | <1           |
|          | 4-Chloroaniline (aq)             | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1       | <1       | -  | <1           | <1           | <1           | <1       | <1           |
|          | 4-Chlorophenylphenylether (aq)   | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1       | <1       | <1 | <1           | <1           | <1           | <1       | <1           |
|          | 4-Methylphenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1       | <1       | <1 | <1           | <1           | <1           | <1       | <1           |
|          | 4-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1       | <1       | -  | <1           | <1           | <1           | <1       | <1           |
|          | 4-Nitrophenol (aq)               | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1       | <1       | <1 | <1           | <1           | <1           | <1       | <1           |
|          | Azobenzene (aq)                  | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1       | <1       | -  | <1           | <1           | <1           | <1       | <1           |
|          | bis(2-Chloroethyl)ether (aq)     | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1       | <1       | <1 | <1           | <1           | <1           | <1       | <1           |
|          | bis(2-Chloroethoxy)methane (aq)  | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1       | <1       | <1 | <1           | <1           | <1           | <1       | <1           |
|          | bis(2-Ethylhexyl) phthalate (aq) | TM176  | µg/l     | 2   | /                  | /               | <2                                   | <2       | <2       | -  | <2           | <2           | <2           | <2       | <16          |
|          | Butylbenzyl phthalate (aq)       | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1       | <1       | -  | <1           | <1           | <1           | <1       | <1           |
|          | Benzo(k)fluoranthene (aq)        | TM176  | µg/l     | 1   | /                  | 0.1             | <1                                   | <1       | <1       | -  | <1           | <1           | <1           | <1       | <1           |
|          | Carbazole (aq)                   | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1       | <1       | -  | <1           | <1           | <1           | <1       | <1           |
|          | Dibenzofuran (aq)                | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1       | <1       | -  | <1           | <1           | <1           | <1       | <1           |
|          | n-Dibutyl phthalate (aq)         | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1       | <1       | -  | <1           | <1           | <1           | <1       | <1           |
|          | Diethyl phthalate (aq)           | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1       | <1       | -  | <1           | <1           | <1           | <1       | <1           |
|          | Dimethyl phthalate (aq)          | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1       | <1       | -  | <1           | <1           | <1           | <1       | <1           |
|          | n-Dioctyl phthalate (aq)         | TM176  | µg/l     | 5   | /                  | /               | <5                                   | <5       | <5       | -  | <5           | <5           | <5           | <20      | <5           |
|          | Hexachlorobenzene (aq)           | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1       | <1       | <1 | <1           | <1           | <1           | <1       | <1           |
|          | Hexachlorobutadiene (aq)         | TM176  | µg/l     | 1   | 0.6                | /               | 10                                   | <1       | <1       | <1 | <1           | <1           | <1           | <1       | <1           |
|          | Pentachlorophenol (aq)           | TM176  | µg/l     | 1   | 0.4                | /               | 5                                    | <1       | <1       | <1 | <1           | <1           | <1           | <1       | <1           |
|          | Phenol (aq)                      | TM176  | µg/l     | 1   | 7.7                | /               | 5                                    | <1       | <1       | <1 | <1           | <1           | <1           | <1       | <1           |
|          | n-Nitroso-n-dipropylamine (aq)   | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1       | <1       | -  | <1           | <1           | <1           | <1       | <1           |
|          | Hexachloroethane (aq)            | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1       | <1       | <1 | <1           | <1           | <1           | <1       | <1           |
|          | Nitrobenzene (aq)                | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1       | <1       | -  | <1           | <1           | <1           | <1       | <1           |
|          | Isophorone (aq)                  | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <1       | <1       | -  | <1           | <1           | <1           | <1       | <1           |
|          | Hexachlorocyclopentadiene (aq)   | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1       | <1       | <1 | <1           | <1           | <1           | <1       | <1           |
|          | Indeno(1,2,3-cd)pyrene (aq)      | TM176  | µg/l     | 1   | /                  | 0.1             | <1                                   | <1       | <1       | -  | <1           | <1           | <1           | <1       | <1           |
|          | SVOC TIC (aq)                    | TM176  | No units |     | /                  | /               | Detected                             | Detected | Detected | -  | Not Detected | Not Detected | Not Detected | Detected | Not Detected |
|          | Total SVOC TIC                   | TM176  | µg/l     | 10  | /                  | /               | 16.8                                 | 10.8     | 12.7     | -  | <10          | <10          | <10          | 13.2     | <40          |

| Volatile Organic Compounds (VOCs) |                                    |       |      |   |     |     |      |      |     |    |      |      |      |      |      |
|-----------------------------------|------------------------------------|-------|------|---|-----|-----|------|------|-----|----|------|------|------|------|------|
|                                   | Dibromofluoromethane**             | TM208 | %    | / | /   | /   | 108  | 107  | 117 | -  | 122  | 117  | 110  | 106  | 115  |
|                                   | Toluene-d8**                       | TM208 | %    | / | /   | /   | 101  | 98.7 | 102 | -  | 98.8 | 98.9 | 99.2 | 96.2 | 96.5 |
|                                   | 4-Bromofluorobenzene**             | TM208 | %    | / | /   | /   | 96.1 | 100  | 101 | -  | 99.7 | 103  | 98.7 | 96.7 | 95.1 |
|                                   | Dichlorodifluoromethane            | TM208 | µg/l | 1 | /   | /   | <1   | <1   | <1  | -  | <1   | <1   | <1   | <1   | <1   |
|                                   | Chloromethane                      | TM208 | µg/l | 1 | /   | /   | 10   | <1   | <1  | <1 | <1   | <1   | <1   | <1   | <1   |
|                                   | Vinyl chloride                     | TM208 | µg/l | 1 | /   | 0.5 | 10   | <1   | <1  | <1 | <1   | <1   | <1   | <1   | <1   |
|                                   | Bromomethane                       | TM208 | µg/l | 1 | /   | /   | <1   | <1   | <1  | -  | <1   | <1   | <1   | <1   | <1   |
|                                   | Chloroethane                       | TM208 | µg/l | 1 | /   | /   | 10   | <1   | <1  | <1 | <1   | <1   | <1   | <1   | <1   |
|                                   | Trichlorofluoromethane             | TM208 | µg/l | 1 | /   | /   | 10   | <1   | <1  | <1 | <1   | <1   | <1   | <1   | <1   |
|                                   | 1,1-Dichloroethene                 | TM208 | µg/l | 1 | /   | /   | 10   | <1   | <1  | <1 | <1   | <1   | <1   | <1   | <1   |
|                                   | Carbon disulphide                  | TM208 | µg/l | 1 | /   | /   | <1   | <1   | <1  | -  | <1   | <1   | <1   | <1   | <1   |
|                                   | Dichloromethane                    | TM208 | µg/l | 1 | 20  | /   | 10   | <3   | <3  | <3 | <3   | <3   | <3   | <3   | <3   |
|                                   | Methyl tertiary butyl ether (MTBE) | TM208 | µg/l | 1 | /   | 15  | <1   | <1   | <1  | -  | <1   | <1   | <1   | <1   | <1   |
|                                   | trans-1,2-Dichloroethene           | TM208 | µg/l | 1 | /   | 50  | 10   | <1   | <1  | <1 | <1   | <1   | <1   | <1   | <1   |
|                                   | 1,1-Dichloroethane                 | TM208 | µg/l | 1 | /   | /   | 10   | <1   | <1  | <1 | <1   | <1   | <1   | <1   | <1   |
|                                   | cis-1,2-Dichloroethene             | TM208 | µg/l | 1 | /   | 50  | 10   | <1   | <1  | <1 | <1   | <1   | <1   | <1   | <1   |
|                                   | 2,2-Dichloropropane                | TM208 | µg/l | 1 | /   | /   | 10   | <1   | <1  | <1 | <1   | <1   | <1   | <1   | <1   |
|                                   | Bromochloromethane                 | TM208 | µg/l | 1 | /   | /   | 10   | <1   | <1  | <1 | <1   | <1   | <1   | <1   | <1   |
|                                   | Chloroform                         | TM208 | µg/l | 1 | 2.5 | /   | 10   | <1   | <1  | <1 | <1   | <1   | <1   | <1   | <1   |
|                                   | 1,1,1-Trichloroethane              | TM208 | µg/l | 1 | /   | /   | 10   | <1   | <1  | <1 | <1   | <1   | <1   | <1   | <1   |
|                                   | 1,1-Dichloropropene                | TM208 | µg/l | 1 | /   | /   | 10   | <1   | <1  | <1 | <1   | <1   | <1   | <1   | <1   |
|                                   | Carbontetrachloride                | TM208 | µg/l | 1 | /   | /   | 10   | <1   | <1  | <1 | <1   | <1   | <1   | <1   | <1   |
|                                   | 1,2-Dichloroethane                 | TM208 | µg/l | 1 | 10  | /   | 10   | <1   | <1  | <1 | <1   | <1   | <1   | <1   | <1   |
|                                   | Benzene                            | TM208 | µg/l | 1 | 8   | /   | <1   | <1   | <1  | -  | <1   | <1   | <1   | <1   | <1   |
|                                   | Trichloroethene                    | TM208 | µg/l | 1 | 10  | /   | 10   | <1   | <1  | <1 | <1   | <1   | <1   | <1   | <1   |
|                                   | 1,2-Dichloropropane                | TM208 | µg/l | 1 | /   | /   | 10   | <1   | <1  | <1 | <1   | <1   | <1   | <1   | <1   |
|                                   | Dibromomethane                     | TM208 | µg/l | 1 | /   | /   | <1   | <1   | <1  | -  | <1   | <1   | <1   | <1   | <1   |
|                                   | Bromodichloromethane               | TM208 | µg/l | 1 | /   | 100 | 10   | <1   | <1  | <1 | <1   | <1   | <1   | <1   | <1   |
|                                   | cis-1,3-Dichloropropene            | TM208 | µg/l | 1 | /   | /   | 10   | <1   | <1  | <1 | <1   | <1   | <1   | <1   | <1   |
|                                   | Toluene                            | TM208 | µg/l | 1 | 74  | /   | <1   | <1   | <1  | -  | <1   | <1   | <1   | <1   | <1   |
|                                   | trans-1,3-Dichloropropene          | TM208 | µg/l | 1 | /   | /   | 10   | <1   | <1  | <1 | <1   | <1   | <1   | <1   | <1   |
|                                   | 1,1,2-Trichloroethane              | TM208 | µg/l | 1 | /   | /   | 10   | <1   | <1  | <1 | <1   | <1   | <1   | <1   | <1   |
|                                   | 1,3-Dichloropropane                | TM208 | µg/l | 1 | /   |     |      |      |     |    |      |      |      |      |      |





Point of Ayre Landfill's  
Groundwater Sample Results

ALS

SDG(s): 190315-102

Customer: Waste Management Unit Douglas (12297)

Client Reference / Point of Ayre

Order no.:

| Customer Sample ID     | P6C                                    | P6C        | P6C        | P6C                                    | P6C        | P6C        | P6C                                    | P6C        | P6C        | P6C                         | P6C        | P6C        |
|------------------------|--|------------|------------|--|------------|------------|--|------------|------------|-----------------------------|------------|------------|
| Sample Type            | 6.32-                                  | 6.87-      | 6.87-      | 6.87-                                  | 6.87-      | 6.87-      | 6.87-                                  | 6.87-      | 6.87-      | 6.87-                       | 6.87-      | 6.40-      |
| Depth                  |  |            |            |  |            |            |  |            |            |                             |            |            |
| AGS Id                 |  |            |            |  |            |            |  |            |            |                             |            |            |
| Sample Type            | WATER JUND WATER JUND WATER JUND WATER |            |            | WATER JUND WATER JUND WATER JUND WATER |            |            | WATER JUND WATER JUND WATER JUND WATER |            |            | WATER JUND WATER JUND WATER |            |            |
| Sampled Date           | 12/03/2019                             | 16/07/2019 | 10/09/2019 | 02/12/2019                             | 02/03/2020 | 01/06/2020 | 07/09/2020                             | 01/12/2020 | 01/03/2021 | 31/05/2021                  | 12/09/2021 | 05/12/2022 |
| Sample Received Date   | 15/03/2019                             | 19/07/2019 | 13/09/2019 | 02/12/2019                             | 06/03/2020 | 03/06/2020 | 10/09/2020                             | 18/12/2020 | 04/03/2021 | 04/06/2021                  | 15/09/2021 | 07/12/2022 |
| Final Instruction Date | 25/03/2019                             | 29/07/2019 | 26/09/2019 |  | 19/03/2020 | 03/06/2020 | 17/09/2020                             | 18/12/2020 | 11/03/2021 | 04/06/2021                  | 15/09/2021 | 09/12/2022 |
| Report Completed Date  | 27/03/2019                             | 30/07/2019 | 30/09/2019 |  | 14/05/2020 | 16/06/2020 | 21/09/2020                             | 21/12/2020 | 23/03/2021 | 16/06/2021                  | 27/09/2021 | 09/12/2022 |
| SDG                    | 190315-102                             | 190719-73  | 190913-125 |  | 200306-148 | 200603-78  | 200910-118                             | 201210-95  | 210304-123 | 210604-112                  | 220915-96  | 221207-97  |
| Lab Sample Number      | 19558450                               | 20363914   | 20719336   |  | 21836360   | 22246281   | 22802676                               | 23404130   | 23838522   | 24394398                    | 26881775   | 27276227   |
| Sample Temperature     | 9.8                                    | 15         | 17.2       |  | 6          | 16.2       | 14.8                                   | 6.5        | 8.6        | 15.2                        | 13.2       | 6.5        |
| Sample Time            |  |            |            |  |            |            |  |            |            |                             |            |            |

| Analysis                                    | Test  | Method | Units | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |       |       |       |        |  |       |        |        |       |        |        |       |       |
|---|-------|--------|-------|-----|--------------------|-----------------|--------------------------------------|-------|-------|-------|--------|--|-------|--------|--------|-------|--------|--------|-------|-------|
| <b>Carbon</b>                               |       |        |       |     |                    |                 |                                      |       |       |       |        |  |       |        |        |       |        |        |       |       |
| Carbon, Organic (diss.ft)                   | TM090 | mg/l   |       |     | 6                  | /               | /                                    | 10    | 26    | 26    | 23.8   |  | 27.4  | 23.6   | 21.9   | 22.8  | 21.4   | 26.1   | 19.9  | 19.7  |
| <b>Inorganics</b>                           |       |        |       |     |                    |                 |                                      |       |       |       |        |  |       |        |        |       |        |        |       |       |
| Fluoride                                    | TM104 | mg/l   |       |     | 0.5                | /               | /                                    | 10    | <0.5  | <0.5  | <0.5   |  | <0.5  | <0.5   | <0.5   | <0.5  | <0.5   | <0.5   | <0.5  | <0.5  |
| Fluoride, Calculation                       | TM104 | mg/l   |       |     | 0.5                | /               | /                                    | 10    | -2.24 | -7.37 | -4.4   |  | -6.1  | 1.46   | -10.6  | 1.99  | -3.4   | -3.74  | -     | -     |
| Nitrite as NO2                              | TM184 | mg/l   |       |     | 0.05               | 0.5             | /                                    | 1     | <0.05 | <0.05 | <0.05  |  | <0.05 | <0.05  | <0.05  | <0.05 | <0.05  | <0.05  | <0.05 | <0.05 |
| Phosphate (Ortho as PO4)                    | TM184 | mg/l   |       |     | 0.05               | /               | /                                    | 1     | <0.05 | <0.05 | <0.05  |  | <0.05 | <0.05  | 0.875  | <0.05 | <0.05  | <0.05  | <0.05 | <0.05 |
| Sulphate                                    | TM184 | mg/l   |       |     | 2                  | /               | 250                                  | 2500  | 310   | 301   | 300    |  | 227   | 244    | 221    | 238   | 114    | 42.7   | 68.7  | -     |
| Sulphide                                    | TM101 | mg/l   |       |     | 0.01               | /               | /                                    | 1     | 0.464 | 0.223 | 0.0395 |  | 0.044 | 0.0739 | <0.01  | <0.01 | 0.0315 | 0.0903 | <0.01 | <0.01 |
| Chloride                                    | TM184 | mg/l   |       |     | 2                  | /               | 250                                  | 2000  | 2910  | 2850  | 3030   |  | 1050  | 1060   | 1110   | 1000  | 1090   | 415    | 508   | 620   |
| COD, unfiltered                             | TM107 | mg/l   |       |     | 7                  | /               | /                                    | 1     | 134   | 96.5  | 440    |  | 144   | 106    | 94.5   | 42    | 67     | 73.6   | 96.4  | -     |
| Nitrogen, Total                             | TM212 | mg/l   |       |     | 1                  | /               | /                                    | 1     | 81.8  | 74.6  | 71.9   |  | 69.1  | 48     | 36.1   | 52.3  | 40.4   | 33.9   | 86.4  | -     |
| Ammoniacal Nitrogen as NH4                  | TM099 | mg/l   |       |     | 0.3                | /               | 0.5                                  | 5     | 93    | 61.5  | 89     |  | 72.7  | 62     | 25.2   | 65.8  | 47.8   | 41.7   | 108   | 109   |
| Nitrate as NO3                              | TM184 | mg/l   |       |     | 0.3                | /               | 50                                   | 500   | <0.3  | <0.3  | <0.3   |  | <0.3  | <0.3   | 0.341  | <0.3  | <0.3   | <0.3   | 4.57  | -     |
| BOD, unfiltered                             | TM045 | mg/l   |       |     | 1                  | /               | /                                    | 1     | -     | 2.26  | <1     |  | 1.57  | <1     | <5     | <1    | <1     | 1.85   | 3.77  | -     |
| Alkalinity, Total as CaCO3                  | TM043 | mg/l   |       |     | 2                  | /               | /                                    | 1     | 1110  | 1130  | 1050   |  | 1190  | 1100   | 1060   | 1010  | 985    | 1050   | 939   | -     |
| Alkalinity, Total as CaCO3 (diss.ft)        | TM043 | mg/l   |       |     | 2                  | /               | /                                    | 1     | -     | -     | -      |  | -     | -      | -      | -     | -      | -      | -     | -     |
| Suspended solids, Total                     | TM022 | mg/l   |       |     | 9                  | /               | /                                    | 1     | 33    | 8.9   | 16.6   |  | 2.7   | 19.6   | 50.1   | 20.3  | 13.8   | 5.2    | 21.4  | -     |
| <b>Filtered (Dissolved) Metals</b>          |       |        |       |     |                    |                 |                                      |       |       |       |        |  |       |        |        |       |        |        |       |       |
| Mercury (diss.ft)                           | TM183 | µg/l   |       |     | 0.01               | 0.07            | /                                    | 10    | <0.01 | <0.01 | <0.01  |  | <0.01 | <0.01  | 0.0217 | <0.01 | <0.01  | <0.01  | <0.01 | <0.01 |
| Arsenic (diss.ft)                           | TM152 | µg/l   |       |     | 0.5                | 25              | /                                    | 500   | 4.6   | 4.22  | 5.05   |  | 6.37  | 4.82   | 4.78   | 7.05  | 5.48   | 7.48   | 17.2  | 8.94  |
| Cadmium (diss.ft)                           | TM152 | µg/l   |       |     | 0.08               | 0.2             | /                                    | 50    | <0.08 | <0.08 | <0.08  |  | <0.08 | <0.08  | <0.08  | <0.08 | <0.08  | <0.08  | <0.08 | <0.08 |
| Chromium (diss.ft)                          | TM152 | µg/l   |       |     | 1                  | /               | 50                                   | 500   | <1    | <1    | <1     |  | <1    | 1.15   | 1.25   | <1    | <1     | 1.18   | <1    | <1    |
| Copper (diss.ft)                            | TM152 | µg/l   |       |     | 0.3                | 3.76            | /                                    | 1000  | <0.3  | 0.69  | <0.3   |  | 0.524 | <0.3   | 1      | 0.383 | 0.832  | 0.314  | 1.06  | -     |
| Lead (diss.ft)                              | TM152 | µg/l   |       |     | 0.2                | 1.3             | /                                    | 500   | 0.268 | 0.415 | <0.2   |  | <0.2  | 0.255  | <0.2   | <0.2  | 0.675  | 0.406  | <0.2  | -     |
| Manganese (diss.ft)                         | TM152 | µg/l   |       |     | 3                  | /               | 50                                   | 500   | 1590  | 1140  | 1170   |  | 1150  | 623    | 565    | 906   | 503    | 596    | 2720  | 2410  |
| Nickel (diss.ft)                            | TM152 | µg/l   |       |     | 0.4                | 8.6             | /                                    | 500   | 30.2  | 27.9  | 26     |  | 31.7  | 28.5   | 17.7   | 29.1  | 20     | 21.7   | 15    | 15.7  |
| Zinc (diss.ft)                              | TM152 | µg/l   |       |     | 1                  | 7.9             | /                                    | 1000  | 7.65  | 8.33  | <1     |  | 4.98  | <1     | 7.16   | 23.7  | 6.02   | 3.38   | 3.38  | 2.04  |
| Sodium (Dis.Fil)                            | TM152 | mg/l   |       |     | 0.076              | /               | 200                                  | 1500  | 1470  | 1370  | 1380   |  | 970   | 1150   | 848    | 1110  | 692    | 340    | 380   | -     |
| Magnesium (Dis.Fil)                         | TM152 | mg/l   |       |     | 0.036              | /               | 500                                  | 500   | 251   | 229   | 254    |  | 195   | 220    | 147    | 219   | 112    | 95.9   | 66.6  | -     |
| Potassium (Dis.Fil)                         | TM152 | mg/l   |       |     | 0.2                | /               | 120                                  | 120   | 90.5  | 82.2  | 88.4   |  | 77.4  | 75.5   | 60.4   | 70.5  | 45.4   | 45.3   | 63.1  | -     |
| Calcium (Dis.Fil)                           | TM152 | mg/l   |       |     | 0.2                | /               | 1000                                 | 1000  | 256   | 227   | 252    |  | 187   | 233    | 162    | 220   | 133    | 106    | 196   | -     |
| Iron (Dis.Fil)                              | TM152 | mg/l   |       |     | 0.019              | 1               | /                                    | 2     | 2.34  | 1.97  | 2.01   |  | 2.1   | 1.73   | 0.353  | 2.18  | 1      | 1.11   | 6.17  | 6.24  |
| <b>Unfiltered (Total) Metals</b>            |       |        |       |     |                    |                 |                                      |       |       |       |        |  |       |        |        |       |        |        |       |       |
| Phosphorus (tot.unfilt)                     | TM152 | µg/l   |       |     | 20                 | /               | /                                    | 10000 | 25.3  | 80.1  | 62.4   |  | 59.2  | 51.6   | 1200   | 110   | 61.5   | 53.3   | 40.6  | -     |
| Hardness, Total as CaCO3 unfiltered         | TM152 | mg/l   |       |     | 0.35               | /               | /                                    | 10000 | 1550  | 1580  | 1680   |  | 1280  | 1500   | 1020   | 1390  | 808    | 611    | 793   | -     |
| <b>Gasoline Range Organics (GRO)</b>        |       |        |       |     |                    |                 |                                      |       |       |       |        |  |       |        |        |       |        |        |       |       |
| Total Aliphatics >C5-C12                    | TM245 | µg/l   |       |     | 10                 | /               | /                                    | 10    | <10   | <10   | <10    |  | <10   | 16     | <10    | 10    | <10    | <10    | -     | -     |
| Total Aromatics >EC5-EC12                   | TM245 | µg/l   |       |     | 10                 | /               | /                                    | 10    | <10   | <10   | <10    |  | <10   | <10    | <10    | <10   | <10    | <10    | -     | -     |
| <b>TPH Criteria Working Group (TPH CWG)</b> |       |        |       |     |                    |                 |                                      |       |       |       |        |  |       |        |        |       |        |        |       |       |
| GRO Surrogate % recovery**                  | TM245 | %      |       |     |                    | /               | /                                    | 100   | 93    | 92    | 90     |  | 95    | 98     | 91     | 107   | 94     | 100    | 93    | -     |
| GRO >C5-C12                                 | TM245 | µg/l   |       |     | 50                 | /               | /                                    | 1000  | <50   | <50   | <50    |  | <50   | <50    | <50    | <50   | <50    | <50    | <50   | -     |
| Methyl tertiary butyl ether (MTBE)          | TM245 | µg/l   |       |     | 3                  | /               | 15                                   | 150   | <3    | <3    | <3     |  | <3    | <3     | <3     | <3    | <3     | <3     | <3    | -     |
| Benzene                                     | TM245 | µg/l   |       |     | 7                  | 8               | /                                    | 80    | <7    | <7    | <7     |  | <7    | <7     | <7     | <7    | <7     | <7     | <7    | -     |
| Toluene                                     | TM245 | µg/l   |       |     | 4                  | 74              | /                                    | 740   | <4    | <4    | <4     |  | <4    | <4     | <4     | <4    | <4     | <4     | <4    | -     |
| Ethylbenzene                                | TM245 | µg/l   |       |     | 5                  | 20              | /                                    | 200   | <5    | <5    | <5     |  | <5    | <5     | <5     | <5    | <5     | <5     | <5    | -     |
| m,p-Xylene                                  | TM245 | µg/l   |       |     | 8                  | 30              | /                                    | 300   | <8    | <8    | <8     |  | <8    | <8     | <8     | <8    | <8     | <8     | <8    | -     |
| o-Xylene                                    | TM245 | µg/l   |       |     | 3                  | 30              | /                                    | 300   | <3    | <3    | <3     |  | <3    | <3     | <3     | <3    | <3     | <3     | <3    | -     |
| Sum of detected Xylenes                     | TM245 | µg/l   |       |     | 11                 | 30              | /                                    | 300   | <11   | <11   | <11    |  | <11   | <11    | <11    | <11   | <11    | <11    | <11   | -     |
| Sum of detected BTEX                        | TM245 | µg/l   |       |     | 28                 | /               | /                                    | 280   | <28   | <28   | <28    |  | <28   | <28    | <28    | <28   | <28    | <28    | <28   | -     |
| Aliphatics >C5-C6                           | TM245 | µg/l   |       |     | 10                 | /               | /                                    | 10    | <10   | <10   | <10    |  | <10   | <10    | <10    | <10   | <10    | <10    | <10   | -     |
| Aliphatics >C6-C8                           | TM245 | µg/l   |       |     | 10                 | /               | /                                    | 10    | <10   | <10   | <10    |  | <10   | <10    | <10    | <10   | <10    | <10    | <10   | -     |
| Aliphatics >C8-C10                          | TM245 | µg/l   |       |     | 10                 | /               | /                                    | 10    | <10   | <10   | <10    |  | <10   | <10    | <10    | <10   | <10    | <10    | <10   | -     |
| Aliphatics >C10-C12                         | TM245 | µg/l   |       |     | 10                 | /               | /                                    | 10    | <10   | <10   | <10    |  | <10   | <10    | <10    | <10   | <10    | <10    | <10   | -     |
| Aliphatics >C12-C16 (aq)                    | TM174 | µg/l   |       |     | 10                 | /               | /                                    | 10    | <10   | <10   | <10    |  | <10   | <10    | <10    | <10   | <10    | <10    | <10   | -     |
| Aliphatics >C16-C21 (aq)                    | TM174 | µg/l   |       |     | 10                 | /               | /                                    | 10    | <10   | <10   | <10    |  |       |        |        |       |        |        |       |       |







Point of Ayre Landfill's  
Groundwater Sample Results

ALS

| Customer Sample ID     | P7B        | P7B        | P7B        | P7B        | P7          | P7B        | P7B        | P7B        | P7B        | P7B        | P7B        | P7B        | P7B        | P7B         |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | -          | 6.14-      | 6.14-      | 5.68-      | -           | -          | -          | -          | -          | -          | -          | -          | -          | 5.71-       |
| AGS Id                 |            |            |            |            |             |            |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 12/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |            |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |            |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |            |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |            |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |            |             |
| Lab Sample Number      | 19558446   | 20363922   | 20719342   | 21297979   | 21836338    | 22246287   | 22802693   | 23404136   | 23838529   | 24394417   | 26881776   | 27276226   |            |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |            |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |            |             |

| Analysis | Test                             | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |              |              |          |              |              |              |              |              |
|----------|----------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|--------------|--------------|----------|--------------|--------------|--------------|--------------|--------------|
|          | 1,2,4-Trichlorobenzene (aq)      | TM176  | µg/l     | 1   | 0.4                | /               |                                      | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | 1,2-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | 1,3-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | 1,4-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | 2,4,5-Trichlorophenol (aq)       | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | 2,4,6-Trichlorophenol (aq)       | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | 2,4-Dichlorophenol (aq)          | TM176  | µg/l     | 1   | 0.42               | /               | 5                                    | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | 2,4-Dimethylphenol (aq)          | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | 2,4-Dinitrotoluene (aq)          | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | 2,6-Dinitrotoluene (aq)          | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | 2-Chloronaphthalene (aq)         | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | 2-Chlorophenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | 2-Methylnaphthalene (aq)         | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | 2-Methylphenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | 2-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | 2-Nitrophenol (aq)               | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | 3-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | 4-Bromophenylphenylether (aq)    | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | 4-Chloro-3-methylphenol (aq)     | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | 4-Chloroaniline (aq)             | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | 4-Chlorophenylphenylether (aq)   | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | 4-Methylphenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | 4-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | 4-Nitrophenol (aq)               | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | Azobenzene (aq)                  | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | bis(2-Chloroethyl)ether (aq)     | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | bis(2-Chloroethoxy)methane (aq)  | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | bis(2-Ethylhexyl) phthalate (aq) | TM176  | µg/l     | 2   | /                  | /               |                                      | <2           | <2           | <4       | <2           | <2           | <2           | <2           | <2           |
|          | Butylbenzyl phthalate (aq)       | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | Benzo(k)fluoranthene (aq)        | TM176  | µg/l     | 1   | /                  | 0.1             |                                      | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | Carbazole (aq)                   | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | Dibenzofuran (aq)                | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | n-Dibutyl phthalate (aq)         | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | Diethyl phthalate (aq)           | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | Dimethyl phthalate (aq)          | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | n-Dioctyl phthalate (aq)         | TM176  | µg/l     | 5   | /                  | /               |                                      | <5           | <5           | <10      | <5           | <5           | <5           | <5           | <5           |
|          | Hexachlorobenzene (aq)           | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | Hexachlorobutadiene (aq)         | TM176  | µg/l     | 1   | 0.6                | /               | 10                                   | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | Pentachlorophenol (aq)           | TM176  | µg/l     | 1   | 0.4                | /               | 5                                    | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | Phenol (aq)                      | TM176  | µg/l     | 1   | 7.7                | /               | 5                                    | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | n-Nitroso-n-dipropylamine (aq)   | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | Hexachloroethane (aq)            | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | Nitrobenzene (aq)                | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | Isophorone (aq)                  | TM176  | µg/l     | 1   | /                  | /               |                                      | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | Hexachlorocyclopentadiene (aq)   | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | Indeno(1,2,3-cd)pyrene (aq)      | TM176  | µg/l     | 1   | /                  | 0.1             |                                      | <1           | <1           | <2       | <1           | <1           | <1           | <1           | <1           |
|          | SVOC TIC (aq)                    | TM176  | No units |     | /                  | /               |                                      | Not Detected | Not Detected | Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected |
|          | Total SVOC TIC                   | TM176  | µg/l     | 10  | /                  | /               |                                      | <10          | <10          | 43.9     | <10          | <10          | <10          | <10          | <10          |

**Volatile Organic Compounds (VOCs)**

|                                    |       |      |   |     |     |      |      |      |     |      |      |      |      |      |      |      |      |   |
|------------------------------------|-------|------|---|-----|-----|------|------|------|-----|------|------|------|------|------|------|------|------|---|
| Dibromofluoromethane**             | TM208 | %    | / | /   |     |      | 111  | 115  | 116 | 119  | 114  | 107  | 111  | 112  | 116  | 105  | 114  | - |
| Toluene-d8**                       | TM208 | %    | / | /   |     |      | 102  | 96.8 | 101 | 97.8 | 101  | 99.1 | 99.3 | 98.8 | 99   | 96.1 | 99.7 | - |
| 4-Bromofluorobenzene**             | TM208 | %    | / | /   |     |      | 96.3 | 97.1 | 101 | 93.5 | 97.8 | 104  | 98.6 | 96.4 | 95.8 | 93.1 | 96.1 | - |
| Dichlorodifluoromethane            | TM208 | µg/l | 1 | /   | /   |      | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | - |
| Chloromethane                      | TM208 | µg/l | 1 | /   | /   | 10   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | - |
| Vinyl chloride                     | TM208 | µg/l | 1 | /   | 0.5 | 10   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | - |
| Bromomethane                       | TM208 | µg/l | 1 | /   | /   |      | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | - |
| Chloroethane                       | TM208 | µg/l | 1 | /   | /   | 10   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | - |
| Trichlorofluoromethane             | TM208 | µg/l | 1 | /   | /   | 10   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | - |
| 1,1-Dichloroethene                 | TM208 | µg/l | 1 | /   | /   | 10   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | - |
| Carbon disulphide                  | TM208 | µg/l | 1 | /   | /   |      | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | - |
| Dichloromethane                    | TM208 | µg/l | 1 | 20  | /   | 10   | <3   | <3   | <3  | <3   | <3   | <3   | <3   | <3   | <3   | <3   | <3   | - |
| Methyl tertiary butyl ether (MTBE) | TM208 | µg/l | 1 | /   | 15  |      | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | - |
| trans-1,2-Dichloroethene           | TM208 | µg/l | 1 | /   | 50  | 10   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | - |
| 1,1-Dichloroethane                 | TM208 | µg/l | 1 | /   | /   | 10   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | - |
| cis-1,2-Dichloroethene             | TM208 | µg/l | 1 | /   | 50  | 10   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | - |
| 2,2-Dichloropropane                | TM208 | µg/l | 1 | /   | /   | 10   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | - |
| Bromochloromethane                 | TM208 | µg/l | 1 | /   | /   | 10   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | - |
| Chloroform                         | TM208 | µg/l | 1 | 2.5 | /   | 10</ |      |      |     |      |      |      |      |      |      |      |      |   |





Point of Ayre Landfill's  
Groundwater Sample Results

ALS

| Customer Sample ID     | P8A        | P8A        | P8A        | P8A        | P8          | P8A        | P8A        | P8A        | P8A        | P8A        | P8A        | P8A        | P8A        | P8A         |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | -          | 5.90-      | 5.90-      | 5.46-      | -           | -          | -          | -          | -          | -          | -          | -          | -          | 5.39-       |
| AGS id                 |            |            |            |            |             |            |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 12/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 06/12/2022 |            |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |            |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |            |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |            |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |            |             |
| Lab Sample Number      | 19558449   | 20363923   | 20719343   | 21297980   | 21836337    | 22246288   | 22802694   | 23404137   | 23838530   | 24394418   | 26881777   | 27276225   |            |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |            |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |            |             |

| Analysis                                    | Test                                   | Method      | Units  | LOD   | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria | P8A   | P8A   | P8A   | P8A   | P8    | P8A   | P8A    | P8A    | P8A   | P8A   | P8A   |      |
|---|--|-------------|--------|-------|--------------------|-----------------|--------------------------------------|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|-------|------|
| <b>Carbon</b>                               | Carbon, Organic (diss.filt)            | TM090       | mg/l   | 6     | /                  | /               | 10                                   | <6    | 10.5  | 11    | 13.9  | 8.65  | <6    | 6.31   | <3     | 6.44  | 73.3  | 19.5  | 7.1  |
| <b>Inorganics</b>                           | Fluoride                               | TM104       | mg/l   | 0.5   | /                  | /               | 10                                   | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5  | <0.5   | <0.5   | <0.5  | <0.5  | <0.5  | -    |
|   | Ionic balance                          | Calculation | % Diff |       | /                  | /               |                                      | 4.79  | 32.8  | 23.7  | 12    | -19.2 | 2.63  | -2.6   | -1.51  | -3.79 | 9.04  | -     | -    |
|   | Nitrite as NO2                         | TM184       | mg/l   | 0.05  | 0.5                | /               | 1                                    | <0.05 | 0.079 | <0.05 | 0.173 | <0.05 | <0.05 | <0.05  | <0.05  | <0.05 | <0.05 | <0.05 | -    |
|   | Phosphate (Ortho as PO4)               | TM184       | mg/l   | 0.05  | /                  | /               |                                      | <0.05 | 1.05  | 1.19  | 0.763 | <0.05 | <0.05 | <0.05  | <0.05  | <0.05 | 1.37  | 9.03  | -    |
|   | Sulphate                               | TM184       | mg/l   | 2     | /                  | 250             | 2500                                 | 54.2  | 19.4  | 15.5  | 4     | 72.5  | 103   | 58.8   | 32.6   | 79.1  | -4    | 4.7   | -    |
|   | Sulphide                               | TM101       | mg/l   | 0.01  | /                  | /               |                                      | 0.314 | <0.01 | 0.515 | 0.111 | 0.243 | 0.196 | 0.0158 | <0.01  | 1.89  | 2.61  | <0.01 | -    |
|   | Chloride                               | TM184       | mg/l   | 2     | /                  | 250             | 2000                                 | 64.3  | 48.7  | 44.4  | 33.2  | 51.1  | 58.7  | 57.8   | 56.2   | 52.9  | 53.2  | 54.7  | 55.7 |
|   | COD, unfiltered                        | TM107       | mg/l   | 7     | /                  | /               |                                      | 24.2  | 27.6  | 44.9  | 35.2  | 21.2  | 20.5  | 16.9   | 15.5   | 10.7  | 14.7  | 78.4  | -    |
|   | Nitrogen, Total                        | TM212       | mg/l   | 1     | /                  | /               |                                      | <1    | 2.3   | <1    | 1.41  | 1.91  | 3.24  | <1     | <1     | 7.55  | 5.96  | 25.6  | -    |
|   | Ammoniacal Nitrogen as NH4             | TM099       | mg/l   | 0.3   | /                  | 0.5             | 5                                    | 0.977 | <0.3  | 1.44  | 0.747 | 0.941 | 3.32  | 0.687  | <0.3   | 6.15  | 6.45  | 31.8  | 4.04 |
|   | Nitrate as NO3                         | TM184       | mg/l   | 0.3   | /                  | 50              | 500                                  | <0.3  | 4.83  | 0.929 | 4.34  | 2.08  | 2.09  | <0.3   | <0.3   | 0.481 | <0.3  | 3.93  | -    |
|   | BOD, unfiltered                        | TM045       | mg/l   | 1     | /                  | /               |                                      | <1    | <1    | <2    | 1.13  | <1    | 2.9   | <1     | <1     | <1    | 105   | <10   | -    |
|   | Alkalinity, Total as CaCO3             | TM043       | mg/l   | 2     | /                  | /               |                                      | 569   | 298   | 2.09  | 160   | 469   | 600   | 630    | 286    | 509   | 130   | 213   | -    |
|   | Alkalinity, Total as CaCO3 (diss.filt) | TM043       | mg/l   | 2     | /                  | /               |                                      |       | 310   | 238   | -     | -     | -     | -      | -      | -     | -     | -     | -    |
|   | Suspended solids, Total                | TM022       | mg/l   | 9     | /                  | /               |                                      | 47.7  | 48    | 22.9  | 16.6  | 18.8  | 33.6  | 19.3   | 16     | 18    | 36.9  | 41.5  | -    |
| <b>Filtered (Dissolved) Metals</b>          |  |             |        |       |                    |                 |                                      |       |       |       |       |       |       |        |        |       |       |       |      |
|   | Mercury (diss.filt)                    | TM183       | µg/l   | 0.01  | 0.07               | /               | 10                                   | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01  | <0.01  | <0.01 | <0.01 | <0.01 | -    |
|   | Arsenic (diss.filt)                    | TM152       | µg/l   | 0.5   | 25                 | /               | 500                                  | 12.3  | 10.5  | 21.9  | 9.34  | 21.1  | 28    | 9.79   | 1.03   | 17.7  | 3.84  | 1.26  | 27.7 |
|   | Cadmium (diss.filt)                    | TM152       | µg/l   | 0.08  | 0.2                | /               | 50                                   | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08 | <0.08  | <0.08  | <0.08 | <0.08 | <0.08 | -    |
|   | Chromium (diss.filt)                   | TM152       | µg/l   | 1     | /                  | 50              | 500                                  | <1    | <1    | <1    | <1    | 1.27  | <1    | <1     | <1     | <1    | <1    | <1    | -    |
|   | Copper (diss.filt)                     | TM152       | µg/l   | 0.3   | 3.76               | /               | 1000                                 | <0.3  | <0.3  | 0.478 | 2.63  | 1.56  | 0.59  | <0.3   | 0.709  | 0.754 | 7.12  | 1.76  | -    |
|   | Lead (diss.filt)                       | TM152       | µg/l   | 0.2   | 1.3                | /               | 500                                  | <0.2  | <0.2  | 0.202 | 1.07  | 0.827 | <0.2  | <0.2   | <0.2   | 0.296 | 12.9  | 0.321 | -    |
|   | Manganese (diss.filt)                  | TM152       | µg/l   | 3     | /                  | 50              | 500                                  | 638   | 678   | 382   | 155   | 373   | 753   | 606    | 71.3   | 493   | 241   | 65.7  | 716  |
|   | Nickel (diss.filt)                     | TM152       | µg/l   | 0.4   | 8.6                | /               | 500                                  | 4.7   | 16.7  | 5.9   | 4.47  | 5.14  | 3.27  | 3.18   | 0.852  | 3.29  | 5.17  | 2.12  | 3.1  |
|   | Zinc (diss.filt)                       | TM152       | µg/l   | 1     | 7.9                | /               | 1000                                 | 2.88  | 4.28  | 4.49  | 11.4  | 13.9  | 4.84  | 1.68   | 7.98   | 9.35  | 175   | 8.24  | 36   |
|   | Sodium (Dis.Filt)                      | TM152       | mg/l   | 0.076 | /                  | 200             | 1500                                 | 69.4  | 65.6  | 43.6  | 25.2  | 36.4  | 61.9  | 58.2   | 32.7   | 39.7  | 28.4  | 25.4  | -    |
|   | Magnesium (Dis.Filt)                   | TM152       | mg/l   | 0.036 | /                  | /               | 500                                  | 61.9  | 60.2  | 32    | 13.1  | 26.6  | 59.2  | 58.6   | 17.9   | 28.6  | 8.54  | 6.76  | -    |
|   | Potassium (Dis.Filt)                   | TM152       | mg/l   | 0.2   | /                  | /               | 120                                  | 2.52  | 2.8   | 4.21  | 4.72  | 3.64  | 5.84  | 2.51   | 3.09   | 7.66  | 20.4  | 13.4  | -    |
|   | Calcium (Dis.Filt)                     | TM152       | mg/l   | 0.2   | /                  | /               | 1000                                 | 160   | 161   | 115   | 67.8  | 93.3  | 182   | 150    | 101    | 116   | 36    | 47.9  | -    |
|   | Iron (Dis.Filt)                        | TM152       | mg/l   | 0.019 | 1                  | /               | 2                                    | 0.71  | 0.428 | 1.22  | 0.667 | 1.91  | 2.22  | 0.775  | <0.019 | 0.956 | 1.14  | 0.387 | 1.61 |
| <b>Unfiltered (Total) Metals</b>            |  |             |        |       |                    |                 |                                      |       |       |       |       |       |       |        |        |       |       |       |      |
|   | Phosphorus (tot.unfilt)                | TM152       | µg/l   | 20    | /                  | /               | 10000                                | <20   | 450   | 448   | 392   | 263   | 79.3  | 87.6   | 35.6   | 334   | 933   | 3520  | -    |
|   | Hardness, Total as CaCO3 unfiltered    | TM152       | mg/l   | 0.35  | /                  | /               |                                      | 634   | 271   | 455   | 222   | 388   | 697   | 668    | 345    | 404   | 118   | 156   | -    |
| <b>Gasoline Range Organics (GRO)</b>        |  |             |        |       |                    |                 |                                      |       |       |       |       |       |       |        |        |       |       |       |      |
|   | Total Aliphatics >C5-C12               | TM245       | µg/l   | 10    | /                  | /               |                                      | <10   | <10   | <10   | <10   | <10   | <10   | <10    | 14     | <10   | 19    | -     | -    |
|   | Total Aromatics >EC5-EC12              | TM245       | µg/l   | 10    | /                  | /               |                                      | <10   | <10   | <10   | <10   | <10   | <10   | <10    | <10    | <10   | <10   | -     | -    |
| <b>TPH Criteria Working Group (TPH CWG)</b> |  |             |        |       |                    |                 |                                      |       |       |       |       |       |       |        |        |       |       |       |      |
|   | GRO Surrogate % recovery**             | TM245       | %      | /     | /                  | /               |                                      | 100   | 100   | 102   | 98    | 104   | 102   | 94     | 103    | 102   | 96    | 89    | 86   |
|   | GRO >C5-C12                            | TM245       | µg/l   | 50    | /                  | /               |                                      | <50   | <50   | <50   | <50   | <50   | <50   | <50    | <50    | <50   | <50   | 233   | <50  |
|   | Methyl tertiary butyl ether (MTBE)     | TM245       | µg/l   | 3     | /                  | 15              |                                      | <3    | <3    | <3    | <3    | <3    | <3    | <3     | <3     | <3    | <3    | -     | -    |
|   | Benzene                                | TM245       | µg/l   | 7     | 8                  | /               |                                      | <7    | <7    | <7    | <7    | <7    | <7    | <7     | <7     | <7    | <7    | -     | -    |
|   | Toluene                                | TM245       | µg/l   | 4     | 74                 | /               |                                      | <4    | <4    | <4    | <4    | <4    | <4    | <4     | <4     | <4    | <4    | -     | -    |
|   | Ethylbenzene                           | TM245       | µg/l   | 5     | 20                 | /               |                                      | <5    | <5    | <5    | <5    | <5    | <5    | <5     | <5     | <5    | <5    | -     | -    |
|   | m,p-Xylene                             | TM245       | µg/l   | 8     | 30                 | /               |                                      | <8    | <8    | <8    | <8    | <8    | <8    | <8     | <8     | <8    | <8    | -     | -    |
|   | o-Xylene                               | TM245       | µg/l   | 3     | 30                 | /               |                                      | <3    | <3    | <3    | <3    | <3    | <3    | <3     | <3     | <3    | <3    | -     | -    |
|   | Sum of detected Xylenes                | TM245       | µg/l   | 11    | 30                 | /               |                                      | <11   | <11   | <11   | <11   | <11   | <11   | <11    | <11    | <11   | <11   | -     | -    |
|   | Sum of detected BTEX                   | TM245       | µg/l   | 28    | /                  | /               |                                      | <28   | <28   | <28   | <28   | <28   | <28   | <28    | <28    | <28   | <28   | -     | -    |
|   | Aliphatics >C5-C6                      | TM245       | µg/l   | 10    | /                  | /               |                                      | <10   | <10   | <10   | <10   | <10   | <10   | <10    | <10    | <10   | <10   | <10   | <10  |
|   | Aliphatics >C6-C8                      | TM245       | µg/l   | 10    | /                  | /               |                                      | <10   | <10   | <10   | <10   | <10   | <10   | <10    | <10    | <10   | <10   | <10   | <10  |
|   | Aliphatics >C8-C10                     | TM245       | µg/l   | 10    | /                  | /               |                                      | <10   | <10   | <10   | <10   | <10   | <10   | <10    | <10    | <10   | 11    | <10   | <10  |
|   | Aliphatics >C10-C12                    | TM245       | µg/l   | 10    | /                  | /               |                                      | <10   | <10   | <10   | <10   | <10   | <10   | <10    | <10    | <10   | <10   | <10   | <10  |
|   | Aliphatics >C12-C16 (aq)               | TM174       | µg/l   | 10    | /                  | /               |                                      | <10   | <10   | <10   | <10   | <10   | <10   | <10    | <10    | <10   | <50   | <10   | <10  |
|   | Aliphatics >C16-C21 (aq)               | TM174       | µg/l   | 10    | /                  | /               |                                      | <10   | <10   | <10   | <10   | <10   | <10   | <10    | <10    | <10   | <50   | <10   | <10  |
|   | Aliphatics >C21-C35 (aq)               | TM174       | µg/l   | 10    | /                  | /               |                                      | <10   | <10   | <10   | <10   | <10   | <10   | <10    | <10    | <10   | <50   | 139   | <10  |
|   | Total Aliphatics >C12-C35 (aq)         | TM174       | µg/l   | 10    | /                  | /               |                                      | <10   | <10   | <10   | <10   | <10   | <10   | <10    | <10    | <10   | <50   | 139   | <10  |
|   | Aromatics >EC5-EC7                     | TM245       |        |       |                    |                 |                                      |       |       |       |       |       |       |        |        |       |       |       |      |

Point of Ayre Landfill's  
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| Customer Sample ID     | P8A        | P8A        | P8A        | P8A        | P8          | P8A        | P8A        | P8A        | P8A        | P8A        | P8A        | P8A        | P8A        | P8A         |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | -          | 5.90-      | 5.90-      | 5.46-      | -           | -          | -          | -          | -          | -          | -          | -          | -          | 5.39-       |
| AGS id                 |            |            |            |            |             |            |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID |
| Sampled Date           | 12/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 06/12/2022 |            |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |            |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |            |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |            |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |            |             |
| Lab Sample Number      | 19558449   | 20363923   | 20719343   | 21297980   | 21836337    | 22246288   | 22802694   | 23404137   | 23838530   | 24394418   | 26881777   | 27276225   |            |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |            |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |            |             |

| Analysis | Test                             | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria | P8A          | P8A          | P8A          | P8A          | P8           | P8A          | P8A          | P8A          | P8A          | P8A          | P8A          |
|----------|----------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|          | 1,2,4-Trichlorobenzene (aq)      | TM176  | µg/l     | 1   | 0.4                | /               | <2                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | 1,2-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <2                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | 1,3-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <2                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | 1,4-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <2                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | 2,4,5-Trichlorophenol (aq)       | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <2           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | 2,4,6-Trichlorophenol (aq)       | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <2           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | 2,4-Dichlorophenol (aq)          | TM176  | µg/l     | 1   | 0.42               | /               | 5                                    | <2           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | 2,4-Dimethylphenol (aq)          | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <2           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | 2,4-Dinitrotoluene (aq)          | TM176  | µg/l     | 1   | /                  | /               | <2                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | 2,6-Dinitrotoluene (aq)          | TM176  | µg/l     | 1   | /                  | /               | <2                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | 2-Chloronaphthalene (aq)         | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <2           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | 2-Chlorophenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <2           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | 2-Methylnaphthalene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <2                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | 2-Methylphenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <2           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | 2-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               | <2                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | 2-Nitrophenol (aq)               | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <2           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | 3-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               | <2                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | 4-Bromophenylphenylether (aq)    | TM176  | µg/l     | 1   | /                  | /               | <2                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | 4-Chloro-3-methylphenol (aq)     | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <2           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | 4-Chloroaniline (aq)             | TM176  | µg/l     | 1   | /                  | /               | <2                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | 4-Chlorophenylphenylether (aq)   | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <2           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | 4-Methylphenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <2           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | 148          | <1           | <1           |
|          | 4-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               | <2                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | 4-Nitrophenol (aq)               | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <2           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | Azobenzene (aq)                  | TM176  | µg/l     | 1   | /                  | /               | <2                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | bis(2-Chloroethyl)ether (aq)     | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <2           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | bis(2-Chloroethoxy)methane (aq)  | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <2           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | bis(2-Ethylhexyl) phthalate (aq) | TM176  | µg/l     | 2   | /                  | /               | <4                                   | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2           |
|          | Butylbenzyl phthalate (aq)       | TM176  | µg/l     | 1   | /                  | /               | <2                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | Benzofluoranthene (aq)           | TM176  | µg/l     | 1   | /                  | 0.1             | <2                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | Carbazole (aq)                   | TM176  | µg/l     | 1   | /                  | /               | <2                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | Dibenzofuran (aq)                | TM176  | µg/l     | 1   | /                  | /               | <2                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | n-Dibutyl phthalate (aq)         | TM176  | µg/l     | 1   | /                  | /               | <2                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | Diethyl phthalate (aq)           | TM176  | µg/l     | 1   | /                  | /               | <2                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | Dimethyl phthalate (aq)          | TM176  | µg/l     | 1   | /                  | /               | <2                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | n-Dioctyl phthalate (aq)         | TM176  | µg/l     | 5   | /                  | /               | <10                                  | <5           | <5           | <5           | <5           | <5           | <5           | <5           | <5           | <5           | <5           | <10          |
|          | Hexachlorobenzene (aq)           | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <2           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | Hexachlorobutadiene (aq)         | TM176  | µg/l     | 1   | 0.6                | /               | 10                                   | <2           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | Pentachlorophenol (aq)           | TM176  | µg/l     | 1   | 0.4                | /               | 5                                    | <2           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | Phenol (aq)                      | TM176  | µg/l     | 1   | 7.7                | /               | 5                                    | <2           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | 97.5         | <1           | <1           |
|          | n-Nitroso-n-dipropylamine (aq)   | TM176  | µg/l     | 1   | /                  | /               | <2                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | Hexachloroethane (aq)            | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <2           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | Nitrobenzene (aq)                | TM176  | µg/l     | 1   | /                  | /               | <2                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | Isophorone (aq)                  | TM176  | µg/l     | 1   | /                  | /               | <2                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | Hexachlorocyclopentadiene (aq)   | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <2           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | Indeno(1,2,3-cd)pyrene (aq)      | TM176  | µg/l     | 1   | /                  | 0.1             | <2                                   | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1           |
|          | SVOC TIC (aq)                    | TM176  | No units |     | /                  | /               | Not Detected                         | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected |
|          | Total SVOC TIC                   | TM176  | µg/l     | 10  | /                  | /               | <20                                  | <10          | <10          | <40          | <10          | <10          | <10          | <10          | <10          | 777          | -            | -            |

**Volatile Organic Compounds (VOCs)**

|                                    |       |      |     |     |     |     |      |     |      |      |      |      |      |      |      |      |      |
|------------------------------------|-------|------|-----|-----|-----|-----|------|-----|------|------|------|------|------|------|------|------|------|
| Dibromofluoromethane**             | TM208 | %    | /   | /   | /   | 107 | 116  | 113 | 120  | 116  | 108  | 112  | 115  | 113  | 102  | 107  | 107  |
| Toluene-d8**                       | TM208 | %    | /   | /   | /   | 102 | 97.9 | 102 | 96.4 | 100  | 98.4 | 99.7 | 98.5 | 96.2 | 95   | 96.4 | 98.7 |
| 4-Bromofluorobenzene**             | TM208 | %    | /   | /   | /   | 96  | 97.5 | 101 | 95.2 | 98.1 | 105  | 97.4 | 96.4 | 96.3 | 92.6 | 97   | 100  |
| Dichlorodifluoromethane            | TM208 | µg/l | 1   | /   | /   | <1  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
| Chloromethane                      | TM208 | µg/l | 1   | /   | /   | 10  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
| Vinyl chloride                     | TM208 | µg/l | 1   | /   | 0.5 | 10  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
| Bromomethane                       | TM208 | µg/l | 1   | /   | /   | <1  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
| Chloroethane                       | TM208 | µg/l | 1   | /   | /   | 10  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
| Trichlorofluoromethane             | TM208 | µg/l | 1   | /   | /   | 10  | 1.26 | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
| 1,1-Dichloroethene                 | TM208 | µg/l | 1   | /   | /   | 10  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
| Carbon disulphide                  | TM208 | µg/l | 1   | /   | /   | <1  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | 6.4  | <1   | <1   |
| Dichloromethane                    | TM208 | µg/l | 1   | 20  | /   | 10  | <3   | <3  | <3   | <3   | <3   | <3   | <3   | <3   | <3   | <3   | <3   |
| Methyl tertiary butyl ether (MTBE) | TM208 | µg/l | 1   | /   | 15  | <1  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
| trans-1,2-Dichloroethene           | TM208 | µg/l | 1   | /   | 50  | 10  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
| 1,1-Dichloroethane                 | TM208 | µg/l | 1   | /   | /   | 10  | 1.25 | <1  | <1   | <1   | <1   | 1.13 | <1   | <1   | <1   | <1   | <1   |
| cis-1,2-Dichloroethene             | TM208 | µg/l | 1   | /   | 50  | 10  | 1.26 | <1  | <1   | <1   | <1   | 1.19 | 2.41 | <1   | <1   | <1   | <1   |
| 2,2-Dichloropropane                | TM208 | µg/l | 1   | /   | /   | 10  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
| Bromochloromethane                 | TM208 | µg/l | 1   | /   | /   | 10  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
| Chloroform                         | TM208 | µg/l | 1   | 2.5 | /   | 10  | <1   | <1  | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   | <1   |
| 1,1,1-Trichloroethane              | TM208 | µg/l | 1</ |     |     |     |      |     |      |      |      |      |      |      |      |      |      |

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| Customer Sample ID     | P8A        | P8A        | P8A        | P8A        | P8          | P8A        | P8A        | P8A        | P8A        | P8A        | P8A        | P8A        | P8A         |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | -          | 5.90-      | 5.90-      | 5.46-      | -           | -          | -          | -          | -          | -          | -          | -          | 5.39-       |
| AGS id                 |            |            |            |            |             |            |            |            |            |            |            |            |             |
| Sample Type            | UND_WATER  | UND_WATER  | UND_WATER  | UND_WATER  | MISC_LIQUID | UND_WATER  | UND_WATER  | UND_WATER  | UND_WATER  | UND_WATER  | UND_WATER  | UND_WATER  | MISC_LIQUID |
| Sampled Date           | 12/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 06/12/2022 |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |             |
| Lab Sample Number      | 19558449   | 20363923   | 20719343   | 21297980   | 21836337    | 22246288   | 22802694   | 23404137   | 23838530   | 24394418   | 26881777   | 27276225   |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |             |

| Analysis | Test                          | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |    |              |              |              |              |              |              |              |     |
|----------|-------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|----|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----|
|          | 1,2-Dichlorobenzene           | TM208  | µg/l     |     | 1                  | /               | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | 1,2-Dibromo-3-chloropropane   | TM208  | µg/l     |     | 1                  | /               | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | 1,2,4-Trichlorobenzene        | TM208  | µg/l     |     | 1                  | 0.4             | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | Hexachlorobutadiene           | TM208  | µg/l     |     | 1                  | 0.6             | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | tert-Amyl methyl ether (TAME) | TM208  | µg/l     |     | 1                  | /               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | Naphthalene                   | TM208  | µg/l     |     | 1                  | 2               | /                                    |    | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | 1,2,3-Trichlorobenzene        | TM208  | µg/l     |     | 1                  | 0.4             | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | 1,3,5-Trichlorobenzene        | TM208  | µg/l     |     | 1                  | 0.4             | /                                    | 10 | <1           | <1           | <1           | <1           | <1           | <1           | <1           | <1  |
|          | Sum of detected Xylenes       | TM208  | µg/l     |     | 2                  | 30              | /                                    |    | <2           | <2           | <2           | <2           | <2           | <2           | <2           | <2  |
|          | Sum of BTEX                   | TM208  | µg/l     |     | 5                  |                 |                                      |    | -            | -            | -            | -            | -            | -            | -            | 295 |
|          | VOC TIC                       | TM208  | No units |     |                    |                 |                                      |    | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | -   |
|          | Total VOC TIC                 | TM208  | µg/l     |     |                    |                 |                                      |    | 0            | 0            | 0            | <10          | <10          | <10          | <10          | -   |

| TICS |   |       |      |  |   |   |   |  |        |         |        |        |        |        |        |         |        |        |        |        |
|------|---|-------|------|--|---|---|---|--|--------|---------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|
|      | Benzeneacetic acid                                |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | 61.7    | -      |        |        |        |
|      | Benzenecarboxylic acid                            |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | 14.7    | -      |        |        |        |
|      | Benzenepranoic acid                               |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | 412     | -      |        |        |        |
|      | Indole  |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | 25.3    | -      |        |        |        |
|      | Isomer of EthylPhenol                             |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | 13.3    | -      |        |        |        |
|      | Unknown acid                                      |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | 49.4    | -      |        |        |        |
|      | Tetradecanoic acid                                | TM176 | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | 25.5    | -      |        |        |        |
|      | (methylene)bis-phenol                             |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | Butylbenzoic acid                                 |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | Dibutylhydroxyphenylpropionic acid                |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | Dimethylcyclohexanediene                          |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | Ditertbutylhydroxyphenylpropionic acid            |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | Ethylmethylbenzenesulfonamide                     |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | Octadecanoic acid                                 |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | trimethylhexanoic acid                            |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | Dimethylheptanoic acid                            | TM176 | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | Hexadecanoic acid                                 | TM176 | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | Isomers of Hexadecenoic acid                      |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | 176     | -      |        |        |        |
|      | Dimethylethylhydroxybenzoic acid                  |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | Hexadecane  |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | mixed hydrocarbons                                |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | Phenol(methylene)bis-                             |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | Tertbutylbenzoic acid                             |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | Benzothiazolone                                   | TM176 | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | Tertbutylhydroxyphenylpropionic acid              |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | 2(3H)-Benzothiazolone                             |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | 3,5,5-trimethyl Hexanoic acid                     |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | 4,4'-(1-methylene)bisphenol                       |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | Camphor   |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | Cyclic octaatomic sulfur                          |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | Isomers of Ditertbutylhydroxyphenylpropionic acid |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | Isomers of TertbutylBenzoic acid                  |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | N-ethyl-2-methyl benzenesulfonamide               |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | Sulfur  |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | Undecane  |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | Isomer of Benzothiazolone                         |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | Isomer of Bisdimethylethylhydroxy Benzoic acid    |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | isomer of trimethyl hexanoic acid                 |       | µg/l |  | / | / | / |  | -      | -       | -      | -      | -      | -      | -      | -       | -      |        |        |        |
|      | Total VOC   |       | µg/l |  | 1 |   |   |  | 3.77   | <1      | <1     | <1     | <1     | 1.19   | 3.54   | <1      | <1     | 6.4    | 295    | <1     |
|      | Total PAH   |       | µg/l |  |   |   |   |  | <0.005 | 0.00744 | <0.005 | <0.005 | <0.002 | <0.005 | <0.005 | 0.00327 | <0.005 | 0.2141 | <0.005 | <0.005 |



Point of Ayre Landfill's  
Groundwater Sample Results

ALS

|                        |             |
|------------------------|-------------|
| Customer Sample ID     | QAQC2       |
| Depth                  |             |
| AGS id                 |             |
| Sample Type            | MISC_LIQUID |
| Sampled Date           | 06/12/2022  |
| Sample Received Date   | 07/12/2022  |
| Final Instruction Date | 09/12/2022  |
| Report Completed Date  | 09/01/2023  |
| SDG                    | 221207-97   |
| Lab Sample Number      | 27276225    |
| Sample Temperature     | 6.5         |
| Sample Time            |             |

| Analysis                                       | Test                                     | Method      | Units  | LOD   | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |        |
|--|--|-------------|--------|-------|--------------------|-----------------|--------------------------------------|--------|
| <b>Carbon</b>                                  |  |             |        |       |                    |                 |                                      |        |
|  | Carbon, Organic (diss.filt)              | TM090       | mg/l   | 6     | /                  | /               | 10                                   | 8.21   |
| <b>Inorganics</b>                              |  |             |        |       |                    |                 |                                      |        |
|  | Fluoride                                 | TM104       | mg/l   | 0.5   | /                  | /               | 10                                   | -      |
|  | Ionic balance                            | Calculation | % Diff |       | /                  | /               |                                      | -      |
|  | Nitrite as NO2                           | TM184       | mg/l   | 0.05  | 0.5                | /               | 1                                    | -      |
|  | Phosphate (Ortho as PO4)                 | TM184       | mg/l   | 0.05  | /                  | /               |                                      | -      |
|  | Sulphate                                 | TM184       | mg/l   | 2     | /                  | 250             | 2500                                 | -      |
|  | Sulphide                                 | TM101       | mg/l   | 0.01  | /                  | /               |                                      | -      |
|  | Chloride                                 | TM184       | mg/l   | 2     | /                  | 250             | 2000                                 | 52.9   |
|  | COD, unfiltered                          | TM107       | mg/l   | 7     | /                  | /               |                                      | -      |
|  | Nitrogen, Total                          | TM212       | mg/l   | 1     | /                  | /               |                                      | -      |
|  | Ammoniacal Nitrogen as NH4               | TM099       | mg/l   | 0.3   | /                  | 0.5             | 5                                    | 4.09   |
|  | Nitrate as NO3                           | TM184       | mg/l   | 0.3   | /                  | 50              | 500                                  | -      |
|  | BOD, unfiltered                          | TM045       | mg/l   | 1     | /                  | /               |                                      | -      |
|  | Alkalinity, Total as CaCO3               | TM043       | mg/l   | 2     | /                  | /               |                                      | -      |
|  | Alkalinity, Total as CaCO3 (diss.filt)   | TM043       | mg/l   | 2     | /                  | /               |                                      | -      |
|  | Suspended solids, Total                  | TM022       | mg/l   | 9     | /                  | /               |                                      | -      |
| <b>Filtered (Dissolved) Metals</b>             |  |             |        |       |                    |                 |                                      |        |
|  | Mercury (diss.filt)                      | TM183       | µg/l   | 0.01  | 0.07               | /               | 10                                   | -      |
|  | Arsenic (diss.filt)                      | TM152       | µg/l   | 0.5   | 25                 | /               | 500                                  | 27.3   |
|  | Cadmium (diss.filt)                      | TM152       | µg/l   | 0.08  | 0.2                | /               | 50                                   | -      |
|  | Chromium (diss.filt)                     | TM152       | µg/l   | 1     | /                  | 50              | 500                                  | -      |
|  | Copper (diss.filt)                       | TM152       | µg/l   | 0.3   | 3.76               | /               | 1000                                 | -      |
|  | Lead (diss.filt)                         | TM152       | µg/l   | 0.2   | 1.3                | /               | 500                                  | -      |
|  | Manganese (diss.filt)                    | TM152       | µg/l   | 3     | /                  | 50              | 500                                  | 729    |
|  | Nickel (diss.filt)                       | TM152       | µg/l   | 0.4   | 8.6                | /               | 500                                  | 2.73   |
|  | Zinc (diss.filt)                         | TM152       | µg/l   | 1     | 7.9                | /               | 1000                                 | 9.18   |
|  | Sodium (Dis.Filt)                        | TM152       | mg/l   | 0.076 | /                  | 200             | 1500                                 | -      |
|  | Magnesium (Dis.Filt)                     | TM152       | mg/l   | 0.036 | /                  | /               | 500                                  | -      |
|  | Potassium (Dis.Filt)                     | TM152       | mg/l   | 0.2   | /                  | /               | 120                                  | -      |
|  | Calcium (Dis.Filt)                       | TM152       | mg/l   | 0.2   | /                  | /               | 1000                                 | -      |
|  | Iron (Dis.Filt)                          | TM152       | mg/l   | 0.019 | 1                  | /               | 2                                    | 1.55   |
| <b>Unfiltered (Total) Metals</b>               |  |             |        |       |                    |                 |                                      |        |
|  | Phosphorus (tot.unfilt)                  | TM152       | µg/l   | 20    | /                  | /               | 10000                                | -      |
|  | Hardness, Total as CaCO3 unfiltered      | TM152       | mg/l   | 0.35  | /                  | /               |                                      | -      |
| <b>Gasoline Range Organics (GRO)</b>           |  |             |        |       |                    |                 |                                      |        |
|  | Total Aliphatics >C5-C12                 | TM245       | µg/l   | 10    | /                  | /               |                                      | -      |
|  | Total Aromatics >EC5-EC12                | TM245       | µg/l   | 10    | /                  | /               |                                      | -      |
| <b>TPH Criteria Working Group (TPH CWG)</b>    |  |             |        |       |                    |                 |                                      |        |
|  | GRO Surrogate % recovery**               | TM245       | %      |       | /                  | /               |                                      | 87     |
|  | GRO >C5-C12                              | TM245       | µg/l   | 50    | /                  | /               |                                      | <50    |
|  | Methyl tertiary butyl ether (MTBE)       | TM245       | µg/l   | 3     | /                  | 15              |                                      | -      |
|  | Benzene                                  | TM245       | µg/l   | 7     | 8                  | /               |                                      | -      |
|  | Toluene                                  | TM245       | µg/l   | 4     | 74                 | /               |                                      | -      |
|  | Ethylbenzene                             | TM245       | µg/l   | 5     | 20                 | /               |                                      | -      |
|  | m,p-Xylene                               | TM245       | µg/l   | 8     | 30                 | /               |                                      | -      |
|  | o-Xylene                                 | TM245       | µg/l   | 3     | 30                 | /               |                                      | -      |
|  | Sum of detected Xylenes                  | TM245       | µg/l   | 11    | 30                 | /               |                                      | -      |
|  | Sum of detected BTEX                     | TM245       | µg/l   | 28    | /                  | /               |                                      | -      |
|  | Aliphatics >C5-C6                        | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    |
|  | Aliphatics >C6-C8                        | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    |
|  | Aliphatics >C8-C10                       | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    |
|  | Aliphatics >C10-C12                      | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    |
|  | Aliphatics >C12-C16 (aq)                 | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    |
|  | Aliphatics >C16-C21 (aq)                 | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    |
|  | Aliphatics >C21-C35 (aq)                 | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    |
|  | Total Aliphatics >C12-C35 (aq)           | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    |
|  | Aromatics >EC5-EC7                       | TM245       | µg/l   | 10    | 8                  | /               |                                      | <10    |
|  | Aromatics >EC7-EC8                       | TM245       | µg/l   | 10    | 74                 | /               |                                      | <10    |
|  | Aromatics >EC8-EC10                      | TM245       | µg/l   | 10    | 20                 | /               |                                      | <10    |
|  | Aromatics >EC10-EC12                     | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    |
|  | Aromatics >EC12-EC16 (aq)                | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    |
|  | Aromatics >EC16-EC21 (aq)                | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    |
|  | Aromatics >EC21-EC35 (aq)                | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    |
|  | Total Aromatics >EC12-EC35 (aq)          | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    |
|  | Total Aliphatics & Aromatics >C5-35 (aq) | TM174       | µg/l   | 10    | /                  | /               | 100                                  | <10    |
| <b>Polyaromatic Hydrocarbons (PAHs)</b>        |  |             |        |       |                    |                 |                                      |        |
|  | Naphthalene (aq)                         | TM178       | µg/l   | 0.01  | 2                  | /               |                                      | <0.01  |
|  | Acenaphthene (aq)                        | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | 0.015  |
|  | Acenaphthylene (aq)                      | TM178       | µg/l   | 0.005 | 5.8                | /               |                                      | <0.005 |
|  | Fluoranthene (aq)                        | TM178       | µg/l   | 0.005 | 0.0063             | /               |                                      | <0.005 |
|  | Anthracene (aq)                          | TM178       | µg/l   | 0.005 | 0.1                | /               |                                      | 0.0095 |
|  | Phenanthrene (aq)                        | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | 0.0081 |
|  | Fluorene (aq)                            | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005 |
|  | Chrysene (aq)                            | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | 0.0117 |
|  | Pyrene (aq)                              | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005 |
|  | Benzo(a)anthracene (aq)                  | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005 |
|  | Benzo(b)fluoranthene (aq)                | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005 |
|  | Benzo(k)fluoranthene (aq)                | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005 |
|  | Benzo(a)pyrene (aq)                      | TM178       | µg/l   | 0.002 | 0.00017            | /               |                                      | <0.002 |
|  | Dibenzo(a,h)anthracene (aq)              | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | 0.0054 |
|  | Benzo(g,h,i)perylene (aq)                | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | 0.0148 |
|  | Indeno(1,2,3-cd)pyrene (aq)              | TM178       | µg/l   | 0.005 | /                  | 0.1             |                                      | <0.005 |
|  | PAH, Total Detected USEPA 16 (aq)        | TM178       | µg/l   | 0.082 | /                  | /               | 2                                    | <0.082 |
| <b>PCB's - (Solids)</b>                        |  |             |        |       |                    |                 |                                      |        |
|  | PCB congener 28                          | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 52                          | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 101                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 118                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 138                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 153                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 180                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | Sum of detected EC7 PCB's                | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 77                          | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 81                          | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 105                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 114                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 123                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 126                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 156                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 157                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 167                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 169                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
|  | PCB congener 189                         | TM197       | µg/l   | 0.015 | /                  | /               |                                      | -      |
| <b>Semi-Volatile Organic Compounds (SVOCs)</b> |  |             |        |       |                    |                 |                                      |        |

Point of Ayre Landfill's  
Groundwater Sample Results

ALS

|                        |              |
|------------------------|--------------|
| Customer Sample ID     | QAQC2        |
| Depth                  |              |
| AGS id                 |              |
| Sample Type            | ALISC_LIQUID |
| Sampled Date           | 06/12/2022   |
| Sample Received Date   | 07/12/2022   |
| Final Instruction Date | 09/12/2022   |
| Report Completed Date  | 09/01/2023   |
| SDG                    | 221207-97    |
| Lab Sample Number      | 27276225     |
| Sample Temperature     | 6.5          |
| Sample Time            |              |

| Analysis | Test                             | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |
|----------|----------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|
|          | 1,2,4-Trichlorobenzene (aq)      | TM176  | µg/l     |     | 1 0.4              | /               | -                                    |
|          | 1,2-Dichlorobenzene (aq)         | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | 1,3-Dichlorobenzene (aq)         | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | 1,4-Dichlorobenzene (aq)         | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | 2,4,5-Trichlorophenol (aq)       | TM176  | µg/l     |     | 1 /                | /               | 5 -                                  |
|          | 2,4,6-Trichlorophenol (aq)       | TM176  | µg/l     |     | 1 /                | /               | 5 -                                  |
|          | 2,4-Dichlorophenol (aq)          | TM176  | µg/l     |     | 1 0.42             | /               | 5 -                                  |
|          | 2,4-Dimethylphenol (aq)          | TM176  | µg/l     |     | 1 /                | /               | 5 -                                  |
|          | 2,4-Dinitrotoluene (aq)          | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | 2,6-Dinitrotoluene (aq)          | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | 2-Chloronaphthalene (aq)         | TM176  | µg/l     |     | 1 /                | /               | 10 -                                 |
|          | 2-Chlorophenol (aq)              | TM176  | µg/l     |     | 1 /                | /               | 5 -                                  |
|          | 2-Methylnaphthalene (aq)         | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | 2-Methylphenol (aq)              | TM176  | µg/l     |     | 1 /                | /               | 5 -                                  |
|          | 2-Nitroaniline (aq)              | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | 2-Nitrophenol (aq)               | TM176  | µg/l     |     | 1 /                | /               | 5 -                                  |
|          | 3-Nitroaniline (aq)              | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | 4-Bromophenylphenylether (aq)    | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | 4-Chloro-3-methylphenol (aq)     | TM176  | µg/l     |     | 1 /                | /               | 5 -                                  |
|          | 4-Chloroaniline (aq)             | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | 4-Chlorophenylphenylether (aq)   | TM176  | µg/l     |     | 1 /                | /               | 10 -                                 |
|          | 4-Methylphenol (aq)              | TM176  | µg/l     |     | 1 /                | /               | 5 -                                  |
|          | 4-Nitroaniline (aq)              | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | 4-Nitrophenol (aq)               | TM176  | µg/l     |     | 1 /                | /               | 5 -                                  |
|          | Azobenzene (aq)                  | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | bis(2-Chloroethyl)ether (aq)     | TM176  | µg/l     |     | 1 /                | /               | 10 -                                 |
|          | bis(2-Chloroethoxy)methane (aq)  | TM176  | µg/l     |     | 1 /                | /               | 10 -                                 |
|          | bis(2-Ethylhexyl) phthalate (aq) | TM176  | µg/l     |     | 2 /                | /               | -                                    |
|          | Butylbenzyl phthalate (aq)       | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | Benzo(k)fluoranthene (aq)        | TM176  | µg/l     |     | 1 /                | 0.1             | -                                    |
|          | Carbazole (aq)                   | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | Dibenzofuran (aq)                | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | n-Dibutyl phthalate (aq)         | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | Diethyl phthalate (aq)           | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | Dimethyl phthalate (aq)          | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | n-Dioctyl phthalate (aq)         | TM176  | µg/l     |     | 5 /                | /               | -                                    |
|          | Hexachlorobenzene (aq)           | TM176  | µg/l     |     | 1 /                | /               | 10 -                                 |
|          | Hexachlorobutadiene (aq)         | TM176  | µg/l     |     | 1 0.6              | /               | 10 -                                 |
|          | Pentachlorophenol (aq)           | TM176  | µg/l     |     | 1 0.4              | /               | 5 -                                  |
|          | Phenol (aq)                      | TM176  | µg/l     |     | 1 7.7              | /               | 5 -                                  |
|          | n-Nitroso-n-dipropylamine (aq)   | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | Hexachloroethane (aq)            | TM176  | µg/l     |     | 1 /                | /               | 10 -                                 |
|          | Nitrobenzene (aq)                | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | Isophorone (aq)                  | TM176  | µg/l     |     | 1 /                | /               | -                                    |
|          | Hexachlorocyclopentadiene (aq)   | TM176  | µg/l     |     | 1 /                | /               | 10 -                                 |
|          | Indeno(1,2,3-cd)pyrene (aq)      | TM176  | µg/l     |     | 1 /                | 0.1             | -                                    |
|          | SVOC TIC (aq)                    | TM176  | No units |     | /                  | /               | -                                    |
|          | Total SVOC TIC                   | TM176  | µg/l     |     | 10 /               | /               | -                                    |

**Volatile Organic Compounds (VOCs)**

|                                    |       |      |  |       |        |    |      |
|------------------------------------|-------|------|--|-------|--------|----|------|
| Dibromofluoromethane**             | TM208 | %    |  | /     | /      |    | 107  |
| Toluene-d8**                       | TM208 | %    |  | /     | /      |    | 99.6 |
| 4-Bromofluorobenzene**             | TM208 | %    |  | /     | /      |    | 98.3 |
| Dichlorodifluoromethane            | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| Chloromethane                      | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| Vinyl chloride                     | TM208 | µg/l |  | 1 /   | 0.5    | 10 | <1   |
| Bromomethane                       | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| Chloroethane                       | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| Trichlorofluoromethane             | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| 1,1-Dichloroethene                 | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| Carbon disulphide                  | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| Dichloromethane                    | TM208 | µg/l |  | 1 20  | /      | 10 | <3   |
| Methyl tertiary butyl ether (MTBE) | TM208 | µg/l |  | 1 /   | 15     |    | <1   |
| trans-1,2-Dichloroethene           | TM208 | µg/l |  | 1 /   | 50     | 10 | <1   |
| 1,1-Dichloroethane                 | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| cis-1,2-Dichloroethene             | TM208 | µg/l |  | 1 /   | 50     | 10 | <1   |
| 2,2-Dichloropropane                | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| Bromochloromethane                 | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| Chloroform                         | TM208 | µg/l |  | 1 2.5 | /      | 10 | <1   |
| 1,1,1-Trichloroethane              | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| 1,1-Dichloropropene                | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| Carbon tetrachloride               | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| 1,2-Dichloroethane                 | TM208 | µg/l |  | 1 10  | /      | 10 | <1   |
| Benzene                            | TM208 | µg/l |  | 1 8   | /      |    | <1   |
| Trichloroethene                    | TM208 | µg/l |  | 1 10  | /      | 10 | <1   |
| 1,2-Dichloropropane                | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| Dibromomethane                     | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| Bromodichloromethane               | TM208 | µg/l |  | 1 /   | 100    | 10 | <1   |
| cis-1,3-Dichloropropene            | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| Toluene                            | TM208 | µg/l |  | 1 74  | /      |    | <1   |
| trans-1,3-Dichloropropene          | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| 1,1,2-Trichloroethane              | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| 1,3-Dichloropropane                | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| Tetrachloroethene                  | TM208 | µg/l |  | 1 10  | /      | 10 | <1   |
| Dibromochloromethane               | TM208 | µg/l |  | 1 /   | 100    | 10 | <1   |
| 1,2-Dibromoethane                  | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| Chlorobenzene                      | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| 1,1,1,2-Tetrachloroethane          | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| Ethylbenzene                       | TM208 | µg/l |  | 1 20  | /      |    | <1   |
| m,p-Xylene                         | TM208 | µg/l |  | 1 30  | /      |    | <1   |
| o-Xylene                           | TM208 | µg/l |  | 1 30  | /      |    | <1   |
| Styrene                            | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| Bromoform                          | TM208 | µg/l |  | 1 /   | 100    |    | <1   |
| Isopropylbenzene                   | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| 1,1,2,2-Tetrachloroethane          | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| 1,2,3-Trichloropropane             | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| Bromobenzene                       | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| Propylbenzene                      | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| 2-Chlorotoluene                    | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| 1,3,5-Trimethylbenzene             | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| 4-Chlorotoluene                    | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| tert-Butylbenzene                  | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| 1,2,4-Trimethylbenzene             | TM208 | µg/l |  | 1 /   | 175000 |    | <1   |
| sec-Butylbenzene                   | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| 4-iso-Propyltoluene                | TM208 | µg/l |  | 1 /   | /      |    | <1   |
| 1,3-Dichlorobenzene                | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| 1,4-Dichlorobenzene                | TM208 | µg/l |  | 1 /   | /      | 10 | <1   |
| n-Butylbenzene                     | TM208 | µg/l |  | 1 /   | /      |    | <1   |

Point of Ayre Landfill's  
Groundwater Sample Results

ALS

|                        |             |
|------------------------|-------------|
| Customer Sample ID     | QAQC2       |
| Depth                  |             |
| AGS id                 |             |
| Sample Type            | MISC_LIQUID |
| Sampled Date           | 06/12/2022  |
| Sample Received Date   | 07/12/2022  |
| Final Instruction Date | 09/12/2022  |
| Report Completed Date  | 09/01/2023  |
| SDG                    | 221207-97   |
| Lab Sample Number      | 27276225    |
| Sample Temperature     | 6.5         |
| Sample Time            |             |

| Analysis | Test                          | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |    |
|----------|-------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|----|
|          | 1,2-Dichlorobenzene           | TM208  | µg/l     |     | 1 / /              |                 | 10                                   | <1 |
|          | 1,2-Dibromo-3-chloropropane   | TM208  | µg/l     |     | 1 / /              |                 | 10                                   | <1 |
|          | 1,2,4-Trichlorobenzene        | TM208  | µg/l     |     | 1 0.4 /            |                 | 10                                   | <1 |
|          | Hexachlorobutadiene           | TM208  | µg/l     |     | 1 0.6 /            |                 | 10                                   | <1 |
|          | tert-Amyl methyl ether (TAME) | TM208  | µg/l     |     | 1 / /              |                 |                                      | <1 |
|          | Naphthalene                   | TM208  | µg/l     |     | 1 2 /              |                 |                                      | <1 |
|          | 1,2,3-Trichlorobenzene        | TM208  | µg/l     |     | 1 0.4 /            |                 | 10                                   | <1 |
|          | 1,3,5-Trichlorobenzene        | TM208  | µg/l     |     | 1 0.4 /            |                 | 10                                   | <1 |
|          | Sum of detected Xylenes       | TM208  | µg/l     |     | 2 30 /             |                 |                                      | <2 |
|          | Sum of BTEX                   | TM208  | µg/l     |     | 5 / /              |                 |                                      | <5 |
|          | VOC TIC                       | TM208  | No units |     | / / /              |                 |                                      | -  |
|          | Total VOC TIC                 | TM208  | µg/l     |     | / / /              |                 |                                      | -  |

| TICS |   |       |      |   |       |  |  |        |
|------|---|-------|------|---|-------|--|--|--------|
|      | Benzeneacetic acid                                |       | µg/l |   | / / / |  |  | -      |
|      | Benzenecarboxylic acid                            |       | µg/l |   | / / / |  |  | -      |
|      | Benzenepropanoic acid                             |       | µg/l |   | / / / |  |  | -      |
|      | Indole  |       | µg/l |   | / / / |  |  | -      |
|      | Isomer of EthylPhenol                             |       | µg/l |   | / / / |  |  | -      |
|      | Unknown acid                                      |       | µg/l |   | / / / |  |  | -      |
|      | Tetradecanoic acid                                | TM176 | µg/l |   | / / / |  |  | -      |
|      | (methylene)bis-phenol                             |       | µg/l |   | / / / |  |  | -      |
|      | Butylbenzoic acid                                 |       | µg/l |   | / / / |  |  | -      |
|      | Dibutylhydroxyphenylpropionic acid                |       | µg/l |   | / / / |  |  | -      |
|      | Dimethylcyclohexanediene                          |       | µg/l |   | / / / |  |  | -      |
|      | Ditertbutylhydroxyphenylpropionic acid            |       | µg/l |   | / / / |  |  | -      |
|      | Ethylmethylbenzenesulfonamide                     |       | µg/l |   | / / / |  |  | -      |
|      | Octadecanoic acid                                 |       | µg/l |   | / / / |  |  | -      |
|      | trimethylhexanoic acid                            |       | µg/l |   | / / / |  |  | -      |
|      | Dimethylheptanoic acid                            | TM176 | µg/l |   | / / / |  |  | -      |
|      | Hexadecanoic acid                                 | TM176 | µg/l |   | / / / |  |  | -      |
|      | Isomers of Hexadecenoic acid                      |       | µg/l |   | / / / |  |  | -      |
|      | Dimethylethylhydroxybenzoic acid                  |       | µg/l |   | / / / |  |  | -      |
|      | Hexadecane  |       | µg/l |   | / / / |  |  | -      |
|      | mixed hydrocarbons                                |       | µg/l |   | / / / |  |  | -      |
|      | Phenol(methylene)bis-                             |       | µg/l |   | / / / |  |  | -      |
|      | Tertbutylbenzoic acid                             |       | µg/l |   | / / / |  |  | -      |
|      | Benzothiazolone                                   | TM176 | µg/l |   | / / / |  |  | -      |
|      | Tertbutylhydroxyphenylpropionic acid              |       | µg/l |   | / / / |  |  | -      |
|      | 2(3H)-Benzothiazolone                             |       | µg/l |   | / / / |  |  | -      |
|      | 3,5,5-trimethyl Hexanoic acid                     |       | µg/l |   | / / / |  |  | -      |
|      | 4,4'-(1-methylene)bisphenol                       |       | µg/l |   | / / / |  |  | -      |
|      | Camphor   |       | µg/l |   | / / / |  |  | -      |
|      | Cyclic octaatomic sulfur                          |       | µg/l |   | / / / |  |  | -      |
|      | Isomers of Ditertbutylhydroxyphenylpropionic acid |       | µg/l |   | / / / |  |  | -      |
|      | Isomers of TertbutylBenzoic acid                  |       | µg/l |   | / / / |  |  | -      |
|      | N-ethyl-2-methyl benzenesulfonamide               |       | µg/l |   | / / / |  |  | -      |
|      | Sulfur  |       | µg/l |   | / / / |  |  | -      |
|      | Undecane  |       | µg/l |   | / / / |  |  | -      |
|      | Isomer of Benzothiazolone                         |       | µg/l |   | / / / |  |  | -      |
|      | Isomer of Bisdimethylethylhydroxy Benzoic acid    |       | µg/l |   | / / / |  |  | -      |
|      | isomer of trimethyl hexanoic acid                 |       | µg/l |   | / / / |  |  | -      |
|      | Total VOC   |       | µg/l | 1 |       |  |  | <1     |
|      | Total PAH   |       | µg/l |   |       |  |  | 0.0645 |









Point of Ayre Landfill's  
Groundwater Sample Results

ALS

SDG(s): 190315-102  
Customer: Waste Management Unit Douglas (12297)  
Client Reference / Point of Ayre  
Order no:

| Customer Sample ID     | LAKE       | Lake       | Lake       | Lake       | Lake        | LAKE       | LAKE       | LAKE       | LAKE       | LAKE       | LAKE       | LAKE       | LAKE       | LAKE       | LAKE        |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | -          | -          | -          | -          | -           | -          | -          | -          | -          | -          | -          | -          | -          | -          | -           |
| AGS Id                 |            |            |            |            |             |            |            |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | FACE_WATER | JUND_WATER | FACE_WATER | FACE_WATER | FACE_WATER | FACE_WATER | FACE_WATER | FACE_WATER | FACE_WATER | MISC_LIQUID |
| Sampled Date           | 11/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |            |            |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |            |            |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |            |            |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |            |            |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |            |            |             |
| Lab Sample Number      | 19558430   | 20363915   | 20719337   | 21297974   | 21836357    | 22246282   | 22802678   | 23404131   | 23838523   | 24394402   | 26881779   | 27276223   |            |            |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |            |            |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |            |            |             |

| Analysis                                    | Test                                   | Method      | Units  | LOD   | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |        |       |        |        |        |       |        |        |        |        |       |        |
|---|--|-------------|--------|-------|--------------------|-----------------|--------------------------------------|--------|-------|--------|--------|--------|-------|--------|--------|--------|--------|-------|--------|
| <b>Carbon</b>                               |  |             |        |       |                    |                 |                                      |        |       |        |        |        |       |        |        |        |        |       |        |
|   | Carbon, Organic (diss.filt)            | TM090       | mg/l   | 6     | /                  | /               | 10                                   | <3     | 8.45  | 7.75   | 6.1    | 5.29   | 7.39  | 9.58   | 5.06   | 4.01   | <3     | 9.2   | 4.56   |
| <b>Inorganics</b>                           |  |             |        |       |                    |                 |                                      |        |       |        |        |        |       |        |        |        |        |       |        |
|   | Fluoride                               | TM104       | mg/l   | 0.5   | /                  | /               | 10                                   | <0.5   | <0.5  | <0.5   | <0.5   | <0.5   | <0.5  | <0.5   | <0.5   | <0.5   | <0.5   | <0.5  | -      |
|   | Ionic balance                          | Calculation | % Diff |       | /                  | /               |                                      | 1.34   | -1.51 | -1.92  | -0.51  | -6.7   | 2.84  | -4.45  | -1.65  | 0.593  | -1.43  | -     | -      |
|   | Nitrite as NO2                         | TM184       | mg/l   | 0.05  | 0.5                | /               | 1                                    | <0.05  | <0.05 | <0.05  | <0.05  | <0.05  | <0.05 | 0.062  | 0.087  | <0.05  | <0.05  | <0.05 | -      |
|   | Phosphate (Ortho as PO4)               | TM184       | mg/l   | 0.05  | /                  | /               |                                      | <0.05  | <0.05 | <0.05  | <0.05  | <0.05  | <0.05 | <0.05  | <0.05  | <0.05  | <0.05  | <0.05 | -      |
|   | Sulphate                               | TM184       | mg/l   | 2     | /                  | 250             | 2500                                 | 36.8   | 24.5  | 15.8   | 16.9   | 17.9   | 16.6  | 14     | 25.4   | 23.4   | 22.3   | 23.1  | -      |
|   | Sulphide                               | TM101       | mg/l   | 0.01  | /                  | /               |                                      | <0.01  | <0.01 | <0.01  | 0.0212 | 0.0401 | <0.01 | 0.0226 | <0.01  | <0.01  | <0.01  | <0.01 | -      |
|   | Chloride                               | TM184       | mg/l   | 2     | /                  | 250             | 2000                                 | 48     | 55.2  | 51.1   | 45.4   | 46.1   | 51.3  | 52.5   | 46.2   | 43.9   | 46     | 54.3  | 50.9   |
|   | COD, unfiltered                        | TM107       | mg/l   | 7     | /                  | /               |                                      | 31     | 29.6  | 50.7   | 28.1   | 7.77   | 19.5  | 25.5   | 31.6   | <7     | <7     | 45.8  | -      |
|   | Nitrogen, Total                        | TM212       | mg/l   | 1     | /                  | /               |                                      | <1     | 1.55  | <1     | <1     | <1     | 1.3   | 1.06   | 1.6    | 1.27   | <1     | 2.74  | -      |
|   | Ammoniacal Nitrogen as NH4             | TM099       | mg/l   | 0.3   | /                  | 0.5             | 5                                    | <0.3   | 0.342 | <0.3   | <0.3   | <0.2   | <0.3  | <0.3   | 0.338  | <0.3   | <0.3   | <0.3  | <0.3   |
|   | Nitrate as NO3                         | TM184       | mg/l   | 0.3   | /                  | 50              | 500                                  | 1.53   | <0.3  | <0.3   | 0.353  | 0.43   | <0.3  | <0.3   | 1.48   | 1.89   | <0.3   | 9.38  | -      |
|   | BOD, unfiltered                        | TM045       | mg/l   | 1     | /                  | /               |                                      | -      | 8.55  | 2.3    | 6.08   | 3.33   | <1    | 6.25   | 2.21   | 2.64   | <1     | 8.92  | -      |
|   | Alkalinity, Total as CaCO3             | TM043       | mg/l   | 2     | /                  | /               |                                      | 136    | 78.8  | 86.9   | 125    | 137    | 120   | 88.5   | 131    | 133    | 117    | 74.6  | -      |
|   | Alkalinity, Total as CaCO3 (diss.filt) | TM043       | mg/l   | 2     | /                  | /               |                                      | -      | -     | -      | -      | -      | -     | -      | -      | -      | -      | -     | -      |
|   | Suspended solids, Total                | TM022       | mg/l   | 9     | /                  | /               |                                      | <2     | 7.4   | 4.15   | 13.2   | 11.2   | <9    | 8.4    | <4     | 5.35   | 6.35   | 22    | -      |
| <b>Filtered (Dissolved) Metals</b>          |  |             |        |       |                    |                 |                                      |        |       |        |        |        |       |        |        |        |        |       |        |
|   | Mercury (diss.filt)                    | TM183       | µg/l   | 0.01  | 0.07               | /               | 10                                   | <0.01  | <0.01 | <0.01  | <0.01  | <0.01  | <0.01 | 0.0103 | <0.01  | <0.01  | <0.01  | <0.01 | -      |
|   | Arsenic (diss.filt)                    | TM152       | µg/l   | 0.5   | 25                 | /               | 500                                  | 1.75   | 5.73  | 6.73   | 2.11   | 1.49   | 4.48  | 6.5    | 1.73   | 1.42   | 2      | 7.52  | 1.58   |
|   | Cadmium (diss.filt)                    | TM152       | µg/l   | 0.08  | 0.2                | /               | 50                                   | <0.08  | <0.08 | <0.08  | <0.08  | <0.08  | <0.08 | <0.08  | <0.08  | <0.08  | <0.08  | <0.08 | -      |
|   | Chromium (diss.filt)                   | TM152       | µg/l   | 1     | /                  | 50              | 500                                  | <1     | 7.78  | <1     | <1     | <1     | <1    | <1     | <1     | <1     | <1     | <1    | -      |
|   | Copper (diss.filt)                     | TM152       | µg/l   | 0.3   | 3.76               | /               | 1000                                 | <0.3   | 1.99  | <0.3   | 1.66   | 0.309  | <0.3  | 0.39   | 0.492  | 1.95   | 1.54   | 3.11  | -      |
|   | Lead (diss.filt)                       | TM152       | µg/l   | 0.2   | 1.3                | /               | 500                                  | <0.2   | <0.2  | <0.2   | <0.2   | <0.2   | <0.2  | <0.2   | <0.2   | <0.2   | 0.372  | <0.2  | -      |
|   | Manganese (diss.filt)                  | TM152       | µg/l   | 3     | /                  | 50              | 500                                  | 10.6   | 16.3  | 26.2   | <3     | <3     | 42.2  | 95.1   | <3     | 5.87   | 4.17   | 22.1  | 4.57   |
|   | Nickel (diss.filt)                     | TM152       | µg/l   | 0.4   | 8.6                | /               | 500                                  | 0.571  | <0.4  | <0.4   | 0.632  | <0.4   | <0.4  | 0.53   | 0.518  | 0.691  | 0.843  | 1.43  | 0.691  |
|   | Zinc (diss.filt)                       | TM152       | µg/l   | 1     | 7.9                | /               | 1000                                 | <1     | 4.07  | 7.09   | 4.35   | 1.59   | <1    | 45.8   | 7.78   | 4.4    | 73.8   | 17.4  | <1     |
|   | Sodium (Dis.Filt)                      | TM152       | mg/l   | 0.076 | /                  | 200             | 1500                                 | 27.7   | 29.2  | 28.6   | 27.3   | 25.4   | 30.4  | 27.7   | 27.6   | 24.6   | 26.8   | 30.5  | -      |
|   | Magnesium (Dis.Filt)                   | TM152       | mg/l   | 0.036 | /                  | /               | 500                                  | 11.5   | 11.7  | 11     | 10.7   | 11.3   | 12.7  | 11     | 10.9   | 10.8   | 11     | 11    | -      |
|   | Potassium (Dis.Filt)                   | TM152       | mg/l   | 0.2   | /                  | /               | 120                                  | 2.07   | 1.6   | 1.89   | 2.05   | 1.84   | 2.04  | 1.74   | 1.83   | 1.9    | 1.73   | 2.14  | -      |
|   | Calcium (Dis.Filt)                     | TM152       | mg/l   | 0.2   | /                  | /               | 1000                                 | 55.6   | 25.4  | 26.7   | 39.6   | 42.1   | 42.6  | 25.9   | 47     | 50.1   | 37.5   | 20    | -      |
|   | Iron (Dis.Filt)                        | TM152       | mg/l   | 0.019 | 1                  | /               | 2                                    | 0.0214 | 0.053 | 0.0813 | <0.019 | <0.019 | 0.054 | 0.089  | <0.019 | <0.019 | <0.019 | 0.055 | <0.019 |
| <b>Unfiltered (Total) Metals</b>            |  |             |        |       |                    |                 |                                      |        |       |        |        |        |       |        |        |        |        |       |        |
|   | Phosphorus (tot.unfilt)                | TM152       | µg/l   | 20    | /                  | /               | 10000                                | 39.4   | 60.2  | 54.1   | 70.7   | 74.6   | 34.3  | 84.5   | 47.8   | 59.9   | <20    | 175   | -      |
|   | Hardness, Total as CaCO3 unfiltered    | TM152       | mg/l   | 0.35  | /                  | /               |                                      | 181    | 113   | -      | 155    | 162    | 169   | 121    | 169    | 164    | 135    | 105   | -      |
| <b>Gasoline Range Organics (GRO)</b>        |  |             |        |       |                    |                 |                                      |        |       |        |        |        |       |        |        |        |        |       |        |
|   | Total Aliphatics >C5-C12               | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10   | <10    | <10    | <10    | <10   | <10    | <10    | <10    | <10    | <10   | -      |
|   | Total Aromatics >EC5-EC12              | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10   | <10    | <10    | <10    | <10   | <10    | <10    | <10    | <10    | <10   | -      |
| <b>TPH Criteria Working Group (TPH CWG)</b> |  |             |        |       |                    |                 |                                      |        |       |        |        |        |       |        |        |        |        |       |        |
|   | GRO Surrogate % recovery**             | TM245       | %      |       | /                  | /               |                                      | 95     | 105   | 107    | 100    | 110    | 111   | 92     | 123    | 103    | 104    | 90    | -      |
|   | GRO >C5-C12                            | TM245       | µg/l   | 50    | /                  | /               |                                      | <50    | <50   | <50    | <50    | <50    | <50   | <50    | <50    | <50    | <50    | <50   | -      |
|   | Methyl tertiary butyl ether (MTBE)     | TM245       | µg/l   | 3     | /                  | 15              |                                      | <3     | <3    | <3     | <3     | <3     | <3    | <3     | <3     | <3     | <3     | <3    | -      |
|   | Benzene                                | TM245       | µg/l   | 7     | 8                  | /               |                                      | <7     | <7    | <7     | <7     | <7     | <7    | <7     | <7     | <7     | <7     | <7    | -      |
|   | Toluene                                | TM245       | µg/l   | 4     | 74                 | /               |                                      | <4     | <4    | <4     | <4     | <4     | <4    | <4     | <4     | <4     | <4     | <4    | -      |
|   | Ethylbenzene                           | TM245       | µg/l   | 5     | 20                 | /               |                                      | <5     | <5    | <5     | <5     | <5     | <5    | <5     | <5     | <5     | <5     | <5    | -      |
|   | m,p-Xylene                             | TM245       | µg/l   | 8     | 30                 | /               |                                      | <8     | <8    | <8     | <8     | <8     | <8    | <8     | <8     | <8     | <8     | <8    | -      |
|   | o-Xylene                               | TM245       | µg/l   | 3     | 30                 | /               |                                      | <3     | <3    | <3     | <3     | <3     | <3    | <3     | <3     | <3     | <3     | <3    | -      |
|   | Sum of detected Xylenes                | TM245       | µg/l   | 11    | 30                 | /               |                                      | <11    | <11   | <11    | <11    | <11    | <11   | <11    | <11    | <11    | <11    | <11   | -      |
|   | Sum of detected BTEX                   | TM245       | µg/l   | 28    | /                  | /               |                                      | <28    | <28   | <28    | <28    | <28    | <28   | <28    | <28    | <28    | <28    | <28   | -      |
|   | Aliphatics >C5-C6                      | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10   | <10    | <10    | <10    | <10   | <10    | <10    | <10    | <10    | <10   | -      |
|   | Aliphatics >C6-C8                      | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10   | <10    | <10    | <10    | <10   | <10    | <10    | <10    | <10    | <10   | -      |
|   | Aliphatics >C8-C10                     | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10   | <10    | <10    | <10    | <10   | <10    | <10    | <10    | <10    | <10   | -      |
|   | Aliphatics >C10-C12                    | TM245       | µg/l   | 10    | /                  | /               |                                      | <10    | <10   | <10    | <10    | <10    | <10   | <10    | <10    | <10    | <10    | <10   | -      |
|   | Aliphatics >C12-C16 (aq)               | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <10   | <10    | <10    | <10    | <10   | <10    | <10    | <10    | <10    | <10   | -      |
|   | Aliphatics >C16-C21 (aq)               | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <10   | <10    | <10    | <10    | <10   | <10    | <10    | <10    | <10    | <10   | -      |
|   | Aliphatics >C21-C35 (aq)               | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <10   | <10    | <10    | <10    | <10   | <10    | <10    | <10    | <10    | <10   | -      |
|   | Total Aliphatics >C12-C35 (aq)         | TM174       | µg/l   | 10    | /                  | /               |                                      | <10    | <10   | <10    | <10    | <10    | <10   | <10    | <10    | <10    | <10    | <10   | -      |
|   | Aromatics >EC5-EC7                     | TM245       | µg/l   | 10    | 8                  | /               |                                      | <10    |       |        |        |        |       |        |        |        |        |       |        |



Point of Ayre Landfill's  
Groundwater Sample Results

ALS

SDG(s): 190315-102  
Customer: Waste Management Unit Douglas (12297)  
Client Reference / Point of Ayre  
Order no:

| Customer Sample ID     | LAKE       | Lake       | Lake       | Lake       | Lake        | LAKE       | LAKE       | LAKE       | LAKE       | LAKE       | LAKE       | LAKE       | LAKE        |
|------------------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Depth                  | -          | -          | -          | -          | -           | -          | -          | -          | -          | -          | -          | -          | -           |
| AGS Id                 |            |            |            |            |             |            |            |            |            |            |            |            |             |
| Sample Type            | JUND_WATER | JUND_WATER | JUND_WATER | JUND_WATER | MISC_LIQUID | FACE_WATER | JUND_WATER | FACE_WATER | FACE_WATER | FACE_WATER | FACE_WATER | FACE_WATER | MISC_LIQUID |
| Sampled Date           | 11/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020  | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 |             |
| Sample Received Date   | 15/03/2019 | 19/07/2019 | 13/09/2019 | 05/12/2019 | 06/03/2020  | 03/06/2020 | 10/09/2020 | 10/12/2020 | 04/03/2021 | 04/06/2021 | 15/09/2022 | 07/12/2022 |             |
| Final Instruction Date | 25/03/2019 | 29/07/2019 | 26/09/2019 | 13/12/2019 | 19/03/2020  | 03/06/2020 | 17/09/2020 | 18/12/2020 | 11/03/2021 | 04/06/2021 | 15/09/2022 | 09/12/2022 |             |
| Report Completed Date  | 27/03/2019 | 30/07/2019 | 30/09/2019 | 16/12/2019 | 14/05/2020  | 16/06/2020 | 21/09/2020 | 21/12/2020 | 23/03/2021 | 16/06/2021 | 27/09/2022 | 09/01/2023 |             |
| SDG                    | 190315-102 | 190719-73  | 190913-125 | 191205-111 | 200306-148  | 200603-78  | 200910-118 | 201210-95  | 210304-123 | 210604-112 | 220915-96  | 221207-97  |             |
| Lab Sample Number      | 19558430   | 20363915   | 20719337   | 21297974   | 21836357    | 22246282   | 22802678   | 23404131   | 23838523   | 24394402   | 26881779   | 27276223   |             |
| Sample Temperature     | 9.8        | 15         | 17.2       | 5.2        | 6           | 16.2       | 14.8       | 6.5        | 8.6        | 15.2       | 13.2       | 6.5        |             |
| Sample Time            |            |            |            |            |             |            |            |            |            |            |            |            |             |

| Analysis | Test                             | Method | Units    | LOD | Coastal Waters EQS | RPV (if no EQS) | WMP 26A Landfill Completion Criteria |              |              |              |              |              |              |              |              |
|----------|----------------------------------|--------|----------|-----|--------------------|-----------------|--------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|          | 1,2-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <5           | <1           | <1           | <2           | <1           | <1           | <1           | <1           |
|          | 1,3-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <5           | <1           | <1           | <2           | <1           | <1           | <1           | <1           |
|          | 1,4-Dichlorobenzene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <5           | <1           | <1           | <2           | <1           | <1           | <1           | <1           |
|          | 2,4,5-Trichlorophenol (aq)       | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <5           | <1           | <1           | <2           | <1           | <1           | <1           |
|          | 2,4,6-Trichlorophenol (aq)       | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <5           | <1           | <1           | <2           | <1           | <1           | <1           |
|          | 2,4-Dichlorophenol (aq)          | TM176  | µg/l     | 1   | 0.42               | /               | 5                                    | <1           | <5           | <1           | <1           | <2           | <1           | <1           | <1           |
|          | 2,4-Dimethylphenol (aq)          | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <5           | <1           | <1           | <2           | <1           | <1           | <1           |
|          | 2,4-Dinitrotoluene (aq)          | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <5           | <1           | <1           | <2           | <1           | <1           | <1           | <1           |
|          | 2,6-Dinitrotoluene (aq)          | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <5           | <1           | <1           | <2           | <1           | <1           | <1           | <1           |
|          | 2-Chloronaphthalene (aq)         | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <5           | <1           | <1           | <2           | <1           | <1           | <1           |
|          | 2-Chlorophenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <5           | <1           | <1           | <2           | <1           | <1           | <1           |
|          | 2-Methylnaphthalene (aq)         | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <5           | <1           | <1           | <2           | <1           | <1           | <1           | <1           |
|          | 2-Methylphenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <5           | <1           | <1           | <2           | <1           | <1           | <1           |
|          | 2-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <5           | <1           | <1           | <2           | <1           | <1           | <1           | <1           |
|          | 2-Nitrophenol (aq)               | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <5           | <1           | <1           | <2           | <1           | <1           | <1           |
|          | 3-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <5           | <1           | <1           | <2           | <1           | <1           | <1           | <1           |
|          | 4-Bromophenylphenylether (aq)    | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <5           | <1           | <1           | <2           | <1           | <1           | <1           | <1           |
|          | 4-Chloro-3-methylphenol (aq)     | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <5           | <1           | <1           | <2           | <1           | <1           | <1           |
|          | 4-Chloroaniline (aq)             | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <5           | <1           | <1           | <2           | <1           | <1           | <1           | <1           |
|          | 4-Chlorophenylphenylether (aq)   | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <5           | <1           | <1           | <2           | <1           | <1           | <1           |
|          | 4-Methylphenol (aq)              | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <5           | <1           | <1           | <2           | <1           | <1           | <1           |
|          | 4-Nitroaniline (aq)              | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <5           | <1           | <1           | <2           | <1           | <1           | <1           | <1           |
|          | 4-Nitrophenol (aq)               | TM176  | µg/l     | 1   | /                  | /               | 5                                    | <1           | <5           | <1           | <1           | <2           | <1           | <1           | <1           |
|          | Azobenzene (aq)                  | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <5           | <1           | <1           | <2           | <1           | <1           | <1           | <1           |
|          | bis(2-Chloroethyl)ether (aq)     | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <5           | <1           | <1           | <2           | <1           | <1           | <1           |
|          | bis(2-Chloroethoxy)methane (aq)  | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <5           | <1           | <1           | <2           | <1           | <1           | <1           |
|          | bis(2-Ethylhexyl) phthalate (aq) | TM176  | µg/l     | 2   | /                  | /               | <1                                   | <10          | <2           | <4           | <2           | <2           | <2           | <2           | <2           |
|          | Butylbenzyl phthalate (aq)       | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <5           | <1           | <1           | <2           | <1           | <1           | <1           | <1           |
|          | Benzo(k)fluoranthene (aq)        | TM176  | µg/l     | 1   | /                  | 0.1             | <1                                   | <5           | <1           | <1           | <2           | <1           | <1           | <1           | <1           |
|          | Carbazole (aq)                   | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <5           | <1           | <1           | <2           | <1           | <1           | <1           | <1           |
|          | Dibenzofuran (aq)                | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <5           | <1           | <1           | <2           | <1           | <1           | <1           | <1           |
|          | n-Dibutyl phthalate (aq)         | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <5           | <1           | <1           | <2           | <1           | <1           | <1           | <1           |
|          | Diethyl phthalate (aq)           | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <5           | <1           | <1           | <2           | <1           | <1           | <1           | <1           |
|          | Dimethyl phthalate (aq)          | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <5           | <1           | <1           | <2           | <1           | <1           | <1           | <1           |
|          | n-Dioctyl phthalate (aq)         | TM176  | µg/l     | 5   | /                  | /               | <5                                   | <25          | <5           | <5           | <10          | <5           | <5           | <5           | <5           |
|          | Hexachlorobenzene (aq)           | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <5           | <1           | <1           | <2           | <1           | <1           | <1           |
|          | Hexachlorobutadiene (aq)         | TM176  | µg/l     | 1   | 0.6                | /               | 10                                   | <1           | <5           | <1           | <1           | <2           | <1           | <1           | <1           |
|          | Pentachlorophenol (aq)           | TM176  | µg/l     | 1   | 0.4                | /               | 5                                    | <1           | <5           | <1           | <1           | <2           | <1           | <1           | <1           |
|          | Phenol (aq)                      | TM176  | µg/l     | 1   | 7.7                | /               | 5                                    | <1           | <5           | <1           | <1           | <2           | <1           | <1           | <1           |
|          | n-Nitroso-n-dipropylamine (aq)   | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <5           | <1           | <1           | <2           | <1           | <1           | <1           | <1           |
|          | Hexachloroethane (aq)            | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <5           | <1           | <1           | <2           | <1           | <1           | <1           |
|          | Nitrobenzene (aq)                | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <5           | <1           | <1           | <2           | <1           | <1           | <1           | <1           |
|          | Isophorone (aq)                  | TM176  | µg/l     | 1   | /                  | /               | <1                                   | <5           | <1           | <1           | <2           | <1           | <1           | <1           | <1           |
|          | Hexachlorocyclopentadiene (aq)   | TM176  | µg/l     | 1   | /                  | /               | 10                                   | <1           | <5           | <1           | <1           | <2           | <1           | <1           | <1           |
|          | Indeno(1,2,3-cd)pyrene (aq)      | TM176  | µg/l     | 1   | /                  | 0.1             | <1                                   | <5           | <1           | <1           | <2           | <1           | <1           | <1           | <1           |
|          | SVOC TIC (aq)                    | TM176  | No units | /   | /                  | /               | Not Detected                         | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected |
|          | Total SVOC TIC                   | TM176  | µg/l     | 10  | /                  | /               | <10                                  | <50          | <10          | <10          | <20          | 32.6         | <10          | <10          | <10          |
|          | Detected                         |        |          |     |                    |                 |                                      |              |              |              |              |              |              |              |              |

Volatile Organic Compounds (VOCs)

|                                    |       |      |   |     |      |      |      |      |      |     |      |      |      |      |      |
|------------------------------------|-------|------|---|-----|------|------|------|------|------|-----|------|------|------|------|------|
| Dibromofluoromethane**             | TM208 | %    | / | /   | 111  | 114  | 120  | 118  | 123  | 114 | 111  | 103  | 114  | 107  | 110  |
| Toluene-d8**                       | TM208 | %    | / | /   | 101  | 97.5 | 102  | 97.5 | 99.6 | 101 | 98.9 | 96.8 | 96.4 | 95.3 | 98.4 |
| 4-Bromofluorobenzene**             | TM208 | %    | / | /   | 96.7 | 97.4 | 99.5 | 96.1 | 102  | 102 | 101  | 97.7 | 95.8 | 93.5 | 97.7 |
| Dichlorodifluoromethane            | TM208 | µg/l | 1 | /   | <1   | <1   | <1   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   |
| Chloromethane                      | TM208 | µg/l | 1 | /   | <1   | <1   | <1   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   |
| Vinyl chloride                     | TM208 | µg/l | 1 | /   | 0.5  | 10   | <1   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   |
| Bromomethane                       | TM208 | µg/l | 1 | /   | <1   | <1   | <1   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   |
| Chloroethane                       | TM208 | µg/l | 1 | /   | <1   | <1   | <1   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   |
| Trichlorofluoromethane             | TM208 | µg/l | 1 | /   | <1   | <1   | <1   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   |
| 1,1-Dichloroethene                 | TM208 | µg/l | 1 | /   | <1   | <1   | <1   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   |
| Carbon disulphide                  | TM208 | µg/l | 1 | /   | <1   | <1   | <1   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   |
| Dichloromethane                    | TM208 | µg/l | 1 | 20  | <3   | <3   | <3   | <3   | <3   | <3  | <3   | <3   | <3   | <3   | <3   |
| Methyl tertiary butyl ether (MTBE) | TM208 | µg/l | 1 | /   | 15   | 10   | <1   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   |
| trans-1,2-Dichloroethene           | TM208 | µg/l | 1 | /   | 50   | 10   | <1   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   |
| 1,1-Dichloroethane                 | TM208 | µg/l | 1 | /   | <1   | <1   | <1   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   |
| cis-1,2-Dichloroethene             | TM208 | µg/l | 1 | /   | 50   | 10   | <1   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   |
| 2,2-Dichloropropane                | TM208 | µg/l | 1 | /   | <1   | <1   | <1   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   |
| Bromochloromethane                 | TM208 | µg/l | 1 | /   | <1   | <1   | <1   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   |
| Chloroform                         | TM208 | µg/l | 1 | 2.5 | <1   | <1   | <1   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   |
| 1,1,1-Trichloroethane              | TM208 | µg/l | 1 | /   | <1   | <1   | <1   | <1   | <1   | <1  | <1   | <1   | <1   | <1   | <1   |
| 1,1-Dichloropropene                | TM208 | µg/l | 1 | /   | <1   | <    |      |      |      |     |      |      |      |      |      |





# APPENDIX G

## STATISTICAL ANALYSIS

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**Point of Ayre Landfills  
Key Contaminants - Statistical Analysis**

| Test                               | 12/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020 | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 | Count | Min   | Max   | Average    | Geomean    | Std Dev    |
|------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------|-------|-------|------------|------------|------------|
| LOD                                | 0.3        | 0.3        | 0.3        | 0.3        | 0.3        | 0.3        | 0.3        | 0.3        | 0.3        | 0.3        | 0.3        | 0.3        |       |       |       |            |            |            |
| WQS                                | 0.5        | 0.5        | 0.5        | 0.5        | 0.5        | 0.5        | 0.5        | 0.5        | 0.5        | 0.5        | 0.5        | 0.5        |       |       |       |            |            |            |
| WMP 26A Landfill Completion Crite  | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          |       |       |       |            |            |            |
| BH101A Ammoniacal Nitrogen as NH4  | 0.301      | 0.311      | 0.306      | 0.327      | 0.333      | 0.3        | 0.369      | 0.3        | 0.3        | 0.3        | 0.3        | 0.3        | 12    | 0.3   | 0.369 | 0.31225    | 0.31163736 | 0.02118372 |
| BH102A Ammoniacal Nitrogen as NH4  | 81         | 82.3       | 76         | 81.9       | 59.7       | 76.6       | 70.5       | 74.7       | 69.2       | 75.5       | 62.6       | 62.7       | 12    | 59.7  | 82.3  | 72.725     | 72.3267872 | 7.81445339 |
| BH103A Ammoniacal Nitrogen as NH4  | 230        | 96.7       | 76.6       | 60.7       | 50.8       | 61.1       | 60.3       | 61.3       | 59.8       | 59         | 63         | 63.3       | 12    | 50.8  | 230   | 78.55      | 71.1015925 | 49.084593  |
| BH103B Ammoniacal Nitrogen as NH4  | 129        |            |            |            |            |            |            |            |            |            |            |            | 1     | 129   | 129   | 129        | 129        | #DIV/0!    |
| BH104A Ammoniacal Nitrogen as NH4  | 11.8       | 4.99       | 8.55       | 24.6       | 23.5       | 19.9       | 14         | 24.6       | 37.2       | 33.4       | 41.5       | 29.6       | 12    | 4.99  | 41.5  | 22.8033333 | 19.5115343 | 11.4801349 |
| BH105A Ammoniacal Nitrogen as NH4  | 265        | 219        | 235        | 221        | 181        | 71.6       | 47.6       | 231        | 175        | 261        | 148        | 76.6       | 12    | 47.6  | 265   | 177.65     | 156.889595 | 76.020099  |
| BH106A Ammoniacal Nitrogen as NH4  | 310        | 221        | 374        | 597        | 129        | 267        | 106        | 148        | 188        | 85.9       | 53.7       | 90.4       | 12    | 53.7  | 597   | 214.166667 | 171.512923 | 155.407478 |
| BH107 Ammoniacal Nitrogen as NH4   | 0.404      | 9.98       | 1.71       | 0.409      | 8.47       | 12.1       | 0.375      | 2.03       | 6.18       | 10.2       | 14.9       | 1.07       | 12    | 0.375 | 14.9  | 5.65233333 | 2.78857401 | 5.28521313 |
| BH108 Ammoniacal Nitrogen as NH4   | 0.3        | 0.982      | 0.3        | 0.3        | 0.2        | 0.987      | 2.35       | 0.3        | 0.3        | 0.3        | 0.3        | 0.3        | 12    | 0.2   | 2.35  | 0.57658333 | 0.41971843 | 0.62023551 |
| BH109 Ammoniacal Nitrogen as NH4   | 1.09       |            |            |            |            |            |            |            |            |            |            |            | 1     | 1.09  | 1.09  | 1.09       | 1.09       | #DIV/0!    |
| BH110 Ammoniacal Nitrogen as NH4   | 0.3        | 0.3        | 0.318      | 0.3        | 0.396      | 0.3        | 0.3        | 0.3        | 0.536      | 0.3        | 0.3        | 0.3        | 12    | 0.3   | 0.536 | 0.32908333 | 0.32375311 | 0.0704627  |
| BH89/10 Ammoniacal Nitrogen as NH4 | 0.3        | 0.3        | 0.3        | 0.3        | 0.285      | 0.3        | 0.3        | 0.3        | 0.3        | 7.19       | 5.41       | 2.2        | 12    | 0.285 | 7.19  | 1.45708333 | 0.58480846 | 2.35735451 |
| BH89/11 Ammoniacal Nitrogen as NH4 | 0.3        | 0.3        | 0.3        | 0.3        | 0.2        | 0.3        | 0.3        | 0.3        | 0.3        | 0.3        | 0.3        | 0.3        | 12    | 0.2   | 0.3   | 0.29166667 | 0.29003271 | 0.02886751 |
| BH90/17 Ammoniacal Nitrogen as NH4 | 0.3        | 0.3        | 0.3        | 0.3        | 0.2        | 0.3        | 0.3        | 0.3        | 0.3        | 0.3        | 0.3        | 0.3        | 11    | 0.2   | 0.3   | 0.29090909 | 0.28914318 | 0.03015113 |
| BH96/4 Ammoniacal Nitrogen as NH4  | 0.3        | 0.3        | 0.3        | 0.3        | 0.2        | 0.3        | 0.3        | 0.3        | 0.3        | 0.3        | 0.3        | 0.3        | 11    | 0.2   | 0.3   | 0.29090909 | 0.28914318 | 0.03015113 |
| P2A Ammoniacal Nitrogen as NH4     | 0.474      | 0.572      | 0.814      | 0.606      | 0.699      | 1.09       | 19.5       | 9.03       | 0.969      | 0.649      | 5.86       | 1.76       | 12    | 0.474 | 19.5  | 3.50191667 | 1.48647089 | 5.69438009 |
| P3A Ammoniacal Nitrogen as NH4     | 55.5       | 56.7       | 55.7       | 56.4       | 41.8       | 52.6       | 51.7       | 50.5       | 56.2       | 43.3       | 48.7       | 53         | 12    | 41.8  | 56.7  | 51.8416667 | 51.6018507 | 5.03667609 |
| P3B Ammoniacal Nitrogen as NH4     | 56.3       | 56.8       |            |            |            | 55.4       | 52.7       | 21.7       | 0.698      | 44.6       |            | 16.7       | 8     | 0.698 | 56.8  | 38.11225   | 23.8681055 | 21.9136565 |
| P4A Ammoniacal Nitrogen as NH4     | 41.7       | 37.3       | 44.7       |            | 33.2       | 40.2       | 21.1       | 40.2       | 43.5       | 44.1       | 41         | 41.5       | 11    | 21.1  | 44.7  | 38.9545455 | 38.2567184 | 6.75342337 |
| P4B Ammoniacal Nitrogen as NH4     | 51.7       | 75.2       | 72.6       |            | 44.5       | 56.4       | 55.9       | 53         | 59.3       | 58.5       | 53.1       | 55         | 11    | 44.5  | 75.2  | 57.7454545 | 57.155515  | 8.92831044 |
| P6A Ammoniacal Nitrogen as NH4     | 54.8       | 132        |            |            | 60.5       | 122        | 120        | 49.4       | 36         | 66.3       | 71.7       | 80.5       | 10    | 36    | 132   | 79.32      | 73.105642  | 33.6779783 |
| P6B Ammoniacal Nitrogen as NH4     | 152        | 130        | 148        |            | 138        | 148        | 28.3       | 132        | 122        | 144        | 112        | 89.7       | 11    | 28.3  | 152   | 122.181818 | 113.270444 | 36.1643697 |
| P6C Ammoniacal Nitrogen as NH4     | 93         | 61.5       | 89         |            | 72.7       | 62         | 25.2       | 65.8       | 47.8       | 41.7       | 108        | 109        | 11    | 25.2  | 109   | 70.5181818 | 65.1180439 | 27.0444012 |
| P7B Ammoniacal Nitrogen as NH4     | 0.3        | 0.3        | 0.944      | 0.3        | 0.2        | 0.3        | 0.3        | 9.41       | 0.302      | 0.3        | 0.3        | 0.3        | 12    | 0.2   | 9.41  | 1.10466667 | 0.42548153 | 2.62240311 |
| P8A Ammoniacal Nitrogen as NH4     | 0.977      | 0.3        | 1.44       | 0.747      | 0.941      | 3.32       | 0.687      | 0.3        | 6.15       | 6.45       | 31.8       | 4.09       | 12    | 0.3   | 31.8  | 4.76683333 | 1.7851477  | 8.79497112 |
| P9A Ammoniacal Nitrogen as NH4     | 0.3        |            |            | 0.3        | 2.01       | 0.306      | 0.3        | 0.3        | 0.724      | 0.3        | 0.38       | 2.01       | 10    | 0.3   | 2.01  | 0.693      | 0.49172716 | 0.70631453 |
| LAKE Ammoniacal Nitrogen as NH4    | 0.3        | 0.342      | 0.3        | 0.3        | 0.2        | 0.3        | 0.3        | 0.338      | 0.3        | 0.3        | 0.3        | 0.3        | 12    | 0.2   | 0.342 | 0.29833333 | 0.29614564 | 0.03460776 |

**NOTE:**

For rounds including and following December 2022, where a duplicate sample has been collected the most conservative result between the original sample and duplicate has been applied when calculating trends and statistics.

**Point of Ayre Landfills  
Key Contaminants - Statistical Analysis**

|                                      |                     | 12/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020 | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 | Count | Min  | Max  | Average    | Geomean     | Std Dev    |            |
|--------------------------------------|---------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------|------|------|------------|-------------|------------|------------|
| LOD                                  |                     | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          |       |      |      |            |             |            |            |
| WQS                                  |                     | 50         | 50         | 50         | 50         | 50         | 50         | 50         | 50         | 50         | 50         | 50         | 50         |       |      |      |            |             |            |            |
| WMP 26A Landfill Completion Criteria |                     | 500        | 500        | 500        | 500        | 500        | 500        | 500        | 500        | 500        | 500        | 500        | 500        |       |      |      |            |             |            |            |
| BH101A                               | Manganese ( TM152 ) | µg/l       | 712        | 663        | 542        | 644        | 581        | 683        | 1190       | 489        | 579        | 507        | 502        | 712   | 12   | 489  | 1190       | 650.333333  | 631.102834 | 188.371168 |
| BH102A                               | Manganese ( TM152 ) | µg/l       | 341        | 397        | 601        | 412        | 393        | 349        | 856        | 797        | 1060       | 321        | 454        | 1160  | 12   | 321  | 1160       | 595.083333  | 535.98086  | 298.16056  |
| BH103A                               | Manganese ( TM152 ) | µg/l       | 997        | 769        | 977        | 932        | 927        | 1070       | 1050       | 1030       | 998        | 966        | 921        | 1070  | 12   | 769  | 1070       | 975.583333  | 972.033182 | 83.8282425 |
| BH103B                               | Manganese ( TM152 ) | µg/l       | 1110       |            |            |            |            |            |            |            |            |            |            | 1     | 1110 | 1110 | 1110       | 1110        | #DIV/0!    |            |
| BH104A                               | Manganese ( TM152 ) | µg/l       | 1350       | 988        | 1170       | 1360       | 1080       | 1050       | 1060       | 1230       | 1270       | 949        | 1320       | 2070  | 12   | 949  | 2070       | 1241.41667  | 1214.84576 | 296.948253 |
| BH105A                               | Manganese ( TM152 ) | µg/l       | 1580       | 1190       | 1270       | 1610       | 1550       | 1170       | 3110       | 1290       | 1640       | 1410       | 1090       | 1940  | 12   | 1090 | 3110       | 1570.833333 | 1506.6049  | 543.079742 |
| BH106A                               | Manganese ( TM152 ) | µg/l       | 1660       | 875        | 1100       | 981        | 1580       | 1410       | 1060       | 1620       | 1750       | 1110       | 1080       | 1340  | 12   | 875  | 1750       | 1297.16667  | 1265.40741 | 300.149912 |
| BH107                                | Manganese ( TM152 ) | µg/l       | 250        | 2770       | 292        | 121        | 1830       | 1580       | 43.9       | 332        | 1090       | 1790       | 2120       | 32.6  | 12   | 32.6 | 2770       | 1020.95833  | 477.083409 | 961.634402 |
| BH108                                | Manganese ( TM152 ) | µg/l       | 19.3       | 3          | 3          | 121        | 3          | 26.7       | 290        | 3          | 3          | 3          | 18.2       | 3     | 12   | 3    | 290        | 41.35       | 9.72966026 | 85.1217043 |
| BH109                                | Manganese ( TM152 ) | µg/l       | 4830       |            |            |            |            |            |            |            |            |            |            | 1     | 4830 | 4830 | 4830       | 4830        | #DIV/0!    |            |
| BH110                                | Manganese ( TM152 ) | µg/l       | 1120       | 1230       | 1380       | 1840       | 1280       | 1240       | 515        | 1580       | 1010       | 926        | 902        | 1260  | 12   | 515  | 1840       | 1190.25     | 1139.68663 | 340.235781 |
| BH89/10                              | Manganese ( TM152 ) | µg/l       | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 76.5       | 36.6       | 56.2  | 12   | 3    | 76.5       | 16.35833333 | 6.17894284 | 25.6197885 |
| BH89/11                              | Manganese ( TM152 ) | µg/l       | 3          | 62.9       | 16.6       | 20.5       | 3          | 12.2       | 20.6       | 22.8       | 3          | 6.9        | 27.3       | 22    | 12   | 3    | 62.9       | 18.4        | 12.4391123 | 16.4770915 |
| BH90/17                              | Manganese ( TM152 ) | µg/l       | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3          | 3.21       | 11    | 3    | 3.21 | 3.01909091 | 3.01850922  | 0.06331738 |            |
| BH96/4                               | Manganese ( TM151 ) | µg/l       | 176        | 2          | 238        | 4.1        | 6.28       | 3          | 4.57       | 3          | 3          | 5.31       | 3          | 11    | 2    | 238  | 40.7509091 | 7.50264577  | 83.3656565 |            |
| P2A                                  | Manganese ( TM152 ) | µg/l       | 545        | 484        | 441        | 453        | 647        | 539        | 390        | 464        | 513        | 554        | 529        | 536   | 12   | 390  | 647        | 507.916667  | 503.897059 | 66.7198462 |
| P3A                                  | Manganese ( TM152 ) | µg/l       | 1420       | 1400       | 1360       | 1400       | 1430       | 1380       | 1400       | 1230       | 1370       | 1210       | 1290       | 1110  | 12   | 1110 | 1430       | 1333.333333 | 1329.62504 | 100.935023 |
| P3B                                  | Manganese ( TM152 ) | µg/l       | 1730       | 1620       |            |            |            | 1800       | 1710       | 647        | 24.4       | 1580       |            | 593   | 8    | 24.4 | 1800       | 1213.05     | 773.088926 | 684.181569 |
| P4A                                  | Manganese ( TM152 ) | µg/l       | 1190       | 714        | 1150       |            | 1130       | 1240       | 448        | 1120       | 1180       | 1160       | 968        | 1000  | 11   | 448  | 1240       | 1027.27273  | 991.486433 | 241.835105 |
| P4B                                  | Manganese ( TM152 ) | µg/l       | 1290       | 1190       | 1020       |            | 1130       | 1260       | 1190       | 979        | 853        | 1210       | 1050       | 1010  | 11   | 853  | 1290       | 1107.45455  | 1099.64109 | 135.254844 |
| P6A                                  | Manganese ( TM152 ) | µg/l       | 1700       | 4140       |            |            | 4310       | 4590       | 4750       | 1680       | 1040       | 3050       | 715        | 909   | 10   | 715  | 4750       | 2688.4      | 2167.67676 | 1650.09631 |
| P6B                                  | Manganese ( TM152 ) | µg/l       | 1600       | 1900       | 1750       |            | 1260       | 1480       | 216        | 1160       | 1250       | 1200       | 1130       | 902   | 11   | 216  | 1900       | 1258.90909  | 1129.04692 | 454.135102 |
| P6C                                  | Manganese ( TM152 ) | µg/l       | 1590       | 1140       | 1170       |            | 1150       | 823        | 365        | 906        | 503        | 386        | 2720       | 2410  | 11   | 365  | 2720       | 1196.63636  | 984.783379 | 775.091643 |
| P7B                                  | Manganese ( TM152 ) | µg/l       | 80.3       | 91.5       | 92.4       | 80.1       | 83         | 94.4       | 94.3       | 803        | 18.6       | 116        | 122        | 86.3  | 12   | 18.6 | 803        | 146.841667  | 97.462776  | 208.172671 |
| P8A                                  | Manganese ( TM152 ) | µg/l       | 638        | 678        | 382        | 155        | 373        | 753        | 606        | 71.3       | 493        | 241        | 65.7       | 729   | 12   | 65.7 | 753        | 432.083333  | 331.618707 | 254.356603 |
| P9A                                  | Manganese ( TM152 ) | µg/l       | 8.87       |            |            | 11.7       | 108        | 28.6       | 74.4       | 59.6       | 118        | 63.4       | 86.9       | 348   | 10   | 8.87 | 348        | 90.747      | 56.3285893 | 97.7718642 |
| LAKE                                 | Manganese ( TM152 ) | µg/l       | 10.6       | 16.3       | 26.2       | 3          | 3          | 42.2       | 95.1       | 3          | 5.87       | 4.17       | 22.1       | 4.57  | 12   | 3    | 95.1       | 19.67583333 | 10.1619685 | 26.683021  |

NOTE:  
For rounds including and following December 2022, where a duplicate sample has been collected the most conservative result between the original sample and duplicate has been applied when calculating trends and statistics.

**Point of Ayre Landfills  
Key Contaminants - Statistical Analysis**

|                                      |                 |       | 12/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020 | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 | Count | Min    | Max    | Average    | Geomean    | Std Dev     |  |
|--------------------------------------|-----------------|-------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------|--------|--------|------------|------------|-------------|--|
| LOD                                  |                 |       | 0.019      | 0.019      | 0.019      | 0.019      | 0.019      | 0.019      | 0.019      | 0.019      | 0.019      | 0.019      | 0.019      | 0.019      |       |        |        |            |            |             |  |
| EQS                                  |                 |       | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          |       |        |        |            |            |             |  |
| WMP 26A Landfill Completion Criteria |                 |       | 2          | 2          | 2          | 2          | 2          | 2          | 2          | 2          | 2          | 2          | 2          | 2          |       |        |        |            |            |             |  |
| BH101A                               | Iron (Dis.Filt) | TM152 | mg/l       | 0.157      | 2.24       | 0.581      | 0.113      | 0.337      | 0.0744     | 0.308      | 0.211      | 0.0289     | 0.019      | 0.114      | 12    | 0.019  | 2.24   | 0.35019167 | 0.1372658  | 0.617473675 |  |
| BH102A                               | Iron (Dis.Filt) | TM152 | mg/l       | 21.6       | 0.0209     | 23.8       | 24.5       | 25         | 26         | 31.3       | 25.8       | 30.5       | 24.1       | 25.2       | 12    | 0.0209 | 36.6   | 24.535075  | 14.5982764 | 8.746955698 |  |
| BH103A                               | Iron (Dis.Filt) | TM152 | mg/l       | 7.29       | 14.3       | 18         | 16.2       | 17.5       | 16.7       | 18.9       | 18.7       | 16.7       | 15.7       | 15.4       | 12    | 7.29   | 18.9   | 16.0491667 | 15.6632252 | 3.068684818 |  |
| BH103B                               | Iron (Dis.Filt) | TM152 | mg/l       | 35.2       |            |            |            |            |            |            |            |            |            |            | 1     | 35.2   | 35.2   | 35.2       | 35.2       | #DIV/0!     |  |
| BH104A                               | Iron (Dis.Filt) | TM152 | mg/l       | 1.9        | 5.59       | 8.12       | 14.7       | 13.3       | 12.5       | 11.7       | 15.4       | 17.4       | 12.3       | 13.4       | 12    | 1.9    | 17.6   | 11.9925    | 10.5571875 | 4.686555481 |  |
| BH105A                               | Iron (Dis.Filt) | TM152 | mg/l       | 0.13       | 18.6       | 23.7       | 33.3       | 26.9       | 23         | 9.26       | 23.6       | 40.5       | 23.9       | 15.6       | 12    | 0.13   | 40.5   | 22.9491667 | 15.1268061 | 11.31504827 |  |
| BH106A                               | Iron (Dis.Filt) | TM152 | mg/l       | 0.019      | 14.3       | 21.1       | 13.6       | 3.05       | 25         | 16.8       | 1.07       | 35.3       | 0.736      | 46.4       | 12    | 0.019  | 46.4   | 17.4645833 | 6.33124603 | 15.16167239 |  |
| BH107                                | Iron (Dis.Filt) | TM152 | mg/l       | 0.0493     | 0.228      | 0.189      | 0.0421     | 0.02       | 0.241      | 0.019      | 0.0323     | 0.0698     | 0.735      | 0.907      | 12    | 0.019  | 0.907  | 0.23295833 | 0.11028579 | 0.291932933 |  |
| BH108                                | Iron (Dis.Filt) | TM152 | mg/l       | 0.0927     | 0.019      | 0.019      | 0.0421     | 0.019      | 0.019      | 0.219      | 0.0225     | 0.019      | 0.019      | 0.019      | 12    | 0.019  | 0.219  | 0.044025   | 0.02880723 | 0.059132011 |  |
| BH109                                | Iron (Dis.Filt) | TM152 | mg/l       | 5.01       |            |            |            |            |            |            |            |            |            |            | 1     | 5.01   | 5.01   | 5.01       | 5.01       | #DIV/0!     |  |
| BH110                                | Iron (Dis.Filt) | TM152 | mg/l       | 0.742      | 0.616      | 0.626      | 0.297      | 2.45       | 0.26       | 0.019      | 0.128      | 0.0767     | 0.236      | 0.167      | 12    | 0.019  | 2.45   | 0.4759     | 0.24028832 | 0.665877124 |  |
| BH89/10                              | Iron (Dis.Filt) | TM152 | mg/l       | 0.019      | 0.019      | 0.0262     | 0.019      | 0.019      | 0.019      | 0.0364     | 0.019      | 0.019      | 0.161      | 0.0834     | 12    | 0.019  | 0.161  | 0.04395833 | 0.03162689 | 0.044062476 |  |
| BH89/11                              | Iron (Dis.Filt) | TM152 | mg/l       | 0.019      | 0.019      | 0.019      | 0.019      | 0.019      | 0.019      | 0.019      | 0.019      | 0.019      | 0.019      | 0.019      | 12    | 0.019  | 0.019  | 0.019      | 0.019      | 3.62372E-18 |  |
| BH90/17                              | Iron (Dis.Filt) | TM152 | mg/l       | 0.019      | 0.019      | 0.0235     | 0.0193     | 0.019      | 0.019      | 0.019      | 0.019      | 0.019      | 0.019      | 0.019      | 11    | 0.019  | 0.0235 | 0.01943636 | 0.01939833 | 0.001350757 |  |
| BH96/4                               | Iron (Dis.Filt) | TM152 | mg/l       | 0.023      | 0.019      | 0.0642     | 0.019      | 0.0332     | 0.019      | 0.019      | 0.019      | 0.019      | 0.031      | 0.019      | 11    | 0.019  | 0.0642 | 0.02585455 | 0.02375367 | 0.013739895 |  |
| P2A                                  | Iron (Dis.Filt) | TM152 | mg/l       | 6.05       | 6.08       | 5          | 5.51       | 5.51       | 4.93       | 1.17       | 0.0587     | 5.06       | 4.1        | 5.89       | 12    | 0.0587 | 6.08   | 3.883975   | 2.49756083 | 2.19930206  |  |
| P3A                                  | Iron (Dis.Filt) | TM152 | mg/l       | 13.7       | 14.3       | 14.7       | 14.2       | 15.1       | 13.5       | 14.2       | 13.3       | 14.3       | 13.8       | 13.4       | 12    | 13.3   | 15.1   | 14.1166667 | 14.1053846 | 0.59058266  |  |
| P3B                                  | Iron (Dis.Filt) | TM152 | mg/l       | 6.03       | 11.6       |            |            |            | 7.65       | 7.21       | 0.896      | 0.019      | 3.53       |            | 8     | 0.019  | 11.6   | 4.654375   | 1.69938271 | 4.16577648  |  |
| P4A                                  | Iron (Dis.Filt) | TM152 | mg/l       | 0.026      | 0.0481     | 14.4       |            | 14.6       | 11.8       | 0.0203     | 14.6       | 14.5       | 16.9       | 15.6       | 11    | 0.0203 | 16.9   | 10.6631273 | 2.68377419 | 6.931509836 |  |
| P4B                                  | Iron (Dis.Filt) | TM152 | mg/l       | 11.6       | 16         | 30.5       |            | 13.1       | 20         | 17.3       | 12.5       | 6.91       | 18.5       | 9.82       | 11    | 6.91   | 30.5   | 15.2209091 | 14.1375465 | 6.413997902 |  |
| P6A                                  | Iron (Dis.Filt) | TM152 | mg/l       | 0.019      | 4.56       |            |            | 0.827      | 24         | 4.08       | 0.17       | 0.0906     | 4.66       | 1.68       | 10    | 0.019  | 24     | 4.23466    | 1.06695871 | 7.183960106 |  |
| P6B                                  | Iron (Dis.Filt) | TM152 | mg/l       | 0.0529     | 14.1       | 15.1       |            | 9.76       | 11.7       | 0.19       | 10.5       | 6.12       | 5.54       | 15.4       | 11    | 0.0529 | 15.4   | 9.04208182 | 4.48407815 | 5.442525321 |  |
| P6C                                  | Iron (Dis.Filt) | TM152 | mg/l       | 2.34       | 1.97       | 2.01       |            | 2.1        | 1.73       | 0.353      | 2.18       | 1          | 1.11       | 6.17       | 11    | 0.353  | 6.24   | 2.473      | 1.89122194 | 1.940156952 |  |
| P7B                                  | Iron (Dis.Filt) | TM152 | mg/l       | 0.019      | 0.019      | 0.019      | 0.019      | 0.019      | 0.019      | 0.019      | 4.81       | 0.019      | 0.019      | 0.0212     | 12    | 0.019  | 4.81   | 0.41843333 | 0.03040895 | 1.382984979 |  |
| P8A                                  | Iron (Dis.Filt) | TM152 | mg/l       | 0.71       | 0.428      | 1.22       |            | 0.667      | 1.91       | 2.22       | 0.775      | 0.019      | 0.956      | 1.14       | 12    | 0.019  | 2.22   | 1.0035     | 0.68398107 | 0.651523878 |  |
| P9A                                  | Iron (Dis.Filt) | TM152 | mg/l       | 0.019      |            |            | 0.019      | 0.13       | 0.101      | 0.0211     | 0.0626     | 1.78       | 0.191      | 0.288      | 10    | 0.019  | 1.78   | 0.38117    | 0.12205216 | 0.607262188 |  |
| LAKE                                 | Iron (Dis.Filt) | TM152 | mg/l       | 0.0214     | 0.053      | 0.0813     | 0.019      | 0.019      | 0.054      | 0.089      | 0.019      | 0.019      | 0.019      | 0.055      | 12    | 0.019  | 0.089  | 0.038975   | 0.03198556 | 0.026416322 |  |

**NOTE:**

For rounds including and following December 2022, where a duplicate sample has been collected the most conservative result between the original sample and duplicate has been applied when calculating trends and statistics.



**Point of Ayre Landfills  
Key Contaminants - Statistical Analysis**

|                                      | 12/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020 | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 | Count | Min    | Max  | Average     | Geomean    | Std Dev    |
|--------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------|--------|------|-------------|------------|------------|
| LOD                                  | 2          | 2          | 2          | 2          | 2          | 2          | 2          | 2          | 2          | 2          | 2          | 2          |       |        |      |             |            |            |
| EQS                                  | 250        | 250        | 250        | 250        | 250        | 250        | 250        | 250        | 250        | 250        | 250        | 250        |       |        |      |             |            |            |
| WMP 26A Landfill Completion Criteria | 2000       | 2000       | 2000       | 2000       | 2000       | 2000       | 2000       | 2000       | 2000       | 2000       | 2000       | 2000       |       |        |      |             |            |            |
| BH101A Chloride TM184 mg/l           | 48.1       | 51.9       | 47         | 43.3       | 2          | 0.0697     | 62.3       | 45.6       | 47.6       | 59.4       | 63         | 52.8       | 12    | 0.0697 | 63   | 43.5891417  | 22.7203566 | 20.9036004 |
| BH102A Chloride TM184 mg/l           | 66.9       | 87         | 97.6       | 92.8       | 46.7       | 105        | 97.4       | 85         | 51         | 87.2       | 87.4       | 84.3       | 12    | 46.7   | 105  | 82.3583333  | 80.1347847 | 18.2288711 |
| BH103A Chloride TM184 mg/l           | 255        | 139        | 113        | 99.1       | 77.9       | 111        | 110        | 109        | 118        | 107        | 107        | 104        | 12    | 77.9   | 255  | 120.8333333 | 115.745949 | 44.4521057 |
| BH103B Chloride TM184 mg/l           | 97.4       |            |            |            |            |            |            |            |            |            |            |            | 1     | 97.4   | 97.4 | 97.4        | 97.4       | #DIV/0!    |
| BH104A Chloride TM184 mg/l           | 466        | 322        | 182        | 125        | 92.3       | 87.2       | 92.9       | 87.9       | 99.4       | 80.9       | 79.5       | 92.8       | 12    | 79.5   | 466  | 150.6583333 | 124.074633 | 121.000003 |
| BH105A Chloride TM184 mg/l           | 164        | 135        | 156        | 379        | 132        | 174        | 97.3       | 137        | 97.9       | 139        | 98.1       | 91.2       | 12    | 91.2   | 379  | 150.041667  | 138.260019 | 77.3014931 |
| BH106A Chloride TM184 mg/l           | 281        | 228        | 319        | 382        | 292        | 160        | 192        | 241        | 239        | 144        | 139        | 188        | 12    | 139    | 382  | 233.75      | 223.068089 | 74.6459827 |
| BH107 Chloride TM184 mg/l            | 58.8       | 115        | 28.9       | 63.5       | 93         | 111        | 35.1       | 33.6       | 72.6       | 82.6       | 82.6       | 19         | 12    | 19     | 115  | 66.3083333  | 57.9078509 | 32.1878141 |
| BH108 Chloride TM184 mg/l            | 40.5       | 60.5       | 33.2       | 17.8       | 18.2       | 39.9       | 21.9       | 22.3       | 25.1       | 44.3       | 48         | 39.5       | 12    | 17.8   | 60.5 | 34.2666667  | 31.8326744 | 13.4368106 |
| BH109 Chloride TM184 mg/l            | 74         |            |            |            |            |            |            |            |            |            |            |            | 1     | 74     | 74   | 74          | 74         | #DIV/0!    |
| BH110 Chloride TM184 mg/l            | 48.5       | 55.8       | 57.1       | 33         | 50.6       | 57.3       | 65.8       | 44.7       | 33.2       | 61.4       | 54.5       | 49.2       | 12    | 33     | 65.8 | 50.925      | 49.8887608 | 10.133215  |
| BH89/10 Chloride TM184 mg/l          | 23.2       | 37.9       | 31         | 27         | 21         | 27.8       | 21.8       | 28.7       | 25.1       | 28.1       | 29.9       | 40.6       | 12    | 21     | 37.9 | 28.5083333  | 27.9792477 | 5.92919715 |
| BH89/11 Chloride TM184 mg/l          | 42.6       | 39.1       | 34         | 33.9       | 23         | 30.1       | 33.4       | 40         | 15.4       | 23.2       | 48.3       | 74.9       | 12    | 15.4   | 48.3 | 36.4916667  | 33.8896397 | 15.1895573 |
| BH90/17 Chloride TM184 mg/l          | 44.2       | 127        | 39.2       | 23         | 23.1       | 48.3       | 15.9       | 29.9       | 23.6       | 52.5       |            | 24.6       | 11    | 15.9   | 127  | 41.0272727  | 34.4773578 | 30.9263024 |
| BH96/4 Chloride TM184 mg/l           | 33.8       | 47.6       | 41.3       | 31.3       | 62.6       | 47.4       | 69.4       | 57.2       | 41         | 46.7       |            | 154        | 11    | 31.3   | 69.4 | 57.4818182  | 51.8121491 | 34.0285709 |
| P2A Chloride TM184 mg/l              | 770        | 1120       | 919        | 1160       | 1200       | 1480       | 31.6       | 1440       | 1550       | 1750       | 1670       | 2180       | 12    | 31.6   | 1750 | 1272.55     | 974.525314 | 549.061806 |
| P3A Chloride TM184 mg/l              | 123        | 110        | 108        | 119        | 115        | 129        | 133        | 113        | 115        | 98.2       | 117        | 104        | 12    | 98.2   | 133  | 115.35      | 114.958977 | 9.92595313 |
| P3B Chloride TM184 mg/l              | 123        | 131        |            |            |            | 127        | 126        | 98.9       | 41.6       | 101        |            | 76.3       | 8     | 41.6   | 131  | 103.1       | 97.5126089 | 31.1507395 |
| P4A Chloride TM184 mg/l              | 131        | 123        | 121        |            | 127        | 120        | 134        | 109        | 111        | 110        | 104        | 107        | 11    | 104    | 134  | 117.909091  | 117.504779 | 10.2708767 |
| P4B Chloride TM184 mg/l              | 146        | 154        | 154        |            | 132        | 128        | 130        | 117        | 133        | 111        | 112        | 122        | 11    | 111    | 154  | 130.818182  | 130.018588 | 15.2827889 |
| P6A Chloride TM184 mg/l              | 362        | 309        |            |            | 1950       | 248        | 682        | 219        | 257        | 138        | 2660       | 2780       | 10    | 138    | 2660 | 960.5       | 540.271486 | 1068.07743 |
| P6B Chloride TM184 mg/l              | 1510       | 2250       | 1930       |            | 681        | 1430       | 175        | 936        | 484        | 337        | 1460       | 1320       | 11    | 175    | 2250 | 1137.54545  | 903.822734 | 668.62551  |
| P6C Chloride TM184 mg/l              | 2810       | 2850       | 3030       |            | 1950       | 1960       | 1710       | 1900       | 1090       | 415        | 598        | 620        | 11    | 415    | 3030 | 1721.18182  | 1428.47577 | 943.021401 |
| P7B Chloride TM184 mg/l              | 51.7       | 52.8       | 55         | 51.5       | 53.9       | 56.3       | 57.5       | 54.9       | 49.8       | 54.6       | 51.4       | 51.8       | 12    | 49.8   | 57.5 | 53.4333333  | 53.3882333 | 2.29795693 |
| P8A Chloride TM184 mg/l              | 64.3       | 48.7       | 44.4       | 33.2       | 51.1       | 58.7       | 57.8       | 56.2       | 52.9       | 53.2       | 54.7       | 55.7       | 12    | 33.2   | 64.3 | 52.575      | 51.9417005 | 7.91788826 |
| P9A Chloride TM184 mg/l              | 74.8       |            |            | 80.2       | 31.9       | 81.7       | 83.3       | 74.1       | 69.8       | 70.7       | 53.6       | 49.8       | 10    | 31.9   | 83.3 | 66.99       | 64.6282042 | 16.6540252 |
| LAKE Chloride TM184 mg/l             | 48         | 55.2       | 51.1       | 45.4       | 46.1       | 51.3       | 52.5       | 46.2       | 43.9       | 46         | 54.3       | 50.9       | 12    | 43.9   | 55.2 | 49.2416667  | 49.109787  | 3.77322103 |

**NOTE:**

For rounds including and following December 2022, where a duplicate sample has been collected the most conservative result between the original sample and duplicate has been applied when calculating trends and statistics

**Point of Ayre Landfills  
Key Contaminants - Statistical Analysis**

|                                      |                      | 12/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020 | 01/06/2020 | 7/9/20 | 7/12/20 | 1/3/21 | 31/5/21 | 12/9/22 | 5/12/22 | Count | Min   | Max  | Average    | Geomean    | Std Dev    |
|--------------------------------------|----------------------|------------|------------|------------|------------|------------|------------|--------|---------|--------|---------|---------|---------|-------|-------|------|------------|------------|------------|
| LOD                                  |                      | 0.5        | 0.5        | 0.5        | 0.5        | 0.5        | 0.5        | 0.5    | 0.5     | 0.5    | 0.5     | 0.5     | 0.5     |       |       |      |            |            |            |
| WQS                                  |                      | 25         | 25         | 25         | 25         | 25         | 25         | 25     | 25      | 25     | 25      | 25      | 25      |       |       |      |            |            |            |
| WMP 26A Landfill Completion Criteria |                      | 500        | 500        | 500        | 500        | 500        | 500        | 500    | 500     | 500    | 500     | 500     | 500     |       |       |      |            |            |            |
| BH101A                               | Arsenic (diss.)TM152 | µg/l       | 1.34       | 2.46       | 1.44       | 0.683      | 0.922      | 0.888  | 7.75    | 0.947  | 1.11    | 0.578   | 0.75    | 3     | 0.578 | 7.75 | 1.82233333 | 1.32054843 | 2.00597119 |
| BH102A                               | Arsenic (diss.)TM152 | µg/l       | 81.6       | 5.76       | 108        | 106        | 100        | 105    | 117     | 117    | 123     | 98.8    | 132     | 140   | 5.76  | 140  | 102.846667 | 86.4265696 | 34.3510427 |
| BH103A                               | Arsenic (diss.)TM152 | µg/l       | 43.7       | 113        | 135        | 125        | 114        | 134    | 125     | 130    | 125     | 111     | 136     | 143   | 43.7  | 143  | 119.558333 | 115.406752 | 25.8779463 |
| BH103B                               | Arsenic (diss.)TM152 | µg/l       | 2.42       |            |            |            |            |        |         |        |         |         |         | 1     | 2.42  | 2.42 | 2.42       | 2.42       | #DIV/0!    |
| BH104A                               | Arsenic (diss.)TM152 | µg/l       | 7.79       | 13.1       | 17.6       | 17.4       | 12         | 14.8   | 16      | 13.1   | 14.4    | 12.9    | 8.42    | 14.9  | 7.79  | 17.6 | 13.5341667 | 13.1652655 | 3.07565945 |
| BH105A                               | Arsenic (diss.)TM152 | µg/l       | 21.1       | 53.2       | 74.5       | 76.8       | 77.3       | 94     | 35.7    | 66.1   | 53.9    | 61.7    | 51.3    | 40.2  | 21.1  | 94   | 58.8166667 | 54.9341188 | 20.5071089 |
| BH106A                               | Arsenic (diss.)TM152 | µg/l       | 1.11       | 84.1       | 89.5       | 71.9       | 13.2       | 63.3   | 94.6    | 6.91   | 42.8    | 5.93    | 203     | 215   | 1.11  | 215  | 74.2791667 | 35.2130971 | 71.6837815 |
| BH107                                | Arsenic (diss.)TM152 | µg/l       | 0.708      | 0.815      | 0.836      | 0.541      | 0.744      | 1.19   | 1.09    | 0.5    | 0.695   | 1.37    | 2.35    | 13    | 0.5   | 13   | 1.98658333 | 1.11425763 | 3.5044007  |
| BH108                                | Arsenic (diss.)TM152 | µg/l       | 1.72       | 0.5        | 0.614      | 0.541      | 0.5        | 2.06   | 1.04    | 0.589  | 0.663   | 0.5     | 0.5     | 0.658 | 0.5   | 2.06 | 0.82375    | 0.72076571 | 0.52483437 |
| BH109                                | Arsenic (diss.)TM152 | µg/l       | 12.5       |            |            |            |            |        |         |        |         |         |         | 1     | 12.5  | 12.5 | 12.5       | 12.5       | #DIV/0!    |
| BH110                                | Arsenic (diss.)TM152 | µg/l       | 2.86       | 2.42       | 6.22       | 5.27       | 7.92       | 4.62   | 0.919   | 3.4    | 2.68    | 3.59    | 4.73    | 4.07  | 0.919 | 7.92 | 4.05825    | 3.60414619 | 1.86713792 |
| BH89/10                              | Arsenic (diss.)TM152 | µg/l       | 0.979      | 0.619      | 1.09       | 0.768      | 0.652      | 0.754  | 0.852   | 0.63   | 0.887   | 0.915   | 0.95    | 1.1   | 0.552 | 1.1  | 0.84133333 | 0.82268653 | 0.18038914 |
| BH89/11                              | Arsenic (diss.)TM152 | µg/l       | 1.43       | 1.62       | 1.63       | 1.52       | 0.997      | 1.33   | 1.53    | 1.4    | 1.01    | 1.13    | 1.62    | 1.07  | 0.997 | 1.63 | 1.35725    | 1.33571025 | 0.24516752 |
| BH90/17                              | Arsenic (diss.)TM152 | µg/l       | 1.61       | 1.44       | 1.45       | 1.31       | 0.869      | 1.22   | 1.27    | 1.07   | 0.819   | 1.1     | 0.831   | 11    | 0.819 | 1.61 | 1.18081818 | 1.15216763 | 0.26820433 |
| BH96/4                               | Arsenic (diss.)TM152 | µg/l       | 1.56       | 1.16       | 2.33       | 1.02       | 0.5        | 1.23   | 1.95    | 1.26   | 1.25    | 0.689   | 1.6     | 11    | 0.5   | 2.33 | 1.32263636 | 1.22053897 | 0.52494614 |
| P2A                                  | Arsenic (diss.)TM152 | µg/l       | 24.2       | 24.9       | 24.8       | 27.1       | 18.9       | 20.3   | 2.09    | 8.47   | 26.8    | 17.3    | 9.8     | 17    | 2.09  | 27.1 | 18.4716667 | 15.6293144 | 8.02637338 |
| P3A                                  | Arsenic (diss.)TM152 | µg/l       | 113        | 116        | 111        | 120        | 96.5       | 98.5   | 112     | 104    | 125     | 74.6    | 114     | 149   | 74.6  | 149  | 111.133333 | 109.774035 | 17.8382803 |
| P3B                                  | Arsenic (diss.)TM152 | µg/l       | 47         | 95.6       |            |            |            | 64.5   | 62.1    | 4.61   | 1.85    | 26.8    | 4.91    | 8     | 1.85  | 95.6 | 38.42125   | 19.4161    | 34.4808499 |
| P4A                                  | Arsenic (diss.)TM152 | µg/l       | 14         | 1.39       | 96.6       |            | 84.4       | 90.3   | 3.01    | 97.4   | 85.3    | 101     | 119     | 113   | 1.39  | 119  | 73.2181818 | 40.5438209 | 44.4296394 |
| P4B                                  | Arsenic (diss.)TM152 | µg/l       | 31.3       | 117        | 173        |            | 59.8       | 132    | 90.5    | 74     | 37.3    | 102     | 187     | 67.2  | 31.3  | 187  | 97.3727273 | 84.6598351 | 51.2329794 |
| P6A                                  | Arsenic (diss.)TM152 | µg/l       | 1.65       | 22.5       |            |            | 4.43       | 42     | 10.2    | 1.03   | 1.33    | 11.4    | 5.2     | 7.65  | 1.03  | 42   | 10.739     | 5.80921988 | 12.744186  |
| P6B                                  | Arsenic (diss.)TM152 | µg/l       | 3.66       | 17.6       | 20.7       |            | 23.8       | 19.9   | 4.14    | 21.2   | 21.4    | 23.4    | 26.1    | 25    | 3.66  | 26.7 | 18.8636364 | 16.0755062 | 7.80948561 |
| P6C                                  | Arsenic (diss.)TM152 | µg/l       | 4.6        | 4.22       | 5.05       |            | 6.37       | 4.82   | 4.78    | 7.05   | 5.46    | 7.46    | 17.2    | 8.94  | 4.22  | 17.2 | 6.90454545 | 6.31348751 | 3.71022469 |
| P7B                                  | Arsenic (diss.)TM152 | µg/l       | 0.666      | 0.616      | 0.96       | 0.857      | 1.18       | 1.08   | 1.11    | 44.5   | 1.38    | 0.862   | 0.759   | 1.15  | 0.616 | 44.5 | 4.59333333 | 1.2941019  | 12.5693764 |
| P8A                                  | Arsenic (diss.)TM152 | µg/l       | 12.3       | 10.5       | 21.9       | 9.34       | 21.1       | 28     | 9.79    | 1.03   | 17.7    | 3.84    | 1.26    | 27.3  | 1.03  | 28   | 13.705     | 9.21174097 | 9.52265003 |
| P9A                                  | Arsenic (diss.)TM152 | µg/l       | 3.01       |            |            | 2.13       | 0.838      | 1.8    | 2.21    | 2.24   | 3.02    | 1.85    | 2.05    | 2.45  | 0.838 | 3.02 | 2.1598     | 2.0550394  | 0.62729433 |
| LAKE                                 | Arsenic (diss.)TM152 | µg/l       | 1.75       | 5.73       | 6.73       | 2.11       | 1.49       | 4.48   | 6.5     | 1.73   | 1.42    | 2       | 7.52    | 1.58  | 1.42  | 7.52 | 3.58666667 | 2.90463968 | 2.40958062 |

**NOTE:**

For rounds including and following December 2022, where a duplicate sample has been collected the most conservative result between the original sample and duplicate has been applied when calculating trends and statistics.

**Point of Ayre Landfills  
Key Contaminants - Statistical Analysis**

|                                      |   |       | 12/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020 | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 | Count | Min | Max         | Average     | Geomean     | Std Dev     |  |
|--------------------------------------|---|-------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------|-----|-------------|-------------|-------------|-------------|--|
| LOD                                  |   |       | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         |       |     |             |             |             |             |  |
| RPV (if no EQS)                      |   |       | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         |       |     |             |             |             |             |  |
| WMP 26A Landfill Completion Criteria |   |       | 100        | 100        | 100        | 100        | 100        | 100        | 100        | 100        | 100        | 100        | 100        | 100        |       |     |             |             |             |             |  |
| BH101A                               | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 10         | 204        | 134        | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 146        | 11    | 10  | 204         | 51.27272727 | 21.25062072 | 72.64308764 |  |
| BH102A                               | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 10         | 10         | 10         | 10         | 13         | 10         | 10         | 62         | 10         | 10         | 10         | 11    | 10  | 62          | 15          | 12.08910347 | 15.6140962  |  |
| BH103A                               | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 3490       | 166        | 322        | 165        | 438        | 289        | 106        | 34         | 21         | 154        | 57         | 12    | 10  | 3490        | 439.6666667 | 132.7193917 | 969.6467335 |  |
| BH103B                               | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 189        |            |            |            |            |            |            |            |            |            |            | 1     | 189 | 189         | 189         | 189         | #DIV/0!     |  |
| BH104A                               | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 248        | 106        | 10         | 95         | 18         | 10         | 10         | 58         | 10         | 10         | 79         | 12    | 10  | 248         | 52.08333333 | 26.5250363  | 69.97331743 |  |
| BH105A                               | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 240        | 22         | 10         | 272        | 12    | 10  | 240         | 52          | 18.32737371 | 95.59383776 |  |
| BH106A                               | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 17         | 10         | 10         | 10         | 10         | 50         | 10         | 180        | 10         | 10         | 10         | 12    | 10  | 180         | 28.08333333 | 15.20749279 | 49.19803827 |  |
| BH107                                | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 11    | 10  | 10          | 10          | 10          | 0           |  |
| BH108                                | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10    | 10  | 10          | 10          | 10          | 0           |  |
| BH109                                | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 4          |            |            |            |            |            |            |            |            |            |            | 1     | 4   | 4           | 4           | 4           | #DIV/0!     |  |
| BH110                                | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 10         | 10         | 12         | 10         | 51         | 10         | 10         | 10         | 10         | 10         | 10         | 11    | 10  | 51          | 13.90909091 | 11.79024573 | 12.31628634 |  |
| BH89/10                              | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 30         | 11         | 12    | 10  | 30          | 11.75       | 11.04611334 | 5.754444922 |  |
| BH89/11                              | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 19         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 11    | 10  | 19          | 10.81818182 | 10.60086335 | 2.713602101 |  |
| BH90/17                              | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 102        | 10         | 10         | 10         | 10    | 10  | 102         | 19.2        | 12.61420865 | 29.09295447 |  |
| BH96/4                               | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 110        | 10         | 10         | 10         | 10    | 10  | 110         | 20          | 12.70981615 | 31.6227766  |  |
| P2A                                  | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 25         | 10         | 10         | 10         | 11    | 10  | 25          | 11.36363636 | 10.86868604 | 4.522670169 |  |
| P3A                                  | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 409        | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 301        | 11         | 10    | 409 | 72.72727273 | 19.09569356 | 141.6333936 |             |  |
| P3B                                  | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 7     | 10  | 10          | 10          | 10          | 0           |  |
| P4A                                  | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 10         | 10         | 10         | 10         | 10         | 10         | 140        | 10         | 10         | 10         | 10         | 10    | 10  | 140         | 23          | 13.02005454 | 41.10960958 |  |
| P4B                                  | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 10         | 10         | 10         | 10         | 10         | 10         | 155        | 10         | 10         | 10         | 10         | 9     | 10  | 155         | 26.11111111 | 13.55998089 | 48.33333333 |  |
| P6A                                  | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 132        | 10         | 10         | 10         | 9     | 10  | 132         | 23.55555556 | 13.32012237 | 40.66666667 |  |
| P6B                                  | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 87         | 10         | 10         | 10         | 10         | 10         | 19         | 10         | 10         | 10         | 10         | 10    | 10  | 87          | 18.6        | 13.23814962 | 24.19917354 |  |
| P6C                                  | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 10         | 10         | 10         | 10         | 10         | 10         | 73         | 10         | 10         | 10         | 10         | 10    | 10  | 73          | 16.3        | 12.19922825 | 19.92234926 |  |
| P7B                                  | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 11    | 10  | 10          | 10          | 10          | 0           |  |
| P8A                                  | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 180        | 372        | 12    | 10  | 372         | 54.33333333 | 17.19826436 | 111.338414  |  |
| P9A                                  | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 10         | 9     | 10  | 10          | 10          | 10          | 0           |  |
| LAKE                                 | Total Aliphatics & Aromatics >C10-C40 (Aqueous) | TM174 | µg/l       | 10         | 10         | 10         | 10         | 10         | 10         | 106        | 10         | 10         | 10         | 10         | 11    | 10  | 106         | 18.72727273 | 12.9393467  | 26.94508908 |  |

NOTE:  
For rounds including and following December 2022, where a duplicate sample has been collected the most conservative result between the original sample and duplicate has been applied when calculating trends and statistics.

**Point of Ayre Landfills  
Key Contaminants - Statistical Analysis**

|                                      |                    |      |       |   |   | 12/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020 | 01/06/2020 | 07/09/2020 | 07/12/2020 | 1/3/21   | 31/5/21 | 12/9/22 | 5/12/22 | Count  | Min      | Max     | Average    | Geomean    | Std Dev    |            |
|--------------------------------------|--------------------|------|-------|---|---|------------|------------|------------|------------|------------|------------|------------|------------|----------|---------|---------|---------|--------|----------|---------|------------|------------|------------|------------|
| LOD                                  |                    |      |       |   |   | 0.082      | 0.082      | 0.082      | 0.082      | 0.082      | 0.082      | 0.082      | 0.082      | 0.082    | 0.082   | 0.082   | 0.082   | 0.082  |          |         |            |            |            |            |
| WQS                                  |                    |      |       |   |   | 0.082      | 0.082      | 0.082      | 0.082      | 0.082      | 0.082      | 0.082      | 0.082      | 0.082    | 0.082   | 0.082   | 0.082   | 0.082  |          |         |            |            |            |            |
| WMP 26A Landfill Completion Criteria |                    |      |       |   |   | 2          | 2          | 2          | 2          | 2          | 2          | 2          | 2          | 2        | 2       | 2       | 2       | 2      |          |         |            |            |            |            |
| BH101A                               | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 0.02248    | 0.8379     | 0.38845    | 0.00587    | 0.0349     | 0.01927    | 0.39545    | 0.0575   | 0.00589 | 0.005   | 0.005   | 0.408  | 12       | 0.005   | 0.8379     | 0.18197583 | 0.04293635 | 0.26669737 |
| BH102A                               | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 0.10629    | 0.4856     | 0.1047     | 0.13496    | 0.022      | 0.05241    | 0.048683   | 0.1505   | 0.08627 | 0.0937  | 0.187   | 5.441  | 12       | 0.022   | 5.441      | 0.57609275 | 0.13869669 | 1.53675012 |
| BH103A                               | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 13.237     | 1.73734    | 1.9407     | 0.7065     | 2.01747    | 1.54002    | 0.6161     | 0.54777  | 0.1911  | 0.569   | 0.257   | 0.0532 | 12       | 0.0532  | 13.237     | 1.9511     | 0.77796871 | 3.62279552 |
| BH103B                               | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 3.8449     |            |            |            |            |            |            |          |         |         |         |        | 1        | 3.8449  | 3.8449     | 3.8449     | 3.8449     | #DIV/0!    |
| BH104A                               | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 3.794      | 1.7791     | 3.0453     | 1.17416    | 0.50821    | 0.39965    | 0.3078     | 0.4479   | 1.2248  | 0.357   | 0.411   | 0.2763 | 12       | 0.2767  | 3.794      | 1.14045187 | 0.74709951 | 1.17396519 |
| BH105A                               | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 2.9255     | 2.73665    | 0.12303    | 0.3287     | 2.2835     | 0.0465     | 1.3688     | 3.83103  | 4.02476 | 5.73    | 1.04    | 0.905  | 12       | 0.0465  | 5.73       | 2.11178917 | 1.11883868 | 1.79273757 |
| BH106A                               | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 1.0647     | 0.1067     | 0.00873    | 0.06627    | 0.005      | 1.3679     | 0.05537    | 0.16842  | 0.3413  | 0.185   | 0.0812  | 0.1013 | 12       | 0.005   | 1.3679     | 0.2959825  | 0.1066895  | 0.44398232 |
| BH107                                | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 0.0054     | 0.00611    | 0.005      | 0.005      | 0.005      | 0.005      | 0.05831    | 0.002689 | 0.005   | 0.005   | 0.005   | 11     | 0.002689 | 0.05831 | 0.00977355 | 0.00605919 | 0.01611842 |            |
| BH108                                | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 0.02364    | 0.005      | 0.005      | 0.005      | 0.005      | 0.01395    | 0.49573    | 0.00115  | 0.005   | 0.005   |         | 10     | 0.00115  | 0.49573 | 0.056547   | 0.00884883 | 0.15450089 |            |
| BH109                                | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 0.04519    |            |            |            |            |            |            |          |         |         |         |        | 1        | 0.04519 | 0.04519    | 0.04519    | 0.04519    | #DIV/0!    |
| BH110                                | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 0.0142     | 0.1255     | 0.0633     | 0.00789    | 0.0106     | 0.0126     | 0.11307    | 0.01453  | 0.005   | 0.00753 | 0.005   |        | 11       | 0.005   | 0.1255     | 0.03447455 | 0.01710888 | 0.04507922 |
| BH89/10                              | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 0.005      | 0.005      | 0.005      | 0.005      | 0.02129    | 0.005      | 0.005      | 0.006    | 0.006   | 0.02268 | 0.005   |        | 11       | 0.005   | 0.02268    | 0.00827    | 0.00676495 | 0.00679945 |
| BH89/11                              | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 0.005      | 0.102      | 0.005      | 0.005      | 0.005      | 0.005      | 0.005      | 0.005    | 0.08132 | 0.005   | 0.005   | 11     | 0.005    | 0.102   | 0.02075636 | 0.00847498 | 0.03535937 |            |
| BH90/17                              | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 0.005      | 0.005      | 0.0183     | 0.005      | 0.005      | 0.005      | 0.03446    | 0.005    | 0.006   | 0.005   |         | 10     | 0.005    | 0.03446 | 0.009376   | 0.00703187 | 0.00974273 |            |
| BH96/4                               | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 0.005      | 0.005      | 0.005      | 0.005      | 0.005      | 0.005      | 0.01775    | 0.005    | 0.006   | 0.005   |         | 10     | 0.005    | 0.01775 | 0.006375   | 0.00577978 | 0.0040091  |            |
| P2A                                  | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 0.005      | 0.005      | 0.005      | 0.005      | 0.005      | 0.005      | 0.00785    | 0.00122  | 0.005   | 0.005   | 0.005   | 11     | 0.00122  | 0.00785 | 0.00491545 | 0.00458234 | 0.0014944  |            |
| P3A                                  | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 0.10393    | 0.005      | 0.0166     | 0.0285     | 0.005      | 0.02435    | 0.02677    | 0.03266  | 0.00674 | 0.0119  | 0.0148  | 11     | 0.005    | 0.10393 | 0.02511364 | 0.01684883 | 0.02789968 |            |
| P3B                                  | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 0.02254    | 0.005      |            |            |            | 0.0461     | 0.00539    | 0.0151   | 0.005   | 0.00718 |         | 7      | 0.005    | 0.0461  | 0.01518714 | 0.01061446 | 0.01515108 |            |
| P4A                                  | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 0.00747    | 0.005      | 0.005      |            |            | 0.00784    | 0.00717    | 0.00762  | 0.00684 | 0.005   |         | 10     | 0.005    | 0.00784 | 0.006194   | 0.00607438 | 0.00128535 |            |
| P4B                                  | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 0.005      | 0.005      | 0.005      |            |            | 0.04748    | 0.005      | 0.006    | 0.00538 |         |         | 9      | 0.005    | 0.04748 | 0.00987333 | 0.00660569 | 0.01410652 |            |
| P6A                                  | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 0.005      | 0.005      |            |            |            | 0.00746    | 0.005      | 0.006    | 0.005   | 0.005   |         | 9      | 0.005    | 0.00746 | 0.00538444 | 0.00533428 | 0.00084568 |            |
| P6B                                  | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 0.07998    | 0.005      | 0.005      |            |            | 0.005      | 0.005      | 0.006    | 0.005   | 0.005   |         | 10     | 0.005    | 0.07998 | 0.012598   | 0.00671876 | 0.02367771 |            |
| P6C                                  | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 0.005      | 0.005      | 0.005      |            |            | 0.005      | 0.005      | 0.00765  | 0.00223 | 0.005   | 0.005   | 10     | 0.00223  | 0.00765 | 0.004988   | 0.00481252 | 0.00127776 |            |
| P7B                                  | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 0.005      | 0.01091    | 0.005      | 0.00615    | 0.005      | 0.005      | 0.005      | 0.01034  | 0.005   | 0.005   | 0.005   | 11     | 0.005    | 0.01091 | 0.00612727 | 0.00584298 | 0.00225362 |            |
| P8A                                  | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 0.005      | 0.00744    | 0.005      | 0.005      | 0.005      | 0.005      | 0.005      | 0.00327  | 0.005   | 0.2141  | 0.005   | 0.0645 | 12       | 0.00327 | 0.2141     | 0.0274425  | 0.00844315 | 0.06122092 |
| P9A                                  | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 0.005      |            |            |            |            | 0.005      | 0.005      | 0.00091  | 0.005   | 0.01685 | 0.005   |        | 9        | 0.00091 | 0.01685    | 0.00586222 | 0.00473567 | 0.00433676 |
| LAKE                                 | PAH, Total D-TM178 | µg/l | 0.082 | / | / | 2          | 0.005      | 0.005      | 0.005      | 0.0075     | 0.005      | 0.005      | 0.005      | 0.005    | 0.005   | 0.005   | 0.005   |        | 11       | 0.005   | 0.0075     | 0.00522727 | 0.00518774 | 0.00075378 |

**NOTE:**

For rounds including and following December 2022, where a duplicate sample has been collected the most conservative result between the original sample and duplicate has been applied when calculating trends and statistics

**Point of Ayre Landfills  
Key Contaminants - Statistical Analysis**

|   |           | 12/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020 | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 | Count | Min    | Max    | Average    | Geomean    | Std Dev    |  |
|---|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------|--------|--------|------------|------------|------------|--|
| LOD   |           | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          |       |        |        |            |            |            |  |
| WQS   |           | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          |       |        |        |            |            |            |  |
| <b>WMP 26A Landfill Completion Criteria</b> |           |            |            |            |            |            |            |            |            |            |            |            |            |       |        |        |            |            |            |  |
| BH101A                                      | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 11    |        | 4.82   | 1.78181818 | 1.51160386 | 1.22925033 |  |
| BH102A                                      | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 12    | 3.21   | 35.66  | 11.6941667 | 9.42032938 | 8.85799224 |  |
| BH103A                                      | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 11    |        | 82.18  | 9.01454545 | 1.91296441 | 24.3264434 |  |
| BH103B                                      | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 1     | 165.71 | 165.71 | 165.71     | 165.71     | #DIV/0!    |  |
| BH104A                                      | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 12    |        | 17.25  | 3.1525     | 1.915357   | 4.60027297 |  |
| BH105A                                      | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 12    |        | 40.13  | 14.0508333 | 9.352591   | 10.8168954 |  |
| BH106A                                      | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 11    |        | 38.53  | 6.92090909 | 2.74996688 | 11.6575662 |  |
| BH107                                       | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 11    |        | 7.76   | 1.61454545 | 1.20474885 | 2.03821668 |  |
| BH108                                       | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 11    |        |        |            |            | 0          |  |
| BH109                                       | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 1     | 5.79   | 5.79   | 5.79       | 5.79       | #DIV/0!    |  |
| BH110                                       | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 11    |        | 4.11   | 1.28272727 | 1.13711346 | 0.93770028 |  |
| BH89/10                                     | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 12    |        | 24.1   | 2.925      | 1.30367125 | 6.66839561 |  |
| BH89/11                                     | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 11    |        |        |            |            | 0          |  |
| BH90/17                                     | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 11    |        | 3.91   | 1.26454545 | 1.13196628 | 0.87739801 |  |
| BH96/4                                      | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 10    |        | 8.62   | 1.762      | 1.24036849 | 2.40965558 |  |
| P2A   | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 11    |        | 6.82   | 1.51090909 | 1.18747221 | 1.89449376 |  |
| P3A   | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 12    |        | 3.7    | 1.32       | 1.2123465  | 0.76247206 |  |
| P3B   | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 7     |        |        |            |            | 0          |  |
| P4A   | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 10    |        |        |            |            | 0          |  |
| P4B   | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 10    |        |        |            |            | 0          |  |
| P6A   | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 9     |        |        |            |            | 0          |  |
| P6B   | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 10    |        |        |            |            | 0          |  |
| P6C   | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 10    |        | 1.28   | 1.061      | 1.05678194 | 0.10311267 |  |
| P7B   | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 11    |        | 1.14   | 1.01272727 | 1.01198299 | 0.04221159 |  |
| P8A   | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 12    |        | 295    | 26.4083333 | 2.36088299 | 84.8019126 |  |
| P9A   | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 10    | 3.57   | 54.72  | 11.087     | 7.28941275 | 15.5167544 |  |
| LAKE  | Total VOC | µg/l       | 1          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | 11    |        |        |            |            | 0          |  |

NOTE:  
For rounds including and following December 2022, where a duplicate sample has been collected the most conservative result between the original sample and duplicate has been applied when calculating trends and statistics

**Point of Ayre Landfills  
Key Contaminants - Statistical Analysis**

| Test                                 | Method          | Units | 12/03/2019 | 16/07/2019 | 10/09/2019 | 02/12/2019 | 02/03/2020 | 01/06/2020 | 07/09/2020 | 07/12/2020 | 01/03/2021 | 31/05/2021 | 12/09/2022 | 05/12/2022 | Count | Min   | Max   | Average    | Geomean    | Std Dev     |
|--------------------------------------|-----------------|-------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------|-------|-------|------------|------------|-------------|
| LOD                                  |                 |       | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      |       |       |       |            |            |             |
| WQS                                  |                 |       | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      |       |       |       |            |            |             |
| WMP 26A Landfill Completion Criteria |                 |       | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          | /          |       |       |       |            |            |             |
| BH101A                               | PCB congener 28 | TM197 | µg/l       | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 11    | 0.015 | 0.015 | 0.015      | 0.015      | 3.63879E-18 |
| BH102A                               | PCB congener 28 | TM197 | µg/l       | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 11    | 0.015 | 0.015 | 0.015      | 0.015      | 3.63879E-18 |
| BH103A                               | PCB congener 28 | TM197 | µg/l       | 0.415      | 0.018      | 0.0229     | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 11    | 0.015 | 0.415 | 0.05235455 | 0.02143288 | 0.120300635 |
| BH103B                               | PCB congener 28 | TM197 | µg/l       | 0.015      |            |            |            |            |            |            |            |            |            |            | 1     | 0.015 | 0.015 | 0.015      | 0.015      | #DIV/0!     |
| BH104A                               | PCB congener 28 | TM197 | µg/l       | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 11    | 0.015 | 0.015 | 0.015      | 0.015      | 3.63879E-18 |
| BH105A                               | PCB congener 28 | TM197 | µg/l       | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 11    | 0.015 | 0.015 | 0.015      | 0.015      | 3.63879E-18 |
| BH106A                               | PCB congener 28 | TM197 | µg/l       | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 11    | 0.015 | 0.015 | 0.015      | 0.015      | 3.63879E-18 |
| BH107                                | PCB congener 28 | TM197 | µg/l       | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 11    | 0.015 | 0.015 | 0.015      | 0.015      | 3.63879E-18 |
| BH108                                | PCB congener 28 | TM197 | µg/l       | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      |            |            | 10    | 0.015 | 0.015 | 0.015      | 0.015      | 3.65712E-18 |
| BH109                                | PCB congener 28 | TM197 | µg/l       | 0.015      |            |            |            |            |            |            |            |            |            |            | 1     | 0.015 | 0.015 | 0.015      | 0.015      | #DIV/0!     |
| BH110                                | PCB congener 28 | TM197 | µg/l       | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 11    | 0.015 | 0.015 | 0.015      | 0.015      | 3.63879E-18 |
| BH89/10                              | PCB congener 28 | TM197 | µg/l       | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 11    | 0.015 | 0.015 | 0.015      | 0.015      | 3.63879E-18 |
| BH89/11                              | PCB congener 28 | TM197 | µg/l       | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 11    | 0.015 | 0.015 | 0.015      | 0.015      | 3.63879E-18 |
| BH90/17                              | PCB congener 28 | TM197 | µg/l       | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 10    | 0.015 | 0.015 | 0.015      | 0.015      | 3.65712E-18 |
| BH96/4                               | PCB congener 28 | TM197 | µg/l       | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      |            |            | 10    | 0.015 | 0.015 | 0.015      | 0.015      | 3.65712E-18 |
| P2A                                  | PCB congener 28 | TM197 | µg/l       | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 11    | 0.015 | 0.015 | 0.015      | 0.015      | 3.63879E-18 |
| P3A                                  | PCB congener 28 | TM197 | µg/l       | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 11    | 0.015 | 0.015 | 0.015      | 0.015      | 3.63879E-18 |
| P3B                                  | PCB congener 28 | TM197 | µg/l       | 0.015      | 0.015      |            |            |            |            |            |            |            |            |            | 6     | 0.015 | 0.015 | 0.015      | 0.015      | 0           |
| P4A                                  | PCB congener 28 | TM197 | µg/l       | 0.015      | 0.015      | 0.015      |            |            |            |            |            |            |            |            | 10    | 0.015 | 0.015 | 0.015      | 0.015      | 3.65712E-18 |
| P4B                                  | PCB congener 28 | TM197 | µg/l       | 0.015      | 0.015      | 0.015      |            |            |            |            |            |            |            |            | 9     | 0.015 | 0.015 | 0.015      | 0.015      | 1.83995E-18 |
| P6A                                  | PCB congener 28 | TM197 | µg/l       | 0.015      | 0.015      |            |            |            |            |            |            |            |            |            | 9     | 0.015 | 0.015 | 0.015      | 0.015      | 1.83995E-18 |
| P6B                                  | PCB congener 28 | TM197 | µg/l       | 0.015      | 0.015      | 0.015      |            |            |            |            |            |            |            |            | 10    | 0.015 | 0.015 | 0.015      | 0.015      | 3.65712E-18 |
| P6C                                  | PCB congener 28 | TM197 | µg/l       | 0.015      | 0.015      | 0.015      |            |            |            |            |            |            |            |            | 10    | 0.015 | 0.015 | 0.015      | 0.015      | 3.65712E-18 |
| P7B                                  | PCB congener 28 | TM197 | µg/l       | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 11    | 0.015 | 0.015 | 0.015      | 0.015      | 3.63879E-18 |
| P8A                                  | PCB congener 28 | TM197 | µg/l       | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 11    | 0.015 | 0.015 | 0.015      | 0.015      | 3.63879E-18 |
| P9A                                  | PCB congener 28 | TM197 | µg/l       | 0.015      |            |            |            |            |            |            |            |            |            |            | 9     | 0.015 | 0.015 | 0.015      | 0.015      | 1.83995E-18 |
| LAKE                                 | PCB congener 28 | TM197 | µg/l       | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 0.015      | 11    | 0.015 | 0.015 | 0.015      | 0.015      | 3.63879E-18 |

NOTE:

For rounds including and following December 2022, where a duplicate sample has been collected the most conservative result between the original sample and duplicate has been applied when calculating trends and statistic:





# APPENDIX H

## THRESHOLD ANALYSIS

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Point of Ayre Landfill Sites  
 Threshold - Absolute (maximum values)  
 Data collected between September 2022 - December 2022



|         | Ammoniacal nitrogen      | Manganese                | Iron                     | Chloride              | Arsenic               | Total TPH                | Total PAH                | Total VOC                | Total PCB                |
|---------|--------------------------|--------------------------|--------------------------|-----------------------|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| BH101A  | Below Threshold Limit    | Above Threshold Limit    | Below Threshold Limit    | Below Threshold Limit | Below Threshold Limit | Above Threshold Limit    | Above Threshold Limit    | Above Threshold Limit    | Contaminant not detected |
| BH102A  | Above Threshold Limit    | Above Threshold Limit    | Above Threshold Limit    | Below Threshold Limit | Above Threshold Limit | Contaminant not detected | Above Threshold Limit    | Above Threshold Limit    | Contaminant not detected |
| BH103A  | Above Threshold Limit    | Above Threshold Limit    | Above Threshold Limit    | Below Threshold Limit | Above Threshold Limit | Above Threshold Limit    | Above Threshold Limit    | Contaminant not detected | Contaminant not detected |
| BH103B  | Location not sampled     | Location not sampled     | Location not sampled     | Location not sampled  | Location not sampled  | Location not sampled     | Location not sampled     | Location not sampled     | Location not sampled     |
| BH104A  | Above Threshold Limit    | Above Threshold Limit    | Above Threshold Limit    | Below Threshold Limit | Below Threshold Limit | Above Threshold Limit    | Above Threshold Limit    | Above Threshold Limit    | Contaminant not detected |
| BH105A* | Above Threshold Limit    | Above Threshold Limit    | Above Threshold Limit    | Below Threshold Limit | Above Threshold Limit | Above Threshold Limit    | Above Threshold Limit    | Above Threshold Limit    | Contaminant not detected |
| BH106A  | Above Threshold Limit    | Above Threshold Limit    | Above Threshold Limit    | Below Threshold Limit | Above Threshold Limit | Contaminant not detected | Above Threshold Limit    | Contaminant not detected | Contaminant not detected |
| BH107   | Above Threshold Limit    | Above Threshold Limit    | Below Threshold Limit    | Below Threshold Limit | Below Threshold Limit | Contaminant not detected | Contaminant not detected | Contaminant not detected | Contaminant not detected |
| BH108   | Contaminant not detected | Below Threshold Limit    | Contaminant not detected | Below Threshold Limit | Below Threshold Limit | Location not sampled     | Location not sampled     | Location not sampled     | Location not sampled     |
| BH109   | Location not sampled     | Location not sampled     | Location not sampled     | Location not sampled  | Location not sampled  | Location not sampled     | Location not sampled     | Location not sampled     | Location not sampled     |
| BH110   | Contaminant not detected | Above Threshold Limit    | Below Threshold Limit    | Below Threshold Limit | Below Threshold Limit | Contaminant not detected | Contaminant not detected | Contaminant not detected | Contaminant not detected |
| BH89/10 | Above Threshold Limit    | Above Threshold Limit    | Below Threshold Limit    | Below Threshold Limit | Below Threshold Limit | Above Threshold Limit    | Contaminant not detected | Contaminant not detected | Contaminant not detected |
| BH89/11 | Contaminant not detected | Below Threshold Limit    | Contaminant not detected | Below Threshold Limit | Below Threshold Limit | Contaminant not detected | Contaminant not detected | Contaminant not detected | Contaminant not detected |
| BH90/17 | Contaminant not detected | Below Threshold Limit    | Contaminant not detected | Below Threshold Limit | Below Threshold Limit | Location not sampled     | Location not sampled     | Contaminant not detected | Location not sampled     |
| BH96/4  | Contaminant not detected | Contaminant not detected | Contaminant not detected | Below Threshold Limit | Below Threshold Limit | Location not sampled     | Location not sampled     | Location not sampled     | Location not sampled     |
| P2A     | Above Threshold Limit    | Above Threshold Limit    | Above Threshold Limit    | Above Threshold Limit | Below Threshold Limit | Contaminant not detected | Contaminant not detected | Contaminant not detected | Contaminant not detected |
| P3A     | Above Threshold Limit    | Above Threshold Limit    | Above Threshold Limit    | Below Threshold Limit | Above Threshold Limit | Above Threshold Limit    | Below Threshold Limit    | Contaminant not detected | Contaminant not detected |
| P3B     | Above Threshold Limit    | Above Threshold Limit    | Below Threshold Limit    | Below Threshold Limit | Below Threshold Limit | Location not sampled     | Below Threshold Limit    | Contaminant not detected | Location not sampled     |
| P4A     | Above Threshold Limit    | Above Threshold Limit    | Above Threshold Limit    | Below Threshold Limit | Above Threshold Limit | Contaminant not detected | Contaminant not detected | Contaminant not detected | Contaminant not detected |
| P4B     | Above Threshold Limit    | Above Threshold Limit    | Above Threshold Limit    | Below Threshold Limit | Above Threshold Limit | Location not sampled     | Location not sampled     | Location not sampled     | Location not sampled     |
| P6A     | Above Threshold Limit    | Above Threshold Limit    | Above Threshold Limit    | Above Threshold Limit | Above Threshold Limit | Contaminant not detected | Contaminant not detected | Contaminant not detected | Contaminant not detected |
| P6B     | Above Threshold Limit    | Above Threshold Limit    | Above Threshold Limit    | Above Threshold Limit | Above Threshold Limit | Contaminant not detected | Contaminant not detected | Contaminant not detected | Contaminant not detected |
| P6C     | Above Threshold Limit    | Above Threshold Limit    | Above Threshold Limit    | Above Threshold Limit | Below Threshold Limit | Contaminant not detected | Contaminant not detected | Contaminant not detected | Contaminant not detected |
| P7B     | Contaminant not detected | Above Threshold Limit    | Below Threshold Limit    | Below Threshold Limit | Below Threshold Limit | Contaminant not detected | Contaminant not detected | Contaminant not detected | Contaminant not detected |
| P8A*    | Above Threshold Limit    | Above Threshold Limit    | Above Threshold Limit    | Below Threshold Limit | Above Threshold Limit | Above Threshold Limit    | Below Threshold Limit    | Above Threshold Limit    | Contaminant not detected |
| P9A     | Above Threshold Limit    | Above Threshold Limit    | Above Threshold Limit    | Below Threshold Limit | Below Threshold Limit | Contaminant not detected | Contaminant not detected | Above Threshold Limit    | Contaminant not detected |
| LAKE    | Contaminant not detected | Below Threshold Limit    | Below Threshold Limit    | Below Threshold Limit | Below Threshold Limit | Contaminant not detected | Contaminant not detected | Contaminant not detected | Contaminant not detected |

|                          |
|--------------------------|
| Contaminant not detected |
| Below Threshold Limit    |
| Above Threshold Limit    |
| Location not sampled     |

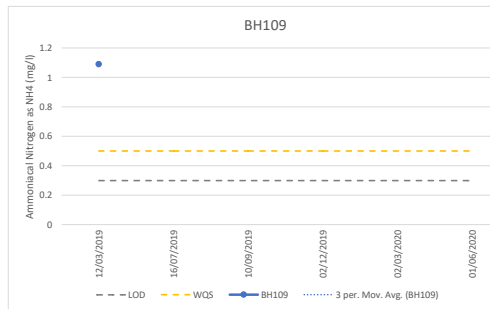
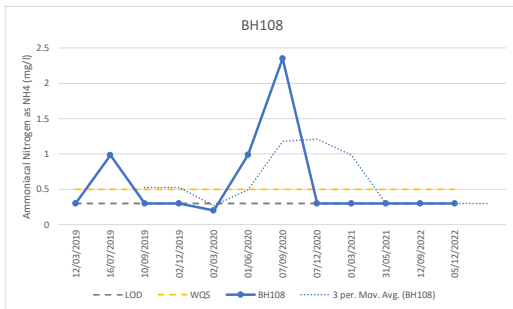
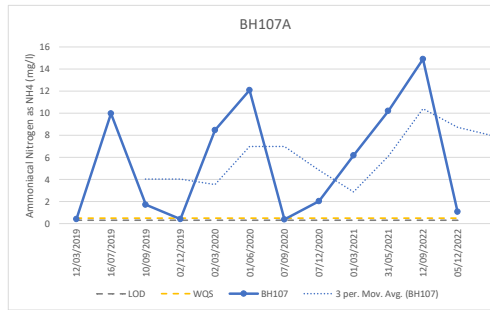
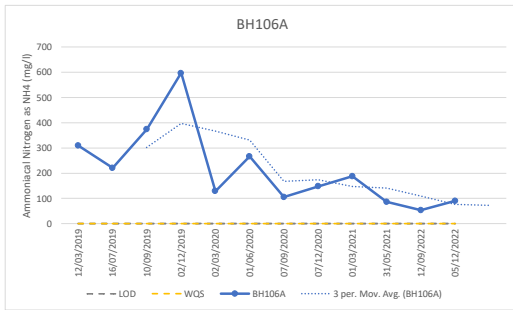
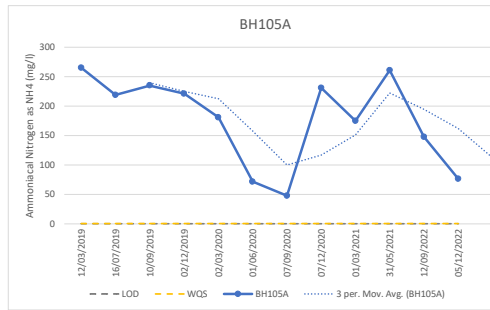
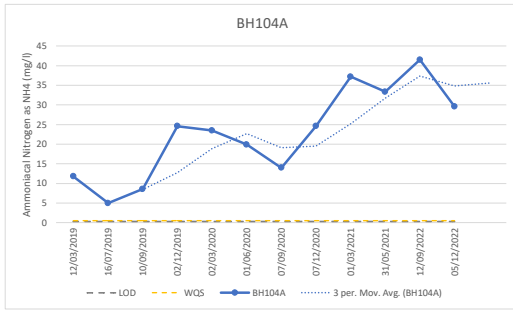
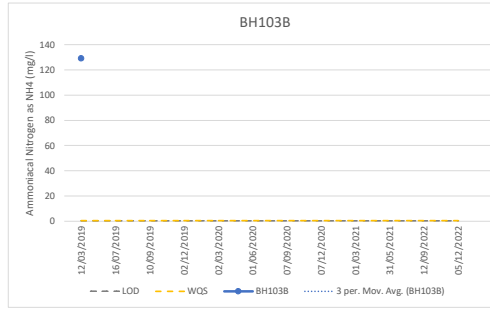
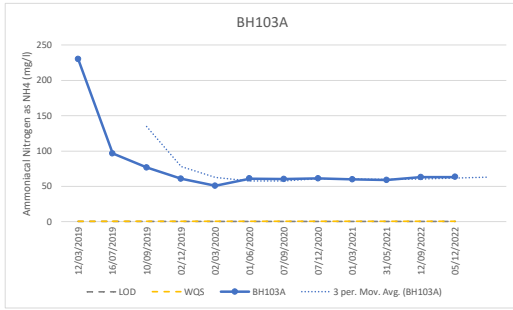
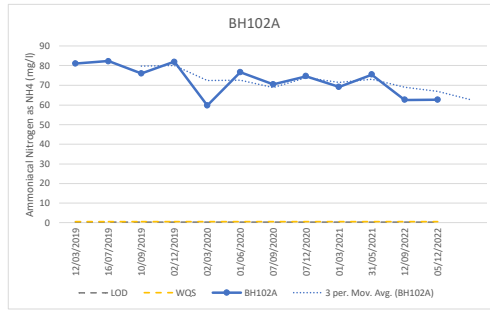
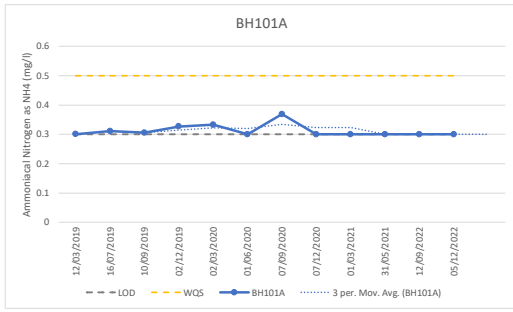
\*Note: During the December 2022 round, the maximum result from the duplicate and original sample has been considered in the assessment

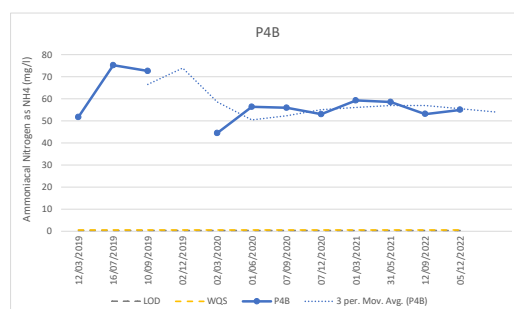
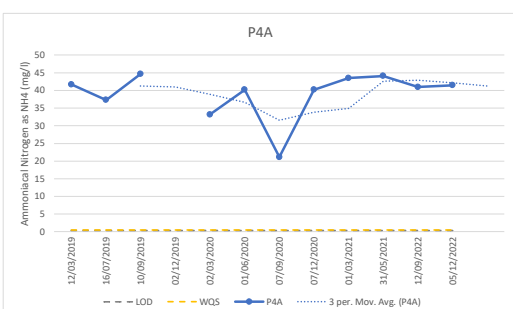
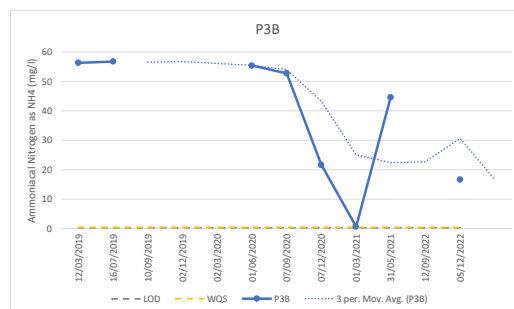
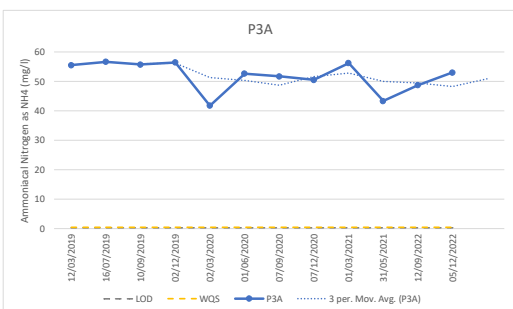
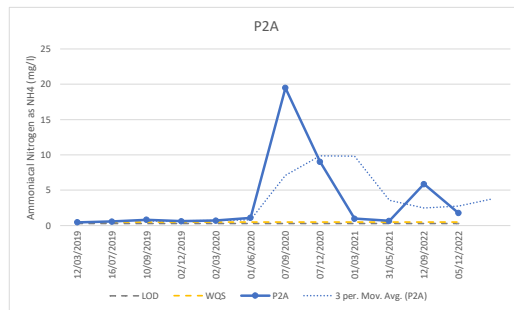
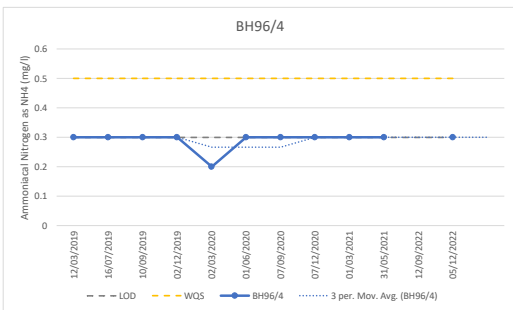
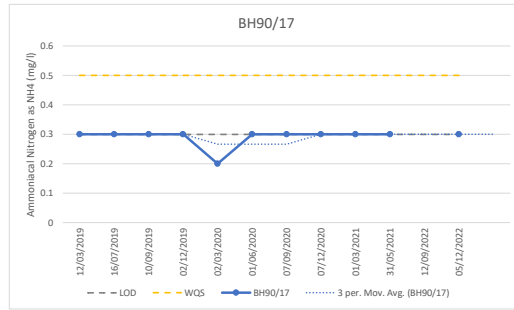
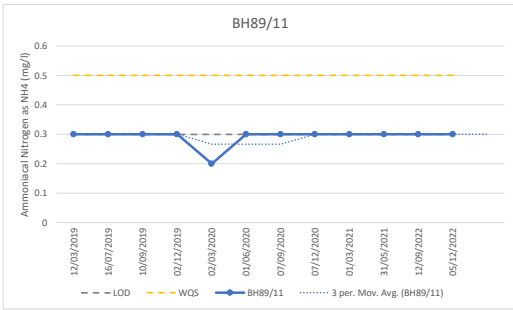
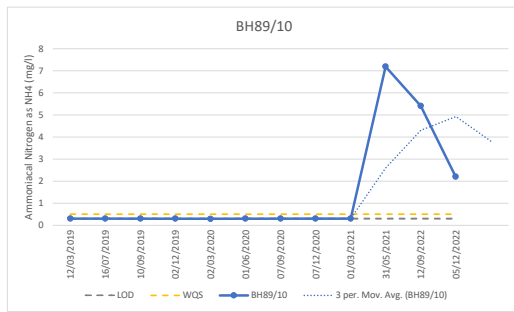
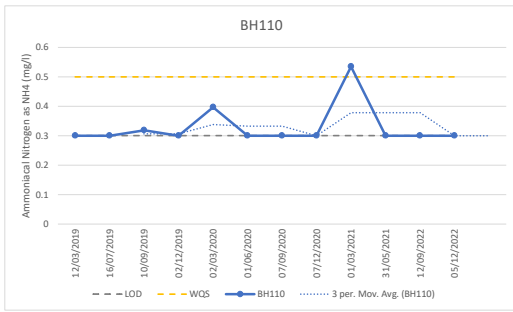


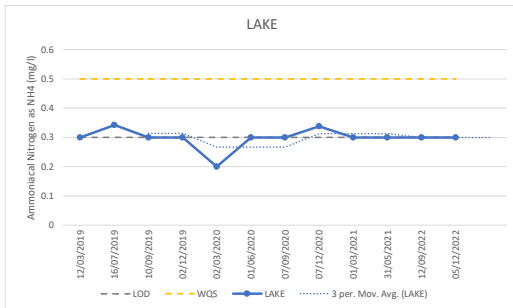
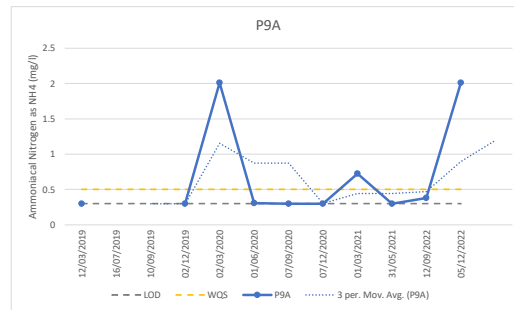
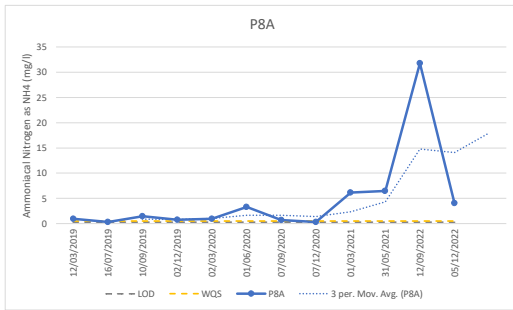
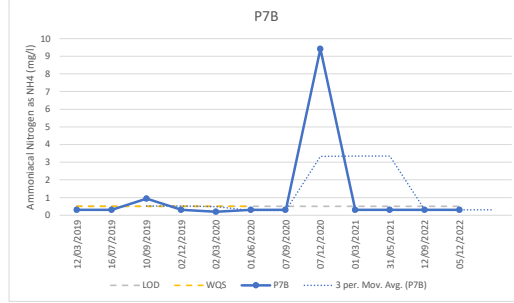
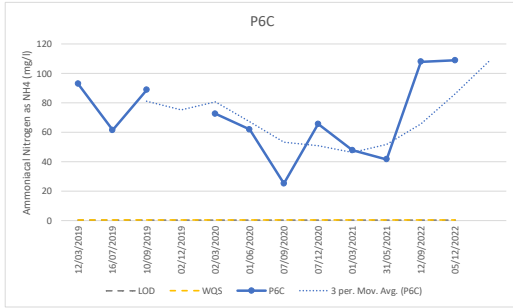
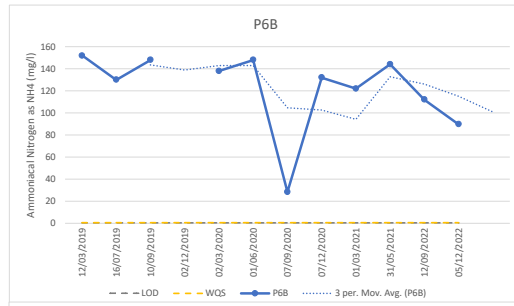
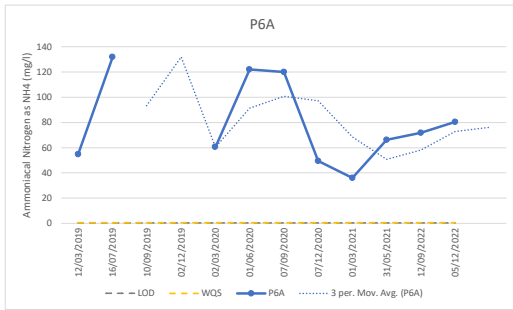
# APPENDIX I

## CONTAMINANT TIME HISTORY PLOTS

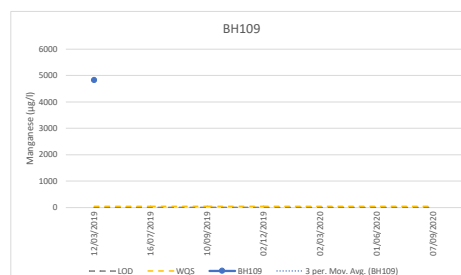
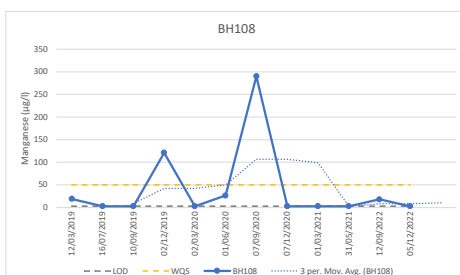
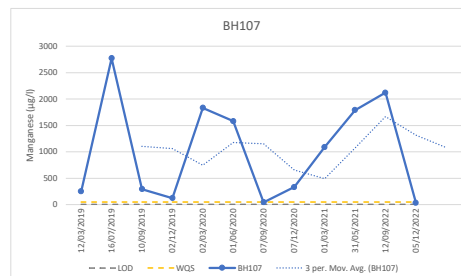
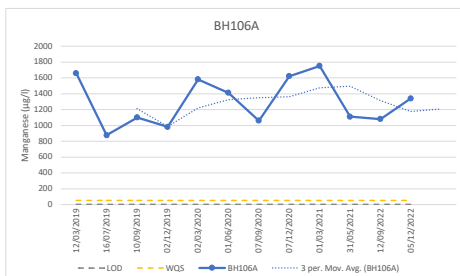
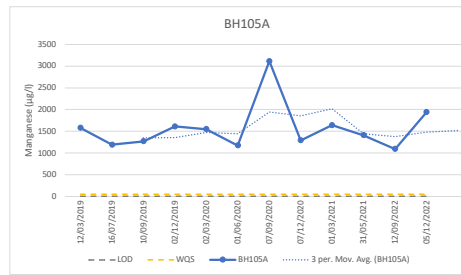
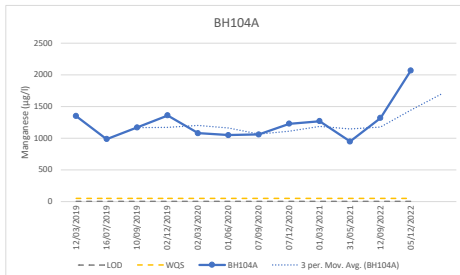
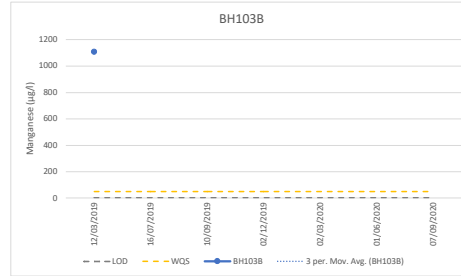
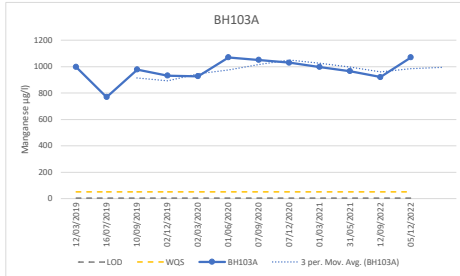
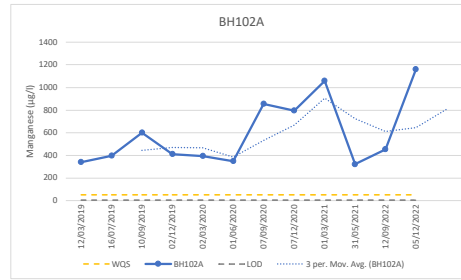
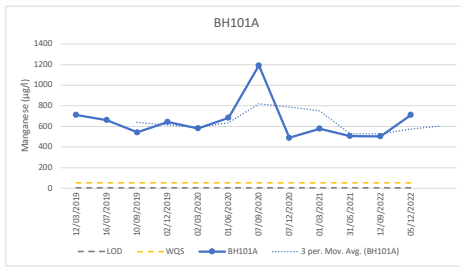
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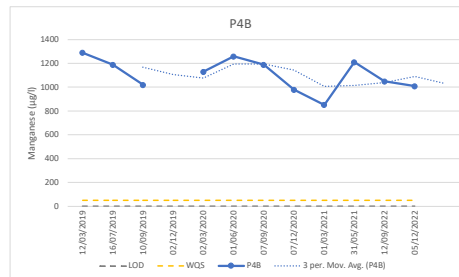
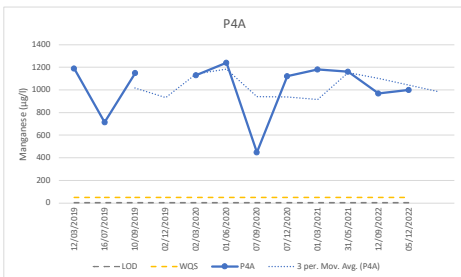
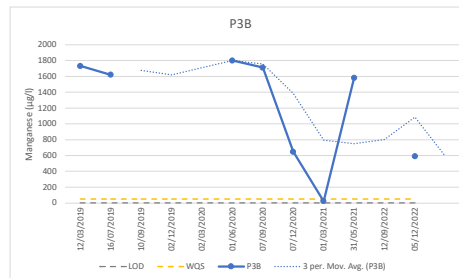
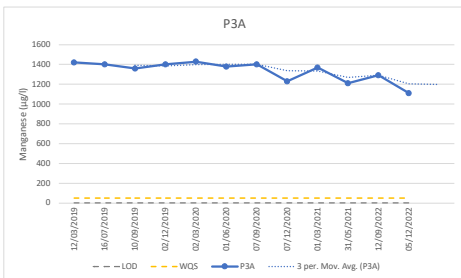
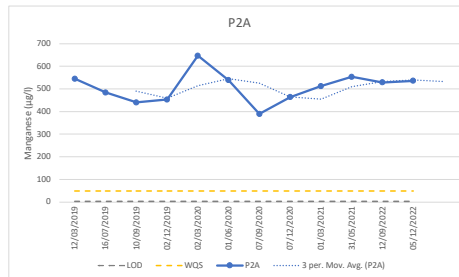
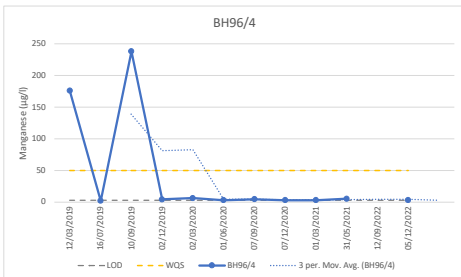
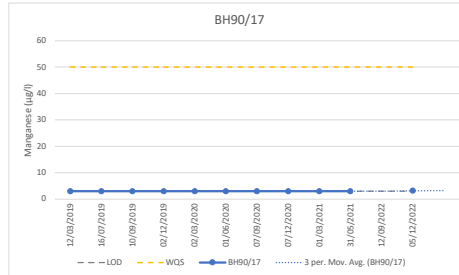
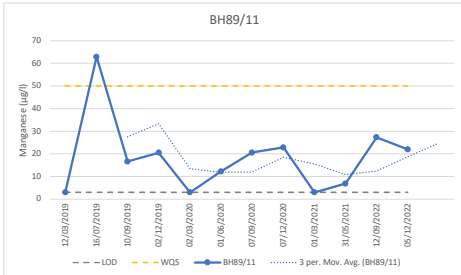
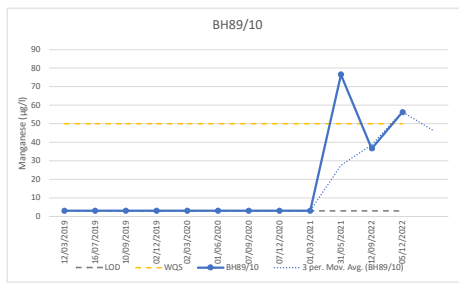
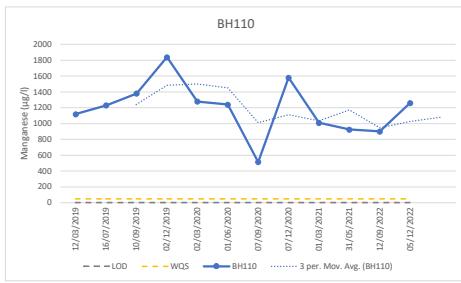


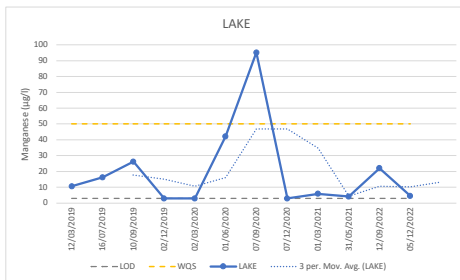
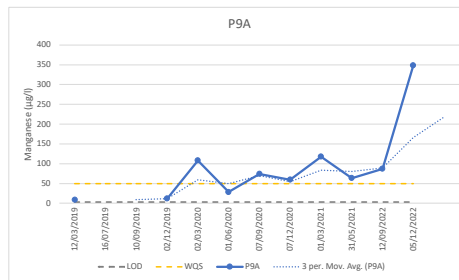
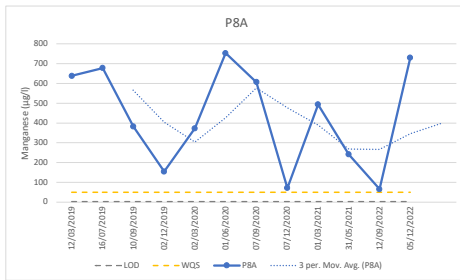
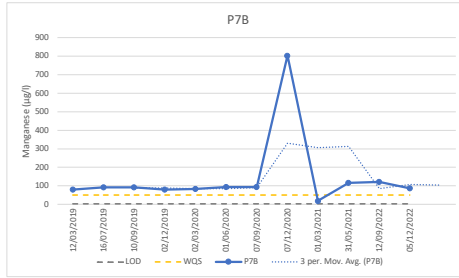
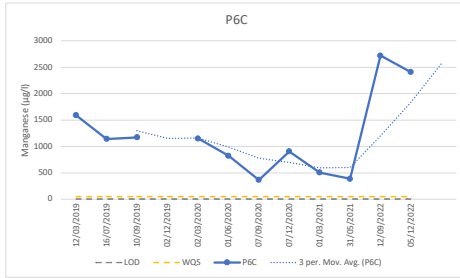
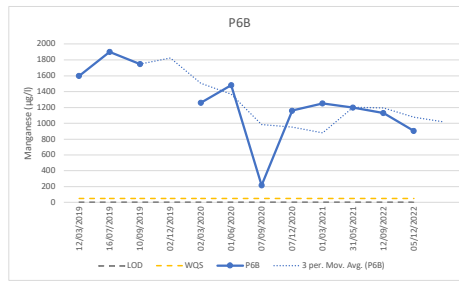
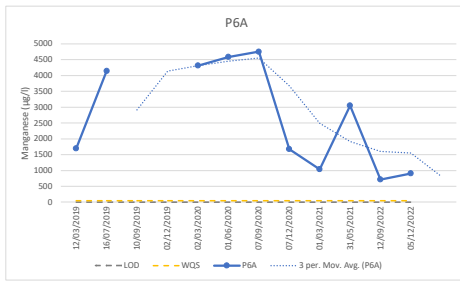


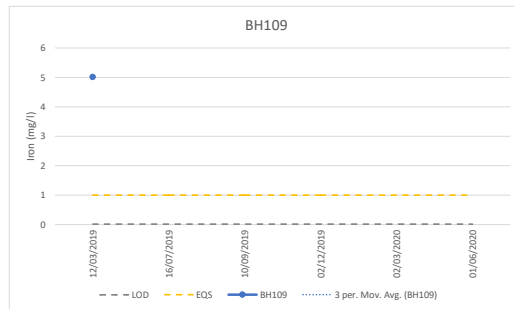
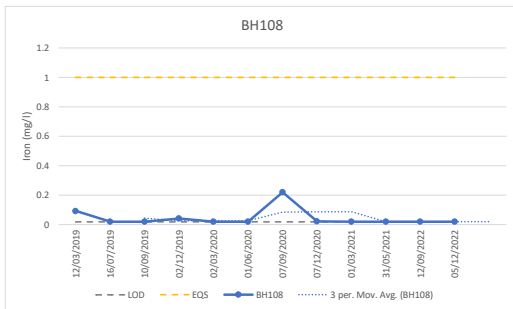
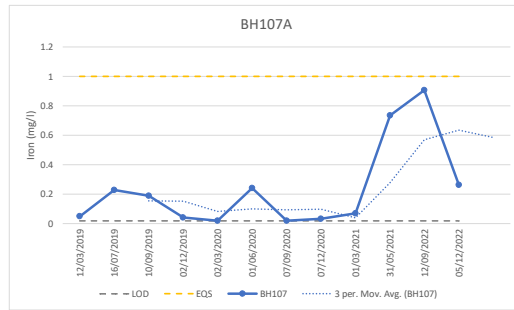
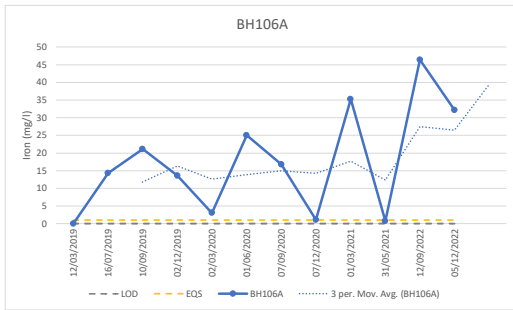
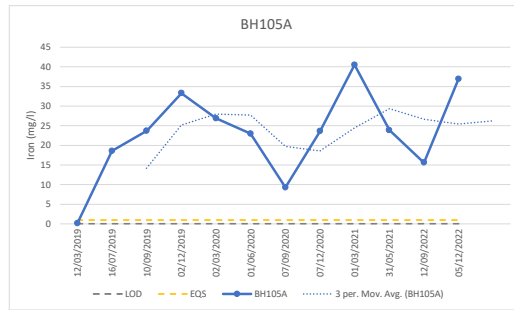
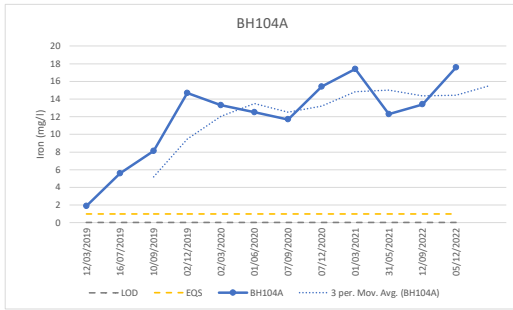
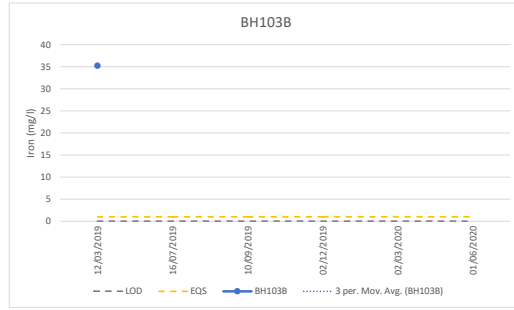
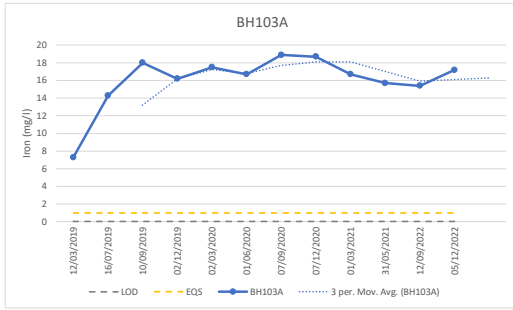
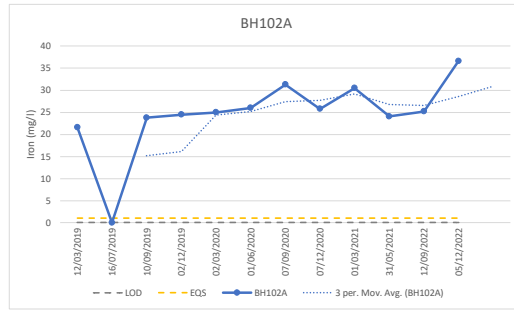
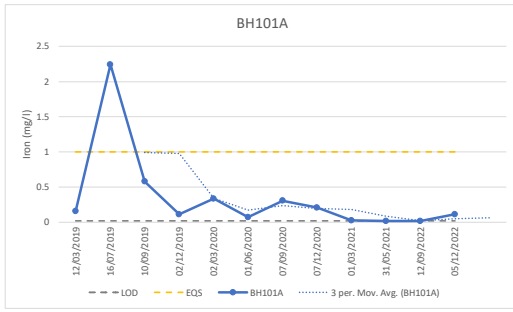


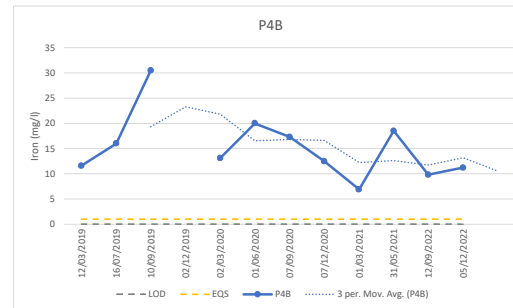
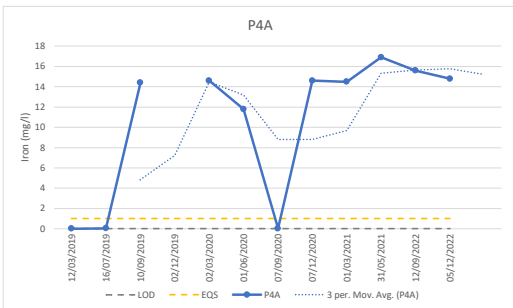
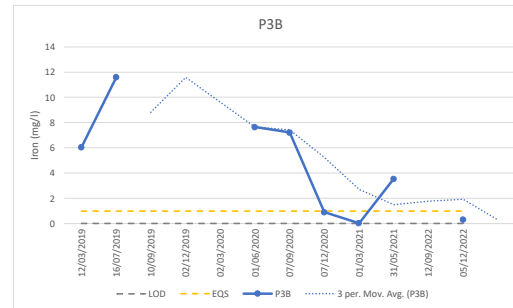
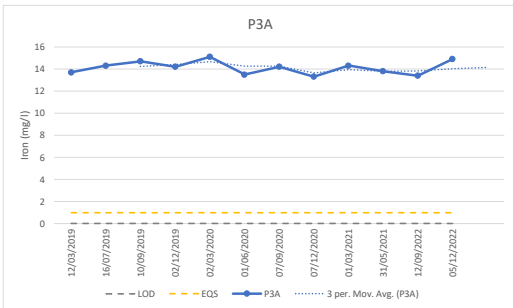
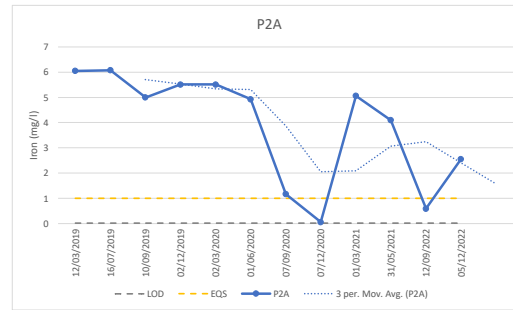
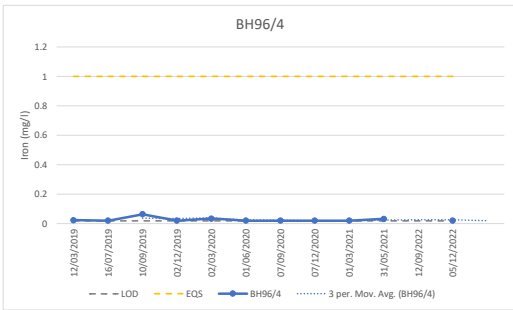
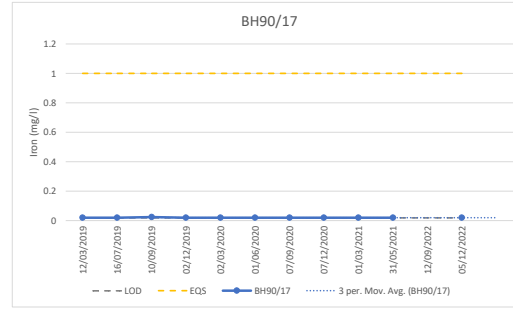
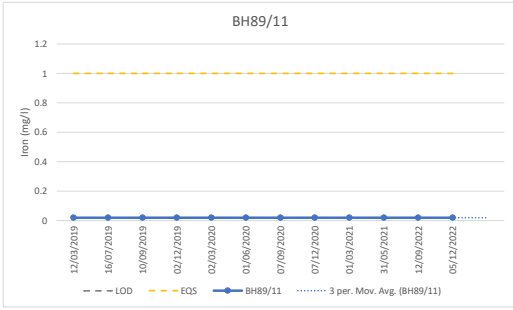
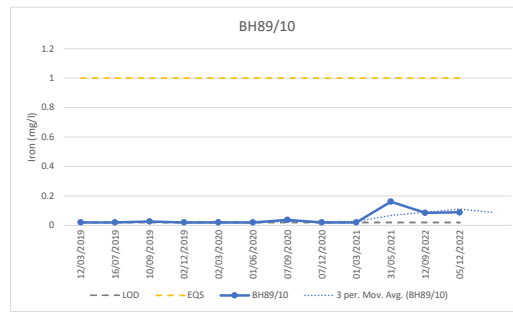
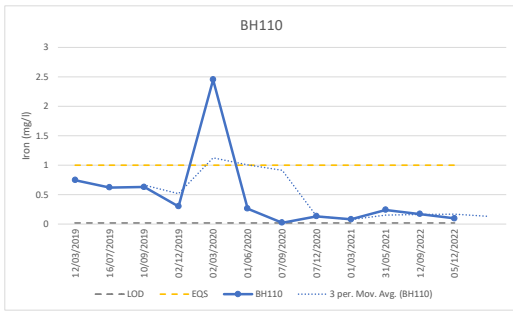


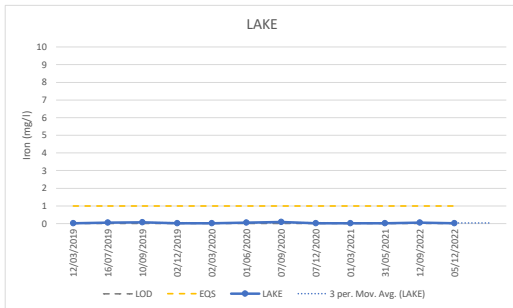
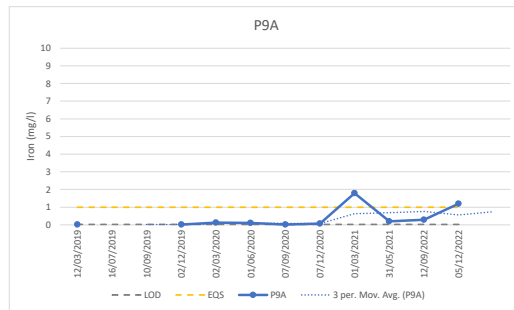
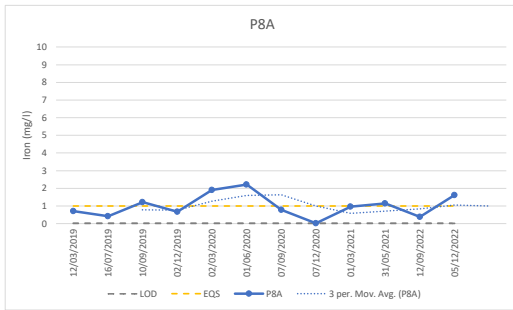
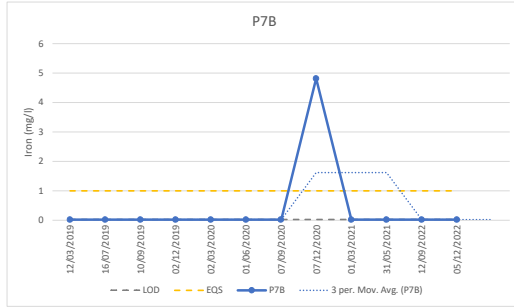
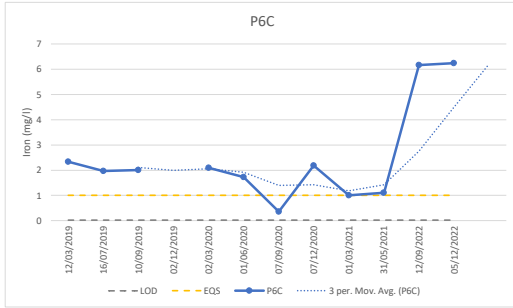
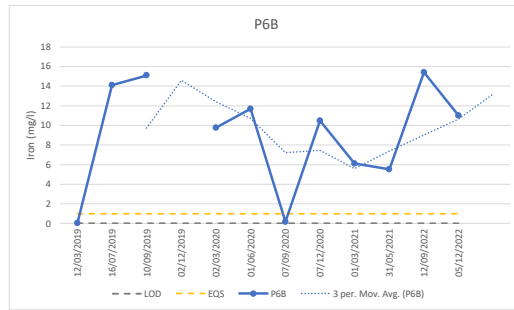
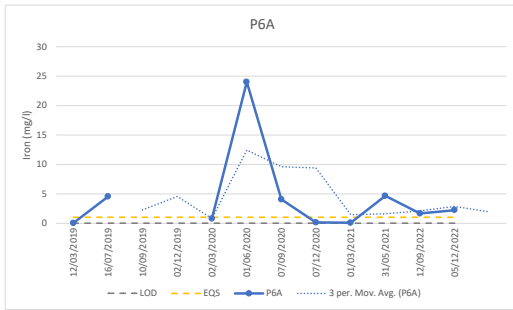




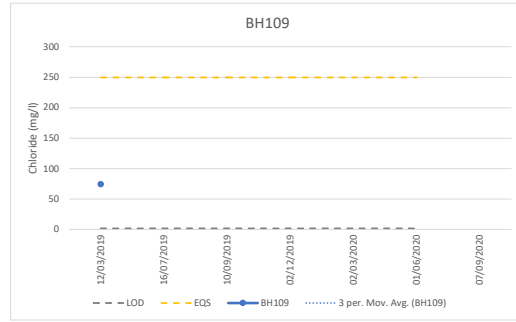
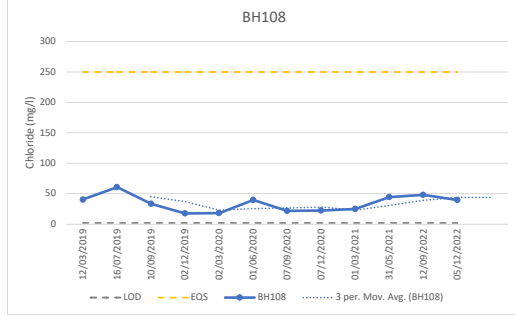
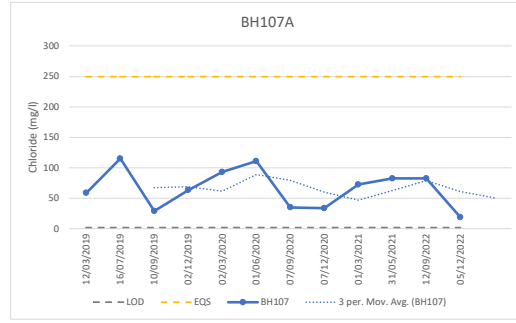
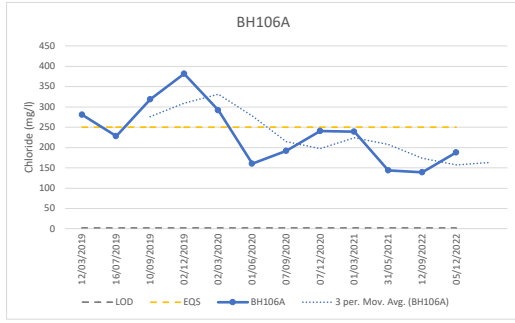
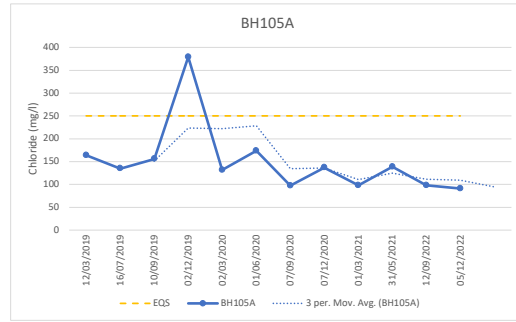
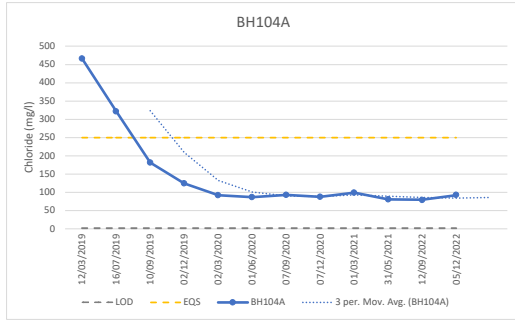
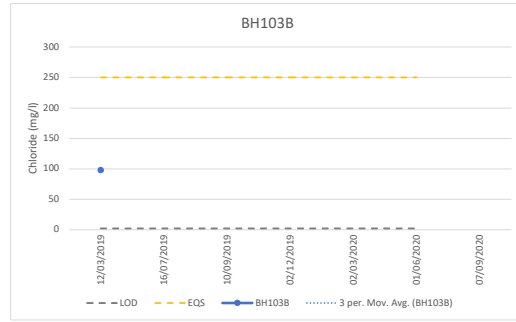
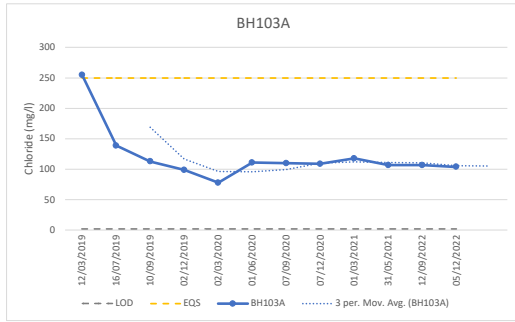
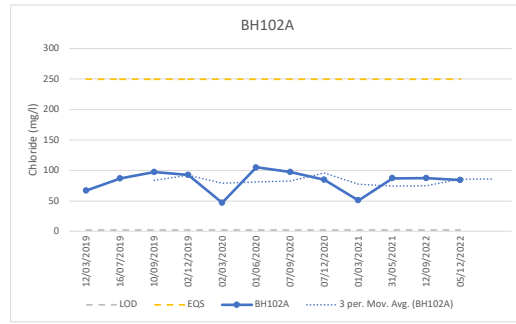
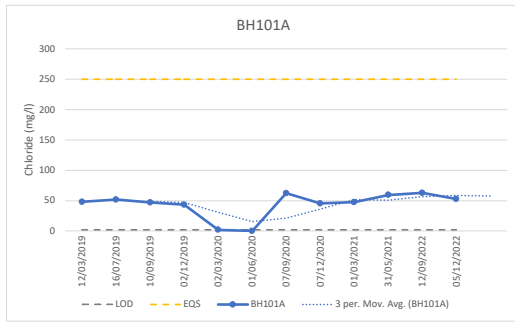


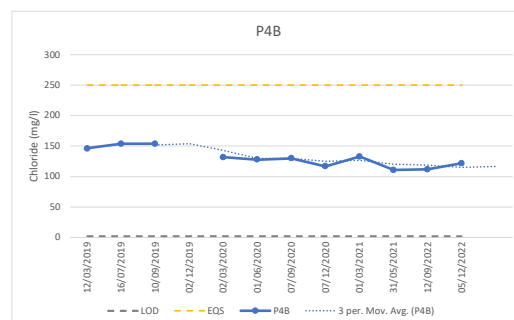
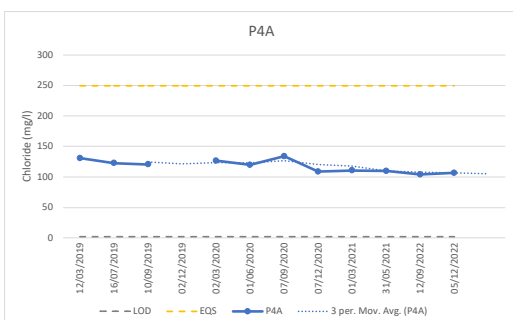
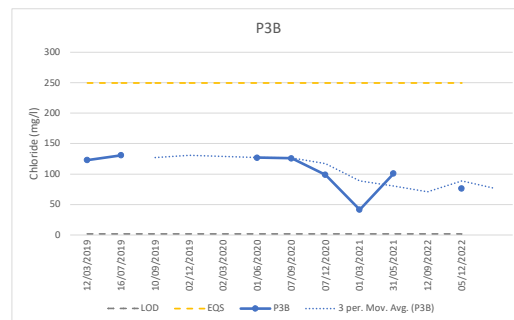
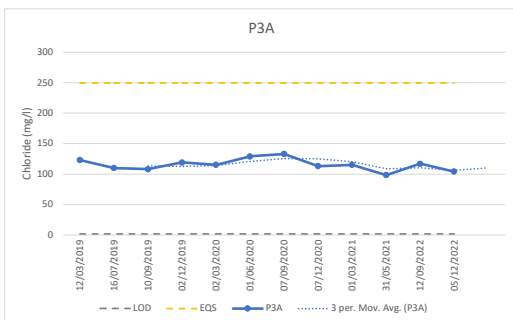
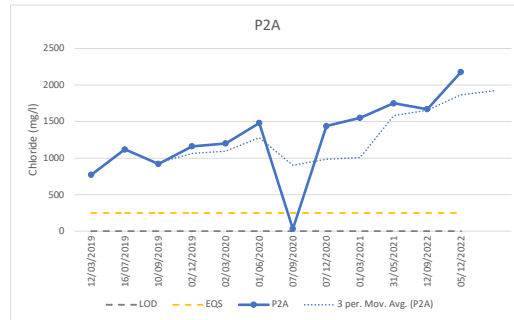
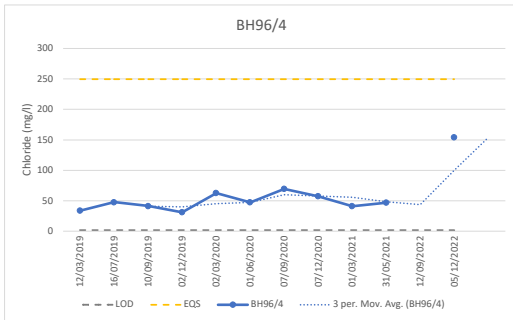
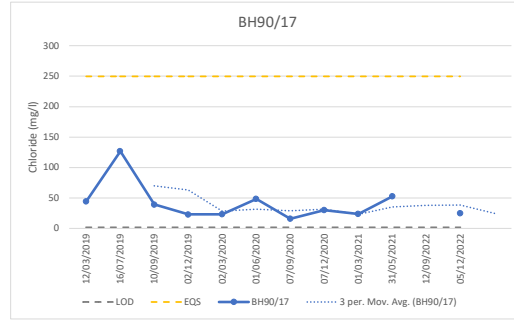
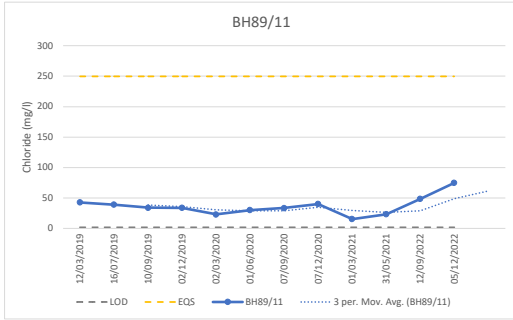
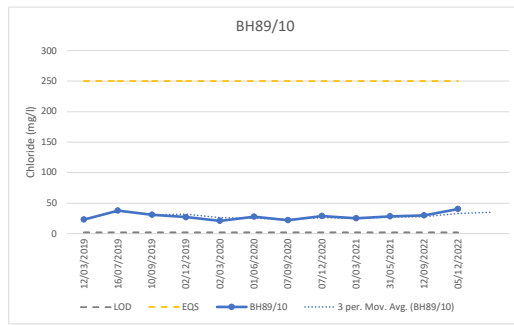
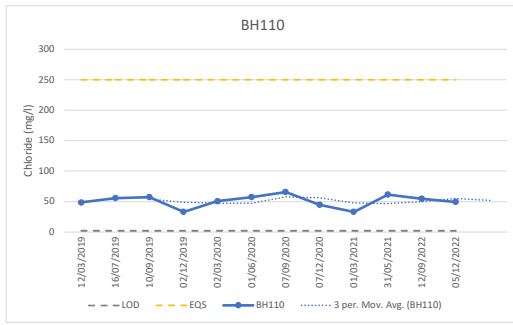


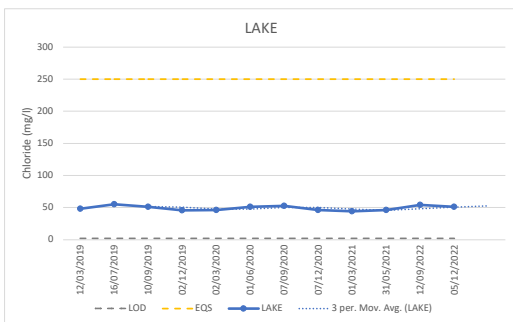
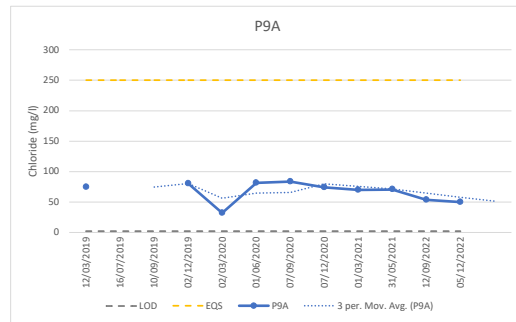
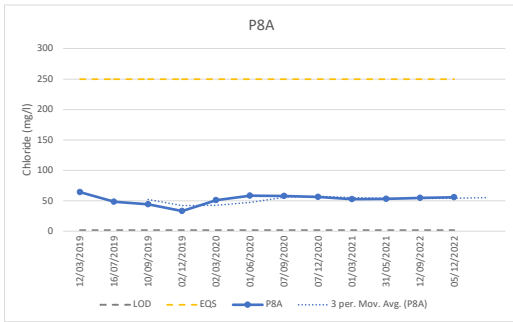
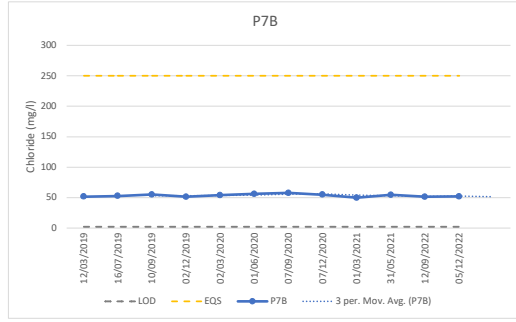
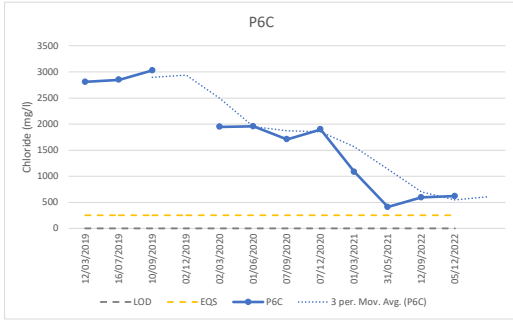
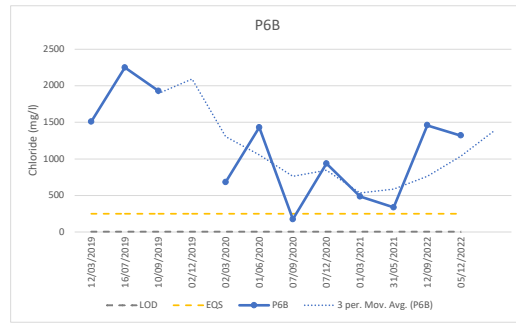
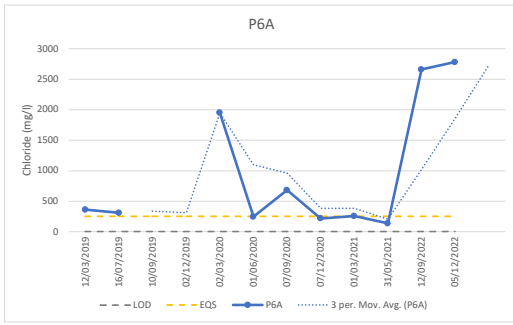


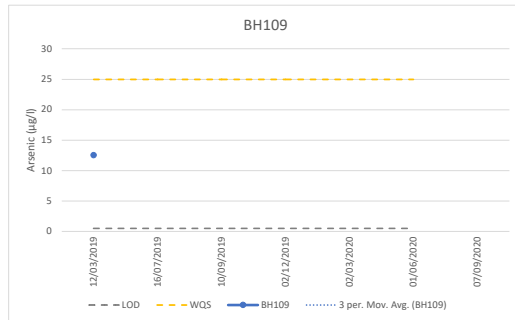
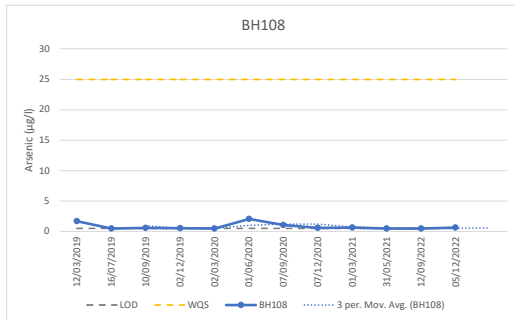
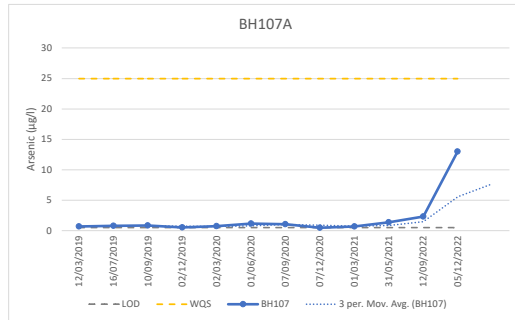
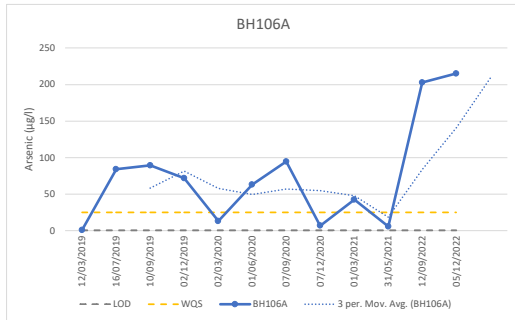
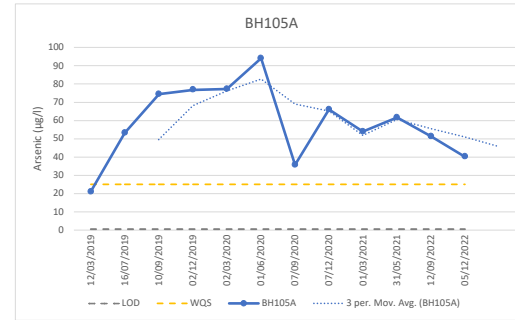
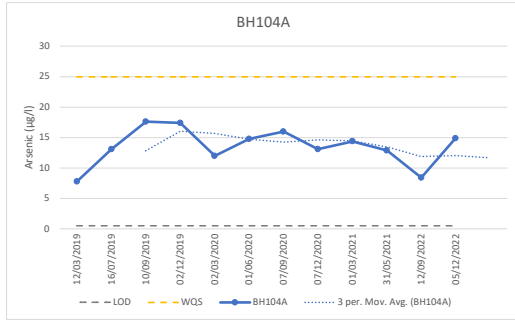
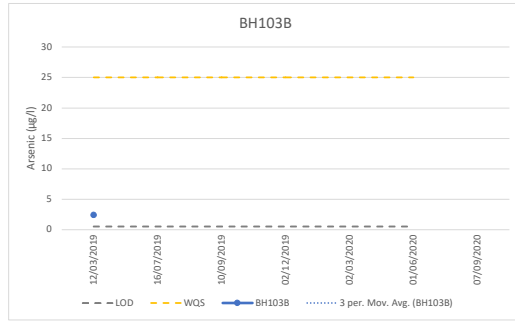
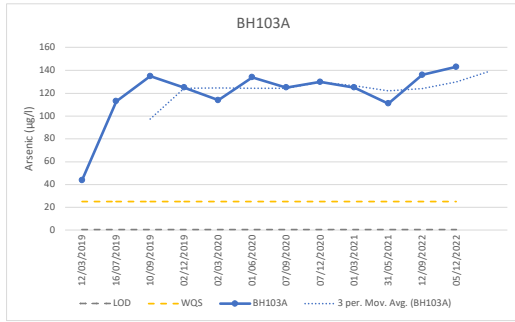
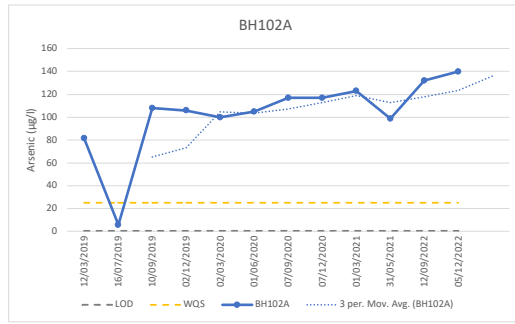
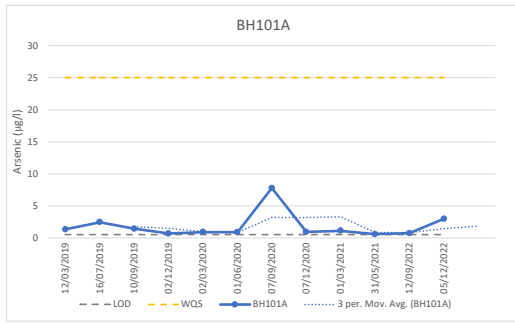


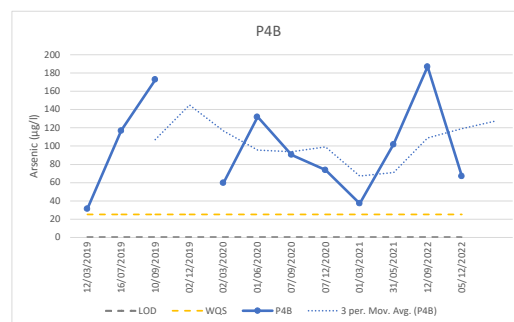
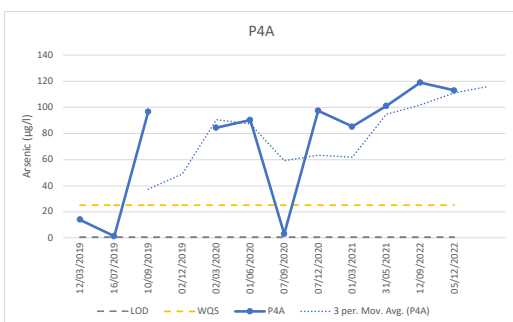
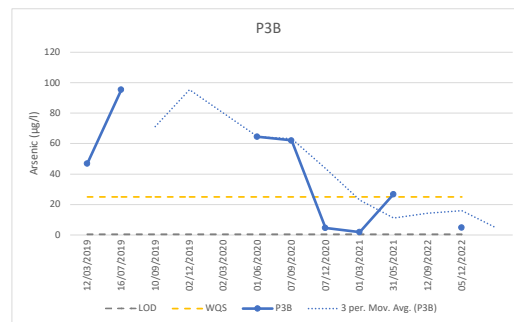
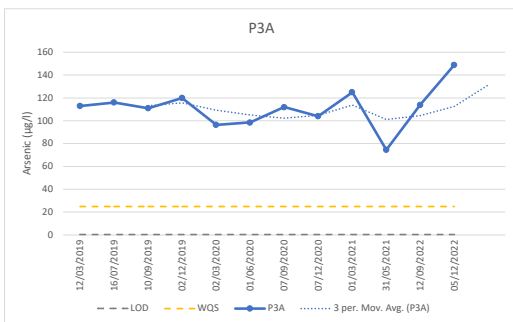
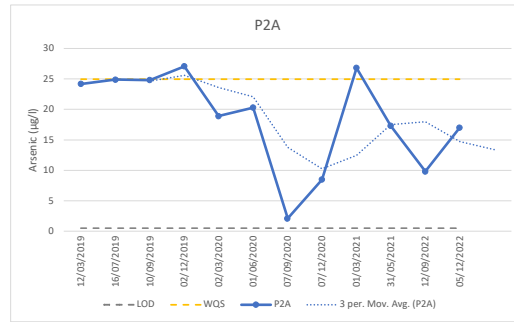
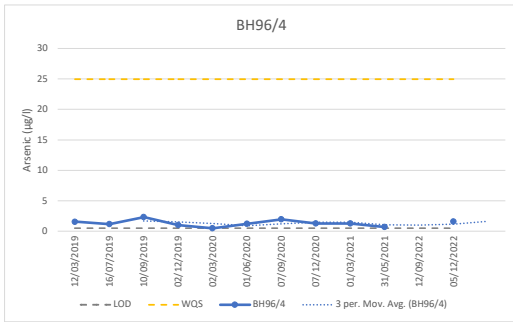
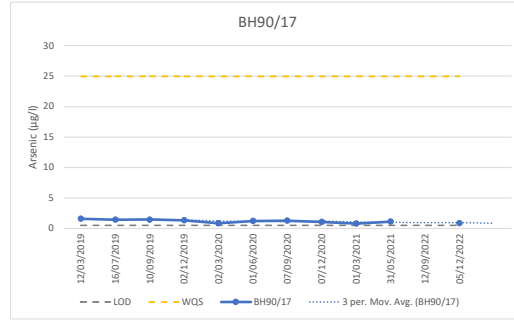
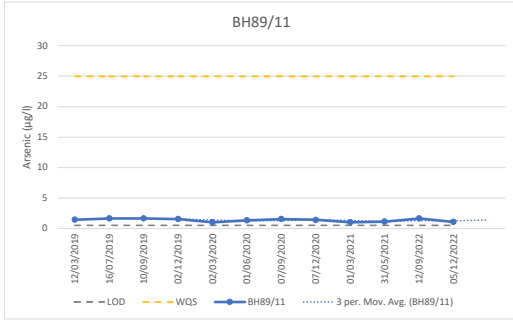
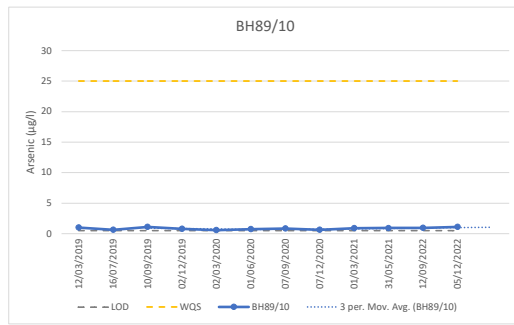
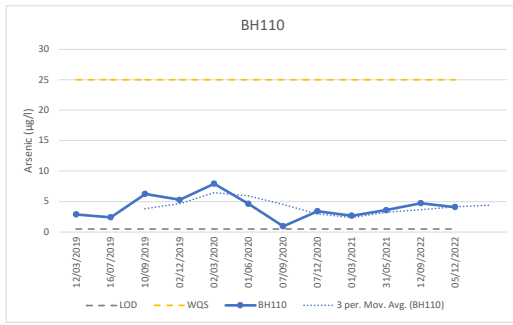


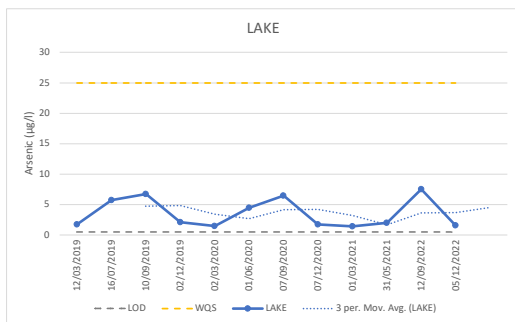
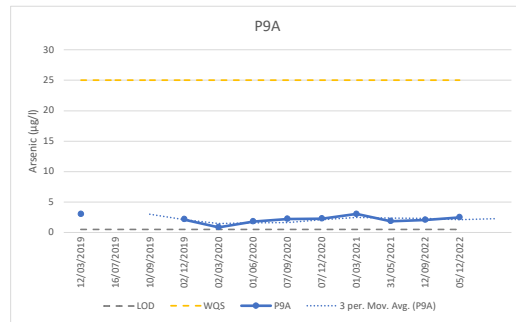
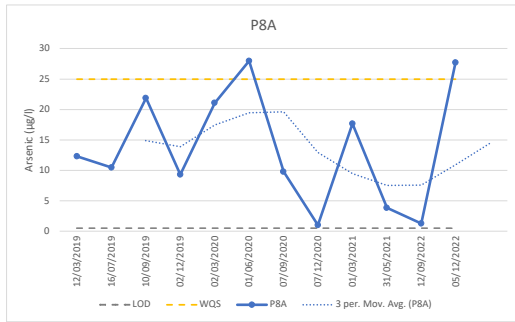
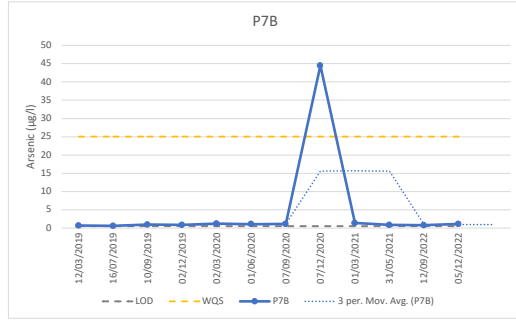
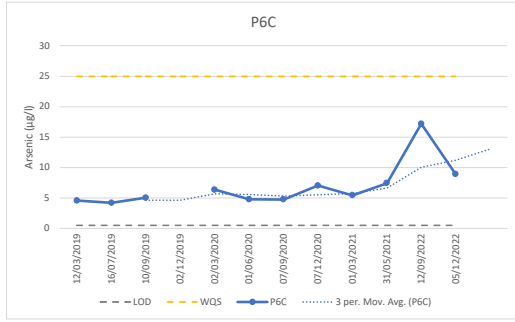
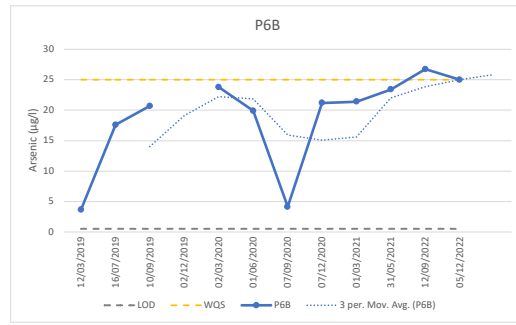
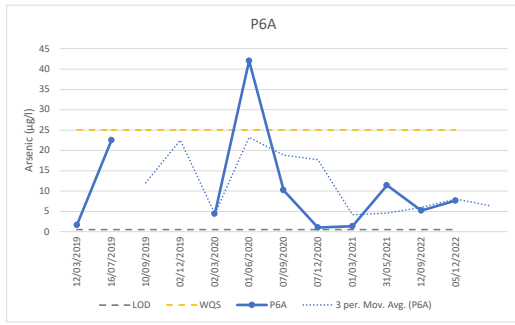




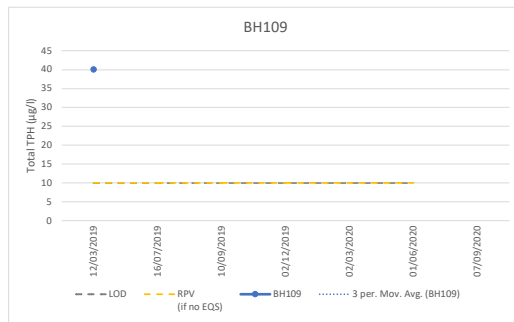
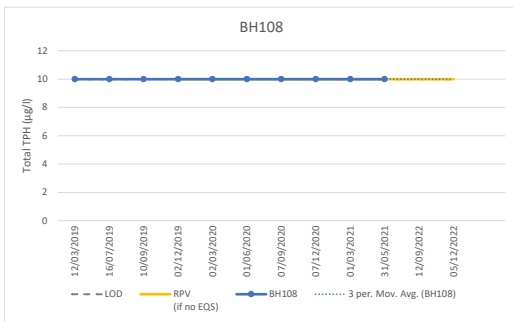
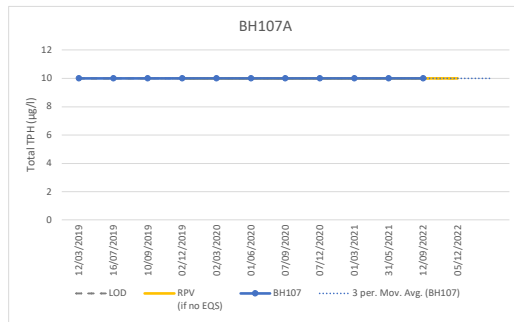
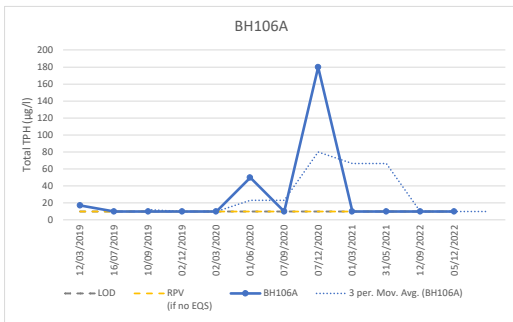
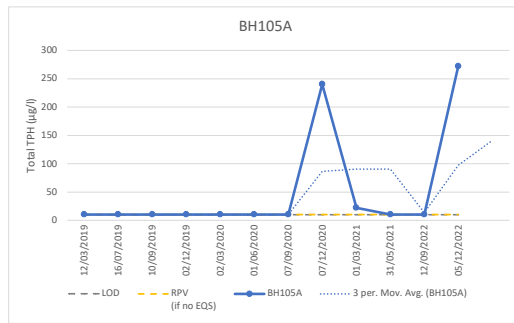
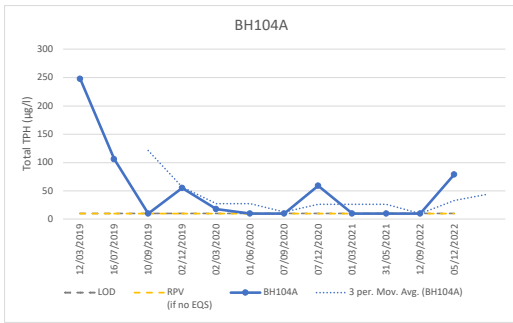
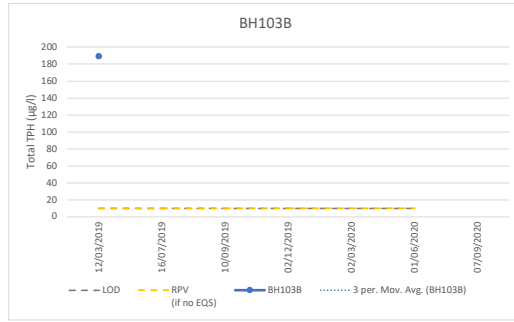
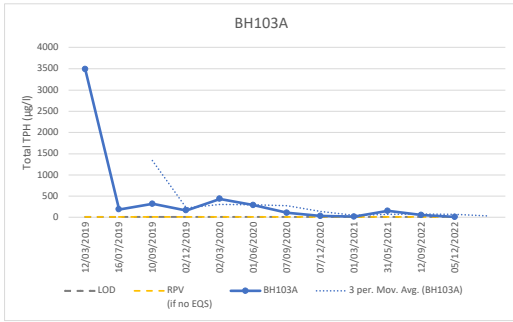
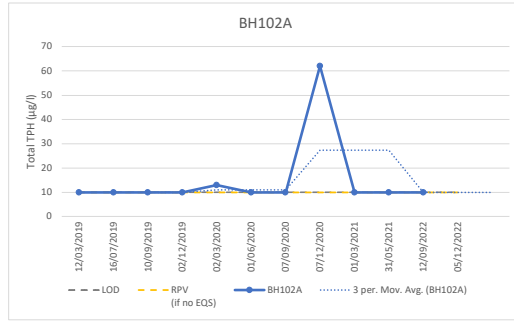
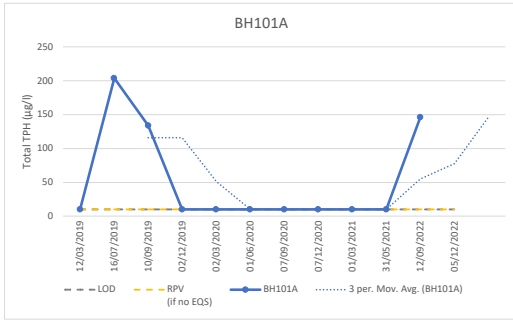


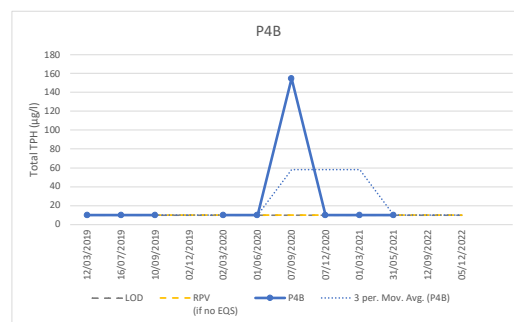
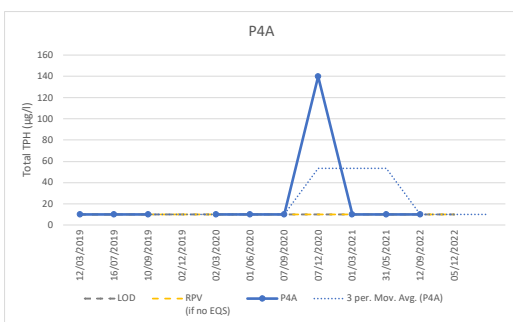
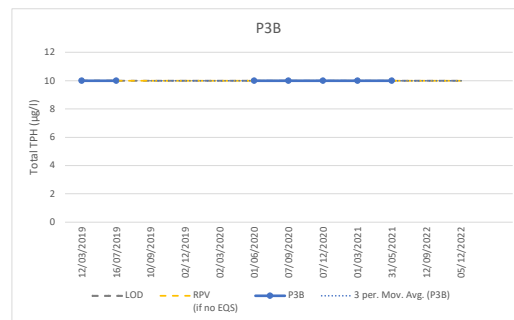
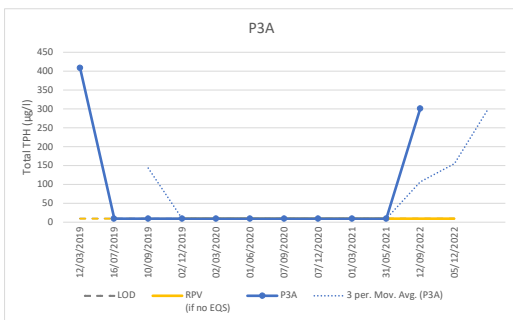
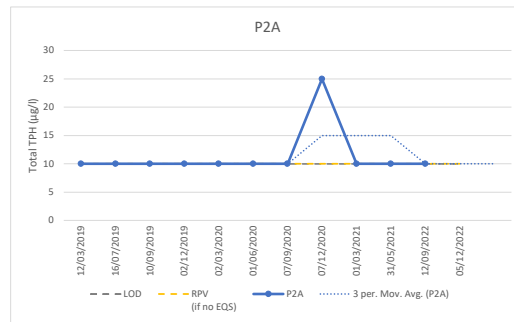
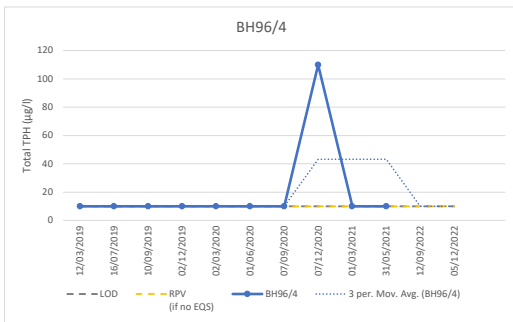
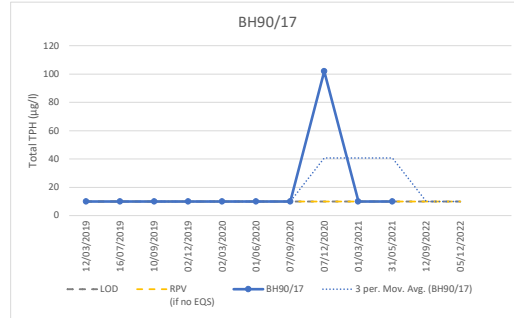
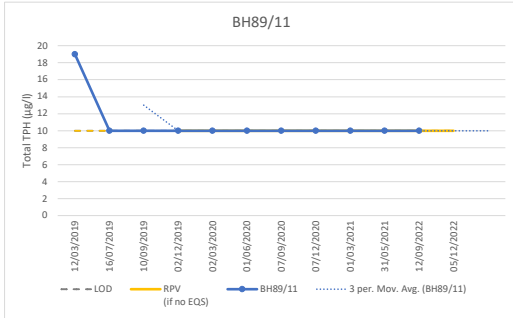
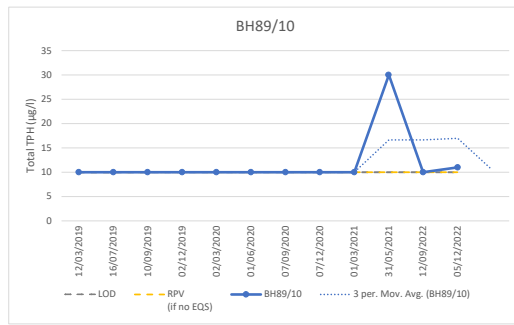
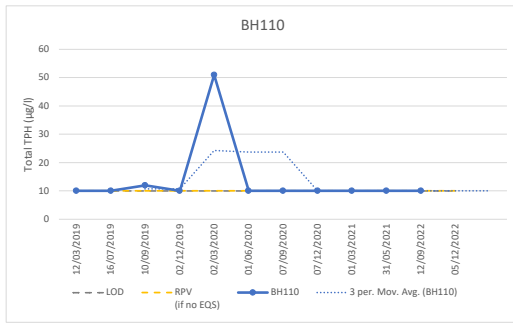


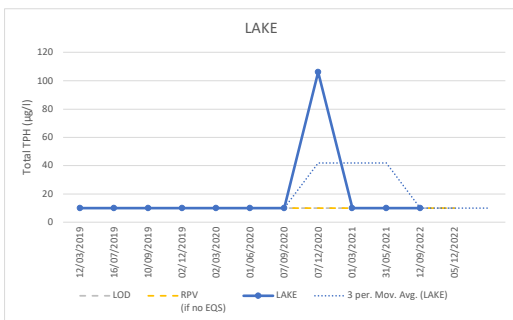
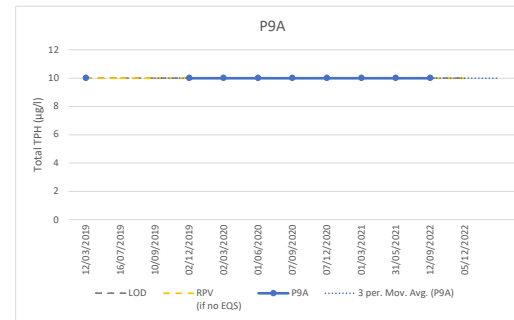
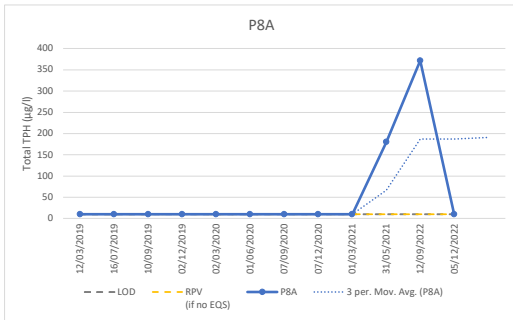
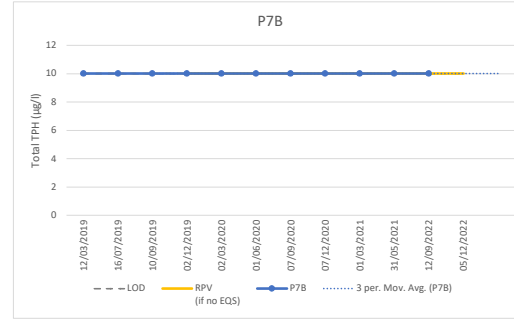
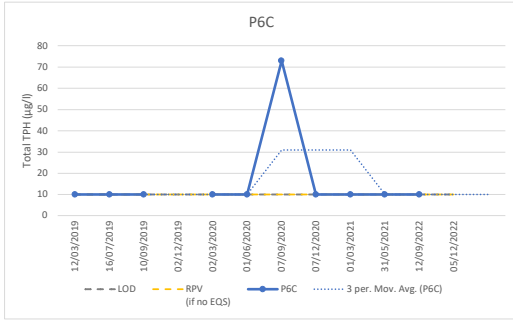
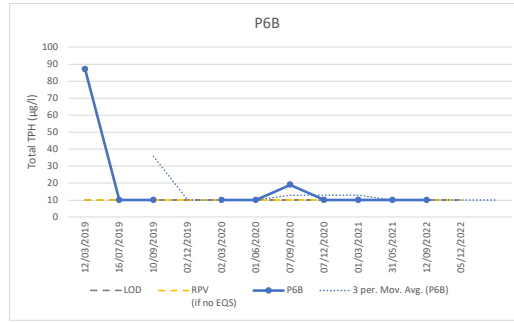
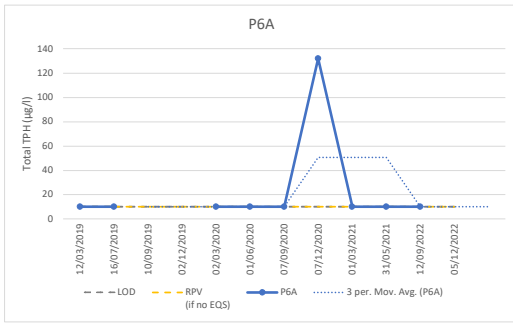


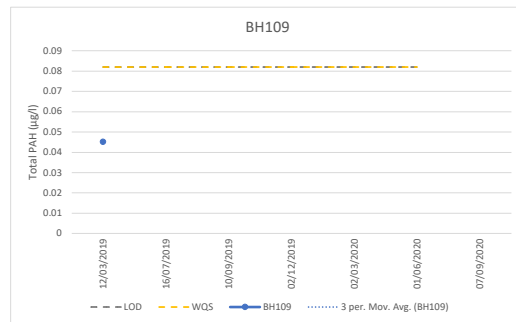
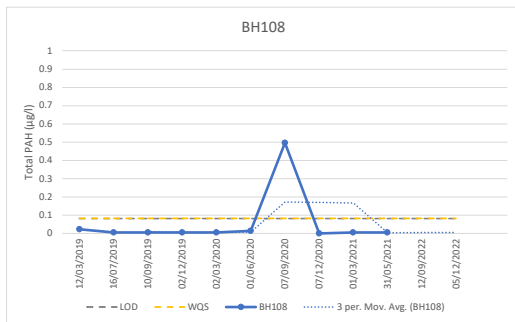
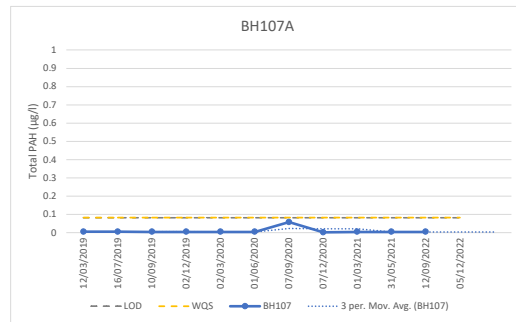
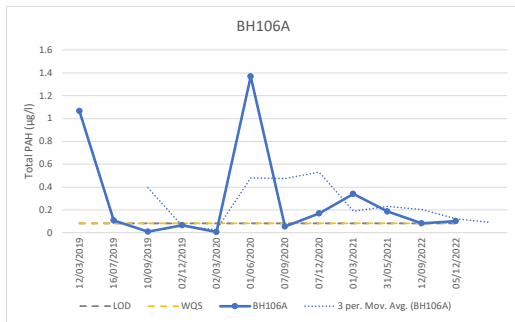
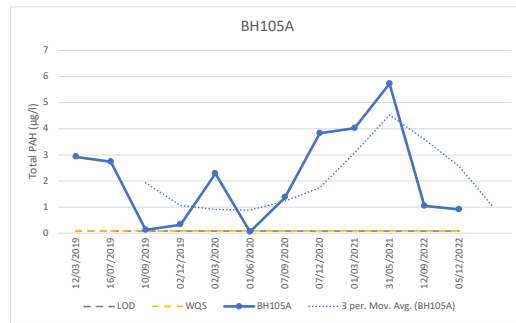
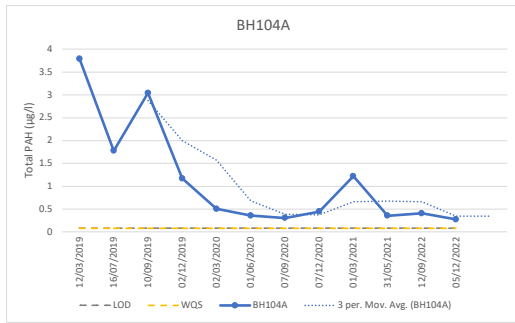
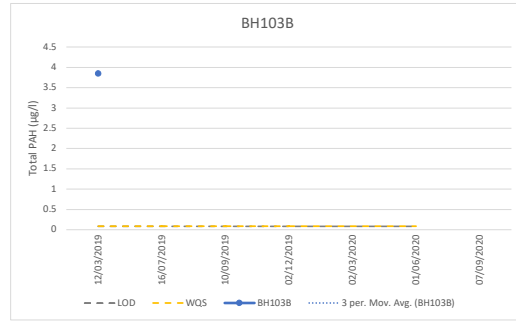
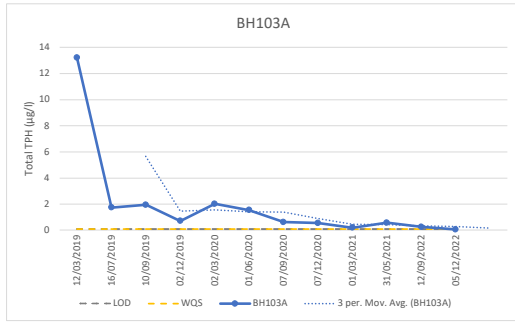
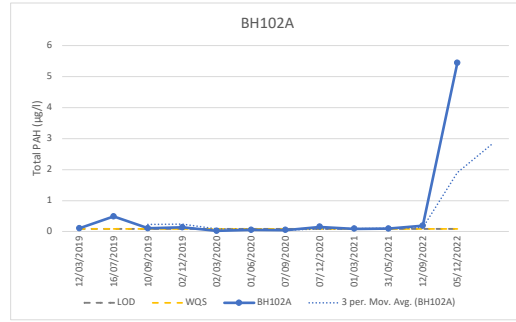
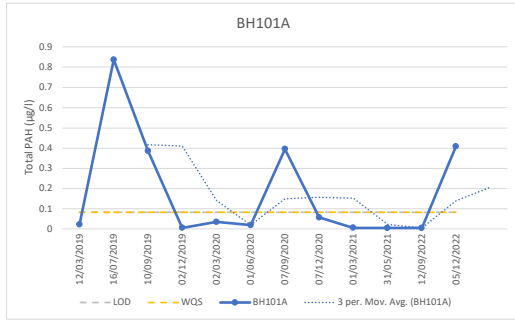


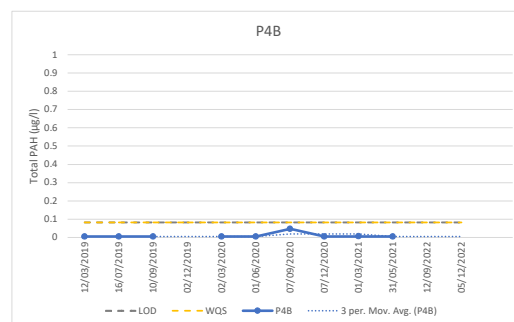
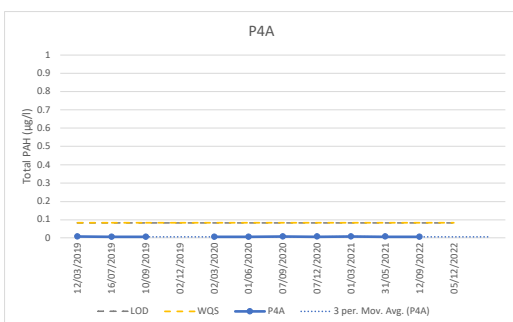
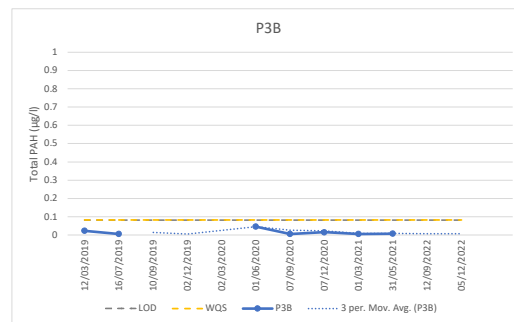
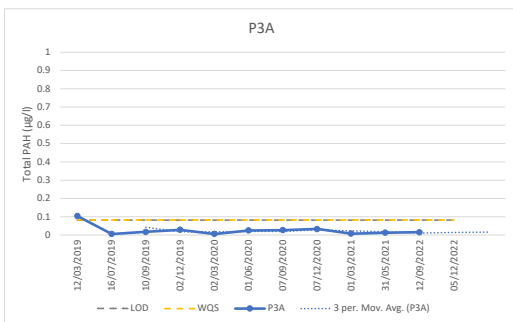
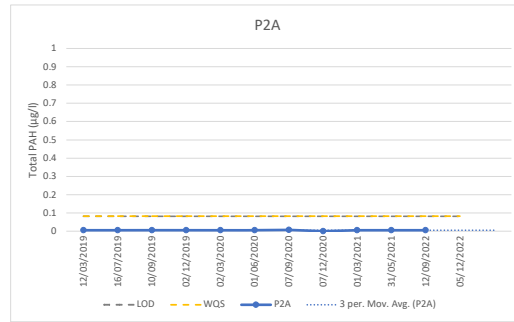
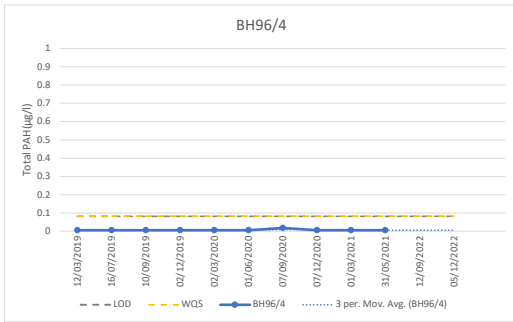
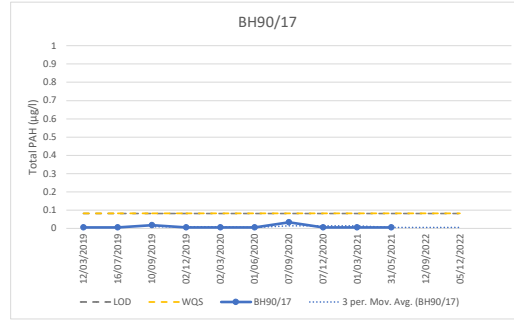
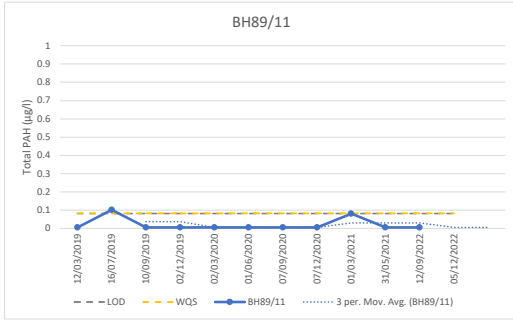
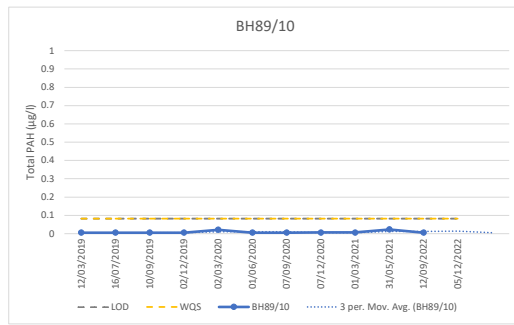
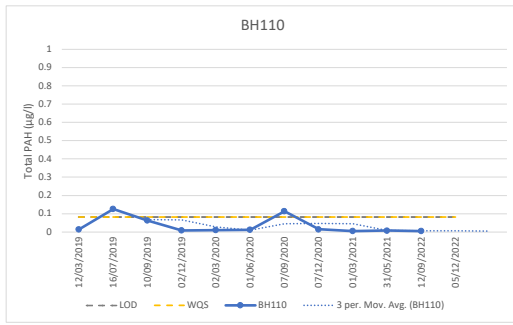


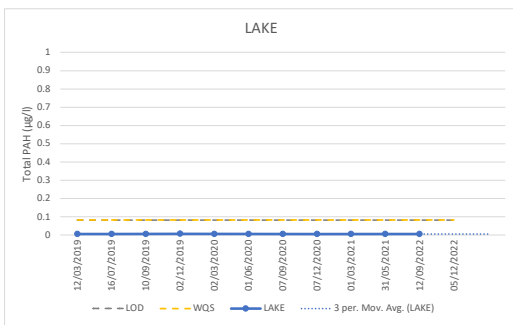
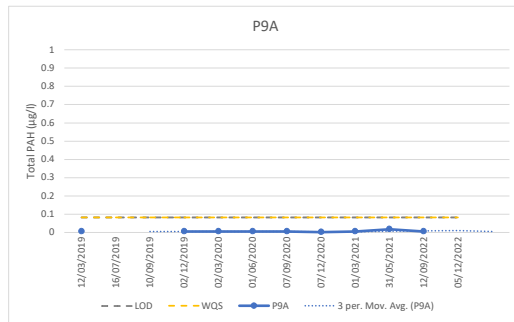
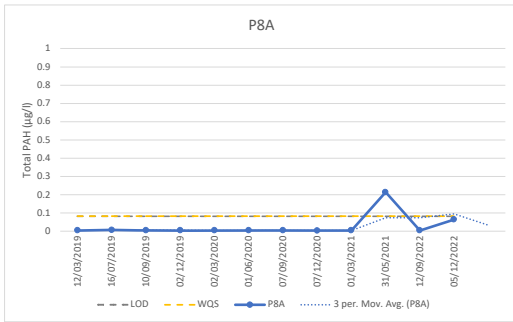
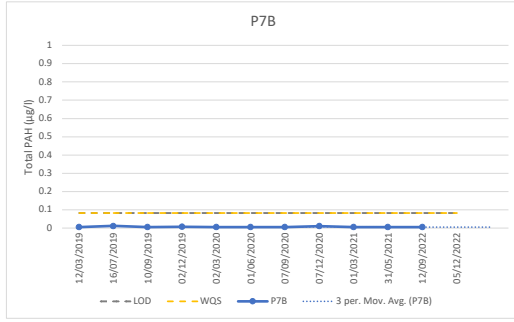
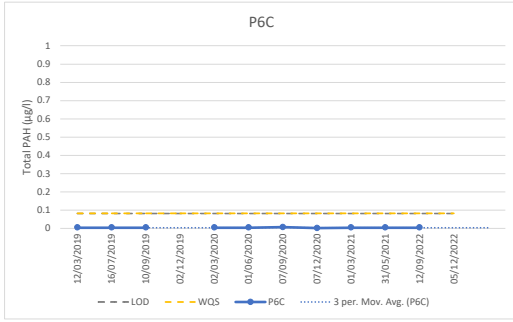
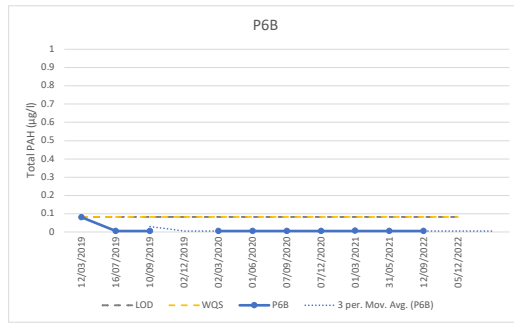
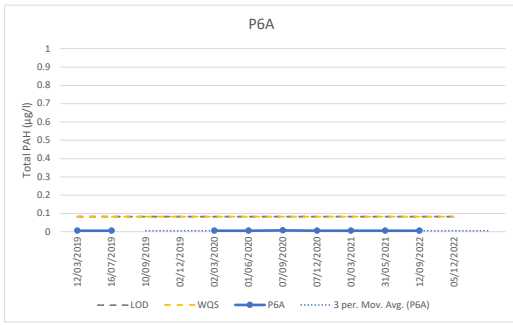




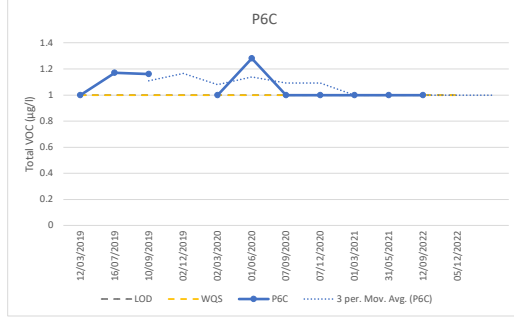
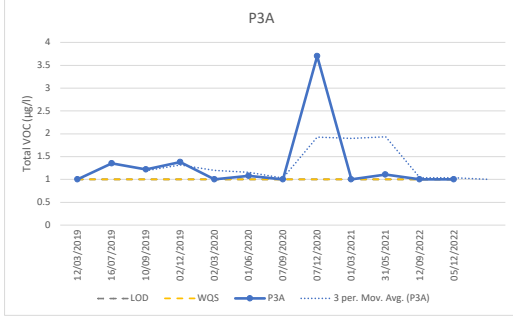
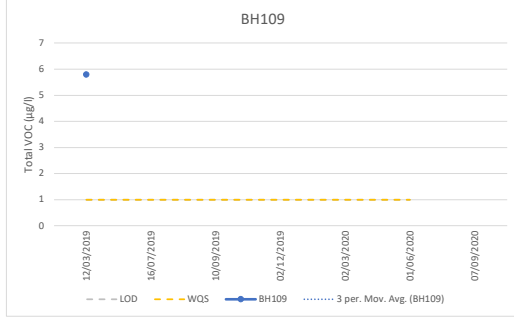
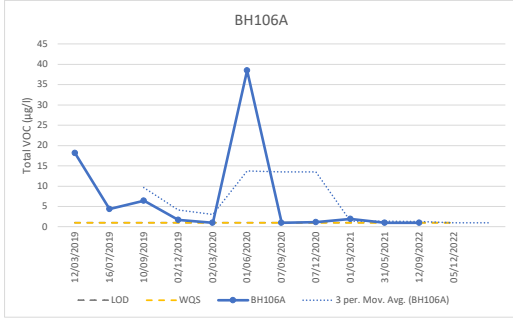
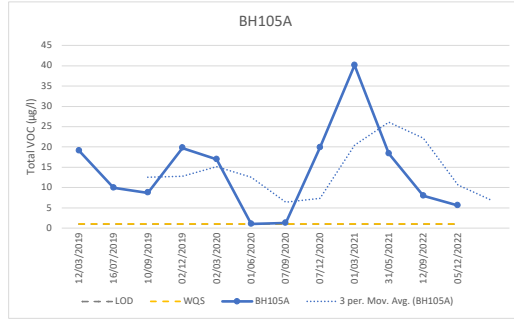
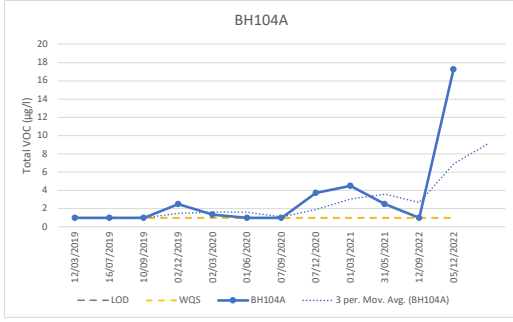
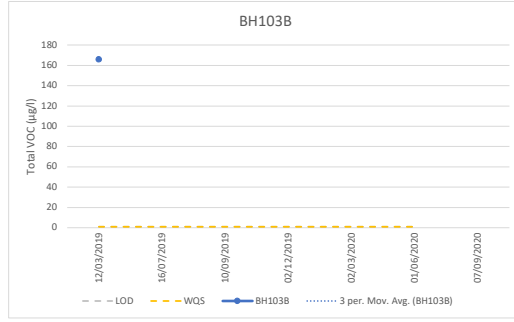
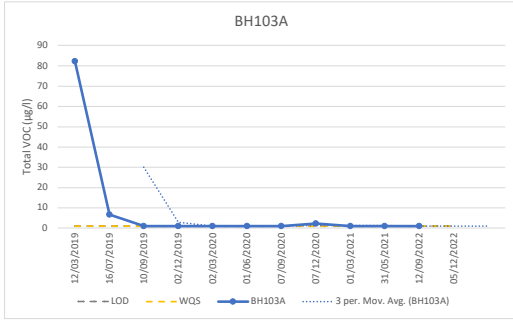
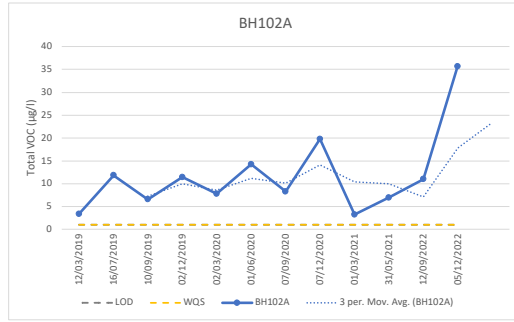
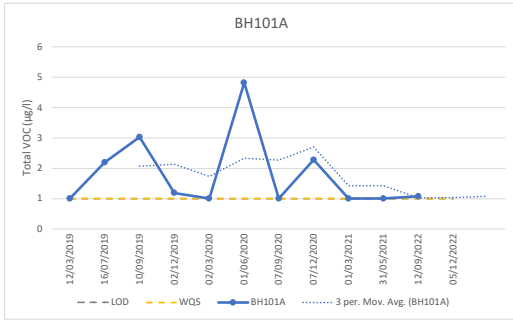


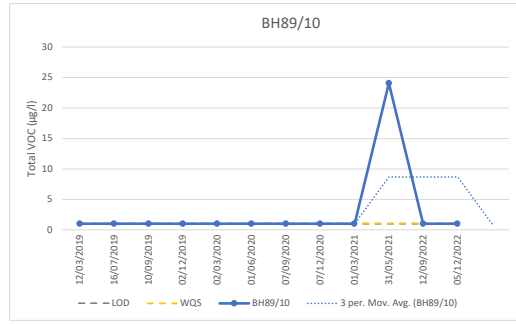
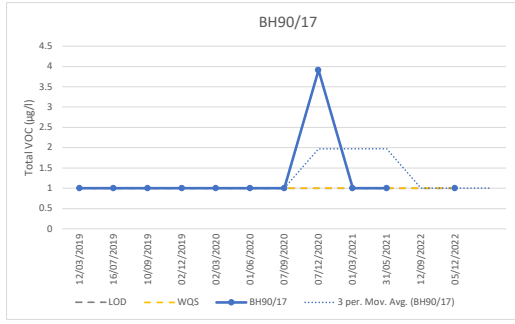
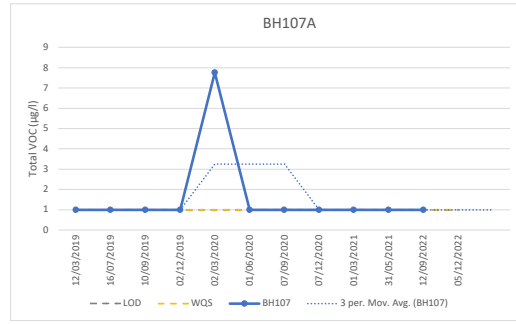
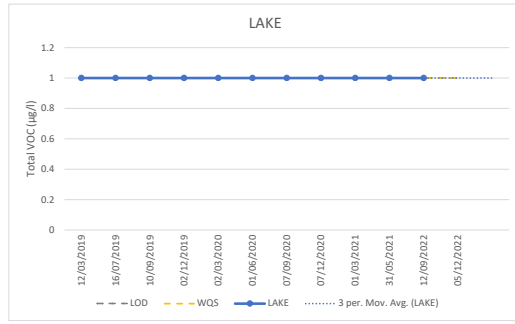
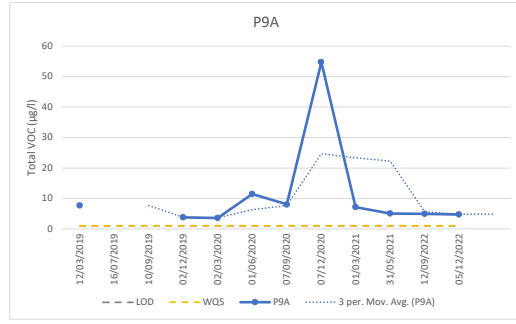
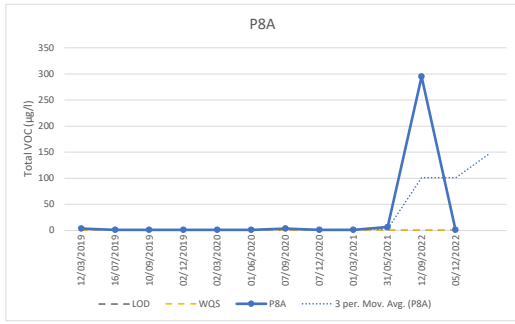


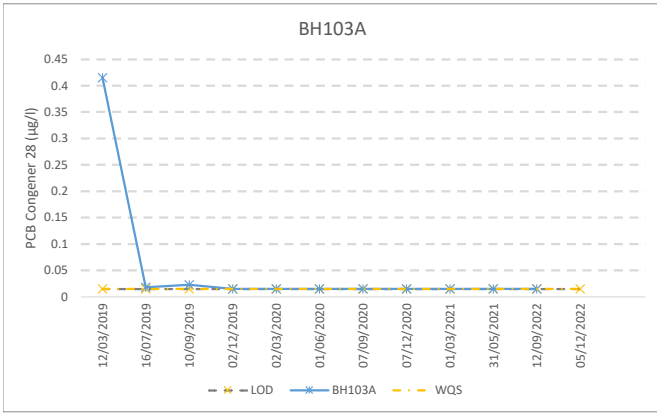














# APPENDIX J

## TREND ANALYSIS

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Point of Ayre Landfill Sites  
Trend analysis - 2022  
Comparison of data collected between March 2019 and December 2022



|         | Ammoniacal nitrogen | Manganese | Iron   | Chloride | Arsenic | Total TPH | Total PAH | Total VOC | Total PCB |
|---------|---------------------|-----------|--------|----------|---------|-----------|-----------|-----------|-----------|
| BH101A  |                     |           |        |          |         |           |           |           |           |
| BH102A  | Green               | Grey      |        |          | Yellow  | Blue      | Yellow    | Yellow    | Blue      |
| BH103A  |                     |           |        |          |         |           | Green     |           | Blue      |
| BH103B  | Grey                | Grey      | Grey   | Grey     | Grey    | Grey      | Grey      | Grey      | Grey      |
| BH104A  | Yellow              | Yellow    |        |          |         |           | Green     | Yellow    | Blue      |
| BH105A* | Grey                |           |        |          | Green   | Grey      | Grey      | Grey      | Blue      |
| BH106A  | Green               |           | Grey   | Green    | Yellow  | Blue      |           |           | Blue      |
| BH107   | Grey                | Grey      | Grey   |          | Yellow  |           |           |           | Blue      |
| BH108   | Blue                |           | Blue   |          |         | Blue      |           |           | Blue      |
| BH109   | Grey                | Grey      | Grey   | Grey     | Grey    | Grey      | Grey      | Grey      | Grey      |
| BH110   | Blue                |           |        |          |         | Blue      |           |           | Blue      |
| BH89/10 | Green               | Yellow    |        |          |         |           |           |           | Blue      |
| BH89/11 | Blue                |           | Blue   | Yellow   |         | Blue      |           |           | Blue      |
| BH90/17 | Blue                |           | Blue   |          |         | Blue      |           |           | Blue      |
| BH96/4  | Blue                |           | Blue   | Grey     |         |           |           |           | Blue      |
| P2A     |                     |           | Green  | Yellow   | Grey    |           |           |           | Blue      |
| P3A     |                     | Green     |        |          | Grey    | Yellow    |           |           | Blue      |
| P3B     | Green               | Green     | Green  | Green    | Green   | Blue      |           |           | Blue      |
| P4A     |                     |           |        |          |         |           |           |           | Blue      |
| P4B     |                     |           |        |          | Grey    |           |           |           | Blue      |
| P6A     | Grey                | Green     |        | Yellow   |         |           | Blue      |           | Blue      |
| P6B     | Green               | Green     | Grey   |          |         |           | Blue      |           | Blue      |
| P6C     | Grey                | Yellow    | Yellow | Green    |         |           |           |           | Blue      |
| P7B     | Blue                |           | Blue   |          |         |           |           |           | Blue      |
| P8A*    | Yellow              | Grey      |        |          | Grey    | Green     | Grey      | Grey      | Blue      |
| P9A     | Grey                | Yellow    |        | Green    |         |           |           |           | Blue      |
| LAKE    | Blue                |           | Blue   |          |         |           | Blue      |           | Blue      |

Insufficient data for trend analysis (3 data points or less)

Fluctuating data - unable to determine trend

Stable

Contaminant typically not detected

Decreasing trend

Increasing trend

\*Note: During the December 2022 round, the maximum result from the duplicate and original sample has been considered in the assessment

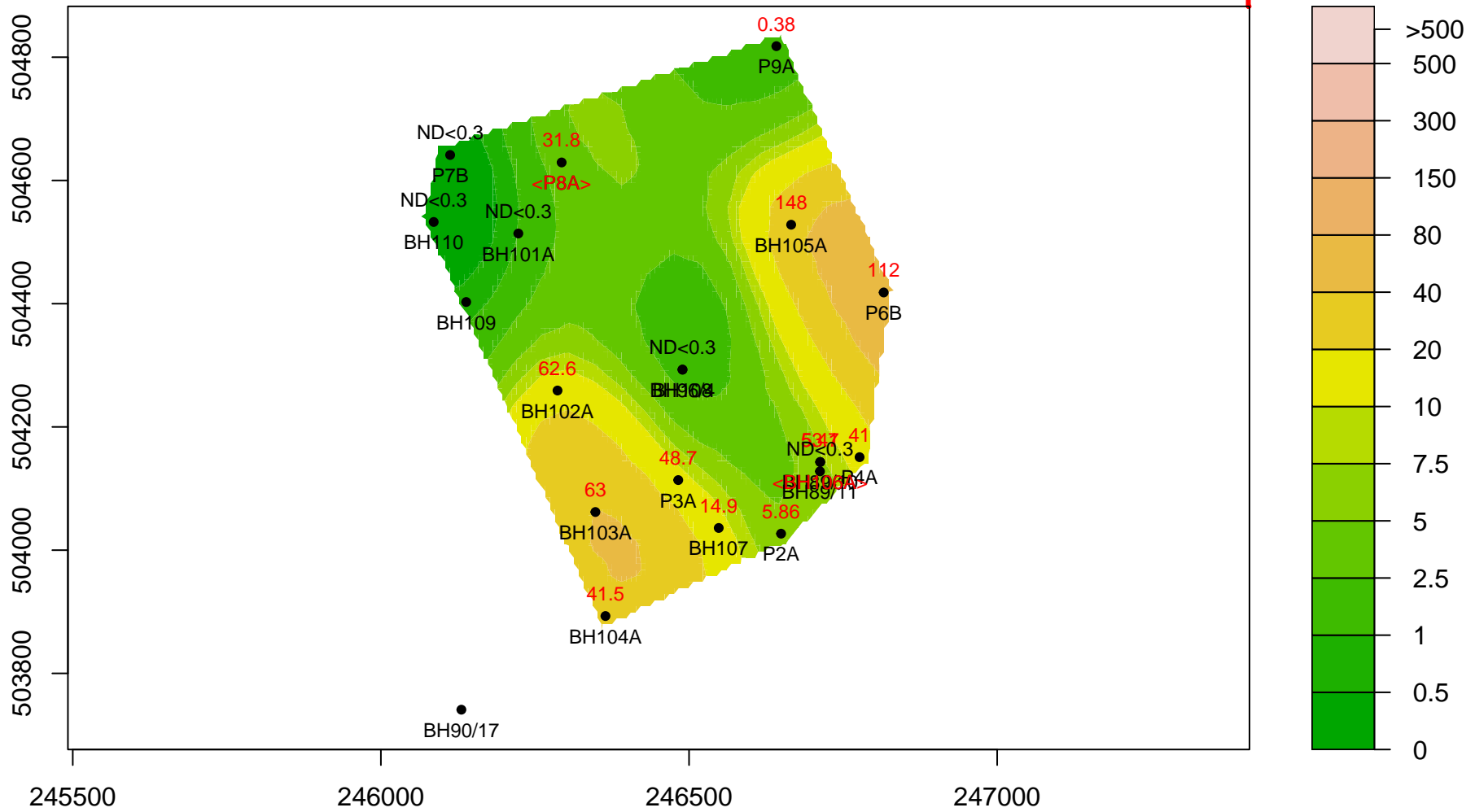


# **APPENDIX K AMMONIACAL NITROGEN PLUME PLOTS (GWSDAT)**

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# Ammoniacal Nitrogen : 12-Sep-2022 : Aquifer-Sand and gravel



Ammoniacal nitrogen : 05-Dec-2022 : Aquifer-Sand and gravel

