

## A. Statement of Compliance - Licence Details

**ALL Licence holders must check that the Licence details in Section A are correct.**

If there are changes to any of these details, **you must advise Environment Protection Authority (EPA) and apply as soon as possible for a variation to your Licence or for a Licence transfer.**

Licence variation and transfer application forms are available on the EPA website at: <http://www.epa.nsw.gov.au/licensing-and-regulation/licensing> or from regional offices of the EPA, or by contacting by telephone 02 9995 5700.

If you are applying to vary or transfer your Licence, you must still complete and submit this Annual Return.

### A1. Licence holder

**Licence number** : 20795  
**Licence holder** : ILUKA RESOURCES LIMITED  
**Trading name (if applicable)** :  
**ABN** : 34 008 675 018  
**ACN** :  
**Reporting period** : From: 10-6-2019 To: 9-6-2020

### A2. Premises to which Licence Applies (if applicable)

**Common name (if any)** : KARRA STATION  
**Premises** : BALRANALD 2715 NSW

### A3. Activities to which Licence Applies

Mineral processing  
 Mining for minerals

### A4. Other Activities (if applicable)

Waste processing  
 Waste disposal

### A5. Fee-Based Activity Classifications

**Note** that the fee based activity classification is used to calculate the administrative fee.

| Fee-based activity | Activity scale           | Unit of measure              |
|--------------------|--------------------------|------------------------------|
| Mineral processing | > 30,000.00 - 100,000.00 | T annual processing capacity |

|                     |                          |                              |
|---------------------|--------------------------|------------------------------|
| Mining for minerals | > 50,000.00 - 100,000.00 | T annual production capacity |
|---------------------|--------------------------|------------------------------|

## A6. Assessable Pollutants (if applicable)

**Note** that the identification of assessable pollutants is used to calculate the **load-based fee**.  
The following assessable pollutants are identified for the fee-based activity classifications in the licence:

## B. Monitoring and Complaints Summary

### B1. Number of Pollution Complaints

| Pollution Complaint Category   | Complaints |
|--|------------|
| Air  | 0          |
| Water  | 0          |
| Noise  | 0          |
| Waste  | 0          |
| Other  | 0          |
| <b>Total complaints recorded by the licensee during the reporting period</b> | <b>0</b>   |

### B2. Concentration Monitoring Summary

For each concentration monitoring point identified in your licence, details are displayed below. If concentration monitoring is not required by your licence, **no data** will appear below.

If data was provided from an uploaded file, the file name will be displayed below instead of any data.

**Note** that this does not exclude the need to conduct appropriate concentration monitoring of assessable pollutants as required by load-based licensing (if applicable).

#### Monitoring Point 1

Air quality monitoring, The dust gauge identified as Bal1 in the map and email attachment titled 'Bulk Sampling Activity Depositional Gauges - Location Plan' dated 27 May 2016 and kept on EPA file DOC16/230523

| Pollutant                       | Unit of measure                  | No. of samples required | No. of samples collected and analysed | Lowest sample value | Mean of sample | Highest sample value |
|---------------------------------|----------------------------------|-------------------------|---------------------------------------|---------------------|----------------|----------------------|
| Particulates - Deposited Matter | grams per square metre per month |                         |                                       |                     |                |                      |

#### Monitoring Point 2

Air quality monitoring, The dust gauge identified as Bal2 in the map and email attachment titled 'Bulk Sampling Activity Depositional Gauges - Location Plan' dated 27 May 2016 and kept on EPA file DOC16/230523

| Pollutant                       | Unit of measure                  | No. of samples required | No. of samples collected and analysed | Lowest sample value | Mean of sample | Highest sample value |
|---------------------------------|----------------------------------|-------------------------|---------------------------------------|---------------------|----------------|----------------------|
| Particulates - Deposited Matter | grams per square metre per month |                         |                                       |                     |                |                      |

## Monitoring Point 3

Air quality monitoring, The dust gauge identified as Bal3 in the map and email attachment titled 'Bulk Sampling Activity Depositional Gauges - Location Plan' dated 27 May 2016 and kept on EPA file DOC16/230523

| Pollutant                       | Unit of measure                  | No. of samples required | No. of samples collected and analysed | Lowest sample value | Mean of sample | Highest sample value |
|---------------------------------|----------------------------------|-------------------------|---------------------------------------|---------------------|----------------|----------------------|
| Particulates - Deposited Matter | grams per square metre per month |                         |                                       |                     |                |                      |

## Monitoring Point 4

Air quality monitoring, The dust gauge identified as Bal4 in the map and email attachment titled 'Bulk Sampling Activity Depositional Gauges - Location Plan' dated 27 May 2016 and kept on EPA file DOC16/230523

| Pollutant                       | Unit of measure                  | No. of samples required | No. of samples collected and analysed | Lowest sample value | Mean of sample | Highest sample value |
|---------------------------------|----------------------------------|-------------------------|---------------------------------------|---------------------|----------------|----------------------|
| Particulates - Deposited Matter | grams per square metre per month |                         |                                       |                     |                |                      |

## Monitoring Point 5

Air quality monitoring, The dust gauge identified as Bal5 in the map and email attachment titled 'Bulk Sampling Activity Depositional Gauges - Location Plan' dated 27 May 2016 and kept on EPA file DOC16/230523

| Pollutant                       | Unit of measure                  | No. of samples required | No. of samples collected and analysed | Lowest sample value | Mean of sample | Highest sample value |
|---------------------------------|----------------------------------|-------------------------|---------------------------------------|---------------------|----------------|----------------------|
| Particulates - Deposited Matter | grams per square metre per month |                         |                                       |                     |                |                      |

## Monitoring Point 6

Groundwater quality monitoring, Groundwater well labelled UGM-M1D identified in Figure B and Table B-7 of the document titled 'Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24 April 2016 and kept on EPA file DOC16/230523.

| Pollutant               | Unit of measure                           | No. of samples required | No. of samples collected and analysed | Lowest sample value | Mean of sample | Highest sample value |
|-------------------------|---|-------------------------|---------------------------------------|---------------------|----------------|----------------------|
| Calcium                 | milligrams per litre                      |                         |                                       |                     |                |                      |
| Chemical oxygen demand  | milligrams per litre                      |                         |                                       |                     |                |                      |
| Chloride                | milligrams per litre                      |                         |                                       |                     |                |                      |
| Depth                   | metres                                    |                         |                                       |                     |                |                      |
| Electrical conductivity | microsiemens per centimetre               |                         |                                       |                     |                |                      |
| Iron                    | milligrams per litre                      |                         |                                       |                     |                |                      |
| Magnesium               | milligrams per litre                      |                         |                                       |                     |                |                      |
| pH                      | pH  |                         |                                       |                     |                |                      |
| Potassium               | milligrams per litre                      |                         |                                       |                     |                |                      |
| Sodium                  | milligrams per litre                      |                         |                                       |                     |                |                      |
| Sulfate                 | milligrams per litre                      |                         |                                       |                     |                |                      |
| Sulfide (total)         | milligrams per litre                      |                         |                                       |                     |                |                      |
| Total alkalinity        | milligrams of calcium carbonate per litre |                         |                                       |                     |                |                      |
| Total dissolved solids  | milligrams per litre                      |                         |                                       |                     |                |                      |

## Monitoring Point 7

Groundwater quality monitoring, Groundwater well labelled UGM-M2D identified in Figure 8 and Table B-7 of the document titled 'Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24 April 2016 and kept on EPA file DOC16/230523.

| Pollutant               | Unit of measure                           | No. of samples required | No. of samples collected and analysed | Lowest sample value | Mean of sample | Highest sample value |
|-------------------------|---|-------------------------|---------------------------------------|---------------------|----------------|----------------------|
| Calcium                 | milligrams per litre                      |                         |                                       |                     |                |                      |
| Chemical oxygen demand  | milligrams per litre                      |                         |                                       |                     |                |                      |
| Chloride                | milligrams per litre                      |                         |                                       |                     |                |                      |
| Depth                   | metres                                    |                         |                                       |                     |                |                      |
| Electrical conductivity | microsiemens per centimetre               |                         |                                       |                     |                |                      |
| Iron                    | milligrams per litre                      |                         |                                       |                     |                |                      |
| Magnesium               | milligrams per litre                      |                         |                                       |                     |                |                      |
| pH                      | pH  |                         |                                       |                     |                |                      |
| Potassium               | milligrams per litre                      |                         |                                       |                     |                |                      |
| Sodium                  | milligrams per litre                      |                         |                                       |                     |                |                      |
| Sulfate                 | milligrams per litre                      |                         |                                       |                     |                |                      |
| Sulfide (total)         | milligrams per litre                      |                         |                                       |                     |                |                      |
| Total alkalinity        | milligrams of calcium carbonate per litre |                         |                                       |                     |                |                      |
| Total dissolved solids  | milligrams per litre                      |                         |                                       |                     |                |                      |

## Monitoring Point 8

Groundwater quality monitoring, Groundwater well labelled UGM-M4D identified in Figure 8 and Table B-7 of the document titled 'Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24 April 2016 and kept on EPA file DOC16/230523.

| Pollutant | Unit of measure      | No. of samples required | No. of samples collected and analysed | Lowest sample value | Mean of sample | Highest sample value |
|-----------|----------------------|-------------------------|---------------------------------------|---------------------|----------------|----------------------|
| Calcium   | milligrams per litre |                         |                                       |                     |                |                      |

|                         |   |  |  |  |  |  |
|-------------------------|---|--|--|--|--|--|
| Chemical oxygen demand  | milligrams per litre                      |  |  |  |  |  |
| Chloride                | milligrams per litre                      |  |  |  |  |  |
| Depth                   | metres                                    |  |  |  |  |  |
| Electrical conductivity | microsiemens per centimetre               |  |  |  |  |  |
| Iron                    | milligrams per litre                      |  |  |  |  |  |
| Magnesium               | milligrams per litre                      |  |  |  |  |  |
| pH                      | pH  |  |  |  |  |  |
| Potassium               | milligrams per litre                      |  |  |  |  |  |
| Sodium                  | milligrams per litre                      |  |  |  |  |  |
| Sulfate                 | milligrams per litre                      |  |  |  |  |  |
| Sulfide (total)         | milligrams per litre                      |  |  |  |  |  |
| Total alkalinity        | milligrams of calcium carbonate per litre |  |  |  |  |  |
| Total dissolved solids  | milligrams per litre                      |  |  |  |  |  |

## Monitoring Point 9

Groundwater quality monitoring, Groundwater well labelled BH-M16 identified in Figure 5.1 and Table 5.2 of the document titled 'Groundwater Management Plan - Bulk Sampling Activities, Balranald Mineral Sands Project' dated 22 October 2019 and kept on EPA file DOC20/269429.

| Pollutant               | Unit of measure             | No. of samples required | No. of samples collected and analysed | Lowest sample value | Mean of sample | Highest sample value |
|-------------------------|-----------------------------|-------------------------|---------------------------------------|---------------------|----------------|----------------------|
| Calcium                 | milligrams per litre        |                         |                                       |                     |                |                      |
| Chemical oxygen demand  | milligrams per litre        |                         |                                       |                     |                |                      |
| Chloride                | milligrams per litre        |                         |                                       |                     |                |                      |
| Depth                   | metres                      |                         |                                       |                     |                |                      |
| Electrical conductivity | microsiemens per centimetre |                         |                                       |                     |                |                      |
| Iron                    | milligrams per litre        |                         |                                       |                     |                |                      |

|                        |   |  |  |  |  |  |
|------------------------|---|--|--|--|--|--|
| Magnesium              | milligrams per litre                      |  |  |  |  |  |
| pH                     | pH  |  |  |  |  |  |
| Potassium              | milligrams per litre                      |  |  |  |  |  |
| Sodium                 | milligrams per litre                      |  |  |  |  |  |
| Sulfate                | milligrams per litre                      |  |  |  |  |  |
| Sulfide (total)        | milligrams per litre                      |  |  |  |  |  |
| Total alkalinity       | milligrams of calcium carbonate per litre |  |  |  |  |  |
| Total dissolved solids | milligrams per litre                      |  |  |  |  |  |

## Monitoring Point 10

Groundwater quality monitoring, Groundwater well labelled BH-M23 identified in Figure 5.1 and Table 5.2 of the document titled 'Groundwater Management Plan - Bulk Sampling Activities, Balranald Mineral Sands Project' dated 22 October 2019 and kept on EPA file DOC20/269429.

| Pollutant               | Unit of measure             | No. of samples required | No. of samples collected and analysed | Lowest sample value | Mean of sample | Highest sample value |
|-------------------------|-----------------------------|-------------------------|---------------------------------------|---------------------|----------------|----------------------|
| Calcium                 | milligrams per litre        |                         |                                       |                     |                |                      |
| Chemical oxygen demand  | milligrams per litre        |                         |                                       |                     |                |                      |
| Chloride                | milligrams per litre        |                         |                                       |                     |                |                      |
| Depth                   | metres                      |                         |                                       |                     |                |                      |
| Electrical conductivity | microsiemens per centimetre |                         |                                       |                     |                |                      |
| Iron                    | milligrams per litre        |                         |                                       |                     |                |                      |
| Magnesium               | milligrams per litre        |                         |                                       |                     |                |                      |
| pH                      | pH                          |                         |                                       |                     |                |                      |
| Potassium               | milligrams per litre        |                         |                                       |                     |                |                      |
| Sodium                  | milligrams per litre        |                         |                                       |                     |                |                      |
| Sulfate                 | milligrams per litre        |                         |                                       |                     |                |                      |

|                        |   |  |  |  |  |  |
|------------------------|---|--|--|--|--|--|
| Sulfide (total)        | milligrams per litre                      |  |  |  |  |  |
| Total alkalinity       | milligrams of calcium carbonate per litre |  |  |  |  |  |
| Total dissolved solids | milligrams per litre                      |  |  |  |  |  |

## Monitoring Point 11

Groundwater quality monitoring, Groundwater well labelled BH-M24 identified in Figure 5.1 and Table 5.2 of the document titled 'Groundwater Management Plan - Bulk Sampling Activities, Balranald Mineral Sands Project' dated 22 October 2019 and kept on EPA file DOC20/269429.

| Pollutant               | Unit of measure                           | No. of samples required | No. of samples collected and analysed | Lowest sample value | Mean of sample | Highest sample value |
|-------------------------|---|-------------------------|---------------------------------------|---------------------|----------------|----------------------|
| Calcium                 | milligrams per litre                      |                         |                                       |                     |                |                      |
| Chemical oxygen demand  | milligrams per litre                      |                         |                                       |                     |                |                      |
| Chloride                | milligrams per litre                      |                         |                                       |                     |                |                      |
| Depth                   | metres                                    |                         |                                       |                     |                |                      |
| Electrical conductivity | microsiemens per centimetre               |                         |                                       |                     |                |                      |
| Iron                    | milligrams per litre                      |                         |                                       |                     |                |                      |
| Magnesium               | milligrams per litre                      |                         |                                       |                     |                |                      |
| pH                      | pH  |                         |                                       |                     |                |                      |
| Potassium               | milligrams per litre                      |                         |                                       |                     |                |                      |
| Sodium                  | milligrams per litre                      |                         |                                       |                     |                |                      |
| Sulfate                 | milligrams per litre                      |                         |                                       |                     |                |                      |
| Sulfide (total)         | milligrams per litre                      |                         |                                       |                     |                |                      |
| Total alkalinity        | milligrams of calcium carbonate per litre |                         |                                       |                     |                |                      |
| Total dissolved solids  | milligrams per litre                      |                         |                                       |                     |                |                      |

## Monitoring Point 12



Groundwater quality monitoring, Groundwater well labelled BH-M25 identified in Figure 5.1 and Table 5.2 of the document titled 'Groundwater Management Plan - Bulk Sampling Activities, Balranald Mineral Sands Project' dated 22 October 2019 and kept on EPA file DOC20/269429.

| Pollutant               | Unit of measure                           | No. of samples required | No. of samples collected and analysed | Lowest sample value | Mean of sample | Highest sample value |
|-------------------------|---|-------------------------|---------------------------------------|---------------------|----------------|----------------------|
| Calcium                 | milligrams per litre                      |                         |                                       |                     |                |                      |
| Chemical oxygen demand  | milligrams per litre                      |                         |                                       |                     |                |                      |
| Chloride                | milligrams per litre                      |                         |                                       |                     |                |                      |
| Depth                   | metres                                    |                         |                                       |                     |                |                      |
| Electrical conductivity | microsiemens per centimetre               |                         |                                       |                     |                |                      |
| Iron                    | milligrams per litre                      |                         |                                       |                     |                |                      |
| Magnesium               | milligrams per litre                      |                         |                                       |                     |                |                      |
| pH                      | pH  |                         |                                       |                     |                |                      |
| Potassium               | milligrams per litre                      |                         |                                       |                     |                |                      |
| Sodium                  | milligrams per litre                      |                         |                                       |                     |                |                      |
| Sulfate                 | milligrams per litre                      |                         |                                       |                     |                |                      |
| Sulfide (total)         | milligrams per litre                      |                         |                                       |                     |                |                      |
| Total alkalinity        | milligrams of calcium carbonate per litre |                         |                                       |                     |                |                      |
| Total dissolved solids  | milligrams per litre                      |                         |                                       |                     |                |                      |

## Name of the uploaded file containing point data ▼

2020 Balranald EPA Licence 20795 Annual Return - Monitoring Data FINAL.xlsx

### B3. Volume or Mass Monitoring Summary

For each volume or mass monitoring point identified in your licence, details are displayed below. If volume or mass monitoring is not required by your licence, **no data** will appear below.

If data was provided from an uploaded file, the file name will be displayed below instead of any data.

**Note** that this does not exclude the need to conduct appropriate volume or mass monitoring of assessable pollutants are required by load-based licensing (if applicable).

## C. Statement of Compliance - Licence Conditions

### C1. Compliance with Licence Conditions

|   |    |
|---|----|
| Were all conditions of the licence complied with (including monitoring and reporting requirements)? | No |
|---|----|

### C2. Details of Non-Compliance with Licence

|   |
|---|
| <b>Licence condition number not complied with ▼</b>   |
| Monitoring Point 25   |
| <b>Summary of particulars of the non-compliance ▼</b>   |
| Monitoring point 25 - M4S - not sampled   |
| <b>Further details on particulars of non-compliance, if required ▼</b>  |
|   |
| <b>Number of times occurred ▼</b>   |
| 1   |
| <b>Date(s) when the non-compliance occurred, if applicable ▼</b>  |
| December 2019   |
| <b>Cause of non-compliance ▼</b>  |
| Well blocked and unable to be sampled - as per previous Annual Returns. The blockage was the result of the drillers backing the rig into the well and subsequently un-lodging the data logger (April 2016). Numerous attempts were made to recover and unblock this well however all proved to be unsuccessful. |
| <b>Action taken or that will be taken to mitigate any adverse effects of the non-compliance ▼</b>   |
| No adverse effects  |
| <b>Action taken or that will be taken to prevent a recurrence of the non-compliance ▼</b>   |
| Iluka updated the GMP and removed M4S from the monitoring program in April 2020.  |
| <b>Uploaded Document Name ▼</b>   |
|   |
| <b>Uploaded Document Description ▼</b>  |
|   |

|  |
|--|
| <b>Licence condition number not complied with ▼</b>                    |
| Monitoring point 34 and 35   |
| <b>Summary of particulars of the non-compliance ▼</b>                  |
| Monitoring point 34 (M9D) and monitoring point 35 (M9S) not sampled    |
| <b>Further details on particulars of non-compliance, if required ▼</b> |
|  |

|   |
|---|
| <b>Number of times occurred ▼</b>   |
| 1   |
| <b>Date(s) when the non-compliance occurred, if applicable ▼</b>  |
| December 2019   |
| <b>Cause of non-compliance ▼</b>  |
| As reported in previous Annual Returns, land subsidence occurred in the near vicinity of monitoring points 34 and 35. Due to safety concerns an exclusion zone was instated around the monitoring wells and thus were inaccessible for sampling from mid-July 2019 - as per Iluka correspondence to EPA dated 5th August 2016 (Iluka Trim Reference:1877748). |
| <b>Action taken or that will be taken to mitigate any adverse effects of the non-compliance ▼</b>   |
| No adverse effects  |
| <b>Action taken or that will be taken to prevent a recurrence of the non-compliance ▼</b>   |
| Iluka updated the GMP and removed M9D and M9S from monitoring program in April 2020.  |
| <b>Uploaded Document Name ▼</b>   |
|   |
| <b>Uploaded Document Description ▼</b>  |
|   |

|   |
|---|
| <b>Licence condition number not complied with ▼</b>   |
| Monitoring Points 22 and 23   |
| <b>Summary of particulars of the non-compliance ▼</b>   |
| Monitoring points 22 (M3D) and monitoring point 23 (M3S) were not installed and thus not sampled at the frequency details in the licence. |
| <b>Further details on particulars of non-compliance, if required ▼</b>  |
|   |
| <b>Number of times occurred ▼</b>   |
| 1   |
| <b>Date(s) when the non-compliance occurred, if applicable ▼</b>  |
| December 2019   |
| <b>Cause of non-compliance ▼</b>  |
| Monitoring points 22 (M3D) and monitoring point 23 (M3S) were not installed and thus not sampled at the frequency details in the licence. |
| <b>Action taken or that will be taken to mitigate any adverse effects of the non-compliance ▼</b>   |
| No adverse effects  |
| <b>Action taken or that will be taken to prevent a recurrence of the non-compliance ▼</b>   |
| Iluka updated the GMP and removed M3D and M3S from the monitoring program in April 2020.  |
| <b>Uploaded Document Name ▼</b>   |
|   |

## Uploaded Document Description ▼

### D. Statement of Compliance - Load Based Fee Calculation

If you are not required to monitor assessable pollutants by your licence, **no data** will appear below.

If assessable pollutants have been identified on your licence, the following worksheets for each assessable pollutant will determine your load based fee for the licence fee period to which this Annual Return relates.

**Loads of assessable pollutants must be calculated using any of the methods provided in EPA's Load Calculation Protocol for the relevant activity.** A Load Calculation Protocol would have been already sent to you with your licence. If you require additional copies, you can download the Protocol from the EPA's website or you can contact us on telephone 02 9995 5700.

You are required to keep all records used to calculate licence fees for four years after the licence fee was paid or became payable, whichever is the later date.

### E. Statement of Compliance - Requirement to Prepare PIRMP

|  |                 |            |
|--|-----------------|------------|
| <b>Have you prepared a Pollution Incident Response Management Plan (PIRMP) as required under section 153A of the Protection of the Environment Operations (POEO) Act 1997?</b> |                 | <b>Yes</b> |
| Is the PIRMP available at the premises?  |                 | <b>Yes</b> |
| Is the PIRMP available in a prominent position on a publicly accessible website?   |                 | <b>No</b>  |
| Has the PIRMP been tested?   |                 | <b>Yes</b> |
| The PIRMP was last tested on   | <b>4-8-2020</b> |            |
| Has the PIRMP been updated?  |                 | <b>Yes</b> |
| The PIRMP was last updated on  | <b>9-6-2020</b> |            |
| Number of times the PIRMP was activated in this reporting period?  |                 | <b>0</b>   |
| The PIRMP was activated on   |                 |            |

### F. Statement of Compliance - Requirement to Publish Pollution Monitoring Data

|  |           |
|--|-----------|
| <b>Are there any conditions attached to your licence that require pollution monitoring to be undertaken as required under section 66(6) of the Protection of the Environment Operations (POEO) Act 1997?</b> | <b>No</b> |
|--|-----------|

## G. Statement of Compliance - Environment Management System and Practices

|   |     |
|---|-----|
| Do you have an ISO 14001 certified Environmental Management System (EMS) OR any other system that EPA considers is equivalent to the accountability, procedures, documentation and record keeping requirements of an ISO 14001 certified EMS? | No  |
| Have you conducted an assessment of your activities and operations to identify the aspects that have a potential to cause environmental impacts and implemented operational controls to address these aspects?                                | Yes |
| Have you established and implemented an operational maintenance program, including preventative maintenance?  | Yes |
| Do you keep records of regular inspections and maintenance of plant and equipment?  | Yes |
| Do you conduct regular (at least yearly) environmental audits at the premises that are conducted by a competent and independent person?   | Yes |
| Have you undertaken an independent environmental audit covering documented environmental practices, procedures and systems in place during the annual return period?  | Yes |
| Have you established and implemented an environmental improvement or management plan?   | Yes |
| Do you train staff in environmental issues that may arise from your activities and operations at the premises and keep records of this?   | Yes |



## H. Signature and Certification

This Annual Return may only be signed by person(s) with legal authority to sign it as set out in following categories: an Individual, a Company, a Public authority or a Local council.

It is an offence under section 66 of the Protection of the Environment Operations Act 1997 to supply any information in this form that is false or misleading in a material respect, or to certify a statement that is false or misleading in a material respect. There is a maximum penalty of \$250,000 for a corporation and \$120,000 for an individual.

I/We

- declare that the information in the Monitoring and Complaints Summary in Section B of this Annual Return application is correct and not false or misleading in a material respect, and
- certify that the information in the Statement and Compliance in sections A, C, D, E, F, G and H and any other pages attached to Section C is correct and not false or misleading in a material respect.

|           |   |           |   |
|-----------|---|-----------|---|
| Signature |  | Signature |  |
| Name      | THOMAS O'LEARY  | Name      | Nigel George Tinley   |



|  |                   |  |                   |
|--|-------------------|--|-------------------|
| Position   | MANAGING DIRECTOR | Position   | Company Secretary |
| Date   | 7 / 8 / 2020      | Date   | 6 / 8 / 2020      |
| <b>Declaration</b><br><br>I declare that the information in the Monitoring and Complaints Summary in section B of this Annual Return is correct and not false or misleading in a material respect, and<br><br>I certify that the information in the Statement of Compliance in section A,C,D,E,F and G and any pages attached to Section C is correct and not false or misleading in a material respect. |                   | <b>Declaration</b><br><br>I declare that the information in the Monitoring and Complaints Summary in section B of this Annual Return is correct and not false or misleading in a material respect, and<br><br>I certify that the information in the Statement of Compliance in section A,C,D,E,F and G and any pages attached to Section C is correct and not false or misleading in a material respect. |                   |

**A Statement of Compliance - Licence Details****Trim # 2055386****A1 Licence Holder**

Licence Number 20795

Licence Holder ILUKA RESOURCES LIMITED

Trading Name (if applicable)

ABN 34 008 675 018

*Monitoring data associated with the 2020 Annual Return was submitted electronically via the eConnect EPA Licence portal (see <http://> address below).*

*This is the spreadsheet submitted for the Annual Return.*

<http://www.epa.nsw.gov.au/profileapp/auth>

**A2 Premises to which Licence Applies (if applicable)**

Common Name (if any) KARRA STATION

Premises BALRANALD NSW 2715

**A3 Activities to which Licence Applies**

Mineral Processing  
Mining for minerals

**A4 Other Activities (if applicable)**

Waste processing  
Waste disposal

**A5 Fee-Based Activity Classifications**

| Fee based activity  | Activity Scale           | Unit of measure              |
|---------------------|--------------------------|------------------------------|
| Mining for minerals | > 50,000.00 - 100,000.00 | T annual production capacity |
| Mineral processing  | > 30,000.00 - 100,000.00 | T annual processing capacity |

**A6 Assessable Pollutants (not applicable)**

**B Monitoring and Complaints Summary****B1 Number of Pollution Complaints**

|  |           |
|--|-----------|
| Number of pollution complaints recorded by the licensee during the reporting period              | See below |
| If no complaints were received enter nil in the attached box, otherwise complete the table below |           |

| Pollution Complaint Category | Number of Complaints |
|------------------------------|----------------------|
| Air                          | 0                    |
| Water                        | 0                    |
| Noise                        | 0                    |
| Waste                        | 0                    |
| Other                        | 0                    |



## Monitoring Point(s) 1-5

**Air quality monitoring, The dust gauge identified as Bal1, Bal2, Bal3, Bal4 and Bal5 in the map and email attachment titled 'Bulk Sampling Activity Depositional Gauges - Location Plan' dated 27 May 2016 and kept**

|                             | Pollutant                       | Unit of measure | No of samples required by licence | No of samples collected and analysed | Lowest sample value | Mean of sample | Highest sample value |
|-----------------------------|---------------------------------|-----------------|-----------------------------------|--------------------------------------|---------------------|----------------|----------------------|
| Monitoring Point 1 (Bal 1)  | Particulates - Deposited Matter | g/m2/month      | 5                                 | 1                                    | 0.4942              | 0.4942         | 0.4942               |
| Monitoring Point 2 (Bal 2)  | Particulates - Deposited Matter | g/m2/month      | 5                                 | 2                                    | 0.5437              | 0.7706         | 0.9975               |
| Monitoring Point 3 (Bal 3)  | Particulates - Deposited Matter | g/m2/month      | 5                                 | 2                                    | 0.2754              | 0.63505        | 0.9947               |
| Monitoring Point 4 (Bal 4)* | Particulates - Deposited Matter | g/m2/month      | 0                                 | 2                                    | 0.9133              | 0.95155        | 0.9898               |
| Monitoring Point 5 (Bal 5)  | Particulates - Deposited Matter | g/m2/month      | 5                                 | 2                                    | 0.5762              | 1.1243         | 1.6724               |

## Monitoring Point 6

**Groundwater quality monitoring, Groundwater well labelled UGM-M10D identified in Figure 8 and Table B-7 of the document titled 'Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**

| Pollutant                   | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|-----------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                     | milligrams per litre                      | 1                                  | 1   | 412                 | 7/12/2019          | 412            |
| Chemical Oxygen Demand      | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Chloride                    | milligrams per litre                      | 1                                  | 1   | 18,100              | 7/12/2019          | 18,100         |
| Depth                       | metres                                    | 1                                  | 1   | 13.074              | 7/12/2019          | 13.074         |
| Electrical Conductivity     | microsiemen per centimetre                | 1                                  | 0   | -                   | -                  | -              |
| Iron (dissolved)<br>(total) | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
|                             |   | 1                                  | 0   | -                   | -                  | -              |
| Magnesium                   | milligrams per litre                      | 1                                  | 1   | 1,350               | 7/12/2019          | 1,350          |
| pH                          | pH  | 1                                  | 1   | 7.7                 | 7/12/2019          | 7.70           |
| Potassium                   | milligrams per litre                      | 1                                  | 1   | 42                  | 7/12/2019          | 42             |
| Sodium                      | milligrams per litre                      | 1                                  | 1   | 10,800              | 7/12/2019          | 10,800         |
| Sulfate                     | milligrams per litre                      | 1                                  | 1   | 3,880               | 7/12/2019          | 3,880          |
| Sulfide (total)             | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Total Alkalinity            | milligrams of calcium carbonate per litre | 1                                  | 1   | 422                 | 7/12/2019          | 422            |
| Total Dissolved Solids      | milligrams per litre                      | 1                                  | 1   | 32,900              | 7/12/2019          | 32,900         |

Notes:

< denotes below the laboratory limit of reporting.

This well located near Stopes 1, 1B and 3. No activity in these stopes during period.

This well was not monitored in April 2020 as not part of the revised GMP monitoring program (approved on revised licence 9 April 2020).

## Monitoring Point 7

**Groundwater quality monitoring, Groundwater well labelled UGM-M10S identified in Figure 8 and Table B-7 of the document titled Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**


| Pollutant                   | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|-----------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                     | milligrams per litre                      | 1                                  | 1   | 479                 | 7/12/2019          | 479            |
| Chemical Oxygen Demand      | milligrams per litre                      | 1                                  | 1   | -                   | -                  | -              |
| Chloride                    | milligrams per litre                      | 1                                  | 1   | 18,000              | 7/12/2019          | 18,000         |
| Depth                       | metres                                    | 1                                  | 1   | 18.816              | 7/12/2019          | 18.816         |
| Electrical Conductivity     | microsiemen per centimetre                | 1                                  | 0   | -                   | -                  | -              |
| Iron (dissolved)<br>(total) | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
|                             |   | 1                                  | 0   | -                   | -                  | -              |
| Magnesium                   | milligrams per litre                      | 1                                  | 1   | 1,400               | 7/12/2019          | 1,400          |
| pH                          | pH  | 1                                  | 1   | 7.57                | 7/12/2019          | 7.57           |
| Potassium                   | milligrams per litre                      | 1                                  | 1   | 50                  | 7/12/2019          | 50             |
| Sodium                      | milligrams per litre                      | 1                                  | 1   | 11,000              | 7/12/2019          | 11,000         |
| Sulfate                     | milligrams per litre                      | 1                                  | 1   | 4,110               | 7/12/2019          | 4,110          |
| Sulfide (total)             | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Total Alkalinity            | milligrams of calcium carbonate per litre | 1                                  | 1   | 424                 | 7/12/2019          | 424            |
| Total Dissolved Solids      | milligrams per litre                      | 1                                  | 1   | 33,300              | 7/12/2019          | 33,300         |

Notes:

< denotes below the laboratory limit of reporting.

This well located near Stopes 1, 1B and 3. Stopes 1, 1B and 3 were mined for a total of 14 days. No Backfilling.

This well was not monitored in April 2020 as not part of the revised GMP monitoring program (approved on revised licence 9 April 2020).

 Denotes non-compliance

## Monitoring Point 8

**Groundwater quality monitoring, Groundwater well labelled UGM-M11D identified in Figure 8 and Table B-7 of the document titled 'Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**


| Pollutant                   | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|-----------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                     | milligrams per litre                      | 1                                  | 1   | 443                 | 7/12/2019          | 443            |
| Chemical Oxygen Demand      | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Chloride                    | milligrams per litre                      | 1                                  | 1   | 17,900              | 7/12/2019          | 17,900         |
| Depth                       | metres                                    | 1                                  | 1   | 13.686              | 7/12/2019          | 13.686         |
| Electrical Conductivity     | microsiemen per centimetre                | 1                                  | 1   | 51,800              | 7/12/2019          | 51,800         |
| Iron (dissolved)<br>(total) | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
|                             |   | 1                                  | 0   | -                   | -                  | -              |
| Magnesium                   | milligrams per litre                      | 1                                  | 1   | 1,290               | 7/12/2019          | 1,290          |
| pH                          | pH  | 1                                  | 1   | 7.28                | 7/12/2019          | 7.28           |
| Potassium                   | milligrams per litre                      | 1                                  | 1   | 48                  | 7/12/2019          | 48             |
| Sodium                      | milligrams per litre                      | 1                                  | 1   | 9,540               | 7/12/2019          | 9,540          |
| Sulfate                     | milligrams per litre                      | 1                                  | 1   | 3,300               | 7/12/2019          | 3,300          |
| Sulfide (total)             | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Total Alkalinity            | milligrams of calcium carbonate per litre | 1                                  | 1   | 470                 | 7/12/2019          | 470            |
| Total Dissolved Solids      | milligrams per litre                      | 1                                  | 1   | 33,700              | 7/12/2019          | 33,700         |

Notes:

< denotes below the laboratory limit of reporting.

This well is located near Stope 4. Stope 4 was mined for a total of 7 days in late August 2016. Backfilling was undertaken for a short period of time on the 14 & 15 Sept 2016

This well was not monitored in April 2020 as not part of the revised GMP monitoring program (approved on revised licence 9 April 2020).

 Denotes non-compliance

## Monitoring Point 9

**Groundwater quality monitoring, Groundwater well labelled UGM-M11S identified in Figure 8 and Table B-7 of the document titled Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**


| Pollutant                   | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|-----------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                     | milligrams per litre                      | 1                                  | 1   | 690                 | 7/12/2019          | 690            |
| Chemical Oxygen Demand      | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Chloride                    | milligrams per litre                      | 1                                  | 1   | 26,400              | 7/12/2019          | 26,400         |
| Depth                       | metres                                    | 1                                  | 1   | 13.545              | 7/12/2019          | 13.545         |
| Electrical Conductivity     | microsiemen per centimetre                | 1                                  | 1   | 70,000              | 7/12/2019          | 70,000         |
| Iron (dissolved)<br>(total) | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
|                             |   | 1                                  | 0   | -                   | -                  | -              |
| Magnesium                   | milligrams per litre                      | 1                                  | 1   | 1,780               | 7/12/2019          | 1,780          |
| pH                          | pH  | 1                                  | 1   | 7.38                | 7/12/2019          | 7.38           |
| Potassium                   | milligrams per litre                      | 1                                  | 1   | 39                  | 7/12/2019          | 39             |
| Sodium                      | milligrams per litre                      | 1                                  | 1   | 14,800              | 7/12/2019          | 14,800         |
| Sulfate                     | milligrams per litre                      | 1                                  | 1   | 5,050               | 7/12/2019          | 5,050          |
| Sulfide (total)             | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Total Alkalinity            | milligrams of calcium carbonate per litre | 1                                  | 1   | 386                 | 7/12/2019          | 386            |
| Total Dissolved Solids      | milligrams per litre                      | 1                                  | 1   | 45,500              | 7/12/2019          | 45,500         |

Notes:

< denotes below the laboratory limit of reporting.

This well is located near Stope 4. Stope 4 was mined for a total of 7 days in late August 2016. Backfilling was undertaken for a short period of time on the 14 & 15 Sept 2016

This well was not monitored in April 2020 as not part of the revised GMP monitoring program (approved on revised licence 9 April 2020).

 Denotes non-compliance

## Monitoring Point 10


**Groundwater quality monitoring, Groundwater well labelled UGM-M12D identified in Figure 8 and Table B-7 of the document titled Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**

| Pollutant                   | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|-----------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                     | milligrams per litre                      | 2                                  | 2   | 359                 | 7/12/2019          | 424            |
| Chemical Oxygen Demand      | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Chloride                    | milligrams per litre                      | 2                                  | 2   | 16,600              | 23/04/2020         | 17,850         |
| Depth                       | metres                                    | 2                                  | 2   | 13.14               | 23/04/2020         | 14             |
| Electrical Conductivity     | microsiemen per centimetre                | 2                                  | 2   | 44,153              | 23/04/2020         | 50,127         |
| Iron (dissolved)<br>(total) | milligrams per litre                      | 2                                  | 1   | <0.1                | 23/04/2020         | -              |
|                             |   | 2                                  | 0   | -                   | -                  | -              |
| Magnesium                   | milligrams per litre                      | 2                                  | 2   | 1,180               | 23/04/2020         | 1,370          |
| pH                          | pH  | 2                                  | 2   | 7.05                | 7/12/2019          | 7.10           |
| Potassium                   | milligrams per litre                      | 2                                  | 2   | 29                  | 23/04/2020         | 42             |
| Sodium                      | milligrams per litre                      | 2                                  | 2   | 9,520               | 23/04/2020         | 10,410         |
| Sulfate                     | milligrams per litre                      | 2                                  | 2   | 3,130               | 23/04/2020         | 3,530          |
| Sulfide (total)             | milligrams per litre                      | 2                                  | 1   | 8.9                 | 23/04/2020         | -              |
| Total Alkalinity            | milligrams of calcium carbonate per litre | 2                                  | 2   | 417                 | 7/12/2019          | 482            |
| Total Dissolved Solids      | milligrams per litre                      | 2                                  | 2   | 31,044              | 23/04/2020         | 33,772         |

Notes:

< denotes below the laboratory limit of reporting.

This well is located near Stope 4. Stope 4 was mined for a total of 7 days in late August 2016. Backfilling was undertaken for a short period of time on the 14 & 15 Sept 2016

 Denotes non-compliance

## Monitoring Point 11


**Groundwater quality monitoring, Groundwater well labelled UGM-M12S identified in Figure 8 and Table B-7 of the document titled Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**

| Pollutant                   | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|-----------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                     | milligrams per litre                      | 2                                  | 2   | 514                 | 28/04/2020         | 548            |
| Chemical Oxygen Demand      | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Chloride                    | milligrams per litre                      | 2                                  | 2   | 24,500              | 7/12/2019          | 25,850         |
| Depth                       | metres                                    | 2                                  | 2   | 13.26               | 28/04/2020         | 13             |
| Electrical Conductivity     | microsiemen per centimetre                | 2                                  | 2   | 58,697              | 28/04/2020         | 63,049         |
| Iron (dissolved)<br>(total) | milligrams per litre                      | 2                                  | 2   | <0.1                | 28/04/2020         | -              |
|                             |   | 2                                  | 0   | -                   | -                  | -              |
| Magnesium                   | milligrams per litre                      | 2                                  | 2   | 1,650               | 28/04/2020         | 1,710          |
| pH                          | pH  | 2                                  | 2   | 7.4                 | 7/12/2019          | 7.71           |
| Potassium                   | milligrams per litre                      | 2                                  | 2   | 21                  | 28/04/2020         | 29             |
| Sodium                      | milligrams per litre                      | 2                                  | 2   | 14,000              | 7/12/2019          | 14,300         |
| Sulfate                     | milligrams per litre                      | 2                                  | 2   | 5,040               | 28/04/2020         | 5,065          |
| Sulfide (total)             | milligrams per litre                      | 2                                  | 1   | <0.01               | 28/04/2020         | -              |
| Total Alkalinity            | milligrams of calcium carbonate per litre | 2                                  | 2   | 266                 | 28/04/2020         | 307            |
| Total Dissolved Solids      | milligrams per litre                      | 2                                  | 2   | 43,800              | 7/12/2019          | 43,970         |

Notes:

< denotes below the laboratory limit of reporting.

This well is located near Stope 4. Stope 4 was mined for a total of 7 days in late August 2016. Backfilling was undertaken for a short period of time on the 14 & 15 Sept 2016

 Denotes non-compliance

## Monitoring Point 12

**Groundwater quality monitoring, Groundwater well labelled UGM-M13D identified in Figure 8 and Table B-7 of the document titled Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**


| Pollutant                   | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|-----------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                     | milligrams per litre                      | 1                                  | 1   | 485                 | 7/12/2019          | 485            |
| Chemical Oxygen Demand      | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Chloride                    | milligrams per litre                      | 1                                  | 1   | 19,100              | 7/12/2019          | 19,100         |
| Depth                       | metres                                    | 1                                  | 1   | 13.615              | 7/12/2019          | 13.62          |
| Electrical Conductivity     | microsiemen per centimetre                | 1                                  | 1   | 56,300              | 7/12/2019          | 56,300         |
| Iron (dissolved)<br>(total) | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
|                             |   | 1                                  | 0   | -                   | -                  | -              |
| Magnesium                   | milligrams per litre                      | 1                                  | 1   | 1,540               | 7/12/2019          | 1,540          |
| pH                          | pH  | 1                                  | 1   | 6.98                | 7/12/2019          | 6.98           |
| Potassium                   | milligrams per litre                      | 1                                  | 1   | 53                  | 7/12/2019          | 53             |
| Sodium                      | milligrams per litre                      | 1                                  | 1   | 11,100              | 7/12/2019          | 11,100         |
| Sulfate                     | milligrams per litre                      | 1                                  | 1   | 3,940               | 7/12/2019          | 3,940          |
| Sulfide (total)             | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Total Alkalinity            | milligrams of calcium carbonate per litre | 1                                  | 1   | 410                 | 7/12/2019          | 410            |
| Total Dissolved Solids      | milligrams per litre                      | 1                                  | 1   | 36,600              | 7/12/2019          | 36,600         |

Notes:

< denotes below the laboratory limit of reporting.

This well is located near Stope 4. Stope 4 was mined for a total of 7 days in late August 2016. Backfilling was undertaken for a short period of time on the 14 & 15 Sept 2016

This well was not monitored in April 2020 as not part of the revised GMP monitoring program (approved on revised licence 9 April 2020).

 Denotes non-compliance



## Monitoring Point 13


**Groundwater quality monitoring, Groundwater well labelled UGM-M13S identified in Figure 8 and Table B-7 of the document titled Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**

| Pollutant                   | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|-----------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                     | milligrams per litre                      | 1                                  | 1   | 915                 | 7/12/2019          | 915            |
| Chemical Oxygen Demand      | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Chloride                    | milligrams per litre                      | 1                                  | 1   | 24,900              | 7/12/2019          | 24,900         |
| Depth                       | metres                                    | 1                                  | 1   | 13.395              | 7/12/2019          | 13.395         |
| Electrical Conductivity     | microsiemen per centimetre                | 1                                  | 1   | 67,400              | 7/12/2019          | 67,400         |
| Iron (dissolved)<br>(total) | milligrams per litre                      | 1                                  | 1   | <0.1                | 7/12/2019          | -              |
|                             |   | 1                                  | 0   | -                   | -                  | -              |
| Magnesium                   | milligrams per litre                      | 1                                  | 1   | 1550                | 7/12/2019          | 1,550          |
| pH                          | pH  | 1                                  | 1   | 7.67                | 7/12/2019          | 7.7            |
| Potassium                   | milligrams per litre                      | 1                                  | 1   | 37                  | 7/12/2019          | 37             |
| Sodium                      | milligrams per litre                      | 1                                  | 1   | 14,000              | 7/12/2019          | 14,000         |
| Sulfate                     | milligrams per litre                      | 1                                  | 1   | 5,240               | 7/12/2019          | 5,240          |
| Sulfide (total)             | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Total Alkalinity            | milligrams of calcium carbonate per litre | 1                                  | 1   | 138                 | 7/12/2019          | 138            |
| Total Dissolved Solids      | milligrams per litre                      | 1                                  | 1   | 43,800              | 7/12/2019          | 43,800         |

Notes:

< denotes below the laboratory limit of reporting.

This well is located near Stope 4. Stope 4 was mined for a total of 7 days in late August 2016. Backfilling was undertaken for a short period of time on the 14 & 15 Sept 2016. This well was not monitored in April 2020 as not part of the revised GMP monitoring program (approved on revised licence 9 April 2020).

 Denotes non-compliance

## Monitoring Point 14

**Groundwater quality monitoring, Groundwater well labelled UGM-M14D identified in Figure 8 and Table B-7 of the document titled Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**


| Pollutant                   | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|-----------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                     | milligrams per litre                      | 1                                  | 1   | 484                 | 7/12/2019          | 484            |
| Chemical Oxygen Demand      | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Chloride                    | milligrams per litre                      | 1                                  | 1   | 19,600              | 7/12/2019          | 19,600         |
| Depth                       | metres                                    | 1                                  | 1   | 13.876              | 7/12/2019          | 13.876         |
| Electrical Conductivity     | microsiemen per centimetre                | 1                                  | 1   | 56,400              | 7/12/2019          | 56,400         |
| Iron (dissolved)<br>(total) | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
|                             |   | 1                                  | 0   | -                   | -                  | -              |
| Magnesium                   | milligrams per litre                      | 1                                  | 1   | 1,540               | 7/12/2019          | 1,540          |
| pH                          | pH  | 1                                  | 1   | 7.01                | 7/12/2019          | 7.01           |
| Potassium                   | milligrams per litre                      | 1                                  | 1   | 53                  | 7/12/2019          | 53             |
| Sodium                      | milligrams per litre                      | 1                                  | 1   | 11,100              | 7/12/2019          | 11,100         |
| Sulfate                     | milligrams per litre                      | 1                                  | 1   | 3,890               | 7/12/2019          | 3,890          |
| Sulfide (total)             | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Total Alkalinity            | milligrams of calcium carbonate per litre | 1                                  | 1   | 421                 | 7/12/2019          | 421            |
| Total Dissolved Solids      | milligrams per litre                      | 1                                  | 1   | 36,700              | 7/12/2019          | 36,700         |

### Notes:

< denotes below the laboratory limit of reporting.

This well is located near Stope 4. Stope 4 was mined for a total of 7 days in late August 2016. Backfilling was undertaken for a short period of time on the 14 & 15 Sept 2016

This well was not monitored in April 2020 as not part of the revised GMP monitoring program (approved on revised licence 9 April 2020).

 Denotes non-compliance

## Monitoring Point 15


**Groundwater quality monitoring, Groundwater well labelled UGM-M14S identified in Figure 8 and Table B-7 of the document titled Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**

| Pollutant                   | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|-----------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                     | milligrams per litre                      | 1                                  | 1   | 599                 | 7/12/2019          | 599            |
| Chemical Oxygen Demand      | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Chloride                    | milligrams per litre                      | 1                                  | 1   | 28,500              | 7/12/2019          | 28,500         |
| Depth                       | metres                                    | 1                                  | 1   | 13.555              | 7/12/2019          | 13.56          |
| Electrical Conductivity     | microsiemen per centimetre                | 1                                  | 1   | 68,400              | 7/12/2019          | 68,400         |
| Iron (dissolved)<br>(total) | milligrams per litre                      | 1                                  | 1   | <0.1                |                    | -              |
|                             |   | 1                                  | 0   | -                   | -                  | -              |
| Magnesium                   | milligrams per litre                      | 1                                  | 1   | 1,760               | 7/12/2019          | 1,760          |
| pH                          | pH  | 1                                  | 1   | 7.45                | 7/12/2019          | 7.45           |
| Potassium                   | milligrams per litre                      | 1                                  | 1   | 34                  | 7/12/2019          | 34             |
| Sodium                      | milligrams per litre                      | 1                                  | 1   | 14,400              | 7/12/2019          | 14,400         |
| Sulfate                     | milligrams per litre                      | 1                                  | 1   | 5,230               | 7/12/2019          | 5,230          |
| Sulfide (total)             | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Total Alkalinity            | milligrams of calcium carbonate per litre | 1                                  | 1   | 369                 | 7/12/2019          | 369            |
| Total Dissolved Solids      | milligrams per litre                      | 1                                  | 1   | 44,500              | 7/12/2019          | 44,500         |

Notes:

< denotes below the laboratory limit of reporting.

This well is located near Stope 4. Stope 4 was mined for a total of 7 days in late August 2016. Backfilling was undertaken for a short period of time on the 14 & 15 Sept 2016. This well was not monitored in April 2020 as not part of the revised GMP monitoring program (approved on revised licence 9 April 2020).

 Denotes non-compliance

## Monitoring Point 16


**Groundwater quality monitoring, Groundwater well labelled UGM-M15D identified in Figure 8 and Table B-7 of the document titled 'Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**

| Pollutant                   | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|-----------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                     | milligrams per litre                      | 2                                  | 2   | 416                 | 24/04/2020         | 434            |
| Chemical Oxygen Demand      | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Chloride                    | milligrams per litre                      | 2                                  | 2   | 18,800              | 24/04/2020         | 19,000         |
| Depth                       | metres                                    | 2                                  | 2   | 13.34               | 24/04/2020         | 14             |
| Electrical Conductivity     | microsiemen per centimetre                | 2                                  | 2   | 50,986              | 24/04/2020         | 53,143         |
| Iron (dissolved)<br>(total) | milligrams per litre                      | 2                                  | 1   | 3.87                | 24/04/2020         | 3.87           |
|                             |   | 2                                  | 0   | -                   | -                  | -              |
| Magnesium                   | milligrams per litre                      | 2                                  | 2   | 1,440               | 24/04/2020         | 1,445          |
| pH                          | pH  | 2                                  | 2   | 6.78                | 24/04/2020         | 6.95           |
| Potassium                   | milligrams per litre                      | 2                                  | 2   | 32                  | 24/04/2020         | 42             |
| Sodium                      | milligrams per litre                      | 2                                  | 2   | 10,700              | 7/12/2019          | 11,200         |
| Sulfate                     | milligrams per litre                      | 2                                  | 2   | 3,640               | 7/12/2019          | 3,730          |
| Sulfide (total)             | milligrams per litre                      | 2                                  | 1   | <0.01               | 24/04/2020         | -              |
| Total Alkalinity            | milligrams of calcium carbonate per litre | 2                                  | 2   | 387                 | 24/04/2020         | 423            |
| Total Dissolved Solids      | milligrams per litre                      | 2                                  | 2   | 20,010              | 24/04/2020         | 27,955         |

### Notes:

< denotes below the laboratory limit of reporting.

This well is located near Stope 4. Stope 4 was mined for a total of 7 days in late August 2016. Backfilling was undertaken for a short period of time on the 14 & 15 Sept 2016

 Denotes non-compliance

## Monitoring Point 17


**Groundwater quality monitoring, Groundwater well labelled UGM-M15S identified in Figure 8 and Table B-7 of the document titled Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**

| Pollutant                   | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|-----------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                     | milligrams per litre                      | 2                                  | 2   | 623                 | 24/04/2020         | 679            |
| Chemical Oxygen Demand      | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Chloride                    | milligrams per litre                      | 2                                  | 2   | 26,100              | 24/04/2020         | 27,250         |
| Depth                       | metres                                    | 2                                  | 2   | 13.11               | 24/04/2020         | 13.25          |
| Electrical Conductivity     | microsiemen per centimetre                | 2                                  | 2   | 56,417              | 24/04/2020         | 62,359         |
| Iron (dissolved)<br>(total) | milligrams per litre                      | 2                                  | 2   | <0.1                | 24/04/2020         | -              |
|                             |   | 2                                  | 0   | -                   | -                  | -              |
| Magnesium                   | milligrams per litre                      | 2                                  | 2   | 1590                | 24/04/2020         | 1,600          |
| pH                          | pH  | 2                                  | 2   | 7.39                | 7/12/2019          | 7.46           |
| Potassium                   | milligrams per litre                      | 2                                  | 2   | 24                  | 24/04/2020         | 32             |
| Sodium                      | milligrams per litre                      | 2                                  | 2   | 14,000              | 7/12/2019          | 14,350         |
| Sulfate                     | milligrams per litre                      | 2                                  | 2   | 5,080               | 7/12/2019          | 5,125          |
| Sulfide (total)             | milligrams per litre                      | 2                                  | 1   | <0.1                | 24/04/2020         | -              |
| Total Alkalinity            | milligrams of calcium carbonate per litre | 2                                  | 2   | 247                 | 7/12/2019          | 254            |
| Total Dissolved Solids      | milligrams per litre                      | 2                                  | 2   | 37,765              | 24/04/2020         | 41,083         |

Notes:

< denotes below the laboratory limit of reporting.

This well is located near Stope 4. Stope 4 was mined for a total of 7 days in late August 2016. Backfilling was undertaken for a short period of time on the 14 & 15 Sept 2016

 Denotes non-compliance

## Monitoring Point 18


**Groundwater quality monitoring, Groundwater well labelled UGM-M1D identified in Figure 8 and Table B-7 of the document titled Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**

| Pollutant                   | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|-----------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                     | milligrams per litre                      | 2                                  | 2   | 314                 | 7/12/2019          | 351            |
| Chemical Oxygen Demand      | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Chloride                    | milligrams per litre                      | 2                                  | 2   | 18,000              | 23/04/2020         | 18,350         |
| Depth                       | metres                                    | 2                                  | 2   | 13.14               | 23/04/2020         | 13.54          |
| Electrical Conductivity     | microsiemen per centimetre                | 2                                  | 2   | 45,561              | 23/04/2020         | 49,831         |
| Iron (dissolved)<br>(total) | milligrams per litre                      | 1                                  | 1   | 1.87                | 23/04/2020         | 1.87           |
|                             |   | 1                                  | 0   | -                   | -                  | -              |
| Magnesium                   | milligrams per litre                      | 2                                  | 2   | 1,440               | 7/12/2019          | 1,520          |
| pH                          | pH  | 2                                  | 2   | 6.52                | 7/12/2019          | 6.66           |
| Potassium                   | milligrams per litre                      | 2                                  | 2   | 48                  | 23/04/2020         | 52             |
| Sodium                      | milligrams per litre                      | 2                                  | 2   | 10,500              | 7/12/2019          | 10,800         |
| Sulfate                     | milligrams per litre                      | 2                                  | 2   | 3,690               | 23/04/2020         | 3,815          |
| Sulfide (total)             | milligrams per litre                      | 2                                  | 1   | <0.1                | 23/04/2020         | -              |
| Total Alkalinity            | milligrams of calcium carbonate per litre | 2                                  | 2   | 314                 | 7/12/2019          | 351            |
| Total Dissolved Solids      | milligrams per litre                      | 2                                  | 2   | 20,010              | 23/04/2020         | 27,605         |

### Notes:

< denotes below the laboratory limit of reporting.

This well located near Stopes 1, 1B and 3. Stopes 1, 1B and 3 were mined for a total of 14 days. No Backfilling.

 Denotes non-compliance

## Monitoring Point 19


**Groundwater quality monitoring, Groundwater well labelled UGM-M1S identified in Figure 8 and Table B-7 of the document titled 'Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**

| Pollutant                   | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|-----------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                     | milligrams per litre                      | 2                                  | 2   | 1060                | 7/12/2019          | 1,115          |
| Chemical Oxygen Demand      | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Chloride                    | milligrams per litre                      | 2                                  | 2   | 24,100              | 23/04/2020         | 25,800         |
| Depth                       | metres                                    | 2                                  | 2   | 13.796              | 7/12/2019          | 13.49          |
| Electrical Conductivity     | microsiemen per centimetre                | 2                                  | 2   | 64,456              | 23/04/2020         | 65,328         |
| Iron (dissolved)<br>(total) | milligrams per litre                      | 1                                  | 1   | 0.48                | 23/04/2020         | 0.48           |
|                             |   | 1                                  | 0   | -                   | -                  | -              |
| Magnesium                   | milligrams per litre                      | 2                                  | 2   | 1,380               | 7/12/2019          | 1,435          |
| pH                          | pH  | 2                                  | 2   | 7.52                | 7/12/2019          | 7.54           |
| Potassium                   | milligrams per litre                      | 2                                  | 2   | 41                  | 23/04/2020         | 44             |
| Sodium                      | milligrams per litre                      | 2                                  | 2   | 13,600              | 7/12/2019          | 14,100         |
| Sulfate                     | milligrams per litre                      | 2                                  | 2   | 4,970               | 23/04/2020         | 4,975          |
| Sulfide (total)             | milligrams per litre                      | 2                                  | 1   | 0.5                 | 23/04/2020         | -              |
| Total Alkalinity            | milligrams of calcium carbonate per litre | 2                                  | 2   | 132                 | 23/04/2020         | 143            |
| Total Dissolved Solids      | milligrams per litre                      | 2                                  | 2   | 42,900              | 7/12/2019          | 42,950         |

### Notes:

< denotes below the laboratory limit of reporting.

This well located near Stopes 1, 1B and 3. Stopes 1, 1B and 3 were mined for a total of 14 days. No Backfilling.

 Denotes non-compliance

## Monitoring Point 20


**Groundwater quality monitoring, Groundwater well labelled UGM-M2D identified in Figure 8 and Table B-7 of the document titled Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**

| Pollutant                | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|--------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                  | milligrams per litre                      | 2                                  | 2   | 454                 | 7/12/2019          | 463            |
| Chemical Oxygen Demand   | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Chloride                 | milligrams per litre                      | 2                                  | 2   | 17,800              | 7/12/2019          | 18,000         |
| Depth                    | metres                                    | 2                                  | 2   | 14.18               | 24/04/2020         | 14.451         |
| Electrical Conductivity  | microsiemen per centimetre                | 2                                  | 1   | 57,267              | 24/04/2020         | -              |
| Iron (dissolved) (total) | milligrams per litre                      | 1                                  | 2   | <0.1                | 24/04/2020         | -              |
|                          |   | 1                                  | 0   | -                   | -                  | -              |
| Magnesium                | milligrams per litre                      | 2                                  | 2   | 1,370               | 7/12/2019          | 1,395          |
| pH                       | pH  | 2                                  | 2   | 7.17                | 24/04/2020         | 7.5            |
| Potassium                | milligrams per litre                      | 2                                  | 2   | 31                  | 24/04/2020         | 37             |
| Sodium                   | milligrams per litre                      | 2                                  | 2   | 11,000              | 7/12/2019          | 11,050         |
| Sulfate                  | milligrams per litre                      | 2                                  | 2   | 3,980               | 24/04/2020         | 4,080          |
| Sulfide (total)          | milligrams per litre                      | 2                                  | 1   | <0.1                | 24/04/2020         | -              |
| Total Alkalinity         | milligrams of calcium carbonate per litre | 2                                  | 2   | 419                 | 7/12/2019          | 451            |
| Total Dissolved Solids   | milligrams per litre                      | 2                                  | 2   | 34,500              | 7/12/2019          | 35,158         |

### Notes:

< denotes below the laboratory limit of reporting.

This well located near Stopes 1, 1B and 3. Stopes 1, 1B and 3 were mined for a total of 14 days. No Backfilling.

 Denotes non-compliance



## Monitoring Point 21


**Groundwater quality monitoring, Groundwater well labelled UGM-M2S identified in Figure 8 and Table B-7 of the document titled Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**

| Pollutant                   | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|-----------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                     | milligrams per litre                      | 2                                  | 2   | 546                 | 7/12/2019          | 575            |
| Chemical Oxygen Demand      | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Chloride                    | milligrams per litre                      | 2                                  | 2   | 20,900              | 7/12/2019          | 22,300         |
| Depth                       | metres                                    | 2                                  | 2   | 14.010              | 25/04/2020         | 14.201         |
| Electrical Conductivity     | microsiemen per centimetre                | 2                                  | 1   | 59,935              | 25/04/2020         | -              |
| Iron (dissolved)<br>(total) | milligrams per litre                      | 1                                  | 1   | <0.1                | 25/04/2020         | -              |
|                             |   | 1                                  | 0   | -                   | -                  | -              |
| Magnesium                   | milligrams per litre                      | 2                                  | 2   | 1,430               | 7/12/2019          | 1,500          |
| pH                          | pH  | 2                                  | 2   | 6.48                | 25/04/2020         | 6.88           |
| Potassium                   | milligrams per litre                      | 2                                  | 2   | 27.0                | 25/04/2020         | 31.5           |
| Sodium                      | milligrams per litre                      | 2                                  | 2   | 11,200              | 7/12/2019          | 11,700         |
| Sulfate                     | milligrams per litre                      | 2                                  | 2   | 4,710               | 7/12/2019          | 4,810          |
| Sulfide (total)             | milligrams per litre                      | 2                                  | 2   | <0.01               | 25/04/2020         | -              |
| Total Alkalinity            | milligrams of calcium carbonate per litre | 2                                  | 2   | 302                 | 25/04/2020         | 310            |
| Total Dissolved Solids      | milligrams per litre                      | 2                                  | 2   | 38,600              | 7/12/2019          | 39,098         |

### Notes:

< denotes below the laboratory limit of reporting.

This well located near Stopes 1, 1B and 3. Stopes 1, 1B and 3 were mined for a total of 14 days. No Backfilling.

 Denotes non-compliance

## Monitoring Point 22

**Groundwater quality monitoring, Groundwater well labelled UGM-M3D identified in Figure 8 and Table B-7 of the document titled Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**


| Pollutant               | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Mean of Sample | Highest Sample Value |
|-------------------------|---|------------------------------------|---|---------------------|----------------|----------------------|
| Calcium                 | milligrams per litre                      |                                    |   |                     |                |                      |
| Chemical Oxygen Demand  | milligrams per litre                      |                                    |   |                     |                |                      |
| Chloride                |   |                                    |   |                     |                |                      |
| Dissolved Oxygen        |   |                                    |   |                     |                |                      |
| Electrical Conductivity |   |                                    |   |                     |                |                      |
| Iron                    |   |                                    |   |                     |                |                      |
| Manganese               |   |                                    |   |                     |                |                      |
| pH                      |   |                                    |   |                     |                |                      |
| Potassium               |   |                                    |   |                     |                |                      |
| Selenium                |   |                                    |   |                     |                |                      |
| Sulfate                 | milligrams per litre                      |                                    |   |                     |                |                      |
| Sulfide (total)         | milligrams per litre                      |                                    |   |                     |                |                      |
| Total Alkalinity        | milligrams of calcium carbonate per litre |                                    |   |                     |                |                      |
| Total Dissolved Solids  | milligrams per litre                      |                                    |   |                     |                |                      |

**Monitoring well not installed**

### Notes:

< denotes below the laboratory limit of reporting.

This well located near Stopes 1, 1B and 3. Stopes 1, 1B and 3 were mined for a total of 14 days. No Backfilling.

 Denotes non-compliance

## Monitoring Point 23


Groundwater quality monitoring, Groundwater well labelled UGM-M3S identified in Figure 8 and Table B-7 of the document titled 'Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523

| Pollutant              | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Mean of Sample | Highest Sample Value |
|------------------------|---|------------------------------------|---|---------------------|----------------|----------------------|
| Calcium                | milligrams per litre                      |                                    |   |                     |                |                      |
| Chemical Oxygen Demand | milligrams per litre                      |                                    |   |                     |                |                      |
| Chloride               | milligrams per litre                      |                                    |   |                     |                |                      |
| De                     | <div>Monitoring well not installed</div>  |                                    |   |                     |                |                      |
| Ele                    |   |                                    |   |                     |                |                      |
| Iro                    |   |                                    |   |                     |                |                      |
|                        |   |                                    |   |                     |                |                      |
| Ma                     |   |                                    |   |                     |                |                      |
| pH                     |   |                                    |   |                     |                |                      |
| Po                     |   |                                    |   |                     |                |                      |
| So                     |   |                                    |   |                     |                |                      |
| Su                     |   |                                    |   |                     |                |                      |
| Sulfide (total)        | milligrams per litre                      |                                    |   |                     |                |                      |
| Total Alkalinity       | milligrams of calcium carbonate per litre |                                    |   |                     |                |                      |
| Total Dissolved Solids | milligrams per litre                      |                                    |   |                     |                |                      |

### Notes:

< denotes below the laboratory limit of reporting.

This well located near Stopes 1, 1B and 3. Stopes 1, 1B and 3 were mined for a total of 14 days. No Backfilling.

 Denotes non-compliance

## Monitoring Point 24


**Groundwater quality monitoring, Groundwater well labelled UGM-M4D identified in Figure 8 and Table B-7 of the document titled Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**

| Pollutant                   | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|-----------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                     | milligrams per litre                      | 2                                  | 2   | 450                 | 26/04/2020         | 492            |
| Chemical Oxygen Demand      | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Chloride                    | milligrams per litre                      | 2                                  | 2   | 17,700              | 26/04/2020         | 17,850         |
| Depth                       | metres                                    | 2                                  | 2   | 14.280              | 26/04/2020         | 14.531         |
| Electrical Conductivity     | microsiemen per centimetre                | 2                                  | 2   | 49,693              | 26/04/2020         | 52,247         |
| Iron (dissolved)<br>(total) | milligrams per litre                      | 1                                  | 1   | <0.1                | 26/04/2020         | -              |
|                             |   | 1                                  | 0   | -                   | -                  | -              |
| Magnesium                   | milligrams per litre                      | 2                                  | 2   | 1,330               | 26/04/2020         | 1,415          |
| pH                          | pH  | 2                                  | 2   | 6.97                | 7/12/2019          | 7.05           |
| Potassium                   | milligrams per litre                      | 2                                  | 2   | 29                  | 26/04/2020         | 40             |
| Sodium                      | milligrams per litre                      | 2                                  | 2   | 10,300              | 7/12/2019          | 10,450         |
| Sulfate                     | milligrams per litre                      | 2                                  | 2   | 3,980               | 26/04/2020         | 4,025          |
| Sulfide (total)             | milligrams per litre                      | 2                                  | 1   | <0.1                | 26/04/2020         | -              |
| Total Alkalinity            | milligrams of calcium carbonate per litre | 2                                  | 2   | 403                 | 7/12/2019          | 426            |
| Total Dissolved Solids      | milligrams per litre                      | 2                                  | 2   | 35,314              | 26/04/2020         | 35,457         |

### Notes:

< denotes below the laboratory limit of reporting.

This well located near Stopes 1, 1B and 3. Stopes 1, 1B and 3 were mined for a total of 14 days. No Backfilling.

 Denotes non-compliance

## Monitoring Point 25


Groundwater quality monitoring, Groundwater well labelled UGM-M4S identified in Figure 8 and Table B-7 of the document titled 'Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523

| Pollutant               | Unit of Measure                                   | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Mean of Sample | Highest Sample Value |
|-------------------------|---|------------------------------------|---|---------------------|----------------|----------------------|
| Calcium                 | milligrams per litre                              |                                    |   |                     |                |                      |
| Chemical Oxygen Demand  | milligrams per litre                              |                                    |   |                     |                |                      |
| Chloride                | milligrams per litre                              |                                    |   |                     |                |                      |
| Depth                   | <div>Well blocked and unable to be accessed</div> |                                    |   |                     |                |                      |
| Electrical Conductivity |   |                                    |   |                     |                |                      |
| Iron                    |   |                                    |   |                     |                |                      |
|                         |   |                                    |   |                     |                |                      |
| Magnesium               |   |                                    |   |                     |                |                      |
| pH                      |   |                                    |   |                     |                |                      |
| Potassium               |   |                                    |   |                     |                |                      |
| Sodium                  |   |                                    |   |                     |                |                      |
| Sulfate                 | milligrams per litre                              |                                    |   |                     |                |                      |
| Sulfide (total)         | milligrams per litre                              |                                    |   |                     |                |                      |
| Total Alkalinity        | milligrams of calcium carbonate per litre         |                                    |   |                     |                |                      |
| Total Dissolved Solids  | milligrams per litre                              |                                    |   |                     |                |                      |

### Notes:

< denotes below the laboratory limit of reporting.

This well located near Stopes 1, 1B and 3. Stopes 1, 1B and 3 were mined for a total of 14 days. No Backfilling.

 Denotes non-compliance

## Monitoring Point 26

**Groundwater quality monitoring, Groundwater well labelled UGM-M5D identified in Figure 8 and Table B-7 of the document titled Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**

| Pollutant                   | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|-----------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                     | milligrams per litre                      | 1                                  | 1   | 511                 | 7/12/2019          | 511            |
| Chemical Oxygen Demand      | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Chloride                    | milligrams per litre                      | 1                                  | 1   | 19,300              | 7/12/2019          | 19,300         |
| Depth                       | metres                                    | 1                                  | 1   | 13.253              | 7/12/2019          | 13.25          |
| Electrical Conductivity     | microsiemen per centimetre                | 1                                  | 0   | -                   | -                  | -              |
| Iron (dissolved)<br>(total) | milligrams per litre                      | 1                                  | 0   | <0.01               | 7/12/2019          | <0.01          |
|                             |   | 1                                  | 1   | -                   | -                  | -              |
| Magnesium                   | milligrams per litre                      | 1                                  | 1   | 1,610               | 7/12/2019          | 1,610          |
| pH                          | pH  | 1                                  | 1   | 7.91                | 7/12/2019          | 7.91           |
| Potassium                   | milligrams per litre                      | 1                                  | 1   | 53                  | 7/12/2019          | 53             |
| Sodium                      | milligrams per litre                      | 1                                  | 1   | 12,400              | 7/12/2019          | 12,400         |
| Sulfate                     | milligrams per litre                      | 1                                  | 1   | 3,750               | 7/12/2019          | 3,750          |
| Sulfide (total)             | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Total Alkalinity            | milligrams of calcium carbonate per litre | 1                                  | 1   | 477                 | 7/12/2019          | 477            |
| Total Dissolved Solids      | milligrams per litre                      | 1                                  | 1   | 32,200              | 7/12/2019          | 32,200         |

### Notes:

< denotes below the laboratory limit of reporting.

This well located near Stopes 1, 1B and 3. Stopes 1, 1B and 3 were mined for a total of 14 days. No Backfilling.

This well was not monitored in April 2020 as not part of the revised GMP monitoring program (approved on revised licence 9 April 2020).

## Monitoring Point 27

**Groundwater quality monitoring, Groundwater well labelled UGM-M5S identified in Figure 8 and Table B-7 of the document titled Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**

| Pollutant                   | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|-----------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                     | milligrams per litre                      | 1                                  | 1   | 594                 | 7/12/2019          | 594            |
| Chemical Oxygen Demand      | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Chloride                    | milligrams per litre                      | 1                                  | 1   | 20,700              | 7/12/2019          | 20,700         |
| Depth                       | metres                                    | 1                                  | 1   | 13.879              | 7/12/2019          | 13.88          |
| Electrical Conductivity     | microsiemen per centimetre                | 1                                  | 0   | -                   | -                  | -              |
| Iron (dissolved)<br>(total) | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
|                             |   | 1                                  | 0   | -                   | -                  | -              |
| Magnesium                   | milligrams per litre                      | 1                                  | 1   | 1,550               | 7/12/2019          | 1,550          |
| pH                          | pH  | 1                                  | 1   | 7.93                | 7/12/2019          | 7.93           |
| Potassium                   | milligrams per litre                      | 1                                  | 1   | 38                  | 7/12/2019          | 38             |
| Sodium                      | milligrams per litre                      | 1                                  | 1   | 11,700              | 7/12/2019          | 11,700         |
| Sulfate                     | milligrams per litre                      | 1                                  | 1   | 4,550               | 7/12/2019          | 4,550          |
| Sulfide (total)             | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Total Alkalinity            | milligrams of calcium carbonate per litre | 1                                  | 1   | 373                 | 7/12/2019          | 373            |
| Total Dissolved Solids      | milligrams per litre                      | 1                                  | 1   | 37,300              | 7/12/2019          | 37,300         |

### Notes:

< denotes below the laboratory limit of reporting.

This well located near Stopes 1, 1B and 3. Stopes 1, 1B and 3 were mined for a total of 14 days. No Backfilling.

This well was not monitored in April 2020 as not part of the revised GMP monitoring program (approved on revised licence 9 April 2020).

## Monitoring Point 28


**Groundwater quality monitoring, Groundwater well labelled UGM-M6D identified in Figure 8 and Table B-7 of the document titled 'Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**

| Pollutant                   | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|-----------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                     | milligrams per litre                      | 2                                  | 2   | 401                 | 7/12/2019          | 409            |
| Chemical Oxygen Demand      | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Chloride                    | milligrams per litre                      | 2                                  | 2   | 18,200              | 26/04/2020         | 18,550         |
| Depth                       | metres                                    | 2                                  | 2   | 12.93               | 26/04/2020         | 13.18          |
| Electrical Conductivity     | microsiemen per centimetre                | 2                                  | 1   | 50,604              | 26/04/2020         | -              |
| Iron (dissolved)<br>(total) | milligrams per litre                      | 1                                  | 1   | <0.1                | 26/04/2020         | -              |
|                             |   | 1                                  | 0   | -                   | -                  | -              |
| Magnesium                   | milligrams per litre                      | 2                                  | 2   | 1,330               | 7/12/2019          | 1,345          |
| pH                          | pH  | 2                                  | 2   | 7.07                | 26/04/2020         | 7.43           |
| Potassium                   | milligrams per litre                      | 2                                  | 2   | 30                  | 26/04/2020         | 36             |
| Sodium                      | milligrams per litre                      | 2                                  | 2   | 10,600              | 26/04/2020         | 10,650         |
| Sulfate                     | milligrams per litre                      | 2                                  | 2   | 3,840               | 26/04/2020         | 3,880          |
| Sulfide (total)             | milligrams per litre                      | 2                                  | 2   | 2.5                 | 26/04/2020         | -              |
| Total Alkalinity            | milligrams of calcium carbonate per litre | 2                                  | 2   | 436                 | 7/12/2019          | 471            |
| Total Dissolved Solids      | milligrams per litre                      | 2                                  | 2   | 32,700              | 7/12/2019          | 34,225         |

### Notes:

< denotes below the laboratory limit of reporting.

This well located near Stopes 1, 1B and 3. Stopes 1, 1B and 3 were mined for a total of 14 days. No Backfilling.

 Denotes non-compliance



## Monitoring Point 29

**Groundwater quality monitoring, Groundwater well labelled UGM-M6S identified in Figure 8 and Table B-7 of the document titled Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**


| Pollutant                   | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|-----------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                     | milligrams per litre                      | 2                                  | 2   | 470                 | 7/12/2019          | 518            |
| Chemical Oxygen Demand      | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Chloride                    | milligrams per litre                      | 2                                  | 2   | 18,700              | 7/12/2019          | 21,200         |
| Depth                       | metres                                    | 2                                  | 2   | 12.840              | 26/04/2020         | 13.135         |
| Electrical Conductivity     | microsiemen per centimetre                | 2                                  | 1   | 56,983              | 26/04/2020         | -              |
| Iron (dissolved)<br>(total) | milligrams per litre                      | 1                                  | 2   | <0.1                | 26/04/2020         | -              |
|                             |   | 1                                  | 0   | -                   | -                  | -              |
| Magnesium                   | milligrams per litre                      | 2                                  | 2   | 1,340               | 7/12/2019          | 1,465          |
| pH                          | pH  | 2                                  | 2   | 6.54                | 26/04/2020         | 7.19           |
| Potassium                   | milligrams per litre                      | 2                                  | 2   | 31                  | 26/04/2020         | 40             |
| Sodium                      | milligrams per litre                      | 2                                  | 2   | 10,900              | 7/12/2019          | 11,950         |
| Sulfate                     | milligrams per litre                      | 2                                  | 2   | 4,110               | 7/12/2019          | 4,285          |
| Sulfide (total)             | milligrams per litre                      | 2                                  | 1   | <0.1                | 26/04/2020         | -              |
| Total Alkalinity            | milligrams of calcium carbonate per litre | 2                                  | 2   | 353                 | 26/04/2020         | 386            |
| Total Dissolved Solids      | milligrams per litre                      | 2                                  | 2   | 33,400              | 7/12/2019          | 36,948         |

Notes:

< denotes below the laboratory limit of reporting.

\* equal to the laboratory limit of reporting.

This well is located near Stope's 1, 1B and 3. Stopes 1, 1B and 3 were mined for a total of 14 days. No Backfilling

 Denotes non-compliance

## Monitoring Point 30

**Groundwater quality monitoring, Groundwater well labelled UGM-M7D identified in Figure 8 and Table B-7 of the document titled Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**


| Pollutant                   | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|-----------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                     | milligrams per litre                      | 1                                  | 1   | 457                 | 7/12/2019          | 457            |
| Chemical Oxygen Demand      | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Chloride                    | milligrams per litre                      | 1                                  | 1   | 19,900              | 7/12/2019          | 19,900         |
| Depth                       | metres                                    | 1                                  | 1   | 13.989              | 7/12/2019          | 13.99          |
| Electrical Conductivity     | microsiemen per centimetre                | 1                                  | 0   | -                   | -                  | -              |
| Iron (dissolved)<br>(total) | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
|                             |   | 1                                  | 0   | -                   | -                  | -              |
| Magnesium                   | milligrams per litre                      | 1                                  | 1   | 1,520               | 7/12/2019          | 1,520          |
| pH                          | pH  | 1                                  | 1   | 7.71                | 7/12/2019          | 7.71           |
| Potassium                   | milligrams per litre                      | 1                                  | 1   | 48                  | 7/12/2019          | 53             |
| Sodium                      | milligrams per litre                      | 1                                  | 1   | 12,000              | 7/12/2019          | 12,000         |
| Sulfate                     | milligrams per litre                      | 1                                  | 1   | 4,010               | 7/12/2019          | 4,010          |
| Sulfide (total)             | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Total Alkalinity            | milligrams of calcium carbonate per litre | 1                                  | 1   | 415                 | 7/12/2019          | 415            |
| Total Dissolved Solids      | milligrams per litre                      | 1                                  | 1   | 33,800              | 7/12/2019          | 33,800         |

### Notes:

< denotes below the laboratory limit of reporting.

This well located near Stopes 1, 1B and 3. Stopes 1, 1B and 3 were mined for a total of 14 days. No Backfilling.

This well was not monitored in April 2020 as not part of the revised GMP monitoring program (approved on revised licence 9 April 2020).

 Denotes non-compliance

## Monitoring Point 31

**Groundwater quality monitoring, Groundwater well labelled UGM-M7S identified in Figure 8 and Table B-7 of the document titled Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**


| Pollutant                   | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|-----------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                     | milligrams per litre                      | 1                                  | 1   | 475                 | 7/12/2019          | 475            |
| Chemical Oxygen Demand      | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Chloride                    | milligrams per litre                      | 1                                  | 1   | 18,800              | 7/12/2019          | 18,800         |
| Depth                       | metres                                    | 1                                  | 1   | 13.619              | 7/12/2019          | 13.619         |
| Electrical Conductivity     | microsiemen per centimetre                | 1                                  | 0   | -                   | -                  | -              |
| Iron (dissolved)<br>(total) | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
|                             |   | 1                                  | 0   | -                   | -                  | -              |
| Magnesium                   | milligrams per litre                      | 1                                  | 1   | 1,370               | 7/12/2019          | 1,370          |
| pH                          | pH  | 1                                  | 1   | 7.65                | 7/12/2019          | 7.65           |
| Potassium                   | milligrams per litre                      | 1                                  | 1   | 40                  | 7/12/2019          | 40             |
| Sodium                      | milligrams per litre                      | 1                                  | 1   | 10,800              | 7/12/2019          | 10,800         |
| Sulfate                     | milligrams per litre                      | 1                                  | 1   | 4,290               | 7/12/2019          | 4,290          |
| Sulfide (total)             | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Total Alkalinity            | milligrams of calcium carbonate per litre | 1                                  | 1   | 405                 | 7/12/2019          | 405            |
| Total Dissolved Solids      | milligrams per litre                      | 1                                  | 1   | 34,400              | 7/12/2019          | 34,400         |

### Notes:

< denotes below the laboratory limit of reporting.

This well located near Stopes 1, 1B and 3. Stopes 1, 1B and 3 were mined for a total of 14 days. No Backfilling.

This well was not monitored in April 2020 as not part of the revised GMP monitoring program (approved on revised licence 9 April 2020).

 Denotes non-compliance

## Monitoring Point 32


**Groundwater quality monitoring, Groundwater well labelled UGM-M8D identified in Figure 8 and Table B-7 of the document titled Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**

| Pollutant                   | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|-----------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                     | milligrams per litre                      | 2                                  | 2   | 416                 | 7/12/2019          | 428            |
| Chemical Oxygen Demand      | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Chloride                    | milligrams per litre                      | 2                                  | 2   | 18,800              | 25/04/2020         | 18,950         |
| Depth                       | metres                                    | 2                                  | 2   | 13.81               | 25/04/2020         | 14.012         |
| Electrical Conductivity     | microsiemen per centimetre                | 2                                  | 1   | 48,436              | 25/04/2020         | -              |
| Iron (dissolved)<br>(total) | milligrams per litre                      | 1                                  | 1   | 0.32                | 25/04/2020         | -              |
|                             |   | 1                                  | 0   | -                   | -                  | -              |
| Magnesium                   | milligrams per litre                      | 2                                  | 2   | 1,350               | 7/12/2019          | 1,370          |
| pH                          | pH  | 2                                  | 2   | 7.06                | 25/04/2020         | 7.42           |
| Potassium                   | milligrams per litre                      | 2                                  | 2   | 32                  | 7/12/2019          | 37             |
| Sodium                      | milligrams per litre                      | 2                                  | 2   | 10,700              | 7/12/2019          | 10,750         |
| Sulfate                     | milligrams per litre                      | 2                                  | 2   | 3,920               | 25/04/2020         | 3,960          |
| Sulfide (total)             | milligrams per litre                      | 2                                  | 1   | <0.1                | 25/04/2020         | -              |
| Total Alkalinity            | milligrams of calcium carbonate per litre | 2                                  | 2   | 412                 | 7/12/2019          | 446            |
| Total Dissolved Solids      | milligrams per litre                      | 2                                  | 2   | 34,125              | 25/04/2020         | 34,363         |

### Notes:

< denotes below the laboratory limit of reporting.

This well located near Stopes 1, 1B and 3. Stopes 1, 1B and 3 were mined for a total of 14 days. No Backfilling.

 Denotes non-compliance

## Monitoring Point 33


**Groundwater quality monitoring, Groundwater well labelled UGM-M8S identified in Figure 8 and Table B-7 of the document titled Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**

| Pollutant                | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Lowest Sample Date | Mean of Sample |
|--------------------------|---|------------------------------------|---|---------------------|--------------------|----------------|
| Calcium                  | milligrams per litre                      | 2                                  | 2   | 614                 | 7/12/2019          | 636            |
| Chemical Oxygen Demand   | milligrams per litre                      | 1                                  | 0   | -                   | -                  | -              |
| Chloride                 | milligrams per litre                      | 2                                  | 2   | 22,800              | 7/12/2019          | 24,250         |
| Depth                    | metres                                    | 2                                  | 2   | 13.730              | 25/04/2020         | 13.80          |
| Electrical Conductivity  | microsiemen per centimetre                | 2                                  | 1   | 61,714              | 25/04/2020         | -              |
| Iron (dissolved) (total) | milligrams per litre                      | 1                                  | 2   | <0.1                | 25/04/2020         | -              |
|                          |   | 1                                  | 0   | -                   | -                  | -              |
| Magnesium                | milligrams per litre                      | 2                                  | 2   | 1,640               | 7/12/2019          | 1,715          |
| pH                       | pH  | 2                                  | 2   | 6.32                | 25/04/2020         | 6.98           |
| Potassium                | milligrams per litre                      | 2                                  | 2   | 30                  | 7/12/2019          | 35             |
| Sodium                   | milligrams per litre                      | 2                                  | 2   | 12,200              | 7/12/2019          | 12,800         |
| Sulfate                  | milligrams per litre                      | 2                                  | 2   | 4,830               | 25/04/2020         | 4,845          |
| Sulfide (total)          | milligrams per litre                      | 2                                  | 1   | <0.1                | 25/04/2020         | -              |
| Total Alkalinity         | milligrams of calcium carbonate per litre | 2                                  | 2   | 272                 | 25/04/2020         | 272            |
| Total Dissolved Solids   | milligrams per litre                      | 2                                  | 2   | 39,000              | 7/12/2019          | 40,073         |

### Notes:

< denotes below the laboratory limit of reporting.

This well located near Stopes 1, 1B and 3. Stopes 1, 1B and 3 were mined for a total of 14 days. No Backfilling.

 Denotes non-compliance

## Monitoring Point 34


Groundwater quality monitoring, Groundwater well labelled UGM-M9D identified in Figure 8 and Table B-7 of the document titled 'Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523

| Pollutant              | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Mean of Sample | Highest Sample Value |
|------------------------|---|------------------------------------|---|---------------------|----------------|----------------------|
| Calcium                | milligrams per litre                      | 2                                  |   |                     |                |                      |
| Chemical Oxygen Demand | milligrams per litre                      | 1                                  |   |                     |                |                      |
| Chloride               | <div>No data collected.</div>             |                                    |   |                     |                |                      |
| Depth                  |   |                                    |   |                     |                |                      |
| Electrical             |   |                                    |   |                     |                |                      |
| Iron (dissolved)       |   |                                    |   |                     |                |                      |
| (total)                |   |                                    |   |                     |                |                      |
| Magnesium              |   |                                    |   |                     |                |                      |
| pH                     |   |                                    |   |                     |                |                      |
| Potassium              |   |                                    |   |                     |                |                      |
| Sodium                 | milligrams per litre                      | 2                                  |   |                     |                |                      |
| Sulfate                | milligrams per litre                      | 2                                  |   |                     |                |                      |
| Sulfide (total)        | milligrams per litre                      | 2                                  |   |                     |                |                      |
| Total Alkalinity       | milligrams of calcium carbonate per litre | 2                                  |   |                     |                |                      |
| Total Dissolved Solids | milligrams per litre                      | 2                                  |   |                     |                |                      |

### Notes:

< denotes below the laboratory limit of reporting.

This well is located near Stope's 1, 1B and 3. Stopes 1, 1B and 3 were mined for a total of 14 days. No Backfilling

 Denotes non-compliance

Reason for non-compliance: due to safety concerns, cavity formed around well & access was restricted from mid/late July 2016.

## Monitoring Point 35

**Groundwater quality monitoring, Groundwater well labelled UGM-M9S identified in Figure 8 and Table B-7 of the document titled Balranald Project, Groundwater Operating Strategy and Management Plan' dated 24th April and kept on EPA file DOC 16/230523**


| Pollutant              | Unit of Measure                           | No. of Samples Required by Licence | No. of Samples you Collected and Analysed | Lowest Sample Value | Mean of Sample | Highest Sample Value |
|------------------------|---|------------------------------------|---|---------------------|----------------|----------------------|
| Calcium                | milligrams per litre                      | 2                                  |   |                     |                |                      |
| Chemical Oxygen Demand | milligrams per litre                      | 1                                  |   |                     |                |                      |
| Chloride               | milligrams per litre                      | 2                                  |   |                     |                |                      |
| Dep                    |   |                                    |   |                     |                |                      |
| Elec                   |   |                                    |   |                     |                |                      |
| Iron                   |   |                                    |   |                     |                |                      |
| Mag                    |   |                                    |   |                     |                |                      |
| pH                     |   |                                    |   |                     |                |                      |
| Pota                   |   |                                    |   |                     |                |                      |
| Sodi                   |   |                                    |   |                     |                |                      |
| Sulfate                | milligrams per litre                      | 2                                  |   |                     |                |                      |
| Sulfide (total)        | milligrams per litre                      | 2                                  |   |                     |                |                      |
| Total Alkalinity       | milligrams of calcium carbonate per litre | 2                                  |   |                     |                |                      |
| Total Dissolved Solids | milligrams per litre                      | 2                                  |   |                     |                |                      |

**No data collected.**

### Notes:

< denotes below the laboratory limit of reporting.

This well is located near Stope's 1, 1B and 3. Stopes 1, 1B and 3 were mined for a total of 14 days. No Backfilling

 Denotes non-compliance

Reason for non-compliance: due to safety concerns, cavity formed around well & access was restricted from mid/late July 2016.