Summary of Environmental Monitoring Data

1 – 31 January 2025

Woodlawn Copper Zinc Project

Document Review/Change History

Date	Review/ChangeType Created, Reviewed, Changed or Obsolete	Revision No.	Authors	
			Reviewed by	Approved by
08/03/2025	Report finalised	0	KC	KC

Compliance summary – January 2025

Medium	Parameter	Compliant with license and project approval	Comment
Air	Deposited dust	Yes with comments	DG34 Sample broken during transit to lab and could not be analysed
	Total Suspended Particulate	Yes	-
	Particulate matter in the air with a diameter of 10 micrometres or less	Yes	-
Water	Surface water	Yes	-
	Ground water	Yes with comments	MB6 was dry and no sample could be collected. Fluoride analysis was not completed on some samples discussed in Section 6
Noise	Noise monitoring	NA	Not required – site not currently operational
Vibration	Blast monitoring	Yes	-

Contents

FIGURES

TABLES

1. EPL LICENCE INFORMATION

Details of the EPL licence holder and licence versions are summarised in Table 1-1.

Table 1-1 EPL details

Environment Protection License Number	**20821**
Licensee Licensee address	Tarago Operations Pty Ltd Woodlawn Mine 507 Collector Road TARAGO NSW 2580
Premises	Woodlawn Mine 507 Collector Road TARAGO NSW 2580
Link to full licence on the EPA website	19 December 2023 Version: https://app.epa.nsw.gov.au/prpoeoapp/ViewPOEONotice.aspx?DOCID=-1&SYSUID=1&LICID=1635655 22 September 2023 Version: https://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=284443&SYSUID=1&LICID=20821 18 August 2022 Version: https://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=249503&SYSUID=1&LICID=20821 16 Feb 2022 Version: https://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=236150&SYSUID=1&LICID=20821 18 Jan 2019 Version: https://app.epa.nsw.gov.au/prpoeoapp/ViewPOEONotice.aspx?DOCID=-1&SYSUID=1&LICID=20821 7 May 2018 Version: https://app.epa.nsw.gov.au/prpoeoapp/ViewPOEONotice.aspx?DOCID=-1&SYSUID=1&LICID=20821 12 May 2017 Initial issue: https://app.epa.nsw.gov.au/prpoeoapp/ViewPOEONotice.aspx?DOCID=-1&SYSUID=1&LICID=20821
Complaints telephone number	02 4816 6314

2. INTRODUCTION

Tarago Operations Pty Ltd, a wholly owned subsidiary of Develop Global, holds Environment Protection Licence 20821 (EPL 20821) issued by the Environment Protection Agency (EPA) under the Protection of the Environment operations Act 1997 (the Act) and operates under the conditions of Project Approval 07_0143 (MOD2) granted by the NSW Department of Planning and Infrastructure for the Woodlawn Mine Project. This report has been prepared to satisfy the reporting requirements of Section 66 (6) of the Protection of the Environment and Operations Act 1997, and also, Schedule 6, Condition 11of the Project Approval. These documents can be found on the Develop web site (https://develop.com.au).

Ownership of Woodlawn mine changed on 19 May 2022 when Develop purchased the Woodlawn Mine from Heron Resources.

The EPL was first issued on 29 March 2017 and has been reviewed numerous times since as included in Table 1-1.

This report summarises environmental monitoring results for the Woodlawn Mine for the period 1 – 31 January 2025.

3. METEOROLOGICAL MONITORING

Develop is required to undertake meteorological monitoring on site. Site weather is obtained from the meteorological station located at the EPL 11436 premises. The detailed January 2025 daily weather data is shown in Table 3-2. The total annual rainfall received on site to end of January 2025 has been 78mm.

Table 3-2 Meteorological data: January 2025

Date (Jan 25)	Temp min (ºC)	Temp max (ºC)	Rain (mm)	No. of wet days (total)	Weather station -Hrs recorded (n)	Avg wind speed (m/s)	Avg wind direction (deg)	Evapo transpiration (mm)
1	15.20	27.99	0.00	0.00	24.0	12.6	161.4	6.84
2	11.76	15.65	0.00	0.00	24.0	15.0	85.1	1.62
3	11.65	26.69	0.00	0.00	24.0	10.7	81.3	5.46
4	14.40	30.21	0.00	0.00	24.0	10.5	177.7	6.86
5	19.92	31.80	0.00	0.00	24.0	14.5	219.6	7.56
6	16.17	29.99	5.00	1.00	24.0	11.9	209.5	6.94
7	12.05	16.40	1.50	1.00	24.0	17.3	98.3	1.73
8	10.64	16.22	0.50	1.00	24.0	16.5	101.7	3.03
9	11.04	20.67	0.00	0.00	24.0	12.6	96.8	3.84
10	15.22	20.03	9.00	1.00	24.0	13.6	90.0	1.65
11	15.47	21.46	1.50	1.00	24.0	12.8	59.3	3.53
12	15.76	25.78	15.50	1.00	24.0	8.8	108.1	4.39
13	14.24	28.54	0.00	0.00	24.0	8.8	152.8	6.25
14	17.21	29.28	2.50	1.00	24.0	12.2	200.7	6.07
15	16.94	33.28	0.00	0.00	24.0	11.8	158.1	5.88
16	12.92	20.37	25.00	1.00	24.0	8.9	127.4	3.08
17	6.44	19.83	0.50	1.00	24.0	19.5	136.5	5.97
18	11.45	16.30	0.00	0.00	24.0	21.0	117.1	2.31
19	11.47	18.46	0.50	1.00	24.0	14.6	95.2	4.16
20	7.82	25.61	0.00	0.00	24.0	7.5	126.6	5.69
21	11.51	28.97	0.00	0.00	24.0	7.3	161.0	5.73
22	14.47	30.23	0.00	0.00	24.0	14.2	170.7	6.46
23	12.56	17.38	11.00	1.00	24.0	13.8	77.0	2.36
24	12.32	21.66	5.50	1.00	24.0	9.3	128.8	4.78
25	13.46	25.46	0.00	0.00	24.0	8.9	152.8	5.03
26	15.37	22.05	0.00	0.00	24.0	13.8	81.4	3.13
27	16.11	31.46	0.00	0.00	24.0	14.0	202.0	NR[1]
28	14.04	33.46	0.00	0.00	24.0	22.2	233.2	0.02[1]
29	11.66	21.96	0.00	0.00	24.0	15.4	81.2	3.87
30	13.13	20.46	0.00	0.00	24.0	12.6	83.4	2.27
31	13.92	18.42	0.00	0.00	24.0	13.8	83.5	1.56
Avg/ Total	6.44	33.46	78.00	12.0	24	13.1	130.92	4.27

[1] Sensor malfunction resulting in data being not recorded (NR) and likely inaccurate

The wind rose in Figure 3-1 depicts the wind speed and direction recorded at 10 m above ground level. The wind rose shows a strong easterly influence in the winds experienced across site during January 2025.

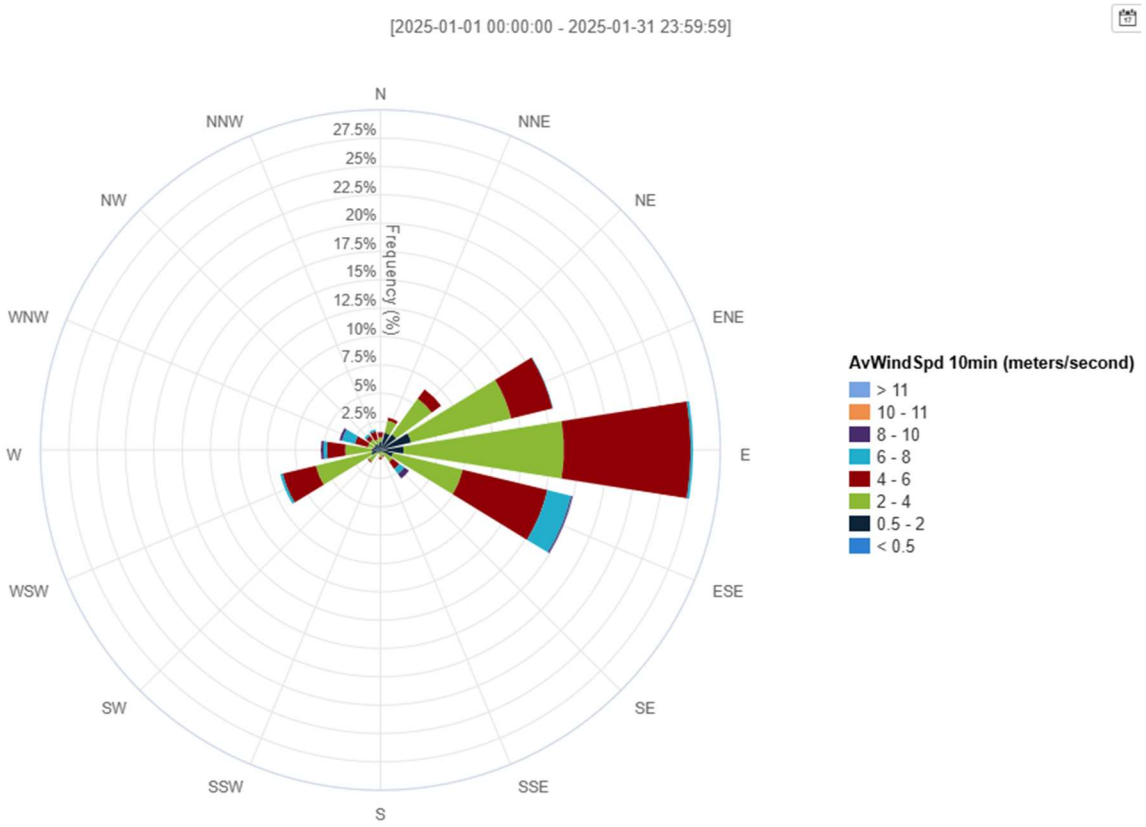

Figure 3-1 Wind rose for January 2025

4. AIR QUALITY MONITORING

Air quality monitoring is undertaken in accordance with the conditions of EPL20821. There are four dust deposition gauges and two high volume air samples monitoring for PM10 and TSP separately. Table 4-3 summarises the frequency and units for monitoring data for the reporting period.

Table 4-3 Supporting information of EPL 20821 dust monitoring requirements

Parameter	Monitoring site	Monitoring frequency	Unit of measure
Air quality monitoring: Deposited Dust (insoluble solids)	DG 22, DG28, DG33, DG34	Monthly	g/m^2/month
TSP	HVAS-1	24 hours every six days	µg/m^3
PM10	HVAS-2	24 hours every six days	µg/m^3

Explanation of units of measurement

mg/m^3 = milligrams per cubic metre

g/m^2/month = grams per square metre per month

µg/m^3 = micrograms per cubic metre

4.1. Depositional Dust

Depositional dust monitoring around the Woodlawn site is undertaken on a monthly basis. Four depositional dust gauges DG22, DG28, DG33 and DG34 are present to monitor the levels of depositional dust. They are located on Site as follows:

- DG22 – East side of void
- DG28 – Pylara
- DG33 – MBT plant
- DG34 – Behind core shed

The limits for deposited dust are outlined in the Project Approval. The limits are summarised in Table 4-4 and only apply to the nearest sensitive receptor (identified in the management plan as DG28).

Table 4-4 Deposited dust limits

Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level (Australian standard Limit)
[c] Deposited dust	Annual	[b] 2 g/m^2/month	[a] 4 g/m^2/month

[a] Total impact (i.e. Incremental increase in concentrations due to the project plus background concentrations due to all other sources).
[b] Incremental impact (i.e. incremental increase in concentrations due to the project on its own)
[c] Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air – Determination of Particulate Matter – Deposited Matter – Gravimetric Method.

Air quality results derived from the depositional dust gauges for January 2025 are shown in Table 4-5. The elevated temperatures and sporadic rainfall conditions experienced across the region during January contributed to higher amounts of insoluble solids being detected across the dust gauge network.

As further discussed in the updated Air Quality Management Plan (currently with the Department of Planning, Housing and Infrastructure for review and approval before it can be publicly available) insoluble solids represent the mater which does not dissolve in water whereby ash content is the matter that remains after the same sample has been combusted in the laboratory. Insoluble solids, therefore, also includes natural organic matter such as pollen which is why ash content is important in determining the impact of site activities on the results and is also presented in Table 4-5.

Table 4-5 January 2025 DDG results

DDG ID	EPL ID	Start date	End date	Insoluble solids (g/m2/month)	Rolling annual average (g/m2/month)[1]	Ash Content (g/m2/month)
DG22	2	02/01/2025	03/02/2025	3.4	1.92	1.50
DG28	1	02/01/2025	03/02/2025	4.2	1.33	1.63
DG33	4	02/01/2025	03/02/2025	2.0	1.54	1.13
DG34	25	02/01/2025	03/02/2025	N/A[2]	N/A[2]	N/A[2]

[1] Rolling average calculated between January 24 – January 25
[2]Sample jar broken in transit to lab

4.1.1. Compliance comments

Although the results at the nearest sensitive receptor (DG28) are elevated for the month this location is located south of the site. The wind experienced on site in the same month was strongly east, therefore, the increase at this depth gauge is not attributable to site activities. When considering ash content deposition dust results for the month and the year are within the criteria set out in the PA.

4.2. Atmospheric dust – particulate matter

The Project Approval requires monitoring of total suspended particulate (TSP) matter and particulate matter <10µm (PM10) to ensure particulate matter emissions generated by the project do not exceed the criteria listed at any residence on privately owned land. High volume air sampling (HVAS) equipment for atmospheric monitoring was installed on 16 October 2017 at Pylara Farm Homestead the nearest residence located to the east of Woodlawn Mine. Monitoring commenced on 17 October 2017 and is undertaken for a 24 hour cycle every 6 days.

The limits for TSP and PM10 outlined in the Project Approval (PA) are detailed in Table 4-6. Results for January 2025 are shown in Table 4-7.

Table 4-6 TSP and PM10 limits

Pollutant	Averaging Period	Criterion [a]
Total suspended particulate (TSP) matter	Annual	[b] 90 µg/m^3
Particulate matter <10 µm (PM_{10})	Annual	[b] 30 µg/m^3
Particulate matter <10 µm	24 hour	[b] 50 µg/m^3

[a] Excludes extraordinary events such as bushfires, prescribed burning, dust storms, fog, fire incidents or any other activity agreed by the Director-General.
[b] Total impact (i.e. Incremental increase in concentrations due to the project plus background concentrations due to all other sources).

Table 4-7 PM10 and TSP results January 2025

Date	PM10 (µg/m^3)	PM10 rolling annual average	TSP (µg/m^3)	TSP Rolling annual average
2/01/2025	14.6	7.11	17.9	12.55
8/01/2025	10.3	7.16	17.1	12.70
14/01/2025	15.4	7.30	20.1	12.86
20/01/2025	16.4	7.46	20.2	12.97
26/01/2025	11.2	7.54	17.8	13.04

4.2.1. Compliance summary

The PM10 and TSP results for 24 hour period are within the criteria set out in the PA. The rolling annual average emissions are within the criteria set out in the PA.

5. SURFACE WATER MONITORING

Develop carries out surface water quality monitoring at six locations designated in EPL 20821. Monitoring and reporting is undertaken for the parameters and at the frequencies prescribed in EPL 20281 Condition M2.2. The locations are:

- Site 115 - Allianoyonyiga Creek
- Site 105 - Crisps Creek
- Site 100 - Woodlawn/Wileroo Boundary South, below Waste Rock Dam
- Site 109 - Pylara Boundary below South Tailings Dam
- Site 300 - Processing Plant Pollution Control Dam
- Tailings Storage Facility 4 (TSF4)

Of the six surface monitoring locations designated in the EPL, two monitor water quality within the process water circuit, and the remaining 4 are for monitoring ephemeral analogue sites. The purpose of the surface water monitoring program is to ensure that mining operations have minimal impact on water quality.

Quarterly monitoring as required under the EPL are contained in Appendix 1 for the period October to December 2024.

6. GROUND WATER MONITORING

Groundwater monitoring is carried out quarterly at 11 ground water monitoring points in accordance with the requirements of EPL 20821. Monitoring and reporting is undertaken for the parameters and at the frequencies prescribed in EPL 20281 Condition M2.2. The purpose of the groundwater monitoring program is to ensure water quality impacts associated with the mining operation are minimised. There are three analogue groundwater locations and eight groundwater monitoring points listed in the EPL. The locations are:

- MB4 – upgradient from the processing plant site
- MB5 - southern face of the rehabilitated waste rock dump
- MB6 - adjacent to mine entry
- MB8 - adjacent to Collector Road and downstream of processing plant site
- MB11 - below ED2 dam wall
- MB12 - below ED2 dam wall
- MB13 - western premises boundary
- MB14 - background ground water quality site
- MB15 - measure seepage from Rehabilitated Waste Rock Dump
- MB16 - measures seepage from Rehabilitated Waste Rock Dump
- MB17 - measures seepage from Rehabilitated Waste Rock Dump

Ground water monitoring results as required under the EPL for the quarter October to December 2024 are contained in Appendix 2. As MB6 was observed to be dry a sample was unable to be collected and there are no results for this location for the October to December quarter. Despite being requested to on Chain of Custody documentation, the external laboratory failed to analyse samples from MB8, MB12, MB14, MB15, MB11, MB16 and MB17 for fluoride. Subsequent correspondence with the laboratory has occurred to limit this occurring again. Given fluoride is not a key analyte for the site and results at these locations have always been low, the absence of this data is not considered significant.

7. NOISE MONITORING

The EPL stipulates that noise from the premises must not exceed an L Aeq, 15 minute noise level of 35dB(A) at any sensitive receivers under the following meteorological conditions:

- Wind speeds up to 3 m/s at 10m above ground level or
- Temperature inversion conditions of up to 3^{o}C/100m and wind speeds up to 2 m/s at 10 m above ground level.

Following the announcement by Heron Resources on 25 March 2020 that Woodlawn mine would enter care and maintenance, there has been no significant noise generating operational activities undertaken on the site. Consequently, noise monitoring was not undertaken during January 2025.

8. BLAST MONITORING

EPL 20821 stipulates the criteria to be met to ensure that air-blast overpressure level from blasting at the Woodlawn project does not exceed the criteria detailed in Table 8-8 at any residence on privately owned land.

Table 8-8 Blasting criteria

Location	Time of blasting	Airblast overpressure (dB(Lin Peak))	Ground vibration (mm/s)	Allowable exceedance
Residence on any privately-owned land	Any time	120	10	0%
	Day	115	5	5% of the total number of blasts over a period of 12 months
	Evening	-	2	5% of the total number of blasts over a period of 12 months
	Night, and all day on Sundays and public holidays	-	1	0%

All blast data and blast events that trigger the monitoring equipment is recorded with the data retained on site. Blasting activities have recommenced from 8 August 2024. The blast log for January 2025 is contained in **Error! Reference source not found.**. UM15923 was not installed until 21 January 2025 due to calibration requirements.

Table 8-9 Blast log January 2025

Date	Time	Blast Monitor ID: UM15923		Blast Monitor ID: UM14301	
		PPV (mm/s)	Monitor location	mm/s	Monitor location
1-Jan-25	01:30	Not Installed	Not Installed	Not Detected	On Site
1-Jan-25	01:30	Not Installed	Not Installed	Not Detected	On Site
1-Jan-25	06:00	Not Installed	Not Installed	Not Detected	On Site
2-Jan-25	01:10	Not Installed	Not Installed	Not Detected	On Site
2-Jan-25	01:10	Not Installed	Not Installed	Not Detected	On Site
2-Jan-25	06:00	Not Installed	Not Installed	Not Detected	On Site
2-Jan-25	06:00	Not Installed	Not Installed	Not Detected	On Site
2-Jan-25	18:00	Not Installed	Not Installed	Not Detected	On Site
3-Jan-25	05:30	Not Installed	Not Installed	Not Detected	On Site
3-Jan-25	05:30	Not Installed	Not Installed	Not Detected	On Site
3-Jan-25	17:30	Not Installed	Not Installed	0.31	On Site
4-Jan-25	06:00	Not Installed	Not Installed	Not Detected	On Site
4-Jan-25	06:00	Not Installed	Not Installed	Not Detected	On Site
4-Jan-25	18:00	Not Installed	Not Installed	Not Detected	On Site
5-Jan-25	06:00	Not Installed	Not Installed	Not Detected	On Site
5-Jan-25	18:00	Not Installed	Not Installed	Not Detected	On Site
5-Jan-25	18:00	Not Installed	Not Installed	Not Detected	On Site

Date	Time	Blast Monitor ID: UM15923		Blast Monitor ID: UM14301	
		PPV (mm/s)	Monitor location	mm/s	Monitor location
5-Jan-25	18:00	Not Installed	Not Installed	Not Detected	On Site
5-Jan-25	23:40	Not Installed	Not Installed	Not Detected	On Site
6-Jan-25	06:00	Not Installed	Not Installed	Not Detected	On Site
6-Jan-25	06:00	Not Installed	Not Installed	Not Detected	On Site
6-Jan-25	18:00	Not Installed	Not Installed	Not Detected	On Site
7-Jan-25	03:00	Not Installed	Not Installed	Not Detected	On Site
7-Jan-25	18:00	Not Installed	Not Installed	Not Detected	On Site
9-Jan-25	05:29	Not Installed	Not Installed	Not Detected	On Site
9-Jan-25	05:29	Not Installed	Not Installed	Not Detected	On Site
9-Jan-25	18:00	Not Installed	Not Installed	Not Detected	On Site
9-Jan-25	18:00	Not Installed	Not Installed	Not Detected	On Site
10-Jan-00	06:00	Not Installed	Not Installed	Not Detected	On Site
10-Jan-00	06:00	Not Installed	Not Installed	Not Detected	On Site
10-Jan-00	06:35	Not Installed	Not Installed	Not Detected	On Site
11-Jan-25	06:00	Not Installed	Not Installed	Not Detected	On Site
12-Jan-25	05:54	Not Installed	Not Installed	Not Detected	On Site
12-Jan-25	18:00	Not Installed	Not Installed	Not Detected	On Site
12-Jan-25	18:00	Not Installed	Not Installed	Not Detected	On Site
13-Jan-25	05:54	Not Installed	Not Installed	Not Detected	On Site
13-Jan-25	05:54	Not Installed	Not Installed	Not Detected	On Site
13-Jan-25	05:54	Not Installed	Not Installed	Not Detected	On Site
14-Jan-25	05:30	Not Installed	Not Installed	Not Detected	On Site
14-Jan-25	05:30	Not Installed	Not Installed	Not Detected	On Site
14-Jan-25	05:30	Not Installed	Not Installed	Not Detected	On Site
15-Jan-25	06:00	Not Installed	Not Installed	Not Detected	On Site
16-Jan-25	05:30	Not Installed	Not Installed	Not Detected	On Site
16-Jan-25	05:30	Not Installed	Not Installed	Not Detected	On Site
16-Jan-25	18:00	Not Installed	Not Installed	Not Detected	On Site
16-Jan-25	18:00	Not Installed	Not Installed	Not Detected	On Site
17-Jan-25	06:00	Not Installed	Not Installed	Not Detected	On Site
17-Jan-25	06:00	Not Installed	Not Installed	Not Detected	On Site
17-Jan-25	18:00	Not Installed	Not Installed	Not Detected	On Site
17-Jan-25	18:00	Not Installed	Not Installed	Not Detected	On Site
18-Jan-25	06:00	Not Installed	Not Installed	Not Detected	On Site
18-Jan-25	06:00	Not Installed	Not Installed	Not Detected	On Site
18-Jan-25	06:00	Not Installed	Not Installed	Not Detected	On Site
18-Jan-25	06:00	Not Installed	Not Installed	Not Detected	On Site
19-Jan-25	06:00	Not Installed	Not Installed	Not Detected	On Site
19-Jan-25	06:00	Not Installed	Not Installed	Not Detected	On Site
19-Jan-25	18:00	Not Installed	Not Installed	Not Detected	On Site
19-Jan-25	18:00	Not Installed	Not Installed	Not Detected	On Site
20-Jan-25	06:00	Not Installed	Not Installed	Not Detected	On Site

Date	Time	Blast Monitor ID: UM15923		Blast Monitor ID: UM14301	
		PPV (mm/s)	Monitor location	mm/s	Monitor location
20-Jan-25	06:00	Not Installed	Not Installed	Not Detected	On Site
20-Jan-25	06:00	Not Installed	Not Installed	Not Detected	On Site
20-Jan-25	18:00	Not Installed	Not Installed	Not Detected	On Site
20-Jan-25	18:00	Not Installed	Not Installed	Not Detected	On Site
21-Jan-25	06:29	Not Installed	Not Installed	Not Detected	On Site
21-Jan-25	18:00	Not Detected	On Site	Not Detected	On Site
21-Jan-25	18:00	Not Detected	On Site	Not Detected	On Site
22-Jan-25	18:05	Not Detected	On Site	Not Detected	On Site
22-Jan-25	18:05	Not Detected	On Site	Not Detected	On Site
22-Jan-25	18:05	Not Detected	On Site	Not Detected	On Site
22-Jan-25	18:05	Not Detected	On Site	Not Detected	On Site
23-Jan-25	06:28	Not Detected	On Site	Not Detected	On Site
23-Jan-25	06:29	Not Detected	On Site	Not Detected	On Site
23-Jan-25	17:26	Not Detected	On Site	Not Detected	On Site
24-Jan-25	17:32	Not Detected	On Site	Not Detected	On Site
24-Jan-25	17:32	Not Detected	On Site	Not Detected	On Site
24-Jan-25	17:32	Not Detected	On Site	Not Detected	On Site
24-Jan-25	18:40	Not Detected	On Site	Not Detected	On Site
24-Jan-25	19:00	Not Detected	On Site	Not Detected	On Site
24-Jan-25	19:00	Not Detected	On Site	Not Detected	On Site
24-Jan-25	06:00	Not Detected	On Site	Not Detected	On Site
24-Jan-25	06:00	Not Detected	On Site	Not Detected	On Site
25-Jan-25	05:59	Not Detected	On Site	Not Detected	On Site
25-Jan-25	05:59	Not Detected	On Site	Not Detected	On Site
25-Jan-25	17:30	Not Detected	On Site	Not Detected	On Site
25-Jan-25	17:30	Not Detected	On Site	Not Detected	On Site
26-Jan-25	05:50	Not Detected	On Site	Not Detected	On Site
26-Jan-25	05:50	Not Detected	On Site	Not Detected	On Site
26-Jan-25	18:00	Not Detected	On Site	Not Detected	On Site
26-Jan-25	18:00	Not Detected	On Site	Not Detected	On Site
26-Jan-25	18:00	Not Detected	On Site	Not Detected	On Site
27-Jan-25	06:00	Not Detected	On Site	Not Detected	On Site
27-Jan-25	17:19	Not Detected	On Site	Not Detected	On Site
27-Jan-25	17:19	Not Detected	On Site	Not Detected	On Site
28-Jan-25	6:00	Not Detected	On Site	Not Detected	On Site
28-Jan-25	6:00	Not Detected	On Site	Not Detected	On Site
28-Jan-25	6:00	Not Detected	On Site	Not Detected	On Site
29-Jan-25	06:00	Not Detected	On Site	Not Detected	On Site
29-Jan-25	06:00	Not Detected	On Site	Not Detected	On Site
29-Jan-25	18:00	Not Detected	On Site	Not Detected	On Site
30-Jan-25	6:45	Not Detected	On Site	Not Detected	On Site
30-Jan-25	06:45	Not Detected	On Site	Not Detected	On Site

Date	Time	Blast Monitor ID: UM15923		Blast Monitor ID: UM14301	
		PPV (mm/s)	Monitor location	mm/s	Monitor location
30-Jan-25	07:00	Not Detected	On Site	Not Detected	On Site
30-Jan-25	18:30	Not Detected	On Site	Not Detected	On Site
30-Jan-25	18:40	Not Detected	On Site	Not Detected	On Site
31-Jan-25	06:00	Not Detected	On Site	Not Detected	On Site
31-Jan-25	06:00	Not Detected	On Site	Not Detected	On Site
31-Jan-25	06:00	Not Detected	On Site	Not Detected	On Site
31-Jan-25	06:00	Not Detected	On Site	Not Detected	On Site
31-Jan-25	18:00	Not Detected	On Site	Not Detected	On Site
31-Jan-25	18:00	Not Detected	On Site	Not Detected	On Site

9. COMPLAINTS

No complaints were received during the January 2025 reporting period.

10. APPENDICES

Appendix 1 Surface water monitoring results October – December 2024 quarter

Analyte	Unit	Monitoring location					
		115	105	100	109	WM300	TSF4
Biological Oxygen Demand	Milligrams per L (mg/L)	< 2	< 2	< 2	< 2	8	2
Conductivity	Microsiemens per centimetre (µs/cm)	3210	2500	914	821	2890	7530
Dissolved Oxygen	mg/L	9.3	8.4	9.2	9.5	2.0	9.7
Nitrogen (ammonia)	mg/L	< 0.1	< 0.1	< 0.1	< 0.1	2.1	4.0
pH	pH units	7.74	7.46	7.28	7.60	2.57	3.14
Potassium (dissolved)	mg/L	6.3	6.4	2.7	3.3	6.3	12.6
Redox	Millivolts (mV)	339	340	454	341	585	510
Total Dissolved Solids	mg/L	2470	1760	601	537	2690	9870
Total Organic Carbon	mg/L	17	19	7	11	13	4

Appendix 2 Ground water monitoring results October – December 2024 quarter

Analyte	Unit	Monitoring location										
		MB4	MB5	MB6[1]	MB8	MB12	MB13	MB14	MB15	MB11	MB16	MB17
Alkalinity (as calcium carbonate)	mg/L	28	<1	-	646	< 1	635	271	462	< 1	< 1	314
Aluminium (total)	mg/L	0.15	38.8	-	0.05	414	0.04	0.05	0.15	366	2330	1.16
Arsenic (total)	mg/L	0.001	0.019	-	<0.002	0.029	< 0.002	< 0.001	< 0.01	0.028	0.034	< 0.1
Barium (total)	mg/L	0.0350	<0.0050	-	0.0802	0.0198	0.0283	0.0089	0.0173	0.0409	0.0113	<0.0500
Benzene	mg/L	Annual analyte, not analysed this quarter										
Cadmium (total)	mg/L	0.00308	0.196	-	0.00044	24.4	0.0106	0.00133	0.00274	23.1	32	0.0186
Calcium (total)	mg/L	10.2	180	-	104	420	164	90.4	501	422	514	428
Chloride	mg/L	542	386	-	632	1070	677	32.6	341	1100	121	373
Chromium (hexavalent)	mg/L	Annual analyte, not analysed this quarter										
Chromium (total)	mg/L	<0.002	<0.002	-	<0.002	0.029	< 0.002	< 0.002	< 0.002	0.041	0.142	0.004
Cobalt (total)	mg/L	0.0221	1.32	-	<0.0004	12.8	0.0042	0.0004	0.0070	11.7	21.5	0.666
Copper (total)	mg/L	0.05	<0.01	-	<0.002	125	0.101	< 0.001	0.015	111	200	0.109
Ethyl benzene	mg/L	Annual analyte, not analysed this quarter										
Fluoride[2]	mg/L	0.22	NP	-	NP	NP	0.64	NP	NP	NP	NP	NP
Lead (total)	mg/L	0.0046	0.0041	-	0.0004	0.0422	0.0046	0.0006	0.0121	0.0094	0.0379	0.0230
Magnesium (total)	mg/L	132	939	-	145	4560	206	112	1260	4800	7620	3620
Manganese (total)	mg/L	0.0257	40.3	-	0.0018	430	0.111	0.0312	8.32	440	551	66.6
Mercury (total)	mg/L	<0.0001	<0.0010	-	<0.0002	<0.001	<0.0002	<0.0001	<0.001	<0.001	<0.001	<0.0100
Nitrate	mg/L	0.5	1.8	-	4.6	13.8	2.3	10.2	2.2	15.3	2.0	4.1
Nitrite	mg/L	<0.05	22.5	-	<0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrogen (ammonia)	mg/L	<0.1	0.2	-	<0.1	0.8	< 0.1	< 0.1	< 0.1	0.4	5.9	0.1

[1] OBSERVED TO BE DRY WHEN MONITORED

[2] FLUORIDE ANALYSIS NOT PERFORMED (NP) BY LABORATORY FOR A NUMBER OF LOCATIONS

Analyte	Unit	Monitoring location										
		MB4	MB5	MB6[1]	MB8	MB12	MB13	MB14	MB15	MB11	MB16	MB17
Organochlorine pesticides	mg/L	Annual analyte, not analysed this quarter										
Organophosphate pesticides	mg/L	Annual analyte, not analysed this quarter										
pH	mg/L	5.90	4.55	-	7.75	3.87	7.59	7.72	7.29	4.18	3.13	6.50
Polycyclic aromatic hydrocarbons	mg/L	Annual analyte, not analysed this quarter										
Potassium (total)	mg/L	4.1	12.5	-	4.8	18.4	6.2	2.6	26.2	14.3	19.9	51.1
Sodium (total)	mg/L	215	432	-	430	1780	314	132	317	1780	187	730
Standing water level	mbgl	10.02	6.17	-	2.84	0.63	2.22	5.65	1.88	0.72	1.88	2.70
Sulfate	mg/L	2.8	5800	-	85.0	29300	57.8	495	5940	29600	54200	13700
Toluene	mg/L	Annual analyte, not analysed this quarter										
Total dissolved solids	mg/L	1520	9300	-	1940	49900	2510	1240	9510	50000	80000	23400
Total organic carbon	mg/L	<1	3	-	1	7	2	2	9	8	22	8
Total petroleum hydrocarbons	mg/L	Annual analyte, not analysed this quarter										
Total phenolics	mg/L	Annual analyte, not analysed this quarter										
Xylene	mg/L	Annual analyte, not analysed this quarter										
Zinc (total)	mg/L	0.977	230	-	0.061	3660	0.014	0.055	0.939	3610	6620	82.2