



Evolution
MINING



Environmental Monitoring Data

December 2021

EPL No: 11912

Licensee: Evolution Mining (Cowel) Pty Limited

Address: PO Box 210 West Wyalong NSW 2671

<http://www.epa.nsw.gov.au/licensing-and-regulation/public-registers>



Dust

Monitoring Point: 1 <McLintocks Shed>

Dust monitoring, Dust gauge located on private property to the west of ML1535 boundary

Frequency	Date Collected	Date Obtained	Date Published	Particulates (g/m ³ /mth)	Comments
Monthly	28/01/2021	18/02/2021	20/02/2021	3.62	
Monthly	25/02/2021	11/03/2021	20/03/2021	2.84	
Monthly	29/03/2021	22/04/2021	20/05/2021	9.46	Water, Some Algae
Monthly	29/04/2021	14/05/2021	20/05/2021	1.06	
Monthly	27/05/2021	11/06/2021	20/06/2021	8.81	
Monthly	28/06/2021	14/07/2021	20/07/2021	3.29	
Monthly	29/07/2021	16/08/2021	20/08/2021	6.83	
Monthly	27/08/2021	21/09/2021	21/09/2021	6.97	Water, Insects, faeces
Monthly	24/09/2021	15/10/2021	21/10/2021	3.52	Bugs, bird poo.
Monthly	22/10/2021	17/11/2021	22/11/2021	3.87	
Monthly	23/11/2021	15/12/2021	20/12/2021	6.91	3/4 Full of water. Bugs. Algae. Harvest ongoing.
Monthly	23/12/2021	14/01/2022	20/01/2022	10.10	Water, Insects, Debris, Algae
Number of Samples Collected				12	
Lowest Value				1.1	
Mean of Sample				5.6	
Highest Sample Value				10.1	
Median				5.4	

Monitoring Point: 2 <Site Office>

Dust monitoring, Dust gauge located on private property to the south of ML1535 boundary

Frequency	Date Collected	Date Obtained	Date Published	Particulates (g/m ³ /mth)	Comments
Monthly	28/01/2021	18/02/2021	20/02/2021	2.06	
Monthly	25/02/2021	11/03/2021	20/03/2021	3.04	
Monthly	29/03/2021	22/04/2021	20/05/2021	1.03	
Monthly	29/04/2021	14/05/2021	20/05/2021	0.35	
Monthly	27/05/2021	11/06/2021	20/06/2021	1.61	
Monthly	28/06/2021	14/07/2021	20/07/2021	4.16	
Monthly	29/07/2021	16/08/2021	20/08/2021	8.84	
Monthly	27/08/2021	21/09/2021	21/09/2021	1.41	
Monthly	25/09/2021	15/10/2021	21/10/2021	3.27	Bugs, water 1/5 full.
Monthly	22/10/2021	17/11/2021	22/11/2021	4.77	Dead lizard in sample jar.
Monthly	23/11/2021	15/12/2021	20/12/2021	12.90	5/6 Full of water. Bugs. Harvest ongoing.
Monthly	23/12/2021	14/01/2022	20/01/2022	9.35	Water, Beetles, Insects, Dust
Number of Samples Collected				12	
Lowest Value				0.4	
Mean of Sample				4.4	
Highest Sample Value				12.9	
Median				3.2	

Monitoring Point: 3 <DG06>

Dust monitoring, Dust gauge located on private property to the east of ML1535 boundary

Frequency	Date Collected	Date Obtained	Date Published	Particulates (g/m ³ /mth)	Comments
Monthly	28/01/2021	18/02/2021	20/02/2021	2.78	
Monthly	25/02/2021	11/03/2021	20/03/2021	4.00	
Monthly	29/03/2021	22/04/2021	20/05/2021	7.63	
Monthly	29/04/2021	14/05/2021	20/05/2021	10.14	Algaside, Bugs
Monthly	27/05/2021	11/06/2021	20/06/2021	12.38	Water, Insects
Monthly	28/06/2021	14/07/2021	20/07/2021	7.64	
Monthly	29/07/2021	16/08/2021	20/08/2021	28.43	Water, algae, bird poo, debris
Monthly	27/08/2021	21/09/2021	21/09/2021	23.20	Water, bugs, faeces, debris
Monthly	24/09/2021	15/10/2021	21/10/2021	1.83	Farmer burning off and hay storage nearby (within 100m). Bugs and debris.
Monthly	22/10/2021	17/11/2021	22/11/2021	4.29	Murky sample (decaying bugs, algae, etc.)
Monthly	23/11/2021	15/12/2021	20/12/2021	1.58	3/4 Full of water. Bugs. Harvest ongoing.
Monthly	23/12/2021	14/01/2022	20/01/2022	4.56	Water, Beetles, Debris, Insects
Number of Samples Collected				12	
Lowest Value				1.6	
Mean of Sample				9.0	
Highest Sample Value				28.4	
Median				6.1	

Monitoring Point: 4 <DG09>

Dust monitoring, Dust gauge located on private property to the south of ML1535 boundary

Frequency	Date Collected	Date Obtained	Date Published	Particulates (g/m ³ /mth)	Comments
Monthly	28/01/2021	18/02/2021	20/02/2021	1.15	
Monthly	25/02/2021	11/03/2021	20/03/2021	5.53	
Monthly	29/03/2021	22/04/2021	20/05/2021	0.92	
Monthly	29/04/2021	14/05/2021	20/05/2021	0.51	
Monthly	27/05/2021	11/06/2021	20/06/2021	1.30	
Monthly	28/06/2021	14/07/2021	20/07/2021	3.64	
Monthly	29/07/2021	16/08/2021	20/08/2021	2.64	
Monthly	27/08/2021	21/09/2021	21/09/2021	0.83	
Monthly	24/09/2021	15/10/2021	21/10/2021	0.90	Bugs, water 1/5 full.
Monthly	22/10/2021	17/11/2021	22/11/2021	3.83	
Monthly	23/11/2021	15/12/2021	20/12/2021	0.81	5/6 Full of water. Bugs. Harvest ongoing.
Monthly	23/12/2021	14/01/2022	20/01/2022	1.25	Water, Beetles, Insects
Number of Samples Collected				12	
Lowest Value				0.5	
Mean of Sample				1.9	
Highest Sample Value				5.5	
Median				1.2	

Monitoring Point: 5 <Site 52>

Dust monitoring, Dust gauge located within ML1535 and north of the open pit

Frequency	Date Collected	Date Obtained	Date Published	Particulates (g/m ³ /mth)	Comments
Monthly	28/01/2021	19/02/2021	20/03/2021	1.87	
Monthly	28/01/2021	11/03/2021	20/03/2021	3.01	
Monthly	29/03/2021	22/04/2021	20/05/2021	2.00	
Monthly	29/04/2021	14/05/2021	20/05/2021	0.26	
Monthly	27/05/2021	11/06/2021	20/06/2021	8.23	Water, Debris
Monthly	28/06/2021	14/07/2021	20/07/2021	3.49	
Monthly	29/07/2021	-	-	-	No access due to lake water
Monthly	27/08/2021	-	-	-	No access due to lake water
Monthly	26/09/2021	15/10/2021	21/10/2021	7.39	Gauge deployed 28/06/2021. Boat required for safe access.
Monthly	28/10/2021	17/11/2021	22/11/2021	3.34	
Monthly	29/11/2021	15/12/2021	20/12/2021	2.12	Full of water. Bugs. Harvest ongoing.
Monthly	29/12/2021	14/01/2022	20/01/2022	2.66	Water, Insects, Fly
Number of Samples Collected				10	
Lowest Value				0.3	
Mean of Sample				3.4	
Highest Sample Value				8.2	
Median				2.8	



Dust

Monitoring Point: 6 <DG01>

Dust monitoring, Dust gauge located on private property to the north of ML1535 boundary

Frequency	Date Collected	Date Obtained	Date Published	Particulates (g/m ² /mth)	Comments
Monthly	28/01/2021	18/02/2021	20/02/2021	0.92	
Monthly	25/02/2021	11/03/2021	20/03/2021	0.90	
Monthly	29/03/2021	22/04/2021	20/05/2021	1.64	
Monthly	29/04/2021	14/05/2021	20/05/2021	0.36	
Monthly	27/05/2021	11/06/2021	20/06/2021	1.57	
Monthly	28/06/2021	14/07/2021	20/07/2021	1.50	
Monthly	29/07/2021	16/08/2021	20/08/2021	0.47	
Monthly	27/08/2021	21/09/2021	21/09/2021	0.48	
Monthly	24/09/2021	15/10/2021	21/10/2021	0.86	
Monthly	22/10/2021	17/11/2021	22/11/2021	1.01	
Monthly	23/11/2021	15/12/2021	20/12/2021	1.87	5/6 Full of water. Bugs. Harvest ongoing.
Monthly	23/12/2021	14/01/2022	20/01/2022	4.22	Water, Beetles, insects, large spider
Number of Samples Collected				12	
Lowest Value				0.4	
Mean of Sample				1.3	
Highest Sample Value				4.2	
Median				1.0	

Monitoring Point: 49 <HV1>

Dust monitoring, High volume sampler located on private property to the north of ML1535 boundary

Frequency	Date Sampled	Date Obtained	Date Published	Total Suspended Particles (µg/m ³)	Comments
Every 7 days	Wednesday, 6 January 2021	18/02/2021	20/02/2021	34.4	
Every 7 days	Wednesday, 13 January 2021	18/02/2021	20/02/2021	31.5	
Every 7 days	Wednesday, 20 January 2021	18/02/2021	20/02/2021	51.5	
Every 7 days	Wednesday, 27 January 2021	14/07/2021	20/07/2021	56.2	
Every 7 days	Wednesday, 3 February 2021	19/03/2021	20/04/2021	19.6	
Every 7 days	Wednesday, 10 February 2021	19/03/2021	20/04/2021	29.3	
Every 7 days	Wednesday, 17 February 2021	19/03/2021	20/04/2021	42.0	
Every 7 days	Wednesday, 24 February 2021	19/03/2021	20/04/2021	47.7	
Every 7 days	Wednesday, 3 March 2021	19/04/2021	20/04/2021	85.6	
Every 7 days	Wednesday, 10 March 2021	19/04/2021	20/04/2021	88.8	
Every 7 days	Wednesday, 17 March 2021	22/04/2021	20/05/2021	23.2	
Every 7 days	Thursday, 25 March 2021	22/04/2021	20/05/2021	12.4	Ran on Thursday 25/03/2021 due to regional flooding.
Every 7 days	Wednesday, 31 March 2021	22/04/2021	20/05/2021	35.2	
Every 7 days	Wednesday, 7 April 2021	07/05/2021	20/05/2021	48.5	
Every 7 days	Wednesday, 14 April 2021	07/05/2021	20/05/2021	44.1	
Every 7 days	Wednesday, 21 April 2021	07/05/2021	20/05/2021	36.3	
Every 7 days	Wednesday, 28 April 2021	07/05/2021	20/05/2021	74.4	
Every 7 days	Wednesday, 5 May 2021	11/06/2021	20/06/2021	0.4	Instrument failed to run correctly.
Every 7 days	Saturday, 15 May 2021	11/06/2021	20/06/2021	33.2	Instrument failed to run on 13/05/2021. Hi-Vol machine swapped out and ran 15/05/2021.
Every 7 days	Wednesday, 19 May 2021	11/06/2021	20/06/2021	37.3	
Every 7 days	Wednesday, 26 May 2021	11/06/2021	20/06/2021	19.3	
Every 7 days	Wednesday, 2 June 2021	14/07/2021	20/07/2021	58.0	
Every 7 days	Wednesday, 9 June 2021	14/07/2021	20/07/2021	4.3	
Every 7 days	Wednesday, 16 June 2021	14/07/2021	20/07/2021	2.2	
Every 7 days	Wednesday, 23 June 2021	14/07/2021	20/07/2021	4.9	
Every 7 days	Wednesday, 30 June 2021	14/07/2021	20/07/2021	2.8	
Every 7 days	Wednesday, 7 July 2021	10/08/2021	20/08/2021	23.7	
Every 7 days	Wednesday, 14 July 2021	10/08/2021	20/08/2021	4.6	
Every 7 days	Wednesday, 21 July 2021	10/08/2021	20/08/2021	3.6	
Every 7 days	Wednesday, 28 July 2021	10/08/2021	20/08/2021	9.4	
Every 7 days	Wednesday, 4 August 2021	10/09/2021	21/09/2021	3.0	
Every 7 days	Wednesday, 11 August 2021	10/09/2021	21/09/2021	11.8	Instrument failed to run on 11/08/2021. Hi-Vol machine swapped out and ran 13/08/2021.
Every 7 days	Friday, 13 August 2021	10/09/2021	21/09/2021	25.9	
Every 7 days	Thursday, 19 August 2021	10/09/2021	21/09/2021	19.1	
Every 7 days	Thursday, 26 August 2021	10/09/2021	21/09/2021	5.1	
Every 7 days	Wednesday, 1 September 2021	15/10/2021	21/10/2021	21.4	
Every 7 days	Wednesday, 8 September 2021	15/10/2021	21/10/2021	14.0	
Every 7 days	Tuesday, 14 September 2021	15/10/2021	21/10/2021	23.5	Ran machine early due to scheduled power outage.
Every 7 days	Wednesday, 22 September 2021	15/10/2021	21/10/2021	13.5	
Every 7 days	Wednesday, 29 September 2021	15/10/2021	21/10/2021	11.3	
Every 7 days	Friday, 1 October 2021	08/11/2021	22/11/2021	11.6	
Every 7 days	Friday, 8 October 2021	08/11/2021	22/11/2021	28.1	
Every 7 days	Wednesday, 13 October 2021	08/11/2021	22/11/2021	9.5	
Every 7 days	Thursday, 21 October 2021	08/11/2021	22/11/2021	24.9	
Every 7 days	Wednesday, 27 October 2021	08/11/2021	22/11/2021	24.1	
Every 7 days	Thursday, 4 November 2021	09/12/2021	20/12/2021	45.3	
Every 7 days	Thursday, 11 November 2021	09/12/2021	20/12/2021	19.6	
Every 7 days	Thursday, 18 November 2021	09/12/2021	20/12/2021	19.6	
Every 7 days	Wednesday, 24 November 2021	09/12/2021	20/12/2021	11.3	
Every 7 days	Wednesday, 1 December 2021	19/01/2022	20/01/2022	31.6	
Every 7 days	Wednesday, 8 December 2021	19/01/2022	20/01/2022	52.8	
Every 7 days	Wednesday, 15 December 2021	19/01/2022	20/01/2022	200.0	Wind gusts of up to 72 km/hr recorded in West Wyalong (BOM Station 05001)
Every 7 days	Wednesday, 22 December 2021	19/01/2022	20/01/2022	20.5	
Every 7 days	Wednesday, 29 December 2021	19/01/2022	20/01/2022	47.8	
Number of Samples Collected				54	
Lowest Value				0.4	
Mean of Sample				30.7	
Highest Sample Value				200.0	
Median				23.6	

Surface Water

Monitoring Point: 12 <D1>

Stormwater quality monitoring, Northern waste emplacement contained water storage

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	Total Suspended Solids (mg/L)	Comments
Monthly	06/01/2021	14/01/2021	20/02/2021	8.40	15478	52	
Monthly	31/01/2021	09/02/2021	20/02/2021	4.99	17589	164	Rainfall event monitoring
Monthly	05/02/2021	15/03/2021	20/03/2021	4.36	18146	184	
Monthly	03/03/2021	08/03/2021	20/04/2021	4.94	18969	89	
Monthly	19/03/2021	01/04/2021	20/04/2021	5.17	18751	36	Rainfall event monitoring
Monthly	24/03/2021	01/04/2021	20/04/2021	6.35	3602	127	Rainfall event monitoring. High water level.
Monthly	22/04/2021	03/05/2021	20/07/2021	8.92	3413	26	
Monthly	12/05/2021	20/05/2021	20/06/2021	9.17	3484	51	
Monthly	02/06/2021	10/06/2021	20/07/2021	5.79	4583	9	
Monthly	10/06/2021	21/06/2021	20/07/2021	5.63	4333	80	Rainfall event monitoring
Monthly	22/07/2021	29/07/2021	20/08/2021	8.46	4471	25	
Monthly	17/08/2021	25/08/2021	21/09/2021	7.61	4639	6	
Monthly	14/09/2021	22/09/2021	21/10/2021	5.77	5279	6	
Monthly	19/10/2021	27/10/2021	22/11/2021	8.40	6123	15	
Monthly	04/11/2021	12/11/2021	20/12/2021	7.80	6229	69	Rainfall event monitoring
Monthly	12/11/2021	22/11/2021	20/12/2021	7.96	4993	109	Rainfall event monitoring
Monthly	26/11/2021	07/12/2021	20/12/2021	8.73	4388	23	Rainfall event monitoring
Monthly	09/12/2021	21/12/2021	20/01/2022	8.70	5820	22	
Monthly	20/12/2021	24/12/2021	20/01/2022	8.59	5574	14	Rainfall event monitoring
Number of Samples Collected				19.00	19	19	
Lowest Value				4.36	3413	6	
Mean of Sample				7.14	8203	58	
Highest Sample Value				9.17	18969	184	
Median				7.80	5279	36	

Monitoring Point: 13 <D4>

Stormwater quality monitoring, Southern waste emplacement contained water storage

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	Total Suspended Solids (mg/L)	Comments
Monthly	06/01/2021	14/01/2021	20/02/2021	8.51	1027	35	
Monthly	31/01/2021	09/02/2021	20/02/2021	6.06	1514	178	Rainfall event monitoring
Monthly	05/02/2021	15/03/2021	20/03/2021	5.21	1224	112	
Monthly	03/03/2021	08/03/2021	20/04/2021	5.45	1298	97	
Monthly	19/03/2021	01/04/2021	20/04/2021	6.03	1145	47	Rainfall event monitoring
Monthly	24/03/2021	01/04/2021	20/04/2021	6.24	1465	35	Rainfall event monitoring. High water level.
Monthly	22/04/2021	03/05/2021	20/07/2021	8.33	1535	44	
Monthly	12/05/2021	20/05/2021	20/06/2021	7.01	6164	6	
Monthly	02/06/2021	10/06/2021	20/07/2021	6.38	8967	3	
Monthly	10/06/2021	21/06/2021	20/07/2021	5.40	7926	32	Rainfall event monitoring
Monthly	22/07/2021	29/07/2021	20/08/2021	8.08	7742	6	
Monthly	17/08/2021	25/08/2021	21/09/2021	8.19	8511	4	
Monthly	14/09/2021	22/09/2021	21/10/2021	5.91	10167	10	
Monthly	19/10/2021	27/10/2021	22/11/2021	7.87	11636	122	
Monthly	04/11/2021	12/11/2021	20/12/2021	7.54	12432	15	Rainfall event monitoring
Monthly	12/11/2021	22/11/2021	20/12/2021	7.03	7635	48	Rainfall event monitoring
Monthly	26/11/2021	07/12/2021	20/12/2021	9.03	5819	22	Rainfall event monitoring
Monthly	09/12/2021	21/12/2021	20/01/2022	8.81	9657	84	
Monthly	20/12/2021	24/12/2021	20/01/2022	8.55	9317	467	Rainfall event monitoring
Number of Samples Collected				19.00	19	19.00	
Lowest Value				5.21	1027	3.00	
Mean of Sample				7.14	6062	71.95	
Highest Sample Value				9.03	12432	467.00	
Median				7.03	7635	35.00	



Lake Water

Monitoring Point 14 - #P1
Ambient water quality monitoring, Surface water point within ML1535 on Lake Cowal

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	Total Suspended Solids (mg/L)	Comments
Weekly	January 2021	-	-	-	-	-	Lake level below 204.5 AHD, monitoring no longer required
Weekly	February 2021	-	-	-	-	-	Lake level below 204.5 AHD, monitoring no longer required
Monthly	March 2021	-	-	-	-	-	Lake level 204.829 AHD (04/06/2021). Monitoring will commence when risk associated with sampling is low or acceptable.
Monthly	April 2021	-	-	-	-	-	Lake level 204.757 AHD (03/05/2021). Monitoring will commence when risk associated with sampling is low or acceptable.
Weekly	May 2021	-	-	-	-	-	Lake level 204.741 AHD (06/06/2021). Monitoring will commence when risk associated with sampling is low or acceptable.
Weekly	June 2021	-	-	-	-	-	Lake level 204.876 AHD (05/07/2021). Monitoring will commence when risk associated with sampling is low or acceptable.
Weekly	July 2021	-	-	-	-	-	Lake level 205.115 AHD (02/08/2021). Monitoring will commence when risk associated with sampling is low or acceptable.
Monthly	August 2021	-	-	-	-	-	Lake level 205.222 AHD (11/08/2021). Monitoring will commence when risk associated with sampling is low or acceptable.
Weekly	23/09/2021	23/09/2021	21/10/2021	7.11	256.1	16	Lake level 205.533 AHD (11/09/2021). Sampling deemed safe to recommence as of 23/09/2021. Water turbid.
Weekly	27/09/2021	27/09/2021	21/10/2021	7.48	284.3	29	Lake level 205.533 AHD (11/09/2021). Water turbid.
Weekly	06/10/2021	06/10/2021	22/11/2021	8.00	282.0	26	Lake level 205.585 AHD (11/11/2021). Water turbid.
Weekly	11/10/2021	06/10/2021	22/11/2021	8.45	316.0	30	Lake level 205.585 AHD (11/11/2021). Water turbid.
Weekly	21/10/2021	21/10/2021	22/11/2021	8.11	319.9	30	Lake level 205.585 AHD (11/11/2021). Water turbid.
Weekly	29/10/2021	29/10/2021	22/11/2021	8.25	345.5	29	Lake level 205.585 AHD (11/11/2021). Water turbid.
Weekly	09/11/2021	09/11/2021	20/12/2021	7.81	359.0	8	Lake level 206.166 AHD (12/12/2021). Water turbid.
Weekly	06/11/2021	06/11/2021	20/12/2021	8.39	355.7	45	Lake level 206.166 AHD (12/12/2021). Water turbid. Rainfall event monitoring.
Weekly	11/11/2021	11/11/2021	20/12/2021	8.07	351.1	13	Lake level 206.166 AHD (12/12/2021). Water turbid.
Weekly	12/11/2021	12/11/2021	20/12/2021	8.10	355.0	33	Lake level 206.166 AHD (12/12/2021). Water turbid. Rainfall event monitoring.
Weekly	19/11/2021	19/11/2021	20/12/2021	8.32	386.0	20	Lake level 206.166 AHD (12/12/2021). Water turbid.
Weekly	23/11/2021	23/11/2021	20/12/2021	8.10	354.7	57	Lake level 206.166 AHD (12/12/2021). Water turbid.
Weekly	29/11/2021	29/11/2021	20/12/2021	8.11	363.0	82	Lake level 206.166 AHD (12/12/2021). Water turbid. Rainfall event monitoring.
Weekly	10/12/2021	10/12/2021	20/12/2021	7.93	362.6	48	Lake level 206.147 AHD (12/01/2022). Water turbid.
Weekly	17/12/2021	17/12/2021	20/01/2022	8.31	347.7	28	Lake level 206.147 AHD (12/01/2022). Water turbid.
Weekly	29/12/2021	29/12/2021	20/01/2022	8.33	355.0	43	Lake level 206.147 AHD (12/01/2022). Water turbid.
Weekly	29/12/2021	29/12/2021	20/01/2022	9.08	321.0	48	Lake level 206.147 AHD (12/01/2022). Water turbid.
Number of Samples Collected				17	17	17	
Lowest Value				7.11	256.1	16	
Mean of Sample				8.1	333.3	29.6	
Highest Sample Value				9.08	386.0	82	
Median Sample Value				8.1	341.1	24.0	

Frequency	Date Sampled	Date Obtained	Date Published	Alkalinity (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Lead (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Total Suspended Solids (mg/L)	Zinc (mg/L)	Comments
Quarterly	January 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	Lake level below 204.5 AHD
Quarterly	April 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	See Weekly Comment
Quarterly	July 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	See Monthly Comment
Quarterly	11/10/2021	20/10/2021	22/11/2021	134.00	<0.005	0.002	<0.0001	0.002	<0.001	<0.001	0.002	<0.01	30	<0.005	See Weekly Comment

Monitoring Point 15 - #P2
Ambient water quality monitoring, Surface water point within ML1535 on Lake Cowal

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	Comments
Monthly	January 2021	-	-	-	-	Lake level below 204.5 AHD, monitoring no longer required
Monthly	February 2021	-	-	-	-	Lake level below 204.5 AHD, monitoring no longer required
Monthly	March 2021	-	-	-	-	Lake level 204.829 AHD (04/06/2021). Monitoring will commence when risk associated with sampling is low or acceptable.
Monthly	April 2021	-	-	-	-	Lake level 204.757 AHD (03/05/2021). Monitoring will commence when risk associated with sampling is low or acceptable.
Monthly	May 2021	-	-	-	-	Lake level 204.741 AHD (06/06/2021). Monitoring will commence when risk associated with sampling is low or acceptable.
Monthly	June 2021	-	-	-	-	Lake level 204.876 AHD (05/07/2021). Monitoring will commence when risk associated with sampling is low or acceptable.
Monthly	July 2021	-	-	-	-	Lake level 205.115 AHD (02/08/2021). Monitoring will commence when risk associated with sampling is low or acceptable.
Monthly	August 2021	-	-	-	-	Lake level 205.222 AHD (11/08/2021). Monitoring will commence when risk associated with sampling is low or acceptable.
Weekly	23/09/2021	23/09/2021	21/10/2021	8.05	283.5	Lake level 205.533 AHD (11/09/2021). Sampling deemed safe to recommence as of 23/09/2021. Water turbid.
Weekly	11/10/2021	06/10/2021	22/11/2021	8.14	337	Lake level 205.585 AHD (11/11/2021). Water turbid.
Weekly	19/11/2021	19/11/2021	20/12/2021	8.33	385.0	Lake level 206.166 AHD (12/12/2021). Water turbid.
Weekly	17/12/2021	17/12/2021	20/01/2022	8.26	351	Lake level 206.147 AHD (12/01/2022). Water turbid.
Number of Samples Collected				17	17	
Lowest Value				8.1	283.5	
Mean of Sample				8.1	329.9	
Highest Sample Value				8.3	385.0	
Median Sample Value				8.2	333.8	

Frequency	Date Sampled	Date Obtained	Date Published	Alkalinity (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Lead (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Total Suspended Solids (mg/L)	Zinc (mg/L)	Comments
Quarterly	January 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	Lake level below 204.5 AHD
Quarterly	April 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	See Monthly Comment
Quarterly	July 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	See Monthly Comment
Quarterly	11/10/2021	20/10/2021	22/11/2021	147	<0.005	0.002	<0.001	0.002	<0.001	<0.001	0.002	<0.01	40	<0.005	See monthly comment

Monitoring Point 16 - #P3
Ambient water quality monitoring, Surface water point within ML1535 on Lake Cowal

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	Total Suspended Solids (mg/L)	Comments
Weekly	January 2021	-	-	-	-	-	Lake level below 204.5 AHD, monitoring no longer required
Weekly	February 2021	-	-	-	-	-	Lake level below 204.5 AHD, monitoring no longer required
Monthly	March 2021	-	-	-	-	-	Lake level 204.829 AHD (04/06/2021). Monitoring will commence when risk associated with sampling is low or acceptable.
Monthly	April 2021	-	-	-	-	-	Lake level 204.757 AHD (03/05/2021). Monitoring will commence when risk associated with sampling is low or acceptable.
Weekly	May 2021	-	-	-	-	-	Lake level 204.741 AHD (06/06/2021). Monitoring will commence when risk associated with sampling is low or acceptable.
Weekly	June 2021	-	-	-	-	-	Lake level 204.876 AHD (05/07/2021). Monitoring will commence when risk associated with sampling is low or acceptable.
Weekly	July 2021	-	-	-	-	-	Lake level 205.115 AHD (02/08/2021). Monitoring will commence when risk associated with sampling is low or acceptable.
Weekly	August 2021	-	-	-	-	-	Lake level 205.222 AHD (11/08/2021). Monitoring will commence when risk associated with sampling is low or acceptable.
Weekly	23/09/2021	23/09/2021	21/10/2021	7.85	252.2	14	Lake level 205.533 AHD (11/09/2021). Sampling deemed safe to recommence as of 23/09/2021. Water turbid.
Weekly	27/09/2021	27/09/2021	21/10/2021	8.08	282.2	34	Lake level 205.533 AHD (11/09/2021). Water turbid.
Weekly	06/10/2021	06/10/2021	22/11/2021	8.16	294.0	10	Lake level 205.585 AHD (11/11/2021). Water turbid.
Weekly	11/10/2021	06/10/2021	22/11/2021	8.11	312.0	35	Lake level 205.585 AHD (11/11/2021). Water turbid.
Weekly	21/10/2021	21/10/2021	22/11/2021	8.16	318.9	37	Lake level 205.585 AHD (11/11/2021). Water turbid.
Weekly	29/10/2021	29/10/2021	22/11/2021	8.25	345.5	18	Lake level 205.585 AHD (11/11/2021). Water turbid.
Weekly	09/11/2021	09/11/2021	20/12/2021	8.00	357.0	40	Lake level 206.166 AHD (12/12/2021). Water turbid.
Weekly	05/11/2021	05/11/2021	20/12/2021	8.14	354.4	12	Lake level 206.166 AHD (12/12/2021). Water turbid. Rainfall event monitoring.
Weekly	11/11/2021	11/11/2021	20/12/2021	7.97	352.4	13	Lake level 206.166 AHD (12/12/2021). Water turbid.
Weekly	12/11/2021	12/11/2021	20/12/2021	7.91	332.0	15	Lake level 206.166 AHD (12/12/2021). Water turbid. Rainfall event monitoring.
Weekly	19/11/2021	19/11/2021	20/12/2021	8.13	355.0	20	Lake level 206.166 AHD (12/12/2021). Water turbid.
Weekly	23/11/2021	23/11/2021	20/12/2021	8.10	355.4	75	Lake level 206.166 AHD (12/12/2021). Water turbid.
Weekly	29/11/2021	29/11/2021	20/12/2021	8.10	358.8	65	Lake level 206.166 AHD (12/12/2021). Water turbid. Rainfall event monitoring.
Weekly	10/12/2021	10/12/2021	20/01/2022	7.90	381.0	141	Lake level 206.147 AHD (12/01/2022). Water turbid.
Weekly	17/12/2021	17/12/2021	20/01/2022	8.25	348.8	68	Lake level 206.147 AHD (12/01/2022). Water turbid.
Weekly	29/12/2021	29/12/2021	20/01/2022	8.18	385.0	35	Lake level 206.147 AHD (12/01/2022). Water turbid. Rainfall event monitoring.
Weekly	29/12/2021	29/12/2021	20/01/2022	8.84	326.0	48	Lake level 206.147 AHD (12/01/2022). Water turbid.
Number of Samples Collected				17	17	17	
Lowest Value				7.9	252.2	14	
Mean of Sample				8.1	341.9	28.6	
Highest Sample Value				8.8	418.9	141.0	
Median Sample Value				8.1	341.5	26.0	

Frequency	Date Sampled	Date Obtained	Date Published	Alkalinity (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Lead (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Total Suspended Solids (mg/L)	Zinc (mg/L)	Comments
Quarterly	January 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	Lake level below 204.5 AHD
Quarterly	April 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	See Weekly Comment
Quarterly	July 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	See Monthly Comment
Quarterly	11/10/2021	20/10/2021	22/11/2021	126	<0.005	0.002	<0.0001	0.002	<0.001	<0.001	0.002	<0.01	38	<0.005	See Monthly Comment

Monitoring Point 17 - #B1
Ambient water quality monitoring, Surface water point within ML1535 on Lake Cowal

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	Comments
Monthly	January 2021	-	-	-	-	Lake level below 204.5 AHD, monitoring no longer required
Monthly	February 2021	-	-	-	-	Lake level below 204.5 AHD, monitoring no longer required
Monthly	March 2021	-	-	-	-	Lake level 204.829 AHD (04/06/2021). Monitoring will commence when risk associated with sampling is low or acceptable.
Monthly	April 2021	-	-	-	-	Lake level 204.757 AHD (03/05/2021). Monitoring will commence when risk associated with sampling is low or acceptable.
Monthly	May 2021	-	-	-	-	Lake level 204.741 AHD (06/06/2021). Monitoring will commence when risk associated with sampling is low or acceptable.
Monthly	June 2021	-	-	-	-	Lake level 204.876 AHD (05/07/2021). Monitoring will commence when risk associated with sampling is low or acceptable.
Monthly	July 2021	-	-	-	-	Lake level 205.115 AHD (02/08/2021). Monitoring will commence when risk associated with sampling is low or acceptable.
Monthly	August 2021	-	-	-	-	Lake level 205.222 AHD (11/08/2021). Monitoring will commence when risk associated with sampling is low or acceptable.
Weekly	23/09/2021	23/09/2021	21/10/2021	8.03	282	Lake level 205.533 AHD (11/09/2021). Sampling deemed safe to recommence as of 23/09/2021. Water turbid.
Weekly	11/10/2021	06/10/2021	22/11/2021	8.05	410	Lake level 205.585 AHD (11/11/2021). Water turbid.
Weekly	19/11/2021	19/11/2021	20/12/2021	7.83	378	Lake level 206.166 AHD (12/12/2021). Water turbid.
Weekly	17/12/2021	17/12/2021	20/01/2022	8.17	364	Lake level 206.147 AHD (12/01/2022). Water turbid.
Number of Samples Collected				8	8	
Lowest Value				7.6	281.2	
Mean of Sample				8.0	358.3	
Highest Sample Value				8.2	410.0	
Median Sample Value				8.1	310.0	

Frequency	Date Sampled	Date Obtained	Date Published	Alkalinity (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Lead (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Total Suspended Solids (mg/L)	Zinc (mg/L)	Comments
Quarterly	January 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	Lake level below 204.5 AHD
Quarterly	April 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	See Monthly Comment
Quarterly	July 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	See Monthly Comment
Quarterly	11/10/2021	20/10/2021	22/11/2021	115	<0.005	0.001	<0.0001	<0.001	<0.001	<0.001	0.003	<0.01	37	<0.005	See Monthly Comment

Monitoring Point 18 - #B0
Ambient water quality monitoring, Surface water point on Lake Cowal to the south-east of ML1535 boundary

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	Comments
Monthly	January 2021	-	-	-	-	



Groundwater

Monitoring Point: 19 <PSSA-R>
Groundwater quality monitoring. Piezometer located up gradient of southern tailings storage facility

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	SWL (m)	Comments
Monthly	13/01/2021	13/01/2021	20/02/2021	6.73	32318	20.818	
Monthly	03/02/2021	03/02/2021	20/03/2021	6.73	32139	20.765	
Monthly	09/03/2021	09/03/2021	20/04/2021	6.70	31768	20.850	
Monthly	19/04/2021	19/04/2021	20/05/2021	6.81	31484	20.788	
Monthly	10/05/2021	10/05/2021	20/06/2021	6.71	31488	20.765	
Monthly	22/06/2021	22/06/2021	20/07/2021	6.73	30937	21.220	
Monthly	08/07/2021	08/07/2021	20/08/2021	6.71	31079	20.800	
Monthly	09/08/2021	09/08/2021	21/09/2021	6.65	30915	20.850	
Monthly	06/09/2021	06/09/2021	21/10/2021	6.72	32245	20.850	
Monthly	19/10/2021	19/10/2021	22/11/2021	6.75	30776	20.735	
Monthly	18/11/2021	18/11/2021	20/12/2021	6.61	30784	20.755	
Monthly	08/12/2021	08/12/2021	20/01/2022	6.63	33300	20.700	
Number of Samples Collected							12
Lowest Value							6.6
Mean of Sample							6.7
Highest Sample Value							6.8

Frequency	Date Sampled	Date Obtained	Date Published	Alkalinity (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Copper (mg/L)	Cyanide WAD (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Sulphate (mg/L)	Total Dissolved Solids (mg/L)	Total Hardness (mg/L)	Zinc (mg/L)	Comments			
Quarterly	13/01/2021	22/01/2021	20/02/2021	828	<0.0005	0.0005	0.0007	284	11700	0.001	<0.004	0.013	<0.0002	828	0.182	0.0019	0.0096	25	0.003	6240	2480	23700	4120	0.007				
Quarterly	19/04/2021	03/05/2021	20/05/2021	854	<0.0005	0.0005	0.0004	291	9130	0.001	<0.004	<0.005	<0.0002	762	0.219	0.0017	0.0092	25	<0.002	5840	2580	23100	3860	0.005				
Quarterly	08/07/2021	19/07/2021	20/08/2021	888	<0.0005	0.0007	0.0006	323	9210	<0.001	<0.004	<0.005	<0.0002	847	0.234	0.002	0.0104	30	0.004	6390	2520	26400	4290	0.008				
Quarterly	19/10/2021	27/10/2021	22/11/2021	736	<0.0005	0.0017	0.0006	307	9880	0.002	<0.004	<0.005	<0.0002	762	0.197	0.0019	0.0079	25	0.002	5720	2500	21300	3900	0.010				
Lowest Value							736.0	0.0000	0.0005	0.0004	284	9130	0.0010	0.0000	0.0130	0.0000	762	0.1800	0.0017	0.0079	25	0.0020	5720	2480	21300	3860	0.0050	
Mean of Sample							826.5	0.0000	0.0009	0.0006	301	9980	0.0013	0.0000	0.0130	0.0000	800	0.2080	0.0019	0.0093	26	0.0030	6048	2520	23625	4043	0.0075	
Highest Sample Value							888.0	0.0000	0.0017	0.0007	323	11700	0.0020	0.0000	0.0130	0.0000	847	0.2340	0.0020	0.0104	30	0.0040	6390	2580	26400	4290	0.0100	

Monitoring Point: 26 <PP03>
Groundwater quality monitoring. Piezometer located near the processing plant area

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	SWL (m)	Comments
Monthly	19/01/2021	19/01/2021	20/02/2021	6.58	47645	17.640	
Monthly	02/02/2021	02/02/2021	20/03/2021	7.09	46929	17.690	
Monthly	16/03/2021	16/03/2021	20/04/2021	6.60	47304	17.750	
Monthly	22/04/2021	22/04/2021	20/05/2021	7.32	42097	17.410	
Monthly	19/05/2021	19/05/2021	20/06/2021	6.93	12979	17.600	
Monthly	15/06/2021	15/06/2021	20/07/2021	6.86	13062	17.720	
Monthly	14/07/2021	14/07/2021	20/08/2021	7.03	12182	17.650	
Monthly	25/08/2021	25/08/2021	21/09/2021	6.15	15791	17.820	
Monthly	23/09/2021	23/09/2021	21/10/2021	7.08	20975	17.800	
Monthly	26/10/2021	26/10/2021	22/11/2021	6.97	24027	17.981	
Monthly	16/11/2021	16/11/2021	20/12/2021	6.62	46866	17.820	
Monthly	01/12/2021	01/12/2021	20/01/2022	6.72	44975	17.820	
Number of Samples Collected							12
Lowest Value							6.2
Mean of Sample							6.8
Highest Sample Value							7.3

Frequency	Date Sampled	Date Obtained	Date Published	Alkalinity (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Copper (mg/L)	Cyanide WAD (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Sulphate (mg/L)	Total Dissolved Solids (mg/L)	Total Hardness (mg/L)	Zinc (mg/L)	Comments					
Quarterly	19/01/2021	28/01/2021	20/02/2021	468	<0.0005	<0.0005	<0.0002	794	16400	0.003	<0.004	0.011	0.0012	1620	0.0115	0.0004	0.0022	57	0.01	8930	3120	35000	8650	0.024						
Quarterly	22/04/2021	07/05/2021	20/05/2021	247	0.0007	0.0013	0.00017	306	3310	0.007	<0.004	0.007	0.0001	309	0.0050	0.0147	0.0011	24	0.01	2100	2080	8320	2040	0.018						
Quarterly	14/07/2021	21/07/2021	20/08/2021	293	0.0007	0.0012	0.00025	396	3470	0.007	<0.004	0.004	0.0288	325	0.0288	0.010	0.0013	24	0.0109	2370	2140	9520	2330	0.031						
Quarterly	26/10/2021	04/11/2021	22/11/2021	340	0.0015	0.001	0.0004	500	7380	0.0100	<0.004	<0.005	0.0006	664	0.0097	0.007	0.0036	31	0.009	4140	2370	18100	3980	0.126						
Lowest Value							247.0	0.0010	0.0010	0.0002	306	3310	0.0030	0.0000	0.0040	0.0001	0.0000	309	0.0050	0.0004	0.0011	24	0.0090	2100	2080	8320	2040	0.0180		
Mean of Sample							337.0	0.0010	0.0012	0.0003	499	7640	0.0067	0.0000	0.0073	0.0006	0.0000	730	0.0138	0.0080	0.0021	34	0.0105	4385	2428	17735	4250	0.0498		
Highest Sample Value							468.0	0.0015	0.0013	0.0004	794	16400	0.0100	0.0000	0.0110	0.0012	0.0016	0.0288	1620	0.0288	0.0147	0.0036	57	0.0120	8930	3120	35000	8650	0.1260	

Monitoring Point: 27 <PP04>
Groundwater quality monitoring. Piezometer located near the processing plant area

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	SWL (m)	Comments
Monthly	19/01/2021	19/01/2021	20/02/2021	6.59	47708	15.840	
Monthly	02/02/2021	02/02/2021	20/03/2021	6.97	47915	15.940	
Monthly	16/03/2021	16/03/2021	20/04/2021	6.51	47144	16.030	
Monthly	22/04/2021	22/04/2021	20/05/2021	6.82	41555	15.990	
Monthly	19/05/2021	19/05/2021	20/06/2021	6.58	47334	16.040	
Monthly	15/06/2021	15/06/2021	20/07/2021	6.59	46211	16.040	
Monthly	14/07/2021	14/07/2021	20/08/2021	6.54	42199	16.030	
Monthly	25/08/2021	25/08/2021	21/09/2021	6.50	46146	16.070	
Monthly	23/09/2021	23/09/2021	21/10/2021	6.53	48311	16.100	
Monthly	26/10/2021	26/10/2021	22/11/2021	6.50	46083	16.181	
Monthly	16/11/2021	16/11/2021	20/12/2021	6.50	47311	16.100	
Monthly	01/12/2021	01/12/2021	20/01/2022	6.57	45958	16.100	
Number of Samples Collected							12
Lowest Value							6.5
Mean of Sample							6.6
Highest Sample Value							7.0

Frequency	Date Sampled	Date Obtained	Date Published	Alkalinity (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Copper (mg/L)	Cyanide WAD (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Sulphate (mg/L)	Total Dissolved Solids (mg/L)	Total Hardness (mg/L)	Zinc (mg/L)	Comments				
Quarterly	19/01/2021	28/01/2021	20/02/2021	496	<0.0005	<0.0005	<0.0002	761	16400	<0.001	<0.004	0.010	<0.0002	1520	<0.0005	0.0004	0.0011	50	0.01	8830	3380	35800	8160	<0.005					
Quarterly	22/04/2021	07/05/2021	20/05/2021	504	<0.0005	<0.0005	<0.0002	774	17400	<0.001	<0.004	0.021	<0.0002	1610	0.0017	0.0002	0.0013	47	0.009	9340	3800	34500	8560	0.005					
Quarterly	14/07/2021	21/07/2021	20/08/2021	537	<0.0005	<0.0005	<0.0002	848	14200	<0.001	<0.004	<0.005	<0.0002	1620	0.0006	0.0001	<0.0005	46	0.011	9590	3680	35600	8790	<0.005					
Quarterly	26/10/2021	04/11/2021	22/11/2021	514	<0.0005	<0.0005	<0.0002	776	16100	<0.001	<0.004	<0.005	0.0002	1550	0.0008	<0.0001	0.0008	46	0.009	9080	3640	35500	8320	<0.005					
Lowest Value							496.0	0.0000	0.0000	0.0000	761	14200	0.0000	0.0000	0.0100	0.0002	0.0000	1520	0.0006	0.0001	0.0008	46	0.0090	8830	3380	34500	8160	0.0050	
Mean of Sample							512.8	0.0000	0.0000	0.0000	790	16025	0.0000	0.0000	0.0155	0.0002	0.0000	1575	0.0010	0.0002	0.0011	47	0.0098	9210	3625	35350	8458	0.0050	
Highest Sample Value							537.0	0.0000	0.0000	0.0000	848	17400	0.0000	0.0000	0.0210	0.0002	0.0000	1620	0.0017	0.0004	0.0013	50	0.0110	9590	3800	35800	8790	0.0050	

Monitoring Point: 30 <P417A>
Groundwater quality monitoring. Piezometer located down gradient of southern tailings storage facility

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	SWL (m)	Comments
Monthly	12/01/2021	12/01/2021	20/02/2021	6.54	46533	12.014	
Monthly	24/02/2021	24/02/2021	20/03/2021	6.64	46337	12.011	
Monthly	24/03/2021	24/03/2021	20/04/2021	6.57	45760	11.951	
Monthly	12/04/2021	12/04/2021	20/05/2021	6.57	47392	12.039	
Monthly	13/05/2021	13/05/2021	20/06/2021	6.52	45437	11.956	
Monthly	23/06/2021	23/06/2021	20/07/2021	6.58	44673	11.975	
Monthly	13/07/2021	13/07/2021	20/08/2021	6.55	44815	11.929	
Monthly	23/08/2021	23/08/2021	21/09/2021	6.53	44746	11.875	
Monthly	07/09/2021	07/09/2021	21/10/2021	6.56	44660	11.960	
Monthly	21/10/2021	21/10/2021	22/11/2021	6.51	44409	11.891	
Monthly	17/11/2021	17/11/2021	20/12/2021	6.47	44878	11.904	
Monthly	07/12/2021	07/12/2021	20/01/2022	6.39	48088	11.859	
Number of Samples Collected							12
Lowest Value							6.4
Mean of Sample							6.5
Highest Sample Value							6.6

Frequency	Date Sampled	Date Obtained	Date Published	Alkalinity (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Copper (mg/L)	Cyanide WAD (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Sulphate (mg/L)	Total Dissolved Solids (mg/L)	Total Hardness (mg/L)	Zinc (mg/L)	Comments
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Groundwater

Monitoring Point: 31 <P417B>

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	SWL (m)	Comments
Monthly	12/01/2021	12/01/2021	20/02/2021	6.55	41451	11.970	
Monthly	24/02/2021	24/02/2021	20/03/2021	6.66	42478	11.975	
Monthly	24/03/2021	24/03/2021	20/04/2021	6.66	42146	11.844	
Monthly	12/04/2021	12/04/2021	20/05/2021	6.59	42630	11.996	
Monthly	13/05/2021	13/05/2021	20/06/2021	6.61	40963	11.925	
Monthly	23/06/2021	23/06/2021	20/07/2021	6.79	41447	11.950	
Monthly	13/07/2021	13/07/2021	20/08/2021	6.66	41084	11.881	
Monthly	23/08/2021	23/08/2021	21/09/2021	6.65	40867	11.830	
Monthly	07/09/2021	07/09/2021	21/10/2021	6.70	43155	11.915	
Monthly	21/10/2021	21/10/2021	22/11/2021	6.64	40895	11.831	
Monthly	17/11/2021	17/11/2021	20/12/2021	6.58	40882	11.885	
Monthly	07/12/2021	07/12/2021	20/01/2022	6.50	43952	11.791	
Number of Samples Collected				12	12	12	
Lowest Value				6.5	40867	11.791	
Mean of Sample				6.6	41899	11.899	
Highest Sample Value				6.8	43952	11.996	

Frequency	Date Sampled	Date Obtained	Date Published	Alkalinity (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Copper (mg/L)	Cyanide WAD (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Sulphate (mg/L)	Total Dissolved Solids (mg/L)	Total Hardness (mg/L)	Zinc (mg/L)	Comments	
Quarterly	12/01/2021	22/01/2021	20/02/2021	258	<0.0005	0.0005	<0.0002	500	16900	0.001	<0.004	0.006	0.0002	1370	0.0006	0.0002	0.0012	22	0.010	7940	2770	35400	6890	0.007		
Quarterly	12/04/2021	26/05/2021	20/05/2021	258	<0.0005	<0.0005	<0.0002	517	13900	0.002	<0.004	0.009	0.0006	1410	0.0026	0.0003	0.0011	22	0.010	8050	2480	29200	7100	0.032		
Quarterly	13/07/2021	21/07/2021	20/08/2021	247	<0.0005	<0.0005	<0.0002	587	12500	0.002	<0.004	0.005	<0.0002	1360	0.0029	0.0003	<0.0005	21	0.011	8120	2870	29200	7070	0.02		
Quarterly	21/10/2021	27/10/2021	22/11/2021	260	<0.0005	<0.0005	<0.0002	566	13900	<0.001	<0.004	<0.005	<0.0002	1280	0.0013	0.0002	0.0008	21	0.008	7430	2770	36400	6680	0.008	Cyanide sampling completed 24/11/2021	
Lowest Value				247.0	0.0000	0.0000	0.0000	508	12500	0.0010	0.0000	0.0050	0.0002	0.0006	1280	0.0016	0.0002	0.0008	21	0.0089	7430	2480	29200	6680	0.0070	
Mean of Sample				255.8	0.0000	0.0005	0.0000	543	14300	0.0017	0.0000	0.0067	0.0004	0.0004	1355	0.0019	0.0003	0.0010	22	0.0098	7885	2723	32800	6935	0.0168	
Highest Sample Value				260.0	0.0000	0.0005	0.0000	587	16900	0.0020	0.0000	0.0090	0.0006	0.0006	1410	0.0029	0.0003	0.0012	22	0.0110	8120	2870	36400	7100	0.0320	

Monitoring Point: 32 <P418A>

Groundwater quality monitoring, Piezometer located down gradient of northern tailings storage facility

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	SWL (m)	Comments
Monthly	14/01/2021	14/01/2021	20/02/2021	6.56	48770	8.398	
Monthly	25/02/2021	25/02/2021	20/03/2021	6.68	48327	8.305	
Monthly	11/03/2021	11/03/2021	20/04/2021	6.52	47970	8.341	
Monthly	16/04/2021	16/04/2021	20/05/2021	6.58	49816	8.268	
Monthly	28/05/2021	28/05/2021	20/06/2021	5.41	-	8.271	Instrument error
Monthly	07/06/2021	07/06/2021	20/07/2021	6.51	46838	8.224	
Monthly	28/07/2021	28/07/2021	20/08/2021	6.59	47188	8.075	
Monthly	23/08/2021	23/08/2021	21/09/2021	6.53	46483	8.040	
Monthly	28/09/2021	28/09/2021	21/10/2021	6.62	48588	8.075	
Monthly	21/10/2021	21/10/2021	22/11/2021	6.53	46524	8.121	
Monthly	17/11/2021	17/11/2021	20/12/2021	6.52	47016	8.062	
Monthly	07/12/2021	07/12/2021	20/01/2022	6.42	50277	8.095	
Number of Samples Collected				12	12	12	
Lowest Value				5.4	46524	8.040	
Mean of Sample				6.5	48006	8.130	
Highest Sample Value				6.7	50277	8.398	

Frequency	Date Sampled	Date Obtained	Date Published	Alkalinity (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Copper (mg/L)	Cyanide WAD (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Sulphate (mg/L)	Total Dissolved Solids (mg/L)	Total Hardness (mg/L)	Zinc (mg/L)	Comments	
Quarterly	14/01/2021	22/01/2021	20/02/2021	528	<0.0005	0.0006	<0.0002	494	18700	<0.001	<0.004	0.665	<0.0002	1490	0.394	0.0004	0.0008	22	<0.002	10200	4880	35900	7370	<0.005		
Quarterly	16/04/2021	26/05/2021	20/05/2021	622	<0.0005	<0.0005	<0.0002	502	16300	0.002	<0.004	0.831	<0.0002	1360	0.381	0.0004	0.0018	24	<0.002	9410	4790	36100	6650	<0.005		
Quarterly	28/07/2021	04/08/2021	20/08/2021	537	<0.0005	<0.0005	<0.0002	503	15400	<0.001	<0.004	0.837	0.0002	1380	0.421	0.0004	0.0014	24	<0.002	9590	4700	35000	6940	<0.005		
Quarterly	21/10/2021	27/10/2021	22/11/2021	596	<0.0005	<0.0005	<0.0002	518	15200	0.001	<0.004	0.859	<0.0002	1330	0.388	0.0003	0.0020	23	<0.002	9170	4840	35900	6770	<0.005		
Lowest Value				528.0	0.0000	0.0006	0.0000	494	15200	0.0010	0.0000	0.6650	0.0002	0.0002	1330	0.3810	0.0003	0.0008	22	0.0000	9170	4700	35000	6770	0.0000	
Mean of Sample				570.8	0.0000	0.0006	0.0000	504	16400	0.0015	0.0000	0.7980	0.0002	0.0002	1390	0.3960	0.0004	0.0015	23	0.0000	9593	4803	35725	6983	0.0000	
Highest Sample Value				622.0	0.0000	0.0006	0.0000	518	18700	0.0020	0.0000	0.8590	0.0002	0.0002	1490	0.4210	0.0004	0.0020	24	0.0000	10200	4880	36100	7370	0.0000	

Monitoring Point: 33 <P418B>

Groundwater quality monitoring, Piezometer located down gradient of northern tailings storage facility

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	SWL (m)	Comments
Monthly	14/01/2021	14/01/2021	20/02/2021	6.42	45739	8.407	
Monthly	25/02/2021	25/02/2021	20/03/2021	6.56	45270	8.324	
Monthly	11/03/2021	11/03/2021	20/04/2021	6.38	45087	8.420	
Monthly	16/04/2021	16/04/2021	20/05/2021	6.45	46514	8.293	
Monthly	28/05/2021	28/05/2021	20/06/2021	6.35	-	8.306	Instrument error
Monthly	07/06/2021	07/06/2021	20/07/2021	6.38	44227	8.226	
Monthly	28/07/2021	28/07/2021	20/08/2021	6.45	44706	8.075	
Monthly	23/08/2021	23/08/2021	21/09/2021	6.39	44275	8.040	
Monthly	28/09/2021	28/09/2021	21/10/2021	6.47	45921	8.069	
Monthly	21/10/2021	21/10/2021	22/11/2021	6.37	43946	8.095	
Monthly	17/11/2021	17/11/2021	20/12/2021	6.39	44401	8.101	
Monthly	07/12/2021	07/12/2021	20/01/2022	6.28	47629	8.012	
Number of Samples Collected				12	12	12	
Lowest Value				6.3	43946	8.012	
Mean of Sample				6.4	45247	8.197	
Highest Sample Value				6.6	47629	8.420	

Frequency	Date Sampled	Date Obtained	Date Published	Alkalinity (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Copper (mg/L)	Cyanide WAD (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Sulphate (mg/L)	Total Dissolved Solids (mg/L)	Total Hardness (mg/L)	Zinc (mg/L)	Comments	
Quarterly	14/01/2021	22/01/2021	20/02/2021	673	<0.0005	<0.0005	<0.0002	356	17300	0.161	<0.004	0.140	0.0022	1270	0.036	0.0191	0.2690	12	0.005	9810	4250	33800	6120	0.080		
Quarterly	16/04/2021	26/05/2021	20/05/2021	711	<0.0005	<0.0005	<0.0002	362	15100	0.135	<0.004	0.012	0.0026	1170	0.018	0.0135	0.1740	12	0.005	9020	4520	35200	5720	0.112		
Quarterly	28/07/2021	04/08/2021	20/08/2021	603	<0.0005	<0.0005	<0.0002	374	14300	0.166	<0.004	0.017	0.0025	1220	0.0171	0.0268	0.174	12	0.005	9340	4510	33200	5960	0.144		
Quarterly	21/10/2021	27/10/2021	22/11/2021	698	<0.0005	<0.0005	<0.0002	398	15000	0.032	<0.004	0.015	0.0002	1190	0.0247	0.0269	0.1910	14	0.005	9050	4680	33600	5900	0.026		
Lowest Value				603.0	0.0000	0.0015	0.0000	356	14300	0.0320	0.0000	0.0120	0.0002	0.0002	1170	0.0171	0.0269	0.1740	12	0.0050	9020	4250	33200	5720	0.0260	
Mean of Sample				671.3	0.0000	0.0015	0.0000	373	15475	0.1235	0.0000	0.0460	0.0019	0.0019	1213	0.0240	0.0166	0.2020	13	0.0050	9305	4490	33950	5923	0.0905	
Highest Sample Value				711.0	0.0000	0.0015	0.0000	398	17300	0.1660	0.0000	0.1400	0.0026	0.0026	1270	0.0362	0.0268	0.2690	14	0.0050	9810	4680	35200	6120	0.1440	



Groundwater

Monitoring Point: 36 <PDB1A>
Groundwater quality monitoring, Pit dewatering bore

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	SWL (m)	Comments
Monthly	14/01/2021	14/01/2021	20/02/2021	6.42	53871	17.935	
Monthly	24/02/2021	24/02/2021	20/03/2021	6.54	54303	18.021	
Monthly	24/03/2021	24/03/2021	20/04/2021	6.44	53539	17.683	
Monthly	14/04/2021	14/04/2021	20/05/2021	6.45	55525	17.988	
Monthly	13/05/2021	13/05/2021	20/06/2021	6.39	53194	18.106	
Monthly	25/06/2021	25/06/2021	20/07/2021	6.40	52061	17.945	
Monthly	13/07/2021	13/07/2021	20/08/2021	6.41	52427	17.959	
Monthly	28/08/2021	28/08/2021	21/09/2021	6.34	52244	17.891	
Monthly	28/09/2021	28/09/2021	21/10/2021	6.49	54291	17.826	
Monthly	21/10/2021	21/10/2021	22/11/2021	6.34	52217	17.776	
Monthly	17/11/2021	17/11/2021	20/12/2021	6.33	52597	17.741	
Monthly	07/12/2021	07/12/2021	20/01/2022	6.27	56237	17.579	
Number of Samples Collected				12	12	12	
Lowest Value				6.3	52061	17.579	
Mean of Sample				6.4	53542	17.871	
Highest Sample Value				6.5	56237	18.106	

Frequency	Date Sampled	Date Obtained	Date Published	Antimony (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Sulphate (mg/L)	Total Dissolved Solids (mg/L)	Total Hardness (mg/L)	Zinc (mg/L)	Comments	
Quarterly	14/01/2021	22/01/2021	20/02/2021	0.0008	0.0009	0.005	975	22300	<0.001	0.012	0.0004	1850	3.02	0.0007	0.0025	33	0.002	10500	4110	48300	10000	<0.005		
Quarterly	14/04/2021	30/04/2021	20/05/2021	0.0008	<0.0005	0.0044	952	18600	<0.001	0.005	<0.0002	1920	2.48	0.0008	0.0023	32	0.003	10800	3430	37500	10300	<0.005		
Quarterly	13/07/2021	21/07/2021	20/08/2021	0.0011	<0.0005	0.004	1090	16500	<0.001	0.005	<0.0002	1860	2.9	0.0004	0.0015	34	0.003	10800	4310	40300	10400	<0.005		
Quarterly	21/10/2021	27/10/2021	22/11/2021	0.0008	0.0006	0.004	968	18000	0.002	<0.0005	<0.0002	1640	3.02	0.0004	0.0019	29	<0.002	9350	4310	44200	9170	0.007		
Lowest Value				0.0008	0.0006	0.0040	952	16500	0.002	0.0050	0.0004	0.0004	1640	2.4800	0.0004	0.002	29	0.002	9350	3430	37500	9170	0.007	
Mean of Sample				0.0009	0.0008	0.0044	996	18850	0.002	0.0073	0.0004	0.0004	1818	2.7800	0.0006	0.003	32	0.003	10363	4040	42575	9968	0.007	
Highest Sample Value				0.0011	0.0009	0.0050	1090	22300	0.002	0.0120	0.0004	0.0004	1920	3.0200	0.0008	0.005	34	0.003	10800	4310	48300	10400	0.007	

Monitoring Point: 38 <PDB3A>
Groundwater quality monitoring, Pit dewatering bore

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	SWL (m)	Comments
Monthly	14/01/2021	14/01/2021	20/02/2021	6.57	48221	82.415	
Monthly	24/02/2021	24/02/2021	20/03/2021	6.65	52588	82.428	
Monthly	24/03/2021	24/03/2021	20/04/2021	6.60	49678	82.395	
Monthly	14/04/2021	14/04/2021	20/05/2021	6.64	50932	82.515	
Monthly	14/05/2021	14/05/2021	20/06/2021	6.50	50998	82.516	
Monthly	23/06/2021	23/06/2021	20/07/2021	6.64	52115	82.538	
Monthly	13/07/2021	13/07/2021	20/08/2021	6.72	48982	82.474	
Monthly	28/08/2021	28/08/2021	21/09/2021	6.57	49497	82.457	
Monthly	28/09/2021	28/09/2021	21/10/2021	6.67	47643	82.323	
Monthly	21/10/2021	21/10/2021	22/11/2021	6.57	49072	82.316	
Monthly	24/11/2021	24/11/2021	20/12/2021	6.54	48923	82.135	
Monthly	16/12/2021	16/12/2021	20/01/2022	6.59	49988	82.071	
Number of Samples Collected				12	12	12	
Lowest Value				6.5	47643	82.071	
Mean of Sample				6.6	49886	82.391	
Highest Sample Value				6.7	52588	82.530	

Frequency	Date Sampled	Date Obtained	Date Published	Antimony (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Sulphate (mg/L)	Total Dissolved Solids (mg/L)	Total Hardness (mg/L)	Zinc (mg/L)	Comments	
Quarterly	14/01/2021	22/01/2021	20/02/2021	0.004	0.0024	0.0055	1110	22100	0.005	0.009	0.0003	1900	0.52	0.0072	0.0136	35	0.003	9590	3600	54100	10600	0.147		
Quarterly	14/04/2021	30/04/2021	20/05/2021	0.0158	0.0018	0.0061	1080	17200	0.011	0.012	0.0005	1850	0.47	0.0066	0.0150	44	0.004	9280	2990	35200	10300	0.492		
Quarterly	13/07/2021	21/07/2021	20/08/2021	0.0292	0.002	0.0052	1280	15700	0.024	0.015	0.0005	1820	0.45	0.0074	0.0174	65	0.005	9650	3530	38600	10700	0.846		
Quarterly	21/10/2021	04/11/2021	22/11/2021	0.0175	0.0018	0.0051	1130	19300	0.014	<0.005	0.0006	1700	0.50	0.0073	0.0151	53	0.003	8870	3580	36200	9820	0.783		
Lowest Value				0.0040	0.0018	0.0051	1080	15700	0.005	0.0090	0.0003	0.0003	1700	0.4530	0.0066	0.014	35	0.003	8870	2990	35200	9820	0.147	
Mean of Sample				0.0166	0.0020	0.0057	1150	18700	0.014	0.0120	0.0005	1818	0.4858	0.0071	0.015	49	0.004	9348	3425	41025	10355	0.567		
Highest Sample Value				0.0292	0.0024	0.0065	1280	22100	0.024	0.0150	0.0006	1900	0.5230	0.0074	0.017	65	0.005	9650	3600	54100	10700	0.846		

Monitoring Point: 40 <PDB5A>
Groundwater quality monitoring, Pit dewatering bore

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	SWL (m)	Comments
Monthly	12/01/2021	12/01/2021	20/02/2021	6.39	53568	36.320	
Monthly	24/02/2021	24/02/2021	20/03/2021	6.47	48722	36.545	
Monthly	24/03/2021	24/03/2021	20/04/2021	6.33	52731	36.541	
Monthly	14/04/2021	14/04/2021	20/05/2021	6.37	54550	36.645	
Monthly	13/05/2021	13/05/2021	20/06/2021	6.31	52343	36.594	
Monthly	25/06/2021	25/06/2021	20/07/2021	6.41	51376	36.513	
Monthly	13/07/2021	13/07/2021	20/08/2021	6.35	51683	36.434	
Monthly	28/08/2021	28/08/2021	21/09/2021	6.30	51415	36.285	
Monthly	28/09/2021	28/09/2021	21/10/2021	6.38	53490	36.041	
Monthly	26/10/2021	26/10/2021	22/11/2021	6.30	51383	35.935	
Monthly	17/11/2021	17/11/2021	20/12/2021	6.31	51575	35.851	
Monthly	07/12/2021	07/12/2021	20/01/2022	6.19	55325	35.625	
Number of Samples Collected				12	12	12	
Lowest Value				6.2	48722	35.625	
Mean of Sample				6.3	52349	36.277	
Highest Sample Value				6.5	55355	36.643	

Frequency	Date Sampled	Date Obtained	Date Published	Antimony (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Sulphate (mg/L)	Total Dissolved Solids (mg/L)	Total Hardness (mg/L)	Zinc (mg/L)	Comments	
Quarterly	12/01/2021	22/01/2021	20/02/2021	<0.0005	0.0075	0.0054	762	22600	0.002	0.022	<0.0002	1960	0.0197	0.0003	0.0214	42	0.004	9820	3430	41800	9970	0.045		
Quarterly	14/04/2021	30/04/2021	20/05/2021	<0.0005	0.0054	0.0055	788	19000	0.001	0.016	<0.0002	2080	0.0191	0.0005	0.0214	49	0.003	10400	2900	37000	10500	0.041		
Quarterly	13/07/2021	21/07/2021	20/08/2021	<0.0005	0.0058	0.0051	860	16000	0.002	0.025	<0.0002	1960	0.0203	0.0005	0.0538	41	0.005	10200	3460	39200	10200	0.040		
Quarterly	26/10/2021	04/11/2021	22/11/2021	<0.0005	0.0055	0.0048	792	20000	0.002	0.006	<0.0002	1880	0.0187	0.0003	0.035	42	0.003	9630	3410	40800	9720	0.058		
Lowest Value				0.0000	0.0054	0.0048	762	16000	0.001	0.0050	0.0000	0.0000	1880	0.0187	0.0003	0.021	41	0.003	9630	2900	37000	9720	0.040	
Mean of Sample				0.0000	0.0061	0.0052	801	19500	0.002	0.0173	0.0000	0.0000	1970	0.0195	0.0004	0.033	43	0.004	10013	3300	39700	10098	0.046	
Highest Sample Value				0.0000	0.0075	0.0055	860	22600	0.002	0.0250	0.0000	0.0000	2080	0.0203	0.0005	0.054	45	0.005	10400	3460	41800	10500	0.058	

Monitoring Point: 52 <PDB1B>
Groundwater quality monitoring, Pit dewatering bore

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	SWL (m)	Comments
Monthly	14/01/2021	14/01/2021	20/02/2021	6.28	48221	7.580	
Monthly	24/02/2021	24/02/2021	20/03/2021	6.44	39058	7.323	
Monthly	24/03/2021	24/03/2021	20/04/2021	7.80	52731	7.425	Instrument error
Monthly	14/04/2021	14/04/2021	20/05/2021	6.55	22164	6.211	
Monthly	13/05/2021	13/05/2021	20/06/2021	6.30	38160	6.271	
Monthly	25/06/2021	25/06/2021	20/07/2021	7.26	23066	6.762	
Monthly	13/07/2021	13/07/2021	20/08/2021	6.61	17523	6.721	
Monthly	28/08/2021	28/08/2021	21/09/2021	6.45	23119	6.475	
Monthly	28/09/2021	28/09/2021	21/10/2021	6.42	36732	6.525	
Monthly	21/10/2021	21/10/2021	22/11/2021	6.72	13744	6.581	
Monthly	17/11/2021	17/11/2021	20/12/2021	6.74	11199	6.601	
Monthly	07/12/2021	07/12/2021	20/01/2022	6.33	36792	6.345	
Number of Samples Collected				12	12	12	
Lowest Value				6.3	11199	6.211	
Mean of Sample				6.7	22271	6.735	
Highest Sample Value				7.8	48221	7.580	

Frequency	Date Sampled	Date Obtained	Date Published	Antimony (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Sulphate (mg/L)	Total Dissolved Solids (mg/L)	Total Hardness (mg/L)	Zinc (mg/L)	Comments
Quarterly	14/01/2021	22/01/2021	20/02/2021	<0.0005	0.0052	<0.0002	718	18900	<0.001	7.28	<0.0002	1610	0.432										



Groundwater

Monitoring Point: 59 <IWL05A>
Groundwater quality monitoring, Groundwater monitoring bore located to the south of the southern tailings storage facility

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	SWL (m)	Comments
Monthly	18/01/2021	18/01/2021	20/02/2021	6.61	40841	4.960	
Monthly	15/02/2021	15/02/2021	20/03/2021	6.62	40757	4.655	
Monthly	26/03/2021	26/03/2021	20/04/2021	6.58	40209	4.795	
Monthly	20/04/2021	20/04/2021	20/05/2021	6.64	42224	4.800	
Monthly	07/05/2021	07/05/2021	20/06/2021	6.57	40389	4.720	
Monthly	22/06/2021	22/06/2021	20/07/2021	6.60	39534	4.476	
Monthly	06/07/2021	06/07/2021	20/08/2021	6.59	41779	4.675	
Monthly	23/08/2021	23/08/2021	21/09/2021	6.56	39663	4.050	
Monthly	06/09/2021	06/09/2021	21/10/2021	6.63	41246	4.580	
Monthly	13/10/2021	13/10/2021	22/11/2021	6.50	39902	4.393	
Monthly	30/11/2021	30/11/2021	20/12/2021	6.54	40072	4.368	
Monthly	17/12/2021	17/12/2021	20/01/2022	6.47	42392	4.310	
Number of Samples Collected				12	12	12	
Lowest Value				6.5	39334	4.050	
Mean of Sample				6.6	40747	4.565	
Highest Sample Value				6.6	42392	4.960	

Frequency	Date Sampled	Date Obtained	Date Published	Alkalinity (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Copper (mg/L)	Cyanide WAD (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Sulphate (mg/L)	Total Dissolved Solids (mg/L)	Total Hardness (mg/L)	Zinc (mg/L)	Comments
Quarterly	18/01/2021	28/01/2021	20/02/2021	740	<0.0005	<0.0005	<0.0002	320	13300	0.003	<0.004	0.028	<0.0002	1260	0.0775	0.0036	0.344	57	0.013	7860	2950	28300	5990	0.007	
Quarterly	20/04/2021	03/05/2021	20/05/2021	794	<0.0005	<0.0005	<0.0002	312	14000	0.005	<0.004	0.042	<0.0002	1170	0.0754	0.0043	0.374	51	0.013	7600	3320	31300	5600	0.009	
Quarterly	06/07/2021	15/07/2021	20/08/2021	745	<0.0005	<0.0005	<0.0002	310	12500	0.004	<0.004	0.02	<0.0002	1190	0.0541	0.0036	0.259	55	0.014	7600	3140	29700	5670	0.011	
Quarterly	13/10/2021	22/10/2021	22/11/2021	728	<0.0005	<0.0005	<0.0002	355	12200	0.004	<0.004	0.024	<0.0002	1200	0.053	0.003	0.245	61	0.013	7480	3300	31000	5830	0.01	
Lowest Value				728.0	0.0000	0.0005	0.0002	310	12200	0.0030	0.0000	0.0200	0.0000	1170	0.0526	0.0027	0.2450	51	0.0130	7480	2950	28300	5600	0.0070	
Mean of Sample				751.8	0.0000	0.0005	0.0002	324	13000	0.0040	0.0000	0.0285	0.0000	1205	0.0649	0.0036	0.3055	56	0.0133	7655	3178	30075	5773	0.0093	
Highest Sample Value				794.0	0.0000	0.0005	0.0002	355	14000	0.0050	0.0000	0.0420	0.0000	1260	0.0775	0.0043	0.3740	61	0.0140	7860	3320	31300	5990	0.0110	

Monitoring Point: 60 <IWL05B>
Groundwater quality monitoring, Groundwater monitoring bore located to the south of the southern tailings storage facility

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	SWL (m)	Comments
Monthly	18/01/2021	18/01/2021	20/02/2021	6.60	42065	4.585	
Monthly	02/02/2021	02/02/2021	20/03/2021	6.64	41507	4.590	
Monthly	26/03/2021	26/03/2021	20/04/2021	6.55	41087	4.445	
Monthly	20/04/2021	20/04/2021	20/05/2021	6.63	43038	4.44	
Monthly	07/05/2021	07/05/2021	20/06/2021	6.57	41225	4.362	
Monthly	22/06/2021	22/06/2021	20/07/2021	6.63	40386	4.420	
Monthly	06/07/2021	06/07/2021	20/08/2021	6.66	42707	4.345	
Monthly	23/08/2021	23/08/2021	21/09/2021	6.57	40345	4.145	
Monthly	06/09/2021	06/09/2021	21/10/2021	6.65	42182	4.275	
Monthly	13/10/2021	13/10/2021	22/11/2021	6.60	40775	4.055	
Monthly	30/11/2021	30/11/2021	20/12/2021	6.57	41029	4.035	
Monthly	17/12/2021	17/12/2021	20/01/2022	6.44	43407	3.995	
Number of Samples Collected				12	12	12	
Lowest Value				6.4	40345	3.995	
Mean of Sample				6.6	41646	4.308	
Highest Sample Value				6.7	43407	4.590	

Frequency	Date Sampled	Date Obtained	Date Published	Alkalinity (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Copper (mg/L)	Cyanide WAD (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Sulphate (mg/L)	Total Dissolved Solids (mg/L)	Total Hardness (mg/L)	Zinc (mg/L)	Comments
Quarterly	18/01/2021	28/01/2021	20/02/2021	428	<0.0005	<0.0005	<0.0002	133	13900	0.032	<0.004	1.22	<0.0002	1340	0.105	0.0076	0.548	47	<0.002	8020	2640	28700	5850	<0.005	
Quarterly	20/04/2021	03/05/2021	20/05/2021	484	<0.0005	<0.0005	<0.0002	129	14700	0.028	<0.004	1.17	<0.0002	1280	0.112	0.0082	0.554	42	<0.002	7720	2920	31800	5190	<0.005	
Quarterly	06/07/2021	15/07/2021	20/08/2021	480	<0.0005	<0.0005	<0.0002	131	12900	0.035	<0.004	2.270	<0.0002	1320	0.0755	0.0084	0.482	46	<0.002	8040	2790	29800	5760	<0.005	
Quarterly	13/10/2021	22/10/2021	22/11/2021	458	<0.0005	0.0011	<0.0002	141	13800	0.035	<0.004	1.36	<0.0002	1430	0.156	0.0238	0.797	50	<0.002	8360	3160	32100	6240	<0.005	
Lowest Value				428.0	0.0000	0.0011	0.0000	129	12900	0.0280	0.0000	1.1700	0.0000	1280	0.0755	0.0076	0.4820	42	0.0030	7720	2640	28700	5590	0.0000	
Mean of Sample				482.5	0.0000	0.0011	0.0000	134	13825	0.0325	0.0000	1.5050	0.0000	1343	0.1121	0.0120	0.6003	46	0.0030	8035	2878	30600	5860	0.0000	
Highest Sample Value				484.0	0.0000	0.0011	0.0000	141	14700	0.0350	0.0000	2.2700	0.0000	1430	0.1560	0.0238	0.7970	50	0.0030	8360	3160	32100	6240	0.0000	

Monitoring Point: 61 <IWL05A>
Groundwater quality monitoring, Groundwater monitoring bore located to the south of the southern tailings storage facility

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	SWL (m)	Comments
Monthly	13/01/2021	13/01/2021	20/02/2021	6.83	35225	29.756	
Monthly	03/02/2021	03/02/2021	20/03/2021	6.77	35161	29.730	
Monthly	11/03/2021	11/03/2021	20/04/2021	6.75	34261	29.860	
Monthly	20/04/2021	20/04/2021	20/05/2021	6.90	35910	29.764	
Monthly	10/05/2021	10/05/2021	20/06/2021	6.80	34327	29.730	
Monthly	22/06/2021	22/06/2021	20/07/2021	6.97	33442	29.800	
Monthly	08/07/2021	08/07/2021	20/08/2021	6.92	33911	29.745	
Monthly	09/08/2021	09/08/2021	21/09/2021	6.75	33696	29.785	
Monthly	06/09/2021	06/09/2021	21/10/2021	6.80	35173	29.755	
Monthly	19/10/2021	19/10/2021	22/11/2021	6.79	33775	29.645	
Monthly	18/11/2021	18/11/2021	20/12/2021	6.69	32613	29.670	
Monthly	08/12/2021	08/12/2021	20/01/2022	6.71	36298	29.600	
Number of Samples Collected				12	12	12	
Lowest Value				6.7	32613	29.600	
Mean of Sample				6.8	34482	29.737	
Highest Sample Value				7.0	36298	29.860	

Frequency	Date Sampled	Date Obtained	Date Published	Alkalinity (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Copper (mg/L)	Cyanide WAD (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Sulphate (mg/L)	Total Dissolved Solids (mg/L)	Total Hardness (mg/L)	Zinc (mg/L)	Comments
Quarterly	13/01/2021	22/01/2021	20/02/2021	817	0.0027	<0.0005	<0.0002	338	13100	0.003	<0.004	0.016	<0.0002	931	0.0129	0.0023	0.0454	42	0.004	6810	3020	27600	4680	0.016	
Quarterly	20/04/2021	03/05/2021	20/05/2021	896	0.0045	<0.0005	<0.0002	339	11700	0.003	<0.004	0.018	<0.0002	846	0.0174	0.0018	0.0446	42	0.005	6400	3070	25900	4330	0.018	
Quarterly	08/07/2021	19/07/2021	20/08/2021	782	0.004	<0.0005	<0.0002	380	9910	0.003	<0.004	0.024	<0.0002	969	0.0154	0.0023	0.0438	50	0.006	7160	3000	28300	4940	0.022	
Quarterly	19/10/2021	27/10/2021	22/11/2021	840	0.0031	0.0008	<0.0002	352	10700	0.002	<0.004	0.021	<0.0002	840	0.0139	0.0021	0.0430	41	0.004	6270	2910	24200	4340	0.017	
Lowest Value				782.0	0.0027	0.0008	0.0000	338	9910	0.0030	0.0000	0.0160	0.0000	840	0.0129	0.0018	0.0430	41	0.0040	6270	2910	24200	4330	0.0160	
Mean of Sample				833.8	0.0036	0.0008	0.0000	352	11353	0.0028	0.0000	0.0170	0.0000	857	0.0149	0.0021	0.0442	44	0.0048	6660	3000	26500	4573	0.0183	
Highest Sample Value				896.0	0.0045	0.0008	0.0000	380	13100	0.0030	0.0000	0.0240	0.0000	969	0.0174	0.0023	0.0454	50	0.0060	7160	3070	28300	4940	0.0220	



Groundwater

Monitoring Point: 66 <IWL02B>

Groundwater quality monitoring, Groundwater monitoring bore located to the south of the southern tailings storage facility

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	SWL (m)	Comments
Monthly	18/01/2021	18/01/2021	20/02/2021	-	-	-	Dry
Monthly	18/02/2021	18/02/2021	20/03/2021	-	-	-	Dry
Monthly	09/03/2021	09/03/2021	20/04/2021	-	-	-	Dry
Monthly	19/04/2020	19/04/2020	20/05/2021	-	-	-	Dry
Monthly	07/05/2021	07/05/2021	20/06/2021	-	-	-	Dry
Monthly	23/06/2021	23/06/2021	20/07/2021	-	-	-	Dry
Monthly	08/07/2021	08/07/2021	20/08/2021	-	-	-	Dry
Monthly	09/08/2021	09/08/2021	21/09/2021	-	-	-	Dry
Monthly	07/09/2021	07/09/2021	21/10/2021	-	-	-	Dry
Monthly	13/10/2021	13/10/2021	22/11/2021	-	-	-	Dry
Monthly	23/11/2021	23/11/2021	20/12/2021	-	-	-	Dry
Monthly	15/12/2021	15/12/2021	20/01/2022	-	-	-	Dry
Number of Samples Collected				0	0	0	
Lowest Value				0.0	0	0.000	
Mean of Sample				0.0	0	0.000	
Highest Sample Value				0.0	0	0.000	

Frequency	Date Sampled	Date Obtained	Date Published	Alkalinity (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Copper (mg/L)	Cyanide WAD (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Sulphate (mg/L)	Total Dissolved Solids (mg/L)	Total Hardness (mg/L)	Zinc (mg/L)	Comments			
Quarterly	18/01/2021	22/01/2021	20/02/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Dry		
Quarterly	19/04/2020	03/05/2021	20/05/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Dry		
Quarterly	08/07/2021	19/07/2021	20/08/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Dry		
Quarterly	13/10/2021	22/10/2021	22/11/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Dry		
Lowest Value				0.0	0.0000	0.0000	0.0000	0	0	0.0000	0.0000	0.0000	0.0000	0	0	0.0000	0.0000	0.0000	0	0.0000	0	0	0	0	0	0.0000		
Mean of Sample				0.0	0.0000	0.0000	0.0000	0	0	0.0000	0.0000	0.0000	0.0000	0	0	0.0000	0.0000	0.0000	0	0.0000	0	0	0	0	0	0	0.0000	
Highest Sample Value				0.0	0.0000	0.0000	0.0000	0	0	0.0000	0.0000	0.0000	0.0000	0	0	0.0000	0.0000	0.0000	0	0.0000	0	0	0	0	0	0	0.0000	

Monitoring Point: 67 <IWL01A>

Groundwater quality monitoring, Groundwater monitoring bore located to the south of the southern tailings storage facility

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	SWL (m)	Comments
Monthly	18/01/2021	18/01/2021	20/02/2021	6.76	46304	4.975	
Monthly	18/02/2021	18/02/2021	20/03/2021	6.78	45993	5.005	
Monthly	09/03/2021	09/03/2021	20/04/2021	6.72	45061	4.970	
Monthly	19/04/2020	19/04/2020	20/05/2021	6.78	47252	4.875	
Monthly	07/05/2021	07/05/2021	20/06/2021	6.74	45247	4.790	
Monthly	08/06/2021	08/06/2021	20/07/2021	6.36	44455	4.810	
Monthly	08/07/2021	08/07/2021	20/08/2021	6.76	44413	4.780	
Monthly	09/08/2021	09/08/2021	21/09/2021	6.66	44384	4.729	
Monthly	07/09/2021	07/09/2021	21/10/2021	6.77	46226	4.685	
Monthly	13/10/2021	13/10/2021	22/11/2021	6.64	44625	4.465	
Monthly	23/11/2021	23/11/2021	20/12/2021	6.66	44573	4.525	
Monthly	15/12/2021	15/12/2021	20/01/2022	6.67	47266	4.420	
Number of Samples Collected				12	12	12	
Lowest Value				6.4	44384	4.420	
Mean of Sample				6.7	45486	4.752	
Highest Sample Value				6.8	47266	5.005	

Frequency	Date Sampled	Date Obtained	Date Published	Alkalinity (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Copper (mg/L)	Cyanide WAD (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Sulphate (mg/L)	Total Dissolved Solids (mg/L)	Total Hardness (mg/L)	Zinc (mg/L)	Comments	
Quarterly	18/01/2021	22/01/2021	20/02/2021	571	<0.0005	<0.0005	0.0007	463	14600	<0.001	<0.004	0.056	<0.0002	1160	0.0217	0.0009	0.0417	27	0.031	9460	4350	32900	5930	<0.005		
Quarterly	19/04/2020	03/05/2021	20/05/2021	554	<0.0005	<0.0005	0.0004	455	15200	0.001	<0.004	0.010	<0.0002	1110	0.0283	0.0015	0.0678	24	0.033	9150	4740	35800	5710	<0.005		
Quarterly	08/07/2021	19/07/2021	20/08/2021	598	<0.0005	<0.0005	0.0006	514	13100	<0.001	<0.004	<0.005	<0.0002	1240	0.0641	0.0019	0.0291	30	0.04	10000	4820	31000	6390	<0.005		
Quarterly	13/10/2021	22/10/2021	22/11/2021	607	<0.0005	0.0008	0.0005	519	13500	0.002	<0.004	0.012	<0.0002	1110	0.043	0.0011	0.0188	28	0.032	8910	5020	34900	5870	0.007		
Lowest Value				554.0	0.0000	0.0008	0.0004	455	13100	0.0010	0.0000	0.0100	0.0000	0.0000	1110	0.0217	0.0009	0.0188	24	0.0310	8910	4350	31000	5710	0.0070	
Mean of Sample				582.5	0.0000	0.0008	0.0006	488	14100	0.0015	0.0000	0.0260	0.0000	0.0000	1155	0.0392	0.0014	0.0394	27	0.0340	9180	4733	33650	5975	0.0070	
Highest Sample Value				607.0	0.0000	0.0008	0.0007	519	15200	0.0020	0.0000	0.0560	0.0000	0.0000	1240	0.0641	0.0019	0.0678	30	0.0400	10000	5020	35800	6390	0.0070	

Monitoring Point: 68 <IWL01B>

Groundwater quality monitoring, Groundwater monitoring bore located to the south of the southern tailings storage facility

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	SWL (m)	Comments
Monthly	18/01/2021	18/01/2021	20/02/2021	6.43	36719	5.450	
Monthly	18/02/2021	18/02/2021	20/03/2021	6.62	37228	5.498	
Monthly	09/03/2021	09/03/2021	20/04/2021	6.33	32641	5.461	
Monthly	19/04/2020	19/04/2020	20/05/2021	6.33	37281	5.375	
Monthly	07/05/2021	07/05/2021	20/06/2021	6.48	36376	5.285	
Monthly	08/06/2021	08/06/2021	20/07/2021	6.36	35339	5.235	
Monthly	08/07/2021	08/07/2021	20/08/2021	6.26	34757	5.295	
Monthly	09/08/2021	09/08/2021	21/09/2021	6.30	35031	5.255	
Monthly	07/09/2021	07/09/2021	21/10/2021	6.30	36051	5.260	
Monthly	13/10/2021	13/10/2021	22/11/2021	6.34	35423	5.060	
Monthly	23/11/2021	23/11/2021	20/12/2021	6.24	34769	5.101	
Monthly	15/12/2021	15/12/2021	20/01/2022	6.28	37352	5.890	
Number of Samples Collected				12	12	12	
Lowest Value				6.2	32641	5.060	
Mean of Sample				6.4	35747	5.347	
Highest Sample Value				6.6	37352	5.890	

Frequency	Date Sampled	Date Obtained	Date Published	Alkalinity (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Copper (mg/L)	Cyanide WAD (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Sulphate (mg/L)	Total Dissolved Solids (mg/L)	Total Hardness (mg/L)	Zinc (mg/L)	Comments	
Quarterly	18/01/2021	22/01/2021	20/02/2021	328	<0.0005	<0.0005	<0.0002	185	11700	<0.001	<0.004	0.014	<0.0002	752	0.0300	0.0008	0.0341	<10	<0.002	7320	2780	24400	3560	<0.005		
Quarterly	19/04/2020	03/05/2021	20/05/2021	310	<0.0005	<0.0005	0.0002	176	12200	0.003	<0.004	0.008	<0.0002	708	0.0323	0.0005	0.0388	3	<0.002	7030	2920	26300	3360	0.009		
Quarterly	08/07/2021	19/07/2021	20/08/2021	282	<0.0005	<0.0005	<0.0002	193	10200	0.002	<0.004	0.011	<0.0002	765	0.035	0.0008	0.0522	3	<0.002	7610	2850	24700	3630	<0.005		
Quarterly	13/10/2021	22/10/2021	22/11/2021	323	<0.0005	0.0194	<0.0002	212	10700	0.002	<0.004	0.005	<0.0002	727	0.030	0.0014	0.0183	3	<0.002	6970	2890	25700	3520	0.006		
Lowest Value				282.0	0.0000	0.0194	0.0002	176	10200	0.0020	0.0000	0.0050	0.0000	0.0000	708	0.0296	0.0005	0.0183	3	0.0030	6970	2780	24400	3360	0.0060	
Mean of Sample				310.8	0.0000	0.0194	0.0002	192	11200	0.0023	0.0000	0.0059	0.0000	0.0000	738	0.0317	0.0009	0.0359	3	0.0030	7233	2860	25275	3518	0.0075	
Highest Sample Value				328.0	0.0000	0.0194	0.0002	212	12200	0.0030	0.0000	0.0140	0.0000	0.0000	765	0.0350	0.0014	0.0522	3	0.0030	7610	2920	26300	3630	0.0090	



Waste Rock Leachate

Monitoring Point: 41 <Northern Waste Emplacement>

Northern Waste Emplacement leachate quality monitoring

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	Comments
Monthly	06/01/2021	-	-	-	-	No water present in toe drain
Monthly	03/02/2021	-	-	-	-	No water present in toe drain
Monthly	03/03/2021	-	-	-	-	No water present in toe drain
Monthly	07/04/2021	-	-	-	-	No water present in toe drain
Monthly	05/05/2021	-	-	-	-	No water present in toe drain
Monthly	02/06/2021	-	-	-	-	No water present in toe drain
Monthly	06/07/2021	-	-	-	-	No water present in toe drain
Monthly	04/08/2021	-	-	-	-	No water present in toe drain
Monthly	14/09/2021	-	-	-	-	No water present in toe drain
Monthly	05/10/2021	-	-	-	-	No water present in toe drain
Monthly	23/11/2021	-	-	-	-	No water present in toe drain
Monthly	08/12/2021	-	-	-	-	No water present in toe drain
Number of Samples Collected						0
Lowest Value						0.0
Mean of Sample						0.0
Highest Sample Value						0.0
Median						0.0

Frequency	Date Sampled	Date Obtained	Date Published	Alkalinity (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	Total Hardness (mg/L)	Total Dissolved Solids (mg/L)	Total Suspended Solids (mg/L)	Zinc (mg/L)	Comments	
Quarterly	06/01/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No water present in toe drain
Quarterly	07/04/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No water present in toe drain
Quarterly	08/07/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No water present in toe drain
Quarterly	05/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No water present in toe drain

Monitoring Point: 42 <Southern Waste Emplacement>

Southern Waste Emplacement leachate quality monitoring

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	Comments
Monthly	06/01/2021	06/01/2021	20/02/2021	7.96	15699	
Monthly	03/02/2021	03/02/2021	20/03/2021	5.25	12418	
Monthly	03/03/2021	03/03/2021	20/04/2021	5.85	16112	
Monthly	07/04/2021	07/04/2021	20/05/2021	7.92	13716	
Monthly	05/05/2021	05/05/2021	20/06/2021	7.78	14286	
Monthly	02/06/2021	02/06/2021	20/07/2021	6.33	12928	
Monthly	06/07/2021	06/07/2021	20/08/2021	7.17	11934	
Monthly	04/08/2021	04/08/2021	21/09/2021	7.86	12156	
Monthly	14/09/2021	14/09/2021	21/10/2021	6.28	13697	
Monthly	05/10/2021	05/10/2021	22/11/2021	7.62	14138	
Monthly	23/11/2021	23/11/2021	20/12/2021	7.69	16846	
Monthly	08/12/2021	08/12/2021	20/01/2022	7.8	16139	
Number of Samples Collected						12
Lowest Value						5.3
Mean of Sample						7.1
Highest Sample Value						8.0
Median						7.7

Frequency	Date Sampled	Date Obtained	Date Published	Alkalinity (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	Total Hardness (mg/L)	Total Dissolved Solids (mg/L)	Total Suspended Solids (mg/L)	Zinc (mg/L)	Comments
Quarterly	06/01/2021	13/01/2021	20/02/2021	228	0.0004	0.0007	0.00401	621	4600	0.0012	0.008	<0.0001	547	0.136	0.0038	<0.0005	34	0.0021	2540	2510	3800	12700	603	0.028	
Quarterly	07/04/2021	07/04/2021	20/05/2021	313	0.0003	0.0004	0.00378	564	5100	0.001	<0.002	<0.0001	572	0.710	0.0042	0.0008	63	<0.002	2460	2620	3760	12300	36	0.078	
Quarterly	06/07/2021	13/07/2021	20/08/2021	302	0.0001	0.0003	0.0048	591	4930	0.0013	<0.002	<0.0001	533	1.15	0.0046	0.0009	32	0.0018	2470	2620	3670	11800	146	0.131	
Quarterly	05/10/2021	14/10/2021	22/11/2021	262	0.0003	0.0004	0.00516	635	4730	0.001	<0.002	<0.0001	568	1.120	0.0046	0.0008	33	0.002	2620	2880	3920	13100	14	0.121	

Monitoring Point: 43 <Perimeter Waste Emplacement>

Perimeter Waste Emplacement leachate quality monitoring

Frequency	Date Sampled	Date Obtained	Date Published	Field - pH (units)	Field - Electrical Conductivity (µS/cm)	Comments
Monthly	06/01/2021	-	-	-	-	No water present in toe drain
Monthly	03/02/2021	-	-	-	-	No water present in toe drain
Monthly	03/03/2021	-	-	-	-	No water present in toe drain
Monthly	07/04/2021	-	-	-	-	No water present in toe drain
Monthly	05/05/2021	-	-	-	-	No water present in toe drain
Monthly	02/06/2021	-	-	-	-	No water present in toe drain
Monthly	06/07/2021	-	-	-	-	No water present in toe drain
Monthly	04/08/2021	-	-	-	-	No water present in toe drain
Monthly	14/09/2021	-	-	-	-	No water present in toe drain
Monthly	05/10/2021	-	-	-	-	No water present in toe drain
Monthly	23/11/2021	-	-	-	-	No water present in toe drain
Monthly	08/12/2021	-	-	-	-	No water present in toe drain
Number of Samples Collected						0
Lowest Value						0.0
Mean of Sample						0.0
Highest Sample Value						0.0
Median						0.0

Frequency	Date Sampled	Date Obtained	Date Published	Alkalinity (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	Total Hardness (mg/L)	Total Dissolved Solids (mg/L)	Total Suspended Solids (mg/L)	Zinc (mg/L)	Comments	
Quarterly	06/01/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No water present in toe drain
Quarterly	07/04/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No water present in toe drain
Quarterly	06/07/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No water present in toe drain
Quarterly	05/10/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No water present in toe drain



Ambient Noise

Q1 Noise Monitoring

Location	Date Sampled	Date Obtained	Date Published	Mine Contributed $LA_{eq(15min)}$ - dBA		Noise Criteria $LA_{eq(15min)}$ - dBA	Comments	
				Survey 1	Survey 2			
New Lake Foreshore	24/02/2021	12/03/2021	20/04/2021	42	50	-	Noise from drilling activities	
Laurel Park	24/02/2021	12/03/2021	20/04/2021	<20	<20	35		
Lakeview III (New Westella)	N09	23/02/2021	12/03/2021	20/04/2021	<20	<20	38	
Bramboynie	N10	23/02/2021	12/03/2021	20/04/2021	<20	<20	35	
The Glen	N12	24/02/2021	12/03/2021	20/04/2021	<20	<20	37	
Caloola 2	N15	23/02/2021	12/03/2021	20/04/2021	<20	<20	35	
Lakeview I & II (Lakeview)	N17	24/02/2021	12/03/2021	20/04/2021	<20	<20	36	
Foxman Downs 2	N16	23/02/2021	12/03/2021	20/04/2021	<20	<20	36	

Location	Date Sampled	Date Obtained	Date Published	Mine Contributed $LA_{eq(15min)}$ - dBA		Noise Criteria $LA_{eq(15min)}$ - dBA	Comments	
				Survey 1	Survey 2			
New Lake Foreshore	N01	23/02/2021	12/03/2021	20/04/2021	58	57	-	Noise from drilling activities
Laurel Park	N11	24/02/2021	12/03/2021	20/04/2021	<20	<20	35	
Lakeview III (New Westella)	N09	23/02/2021	12/03/2021	20/04/2021	<20	<20	38	
Bramboynie	N10	23/02/2021	12/03/2021	20/04/2021	<20	<20	35	
The Glen	N12	24/02/2021	12/03/2021	20/04/2021	<20	<20	37	
Caloola 2	N15	23/02/2021	12/03/2021	20/04/2021	<20	<20	35	
Lakeview I & II (Lakeview)	N17	23/02/2021	12/03/2021	20/04/2021	<20	<20	36	
Foxman Downs 2	N16	23/02/2021	12/03/2021	20/04/2021	<20	<20	36	

Location	Date Sampled	Date Obtained	Date Published	Mine Contributed $LA_{eq(15min)}$ - dBA		Noise Criteria $LA_{eq(15min)}$ - dBA	Comments	
				Survey 1	Survey 2			
New Lake Foreshore	N01	24/02/2021	12/03/2021	20/04/2021	44	60	-	Noise from drilling activities
Laurel Park	N11	24/02/2021	12/03/2021	20/04/2021	20	21	35	
Lakeview III (New Westella)	N09	23/02/2021	12/03/2021	20/04/2021	24	22	38	
Bramboynie	N10	23/02/2021	12/03/2021	20/04/2021	22	25	35	
The Glen	N12	23/02/2021	12/03/2021	20/04/2021	<20	<20	37	
Caloola 2	N15	24/02/2021	12/03/2021	20/04/2021	<20	<20	35	
Lakeview I & II (Lakeview)	N17	25/02/2021	12/03/2021	20/04/2021	<20	<20	36	
Foxman Downs 2	N16	24/02/2021	12/03/2021	20/04/2021	<20	<20	36	

<20 - Mine noise emission inaudible or barely audible

Q2 Noise Monitoring

Location	Date Sampled	Date Obtained	Date Published	Mine Contributed $LA_{eq(15min)}$ - dBA		Noise Criteria $LA_{eq(15min)}$ - dBA	Comments	
				Survey 1	Survey 2			
New Lake Foreshore	N01	13/05/2021	24/05/2021	20/06/2021	32	31	-	
Laurel Park	N11	12/05/2021	24/05/2021	20/06/2021	24	20	35	
Lakeview (New Westella)	N09	12/05/2021	24/05/2021	20/06/2021	23	27	38	
Bramboynie	N10	12/05/2021	24/05/2021	20/06/2021	23	22	35	
The Glen	N12	13/05/2021	24/05/2021	20/06/2021	23	23	37	
Caloola 2	N15	12/05/2021	24/05/2021	20/06/2021	<20	<20	35	
Lakeview I & II (Lakeview)	N17	12/05/2021	24/05/2021	20/06/2021	26	23	36	
Foxman Downs 2	N16	12/05/2021	24/05/2021	20/06/2021	25	21	36	

Location	Date Sampled	Date Obtained	Date Published	Mine Contributed $LA_{eq(15min)}$ - dBA		Noise Criteria $LA_{eq(15min)}$ - dBA	Comments	
				Survey 1	Survey 2			
New Lake Foreshore	N01	13/05/2021	24/05/2021	20/06/2021	34	35	-	
Laurel Park	N11	13/05/2021	24/05/2021	20/06/2021	22	23	35	
Lakeview (New Westella)	N09	12/05/2021	24/05/2021	20/06/2021	23	23	38	
Bramboynie	N10	12/05/2021	24/05/2021	20/06/2021	22	26	35	
The Glen	N12	13/05/2021	24/05/2021	20/06/2021	24	24	37	
Caloola 2	N15	12/05/2021	24/05/2021	20/06/2021	<20	<20	35	
Lakeview I & II (Lakeview)	N17	12/05/2021	24/05/2021	20/06/2021	<20	22	36	
Foxman Downs 2	N16	12/05/2021	24/05/2021	20/06/2021	22	25	36	

Location	Date Sampled	Date Obtained	Date Published	Mine Contributed $LA_{eq(15min)}$ - dBA		Noise Criteria $LA_{eq(15min)}$ - dBA	Comments	
				Survey 1	Survey 2			
New Lake Foreshore	N01	13/05/2021	24/05/2021	20/06/2021	39	39	-	
Laurel Park	N11	12/05/2021	24/05/2021	20/06/2021	32	30	35	
Lakeview (New Westella)	N09	13/05/2021	24/05/2021	20/06/2021	29	27	38	
Bramboynie	N10	12/05/2021	24/05/2021	20/06/2021	24	25	35	
The Glen	N12	12/05/2021	24/05/2021	20/06/2021	24	29	37	
Caloola 2	N15	13/05/2021	24/05/2021	20/06/2021	<20	<20	35	
Lakeview I & II (Lakeview)	N17	14/05/2021	24/05/2021	20/06/2021	21	<20	36	
Foxman Downs 2	N16	13/05/2021	24/05/2021	20/06/2021	<20	<20	36	

<20 - Mine noise emission inaudible or barely audible



Ambient Noise

Q3 Noise Monitoring

Location	Date Sampled	Date Obtained	Date Published	Mine Contributed LA _{eq(15min)} - dBA		Noise Criteria LA _{eq(15min)} - dBA	Comments
				Survey 1	Survey 2		
New Lake Foreshore	N01	28/08/2021	08/09/2021	21/09/2021	20	22	-
Laurel Park	N11	28/08/2021	08/09/2021	21/09/2021	<20	<20	35
Lakeview (New Westella)	N09	28/08/2021	08/09/2021	21/09/2021	<20	<20	38
Bramboyne	N10	28/08/2021	08/09/2021	21/09/2021	<20	<20	35
The Glen	N12	28/08/2021	08/09/2021	21/09/2021	<20	<20	37
Caloola 2	N15	28/08/2021	08/09/2021	21/09/2021	<20	<20	35
Lakeview I & II (Lakeview)	N17	28/08/2021	08/09/2021	21/09/2021	<20	<20	36
Foxman Downs 2	N16	28/08/2021	08/09/2021	21/09/2021	<20	<20	36

Location	Date Sampled	Date Obtained	Date Published	Mine Contributed LA _{eq(15min)} - dBA		Noise Criteria LA _{eq(15min)} - dBA	Comments
				Survey 1	Survey 2		
New Lake Foreshore	N01	25/08/2021	08/09/2021	21/09/2021	35	38	-
Laurel Park	N11	26/08/2021	08/09/2021	21/09/2021	20	15	35
Lakeview (New Westella)	N09	26/08/2021	08/09/2021	21/09/2021	17	15	38
Bramboyne	N10	26/08/2021	08/09/2021	21/09/2021	<20	<20	35
The Glen	N12	26/08/2021	08/09/2021	21/09/2021	15	15	37
Caloola 2	N15	25/08/2021	08/09/2021	21/09/2021	<20	<20	35
Lakeview I & II (Lakeview)	N17	26/08/2021	08/09/2021	21/09/2021	<20	17	36
Foxman Downs 2	N16	25/08/2021	08/09/2021	21/09/2021	<20	<20	36

Location	Date Sampled	Date Obtained	Date Published	Mine Contributed LA _{eq(15min)} - dBA		Noise Criteria LA _{eq(15min)} - dBA	Comments
				Survey 1	Survey 2		
New Lake Foreshore	N01	25/08/2021	08/09/2021	21/09/2021	37	38	-
Laurel Park	N11	26/08/2021	08/09/2021	21/09/2021	<20	<20	35
Lakeview (New Westella)	N09	27/08/2021	08/09/2021	21/09/2021	15	<20	38
Bramboyne	N10	26/08/2021	08/09/2021	21/09/2021	<20	<20	35
The Glen	N12	26/08/2021	08/09/2021	21/09/2021	15	16	37
Caloola 2	N15	26/08/2021	08/09/2021	21/09/2021	<20	<20	35
Lakeview I & II (Lakeview)	N17	27/08/2021	08/09/2021	21/09/2021	<20	<20	36
Foxman Downs 2	N16	25/08/2021	08/09/2021	21/09/2021	<20	<20	36

<20 - Mine noise emission inaudible or barely audible

Q4 Noise Monitoring

Location	Date Sampled	Date Obtained	Date Published	Mine Contributed LA _{eq(15min)} - dBA		Noise Criteria LA _{eq(15min)} - dBA	Comments
				Survey 1	Survey 2		
New Lake Foreshore	N01	10/11/2021	23/11/2021	20/12/2021	22	20	-
Laurel Park	N11	11/11/2021	23/11/2021	20/12/2021	27	25	35
Lakeview (New Westella)	N09	11/11/2021	23/11/2021	20/12/2021	31	29	38
Bramboyne	N10	11/11/2021	23/11/2021	20/12/2021	30	29	35
The Glen	N12	11/11/2021	23/11/2021	20/12/2021	<20	<20	37
Caloola 2	N15	10/11/2021	23/11/2021	20/12/2021	<20	<20	35
Lakeview I & II (Lakeview)	N17	11/11/2021	23/11/2021	20/12/2021	32	32	36
Foxman Downs 2	N16	11/11/2021	23/11/2021	20/12/2021	<20	<20	36

Location	Date Sampled	Date Obtained	Date Published	Mine Contributed LA _{eq(15min)} - dBA		Noise Criteria LA _{eq(15min)} - dBA	Comments
				Survey 1	Survey 2		
New Lake Foreshore	N01	12/11/2021	23/11/2021	20/12/2021	25	20	-
Laurel Park	N11	12/11/2021	23/11/2021	20/12/2021	<20	<20	35
Lakeview (New Westella)	N09	12/11/2021	23/11/2021	20/12/2021	<20	<20	38
Bramboyne	N10	12/11/2021	23/11/2021	20/12/2021	<20	<20	35
The Glen	N12	12/11/2021	23/11/2021	20/12/2021	<20	<20	37
Caloola 2	N15	12/11/2021	23/11/2021	20/12/2021	<20	<20	35
Lakeview I & II (Lakeview)	N17	12/11/2021	23/11/2021	20/12/2021	<20	<20	36
Foxman Downs 2	N16	12/11/2021	23/11/2021	20/12/2021	<20	<20	36

Location	Date Sampled	Date Obtained	Date Published	Mine Contributed LA _{eq(15min)} - dBA		Noise Criteria LA _{eq(15min)} - dBA	Comments
				Survey 1	Survey 2		
New Lake Foreshore	N01	12/11/2021	23/11/2021	20/12/2021	22	22	-
Laurel Park	N11	12/11/2021	23/11/2021	20/12/2021	<20	<20	35
Lakeview (New Westella)	N09	12/11/2021	23/11/2021	20/12/2021	<20	<20	38
Bramboyne	N10	12/11/2021	23/11/2021	20/12/2021	<20	<20	35
The Glen	N12	12/11/2021	23/11/2021	20/12/2021	<20	<20	37
Caloola 2	N15	13/11/2021	23/11/2021	20/12/2021	<20	<20	35
Lakeview I & II (Lakeview)	N17	12/11/2021	23/11/2021	20/12/2021	<20	<20	36
Foxman Downs 2	N16	13/11/2021	23/11/2021	20/12/2021	<20	<20	36

<20 - Mine noise emission inaudible or barely audible



Blasting & Ground Vibration

957-500 Preliminary	Friday, 10 September 2021	12:53:42	07/10/2021	21/10/2021	5	115	0.11	91.5
966-202 & oversized Preliminary	Sunday, 12 September 2021	12:29:34	07/10/2021	21/10/2021	1	95	0.11	88.0
993-2218	Monday, 13 September 2021	12:24:53	07/10/2021	21/10/2021	5	115	0.12	98.8
984-2218	Tuesday, 14 September 2021	12:27:10	07/10/2021	21/10/2021	5	115	0.09	81.9
957-501A Toe	Tuesday, 14 September 2021	12:30:15	07/10/2021	21/10/2021	5	115	0.10	88.0
957-501	Friday, 17 September 2021	12:49:03	07/10/2021	21/10/2021	5	115	0.09	91.5
984-308	Friday, 17 September 2021	12:51:44	07/10/2021	21/10/2021	5	115	0.08	88.0
984-318 Preliminary	Monday, 20 September 2021	12:31:00	07/10/2021	21/10/2021	5	115	0.09	95.9
966-211 preliminary	Monday, 20 September 2021	12:34:33	07/10/2021	21/10/2021	5	115	0.10	104.2
975-546 Preliminary	Tuesday, 21 September 2021	12:39:46	07/10/2021	21/10/2021	5	115	0.09	95.9
975-901 Preliminary	Tuesday, 21 September 2021	12:31:20	07/10/2021	21/10/2021	5	115	0.09	91.5
984-318 preliminary	Thursday, 23 September 2021	12:25:17	07/10/2021	21/10/2021	5	115	0.09	94.0
984-317 Preliminary	Saturday, 25 September 2021	12:21:46	07/10/2021	21/10/2021	5	115	0.09	88.0
975-101A & 984-316 Preliminary	Monday, 27 September 2021	12:33:17	07/10/2021	21/10/2021	5	115	0.09	88.0
966-203 preliminary	Thursday, 30 September 2021	12:43:54	07/10/2021	21/10/2021	5	115	0.08	88.0
OCTOBER								
984-319A	Saturday, 2 October 2021	09:14:59	10/11/2021	22/11/2021	5	115	0.10	91.5
975-100 984-319B	Sunday, 3 October 2021	12:28:40	10/11/2021	22/11/2021	5	115	0.08	88.0
984-315	Wednesday, 6 October 2021	13:26:28	10/11/2021	22/11/2021	5	115	0.10	88.0
975-110	Friday, 8 October 2021	10:27:32	10/11/2021	22/11/2021	5	115	0.09	81.9
984-323	Saturday, 9 October 2021	15:23:50	10/11/2021	22/11/2021	5	115	0.09	97.5
984-320	Tuesday, 12 October 2021	16:38:47	10/11/2021	22/11/2021	5	115	0.09	88.0
975-106	Thursday, 14 October 2021	12:36:28	10/11/2021	22/11/2021	5	115	0.09	91.5
South Pinch Point 2	Friday, 15 October 2021	12:28:31	10/11/2021	22/11/2021	5	115	0.09	94.0
975-107 984 Pinch Point	Saturday, 16 October 2021	13:03:48	10/11/2021	22/11/2021	5	115	0.09	100.0
975-101B 975-547	Monday, 18 October 2021	12:40:54	10/11/2021	22/11/2021	5	115	0.09	103.5
975-105	Wednesday, 20 October 2021	12:38:01	10/11/2021	22/11/2021	5	115	0.11	91.5
975-113	Friday, 22 October 2021	12:31:50	10/11/2021	22/11/2021	5	115	0.09	88.0
984-314	Saturday, 23 October 2021	12:26:37	10/11/2021	22/11/2021	5	115	0.09	97.5
975-108 975-548	Monday, 25 October 2021	12:52:33	10/11/2021	22/11/2021	5	115	0.09	100.0
975-109	Tuesday, 26 October 2021	12:24:19	10/11/2021	22/11/2021	5	115	0.09	88.0
975-119	Wednesday, 27 October 2021	12:27:43	10/11/2021	22/11/2021	5	115	0.09	91.5
966-216 975-550/549	Friday, 29 October 2021	13:22:33	10/11/2021	22/11/2021	5	115	0.09	98.8
NOVEMBER								
975-551	Tuesday, 2 November 2021	12:35:16	03/12/2021	20/12/2021	5	115	0.10	88.0
975-104	Tuesday, 2 November 2021	12:35:27	03/12/2021	20/12/2021	5	115	0.10	91.5
975-117	Thursday, 4 November 2021	15:05:09	03/12/2021	20/12/2021	5	115	0.08	88.0
975-114	Sunday, 7 November 2021	12:25:35	03/12/2021	20/12/2021	1	95	0.09	88.0
966-222	Monday, 8 November 2021	12:49:50	03/12/2021	20/12/2021	5	115	0.09	94.0
975-116	Wednesday, 10 November 2021	14:13:06	03/12/2021	20/12/2021	5	115	0.09	91.5
975-119B	Thursday, 11 November 2021	13:42:15	03/12/2021	20/12/2021	5	115	0.09	88.0
966-233 & Toe	Sunday, 14 November 2021	12:39:31	03/12/2021	20/12/2021	1	95	0.09	94.0
975-115	Tuesday, 16 November 2021	12:29:23	03/12/2021	20/12/2021	5	115	0.09	88.0
957-502	Wednesday, 17 November 2021	12:36:37	03/12/2021	20/12/2021	5	115	0.09	88.0
966-208	Friday, 19 November 2021	12:30:36	03/12/2021	20/12/2021	5	115	0.11	88.0
966-217	Sunday, 21 November 2021	12:31:00	03/12/2021	20/12/2021	1	95	0.09	81.9
957-901 & 957-550	Monday, 22 November 2021	12:52:28	03/12/2021	20/12/2021	5	115	0.09	91.5
966-209	Wednesday, 24 November 2021	14:36:07	03/12/2021	20/12/2021	5	115	0.10	88.0
966-209	Monday, 29 November 2021	12:38:17	03/12/2021	20/12/2021	5	115	0.09	88.0
975-552	Monday, 29 November 2021	12:38:28	03/12/2021	20/12/2021	5	115	0.08	88.0
DECEMBER								
975-118	Wednesday, 1 December 2021	12:25:07	05/01/2022	20/01/2022	5	115	0.09	88.0
975-553 & 966-207	Thursday, 2 December 2021	15:12:48	05/01/2022	20/01/2022	5	115	0.09	88.0
975-120	Saturday, 4 December 2021	15:39:48	05/01/2022	20/01/2022	5	115	0.08	88.0
966-206 & 957-549A	Tuesday, 7 December 2021	12:27:01	05/01/2022	20/01/2022	5	115	0.09	108.8
957-311 & 957-317	Thursday, 9 December 2021	13:42:41	05/01/2022	20/01/2022	5	115	0.08	88.0
966-210	Saturday, 11 December 2021	12:29:25	05/01/2022	20/01/2022	5	115	0.09	88.0
957-319 & 957-549B	Monday, 13 December 2021	12:34:20	05/01/2022	20/01/2022	5	115	0.10	91.5
966-204	Wednesday, 15 December 2021	12:28:07	05/01/2022	20/01/2022	5	115	0.08	103.5
966-218 & 957-548	Thursday, 16 December 2021	12:31:09	05/01/2022	20/01/2022	5	115	0.10	94.0
966-205	Monday, 20 December 2021	12:31:00	05/01/2022	20/01/2022	5	115	0.09	88.0
957-302B & 957-547	Wednesday, 22 December 2021	12:51:48	05/01/2022	20/01/2022	5	115	0.09	91.5
966-219	Thursday, 23 December 2021	13:05:59	05/01/2022	20/01/2022	5	115	0.08	101.9
957-306A	Friday, 24 December 2021	12:28:34	05/01/2022	20/01/2022	5	115	0.09	88.0
957-301 & 957-545	Sunday, 26 December 2021	12:34:18	05/01/2022	20/01/2022	1	95	0.09	94.0
957-302A	Tuesday, 28 December 2021	12:26:26	05/01/2022	20/01/2022	5	115	0.09	88.0
984-313	Thursday, 30 December 2021	12:41:39	05/01/2022	20/01/2022	5	115	0.08	88.0
966-215 & 957-546	Friday, 31 December 2021	12:34:42	05/01/2022	20/01/2022	5	115	0.08	91.5



Blasting & Ground Vibration

966-202 & oversized Preliminary	Sunday, 12 September 2021	12:29:34	07/10/2021	21/10/2021	1	95	0.14	88.0	
993-2118	Monday, 13 September 2021	12:24:53	07/10/2021	21/10/2021	5	115	0.15	88.0	
984-3218	Tuesday, 14 September 2021	12:27:10	07/10/2021	21/10/2021	5	115			Monitor offline during calibration and changover of equipment.
957-501A Toe	Tuesday, 14 September 2021	12:30:35	07/10/2021	21/10/2021	5	115			Monitor offline during calibration and changover of equipment.
957-501	Friday, 17 September 2021	12:49:03	07/10/2021	21/10/2021	5	115	0.11	107.0	
984-308	Friday, 17 September 2021	12:51:44	07/10/2021	21/10/2021	5	115	0.15	94.0	
984-3138 Preliminary	Monday, 20 September 2021	12:31:00	07/10/2021	21/10/2021	5	115	0.10	100.0	
966-211 preliminary	Monday, 20 September 2021	12:34:33	07/10/2021	21/10/2021	5	115	0.15	103.5	
975-546 Preliminary	Tuesday, 21 September 2021	12:19:46	07/10/2021	21/10/2021	5	115	0.10	102.8	
975-901 Preliminary	Tuesday, 21 September 2021	12:31:20	07/10/2021	21/10/2021	5	115	0.11	104.9	
984-318 preliminary	Thursday, 23 September 2021	12:35:17	07/10/2021	21/10/2021	5	115	0.12	94.0	
984-317 Preliminary	Saturday, 25 September 2021	12:21:46	07/10/2021	21/10/2021	5	115	0.12	100.0	
975-101A & 984-316 Preliminary	Monday, 27 September 2021	12:33:17	07/10/2021	21/10/2021	5	115	0.19	97.5	
966-203 preliminary	Thursday, 30 September 2021	12:43:54	07/10/2021	21/10/2021	5	115	0.11	94.0	
OCTOBER									
984-319A	Saturday, 2 October 2021	09:14:59	10/11/2021	22/11/2021	5	115	0.10	91.5	
975-100 984-319B	Sunday, 3 October 2021	12:28:40	10/11/2021	22/11/2021	5	115	0.11	94.0	
984-315	Wednesday, 6 October 2021	14:36:28	10/11/2021	22/11/2021	5	115	0.20	95.9	
975-110	Friday, 8 October 2021	10:27:32	10/11/2021	22/11/2021	5	115	0.19	94.0	
984-323	Saturday, 9 October 2021	15:23:50	10/11/2021	22/11/2021	5	115	0.12	91.5	
984-320	Tuesday, 12 October 2021	16:38:47	10/11/2021	22/11/2021	5	115	0.11	94.0	
975-108	Thursday, 14 October 2021	12:36:39	10/11/2021	22/11/2021	5	115	0.19	94.0	
South Pinch Point 2	Friday, 15 October 2021	12:28:21	10/11/2021	22/11/2021	5	115	0.10	95.9	
975-107 984 Pinch Point	Saturday, 16 October 2021	13:03:48	10/11/2021	22/11/2021	5	115	0.19	102.8	
975-101B 975-547	Monday, 18 October 2021	12:40:54	10/11/2021	22/11/2021	5	115	0.15	97.5	
975-105	Wednesday, 20 October 2021	12:36:01	10/11/2021	22/11/2021	5	115	0.18	98.8	
975-113	Friday, 22 October 2021	12:31:50	10/11/2021	22/11/2021	5	115	0.12	94.0	
984-314	Saturday, 23 October 2021	12:26:37	10/11/2021	22/11/2021	5	115	0.14	94.0	
975-108 975-548	Monday, 25 October 2021	12:52:33	10/11/2021	22/11/2021	5	115	0.16	95.9	
975-109	Tuesday, 26 October 2021	12:28:19	10/11/2021	22/11/2021	5	115	0.17	94.0	
975-119	Wednesday, 27 October 2021	12:27:43	10/11/2021	22/11/2021	5	115	0.13	94.0	
966-216 975-550/549	Friday, 29 October 2021	13:22:33	10/11/2021	22/11/2021	5	115	0.13	95.9	
NOVEMBER									
975-551	Tuesday, 2 November 2021	12:35:16	03/12/2021	20/12/2021	5	115	0.19	100.0	
975-104	Tuesday, 2 November 2021	12:35:27	03/12/2021	20/12/2021	5	115	0.13	100.0	
975-117	Thursday, 4 November 2021	15:05:09	03/12/2021	20/12/2021	5	115	0.20	94.0	
975-114	Sunday, 7 November 2021	12:25:35	03/12/2021	20/12/2021	1	95	0.16	91.5	
966-222	Monday, 8 November 2021	12:49:50	03/12/2021	20/12/2021	5	115	0.14	104.2	
975-116	Wednesday, 10 November 2021	14:13:06	03/12/2021	20/12/2021	5	115	0.14	94.0	
975-119B	Thursday, 11 November 2021	13:42:15	03/12/2021	20/12/2021	5	115	0.15	94.0	
966-238 & Toe	Sunday, 14 November 2021	12:29:21	03/12/2021	20/12/2021	1	95	0.13	98.8	Assessed to be non-related to blasting practices
975-115	Tuesday, 16 November 2021	12:28:23	03/12/2021	20/12/2021	5	115	0.15	94.0	
957-502	Wednesday, 17 November 2021	12:36:37	03/12/2021	20/12/2021	5	115	0.11	95.9	
966-208	Friday, 19 November 2021	12:30:36	03/12/2021	20/12/2021	5	115	0.19	91.5	
966-217	Sunday, 21 November 2021	12:31:00	03/12/2021	20/12/2021	1	95	0.10	94.0	
957-901 & 957-550	Monday, 22 November 2021	12:52:28	03/12/2021	20/12/2021	5	115	0.12	98.8	
966-221	Wednesday, 24 November 2021	14:36:07	03/12/2021	20/12/2021	5	115	0.18	97.5	
966-209	Monday, 29 November 2021	12:38:17	03/12/2021	20/12/2021	5	115	0.14	94.0	
975-552	Monday, 29 November 2021	12:38:28	03/12/2021	20/12/2021	5	115	0.14	94.0	
DECEMBER									
975-118	Wednesday, 1 December 2021	12:25:07	05/01/2022	20/01/2022	5	115	0.15	94.0	
975-553 & 966-207	Thursday, 2 December 2021	15:12:48	05/01/2022	20/01/2022	5	115	0.15	94.0	
975-120	Saturday, 4 December 2021	15:39:48	05/01/2022	20/01/2022	5	115	0.15	98.8	
966-206 & 957-549A	Tuesday, 7 December 2021	12:27:01	05/01/2022	20/01/2022	5	115	0.19	97.5	
957-311 & 957-317	Thursday, 9 December 2021	13:42:41	05/01/2022	20/01/2022	5	115	0.13	94.0	
966-210	Saturday, 11 December 2021	12:29:25	05/01/2022	20/01/2022	5	115	0.14	94.0	
957-319 & 957-549B	Monday, 13 December 2021	12:34:20	05/01/2022	20/01/2022	5	115	0.14	94.0	
966-204	Wednesday, 15 December 2021	12:28:07	05/01/2022	20/01/2022	5	115	0.16	94.0	
966-218 & 957-548	Thursday, 16 December 2021	12:31:09	05/01/2022	20/01/2022	5	115	0.17	97.5	
966-205	Monday, 20 December 2021	12:31:00	05/01/2022	20/01/2022	5	115	0.17	98.8	
957-302B & 957-547	Wednesday, 22 December 2021	12:51:48	05/01/2022	20/01/2022	5	115	0.15	94.0	
966-219	Thursday, 23 December 2021	13:05:50	05/01/2022	20/01/2022	5	115	0.16	94.0	
957-306A	Friday, 24 December 2021	12:28:34	05/01/2022	20/01/2022	5	115	0.14	94.0	
957-301 & 957-545	Sunday, 26 December 2021	12:34:18	05/01/2022	20/01/2022	1	95	0.13	97.5	Assessed to be non-related to blasting practices
957-302A	Tuesday, 28 December 2021	12:26:26	05/01/2022	20/01/2022	5	115	0.15	94.0	
966-213	Thursday, 30 December 2021	12:41:30	05/01/2022	20/01/2022	5	115	0.15	94.0	
966-215 & 957-546	Friday, 31 December 2021	12:38:42	05/01/2022	20/01/2022	5	115	0.14	94.0	



Blasting & Ground Vibration

957-500 Preliminary	Friday, 10 September 2021	12:53:42	07/10/2021	21/10/2021	5	115	0.13	91.5	
966-202 & oversized Preliminary	Sunday, 12 September 2021	12:29:34	07/10/2021	21/10/2021	1	95	0.22	88.0	
993-2218	Monday, 13 September 2021	12:24:53	07/10/2021	21/10/2021	5	115	0.11	91.5	
984-2218	Tuesday, 14 September 2021	12:27:10	07/10/2021	21/10/2021	5	115			Monitor offline during calibration and changeover of equipment.
957-501A Toe	Tuesday, 14 September 2021	12:30:15	07/10/2021	21/10/2021	5	115			Monitor offline during calibration and changeover of equipment.
957-501	Friday, 17 September 2021	12:49:03	07/10/2021	21/10/2021	5	115	0.10	95.9	
984-308	Friday, 17 September 2021	12:51:44	07/10/2021	21/10/2021	5	115	0.11	88.0	
984-318 Preliminary	Monday, 20 September 2021	12:31:00	07/10/2021	21/10/2021	5	115	0.13	94.0	
966-211 preliminary	Monday, 20 September 2021	12:34:33	07/10/2021	21/10/2021	5	115	0.10	88.0	
975-546 Preliminary	Tuesday, 21 September 2021	12:39:46	07/10/2021	21/10/2021	5	115	0.11	105.5	
975-901 Preliminary	Tuesday, 21 September 2021	12:31:20	07/10/2021	21/10/2021	5	115	0.11	104.2	
984-318 preliminary	Thursday, 23 September 2021	12:25:17	07/10/2021	21/10/2021	5	115	0.11	88.0	
984-317 Preliminary	Saturday, 25 September 2021	12:21:46	07/10/2021	21/10/2021	5	115	0.11	91.5	
975-101A & 984-316 Preliminary	Monday, 27 September 2021	12:33:17	07/10/2021	21/10/2021	5	115	0.14	88.0	
966-203 preliminary	Thursday, 30 September 2021	12:43:54	07/10/2021	21/10/2021	5	115	0.15	88.0	
OCTOBER									
984-319A	Saturday, 2 October 2021	09:14:59	10/11/2021	22/11/2021	5	115	0.18	88.0	
975-100 984-319B	Sunday, 3 October 2021	12:28:40	10/11/2021	22/11/2021	5	115	0.13	88.0	
984-315	Wednesday, 6 October 2021	13:36:28	10/11/2021	22/11/2021	5	115	0.10	88.0	
975-110	Friday, 8 October 2021	10:27:32	10/11/2021	22/11/2021	5	115	0.16	88.0	
984-323	Saturday, 9 October 2021	15:23:50	10/11/2021	22/11/2021	5	115	0.12	88.0	
984-320	Tuesday, 12 October 2021	16:38:47	10/11/2021	22/11/2021	5	115	0.13	91.5	
975-106	Thursday, 14 October 2021	12:36:28	10/11/2021	22/11/2021	5	115	0.14	88.0	
South Pinch Point 2	Friday, 15 October 2021	12:28:31	10/11/2021	22/11/2021	5	115	0.10	91.5	
975-107 984 Pinch Point	Saturday, 16 October 2021	13:03:48	10/11/2021	22/11/2021	5	115	0.14	88.0	
975-1018 975-547	Monday, 18 October 2021	12:40:54	10/11/2021	22/11/2021	5	115	0.12	88.0	
975-105	Wednesday, 20 October 2021	12:38:01	10/11/2021	22/11/2021	5	115	0.13	94.0	
975-113	Friday, 22 October 2021	12:31:50	10/11/2021	22/11/2021	5	115	0.11	88.0	
984-314	Saturday, 23 October 2021	12:26:37	10/11/2021	22/11/2021	5	115	0.09	88.0	
975-108 975-548	Monday, 25 October 2021	12:32:33	10/11/2021	22/11/2021	5	115	0.17	88.0	
975-109	Tuesday, 26 October 2021	12:24:19	10/11/2021	22/11/2021	5	115	0.14	91.5	
975-119	Wednesday, 27 October 2021	12:27:43	10/11/2021	22/11/2021	5	115	0.11	88.0	
966-216 975-550/549	Friday, 29 October 2021	13:22:33	10/11/2021	22/11/2021	5	115	0.13	97.5	
NOVEMBER									
975-551	Tuesday, 2 November 2021	12:35:16	03/12/2021	20/12/2021	5	115	0.10	91.5	
975-104	Tuesday, 2 November 2021	12:35:27	03/12/2021	20/12/2021	5	115	0.10	91.5	
975-117	Thursday, 4 November 2021	15:05:09	03/12/2021	20/12/2021	5	115	0.14	88.0	
975-114	Sunday, 7 November 2021	12:25:35	03/12/2021	20/12/2021	1	95	0.10	88.0	
966-222	Monday, 8 November 2021	12:49:50	03/12/2021	20/12/2021	5	115	0.15	95.9	
975-116	Wednesday, 10 November 2021	14:13:06	03/12/2021	20/12/2021	5	115	0.10	91.5	
975-119B	Thursday, 11 November 2021	13:42:15	03/12/2021	20/12/2021	5	115	0.15	88.0	
966-233 & Toe	Sunday, 14 November 2021	12:39:31	03/12/2021	20/12/2021	1	95	0.13	88.0	
975-115	Tuesday, 16 November 2021	12:29:23	03/12/2021	20/12/2021	5	115	0.12	101.0	
957-502	Wednesday, 17 November 2021	12:36:37	03/12/2021	20/12/2021	5	115	0.10	91.5	
966-208	Friday, 19 November 2021	12:30:36	03/12/2021	20/12/2021	5	115	0.11	91.5	
966-217	Sunday, 21 November 2021	12:31:00	03/12/2021	20/12/2021	1	95	0.10	88.0	
957-901 & 957-550	Monday, 22 November 2021	12:52:28	03/12/2021	20/12/2021	5	115	0.09	101.0	
966-221	Wednesday, 24 November 2021	14:36:07	03/12/2021	20/12/2021	5	115	0.13	91.5	
966-209	Monday, 29 November 2021	12:38:17	03/12/2021	20/12/2021	5	115	0.10	91.5	
975-552	Monday, 29 November 2021	12:38:28	03/12/2021	20/12/2021	5	115	0.09	91.5	
DECEMBER									
975-118	Wednesday, 1 December 2021	12:25:07	05/01/2022	20/01/2022	5	115	0.11	88.0	
975-533 & 966-207	Thursday, 2 December 2021	15:12:48	05/01/2022	20/01/2022	5	115	0.11	88.0	
975-120	Saturday, 4 December 2021	15:39:48	05/01/2022	20/01/2022	5	115	0.15	88.0	
966-206 & 957-549A	Tuesday, 7 December 2021	12:27:01	05/01/2022	20/01/2022	5	115	0.13	91.5	
957-311 & 957-317	Thursday, 9 December 2021	13:42:41	05/01/2022	20/01/2022	5	115	0.14	88.0	
966-210	Saturday, 11 December 2021	12:29:25	05/01/2022	20/01/2022	5	115	0.10	91.5	
957-319 & 957-549B	Monday, 13 December 2021	12:34:20	05/01/2022	20/01/2022	5	115	0.09	94.0	
966-204	Wednesday, 15 December 2021	12:28:07	05/01/2022	20/01/2022	5	115	0.17	94.0	
966-218 & 957-548	Thursday, 16 December 2021	12:31:09	05/01/2022	20/01/2022	5	115	0.09	97.5	
966-205	Monday, 20 December 2021	12:31:00	05/01/2022	20/01/2022	5	115	0.25	97.5	
957-308B & 957-547	Wednesday, 22 December 2021	12:51:48	05/01/2022	20/01/2022	5	115	0.10	94.0	
966-219	Thursday, 23 December 2021	13:05:59	05/01/2022	20/01/2022	5	115	0.11	91.5	
957-306A	Friday, 24 December 2021	12:28:34	05/01/2022	20/01/2022	5	115	0.15	88.0	
957-301 & 957-545	Sunday, 26 December 2021	12:34:18	05/01/2022	20/01/2022	1	95	0.09	91.5	
957-302A	Tuesday, 28 December 2021	12:26:26	05/01/2022	20/01/2022	5	115	0.11	84.0	
988-313	Thursday, 30 December 2021	12:41:39	05/01/2022	20/01/2022	5	115	0.11	88.0	
966-215 & 957-546	Friday, 31 December 2021	12:34:42	05/01/2022	20/01/2022	5	115	0.13	94.0	



Blasting & Ground Vibration

957-500 Preliminary	Friday, 10 September 2021	12:53:42	07/10/2021	21/10/2021	5	115	0.08	88.0	
966-202 & oversized Preliminary	Sunday, 12 September 2021	12:29:34	07/10/2021	21/10/2021	1	95	0.08	84.0	
993-221B	Monday, 13 September 2021	12:24:53	07/10/2021	21/10/2021	5	115	0.02	84.0	
984-221B	Tuesday, 14 September 2021	12:27:10	07/10/2021	21/10/2021	5	115	0.01	81.5	
957-501A Toe	Tuesday, 14 September 2021	12:30:15	07/10/2021	21/10/2021	5	115	0.03	100.0	
957-501	Friday, 17 September 2021	12:49:03	07/10/2021	21/10/2021	5	115	0.01	84.0	
984-308	Friday, 17 September 2021	12:51:44	07/10/2021	21/10/2021	5	115	0.03	85.9	
984-318 Preliminary	Monday, 20 September 2021	12:31:00	07/10/2021	21/10/2021	5	115	0.06	101.0	
966-211 preliminary	Monday, 20 September 2021	12:34:33	07/10/2021	21/10/2021	5	115	0.04	81.5	
975-546 Preliminary	Tuesday, 21 September 2021	12:39:46	07/10/2021	21/10/2021	5	115	0.01	104.9	
975-501 Preliminary	Tuesday, 21 September 2021	12:41:20	07/10/2021	21/10/2021	5	115	0.14	101.0	
984-318 preliminary	Thursday, 23 September 2021	12:35:17	07/10/2021	21/10/2021	5	115	0.02	94.0	
984-317 Preliminary	Saturday, 25 September 2021	12:21:46	07/10/2021	21/10/2021	5	115	0.03	87.5	
975-101A & 984-316 Preliminary	Monday, 27 September 2021	12:33:17	07/10/2021	21/10/2021	5	115	0.04	81.5	
966-203 preliminary	Thursday, 30 September 2021	12:43:54	07/10/2021	21/10/2021	5	115	0.06	84.0	
OCTOBER									
984-318A	Saturday, 2 October 2021	09:14:59	10/11/2021	22/11/2021	5	115	0.08	87.5	
975-100/984-319B	Sunday, 3 October 2021	12:28:40	10/11/2021	22/11/2021	5	115	0.04	91.5	
984-315	Wednesday, 6 October 2021	13:36:28	10/11/2021	22/11/2021	5	115	0.02	94.0	
975-110	Friday, 8 October 2021	10:27:32	10/11/2021	22/11/2021	5	115	0.03	88.0	
984-323	Saturday, 9 October 2021	15:28:50	10/11/2021	22/11/2021	5	115	0.01	88.0	
984-330	Tuesday, 12 October 2021	16:38:47	10/11/2021	22/11/2021	5	115	0.02	91.5	
975-106	Thursday, 14 October 2021	12:36:39	10/11/2021	22/11/2021	5	115	0.05	91.5	
South Pinch Point 2	Friday, 15 October 2021	12:28:31	10/11/2021	22/11/2021	5	115	0.03	94.0	
975-107/984 Pinch Point	Saturday, 16 October 2021	13:01:48	10/11/2021	22/11/2021	5	115	0.04	95.9	
975-101B/975-547	Monday, 18 October 2021	12:40:54	10/11/2021	22/11/2021	5	115	0.04	91.5	
975-105	Wednesday, 20 October 2021	12:38:01	10/11/2021	22/11/2021	5	115	0.06	94.0	
975-113	Friday, 22 October 2021	12:31:50	10/11/2021	22/11/2021	5	115	0.03	88.0	
984-314	Saturday, 23 October 2021	12:36:37	10/11/2021	22/11/2021	5	115	0.06	88.0	
975-108/975-548	Monday, 25 October 2021	12:52:33	10/11/2021	22/11/2021	5	115	0.03	91.5	
975-109	Tuesday, 26 October 2021	12:24:19	10/11/2021	22/11/2021	5	115	0.02	88.0	
975-119	Wednesday, 27 October 2021	12:27:43	10/11/2021	22/11/2021	5	115	0.02	88.0	
966-216/975-550/549	Friday, 29 October 2021	13:22:33	10/11/2021	22/11/2021	5	115	0.03	98.8	
NOVEMBER									
975-551	Tuesday, 2 November 2021	12:35:16	03/12/2021	20/12/2021	5	115	0.05	88.0	
975-104	Tuesday, 2 November 2021	12:35:27	03/12/2021	20/12/2021	5	115	0.05	88.0	
975-117	Thursday, 4 November 2021	15:05:09	03/12/2021	20/12/2021	5	115	0.03	88.0	
975-114	Sunday, 7 November 2021	12:25:35	03/12/2021	20/12/2021	1	95	0.03	88.0	
966-222	Monday, 8 November 2021	12:49:50	03/12/2021	20/12/2021	5	115	0.04	95.9	
975-116	Wednesday, 10 November 2021	14:15:06	03/12/2021	20/12/2021	5	115	0.02	88.0	
975-119B	Thursday, 11 November 2021	13:42:15	03/12/2021	20/12/2021	5	115	0.03	88.0	
966-233 & Toe	Sunday, 14 November 2021	12:39:31	03/12/2021	20/12/2021	1	95	0.04	100.0	Assessed to be non-related to blasting practices.
975-115	Tuesday, 16 November 2021	12:29:23	03/12/2021	20/12/2021	5	115	0.04	84.0	
957-500	Wednesday, 17 November 2021	12:36:37	03/12/2021	20/12/2021	5	115	0.01	88.0	
966-208	Friday, 19 November 2021	12:30:36	03/12/2021	20/12/2021	5	115	0.06	88.0	
966-217	Sunday, 21 November 2021	12:31:00	03/12/2021	20/12/2021	1	95	0.05	88.0	
957-901 & 957-550	Monday, 22 November 2021	12:52:28	03/12/2021	20/12/2021	5	115	0.10	88.0	
966-221	Wednesday, 24 November 2021	14:36:07	03/12/2021	20/12/2021	5	115	0.05	94.0	
966-209	Monday, 29 November 2021	12:38:17	03/12/2021	20/12/2021	5	115	0.10	88.0	
975-552	Monday, 29 November 2021	12:38:28	03/12/2021	20/12/2021	5	115	0.02	88.0	
DECEMBER									
975-118	Wednesday, 1 December 2021	12:25:07	05/01/2022	20/01/2022	5	115	0.03	88.0	
975-533 & 966-207	Thursday, 2 December 2021	15:12:48	05/01/2022	20/01/2022	5	115	0.05	88.0	
975-120	Saturday, 4 December 2021	15:39:48	05/01/2022	20/01/2022	5	115	0.03	101.0	
966-206 & 957-548A	Tuesday, 7 December 2021	12:27:01	05/01/2022	20/01/2022	5	115	0.04	100.0	
957-311 & 957-317	Thursday, 9 December 2021	13:42:41	05/01/2022	20/01/2022	5	115	0.07	91.5	
966-210	Saturday, 11 December 2021	12:29:25	05/01/2022	20/01/2022	5	115	0.03	94.0	
957-319 & 957-549B	Monday, 13 December 2021	12:34:20	05/01/2022	20/01/2022	5	115	0.11	88.0	
966-204	Wednesday, 15 December 2021	12:28:07	05/01/2022	20/01/2022	5	115	0.04	88.0	
966-218 & 957-548	Thursday, 16 December 2021	12:31:09	05/01/2022	20/01/2022	5	115	0.03	104.9	
966-205	Monday, 20 December 2021	12:31:00	05/01/2022	20/01/2022	5	115	0.03	91.5	
957-308B & 957-547	Wednesday, 23 December 2021	12:51:48	05/01/2022	20/01/2022	5	115	0.06	98.8	
966-219	Thursday, 23 December 2021	13:05:50	05/01/2022	20/01/2022	5	115	0.01	94.0	
957-306A	Friday, 24 December 2021	12:28:34	05/01/2022	20/01/2022	5	115	0.03	88.0	
957-301 & 957-545	Sunday, 26 December 2021	12:34:18	05/01/2022	20/01/2022	1	95	0.07	91.5	
957-302A	Tuesday, 28 December 2021	12:26:26	05/01/2022	20/01/2022	5	115	0.03	94.0	
968-213	Thursday, 30 December 2021	12:41:30	05/01/2022	20/01/2022	5	115	0.02	88.0	
966-215 & 957-546	Friday, 31 December 2021	12:34:42	05/01/2022	20/01/2022	5	115	0.04	88.0	
Compliance Summary - Overpressure level from blasting operations must not exceeded more than 5% of the total number of blasts over a period of 12 months									
			Total Number of blasts last 12 months	199	Percentage of exceedances over 12 month period	0.0%	1.5%		



Cyanide

Monitoring Point: 48

Water quality monitoring, automated sampler located at the processing plant

Frequency	Month	No Sampled during Month	Total Cyanide (mg/L)				Comments
			Minimum	Mean	Median	Maximum	
Weekly	January	5	7.49	15.34	12.81	26.05	
Weekly	February	4	3.08	13.60	12.95	25.43	
Weekly	March	4	17.49	20.44	21.33	21.61	
Weekly	April	3	3.79	10.00	11.50	14.71	Plant shutdown from 24/04/2021
Weekly	May	4	5.31	13.13	11.24	24.73	April shutdown continued until 02/05/2021
Weekly	June	4	5.73	10.75	9.52	18.24	
Weekly	July	4	3.48	10.79	8.37	22.93	
Weekly	August	4	5.55	10.81	11.56	14.59	Plant shutdown from 03/08/2021 - 13/08/2021
Weekly	September	4	7.34	8.67	8.40	10.53	
Weekly	October	5	1.42	11.26	12.45	16.59	
Weekly	November	4	10.02	14.13	14.58	17.34	
Weekly	December	4	2.74	5.31	5.68	7.15	

Frequency	Month	No Sampled during Month	WAD Cyanide (mg/L)		Concentration Limits		Comments
			Minimum	Maximum	90th Percentile	100th Percentile	
Twice daily	January	62	0.00	7.96	20.00	30.00	
Twice daily	February	48	0.00	9.15	20.00	30.00	Shutdown 17-21 February.
Twice daily	March	62	0.00	12.03	20.00	30.00	
Twice daily	April	46	0.00	18.71	20.00	30.00	Plant shutdown from 24/04/2021
Twice daily	May	58	0.00	9.31	20.00	30.00	April shutdown continued until 02/05/2021
Twice daily	June	60	0.00	18.30	20.00	30.00	
Twice daily	July	61	0.13	35.00	20.00	30.00	One sample missing due to shutdown on 6/07/2021. Additional grab sample taken 06:35am 7/7/2021 exceeded 30ppm WAD cyanide. Refer to Exceedances tab for more information.
Twice daily	August	42	0.13	6.03	20.00	30.00	Plant shutdown from 03/08/2021 - 13/08/2021
Twice daily	September	60	0.00	6.95	20.00	30.00	
Twice daily	October	62	0.00	11.92	20.00	30.00	Samples from 18/10/2021 (8.926 ppm) and 19/10/2021 (11.915 ppm) were >5ppm higher than external laboratory results. Incidents raised for internal investigation.
Twice daily	November	60	0.00	12.33	20.00	30.00	
Twice daily	December	62	0.00	7.91	20.00	30.00	

