Dust

Monitoring Point: 1 <McLintocks Shed>
Dust monitoring, Dust gauge located on private property to the west of ML1535 boundary

Frequency	Date Deployed	Date Obtained	Date Published	Particulates ($g/m^2/mth$)	Comments
Monthly	29/12/2020	18/02/2021	20/02/2021	1.27	
Monthly	28/01/2021	11/03/2021	20/03/2021	0.71	
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Number of Samples Collected				2	
Lowest Value				0.7	
Mean of Sample				1.0	
Highest Sample Value				1.3	
Median				1.0	

Monitoring Point: 2 <Site Office>
Dust monitoring, Dust gauge located on private property to the south of ML1535 boundary

Frequency	Date Deployed	Date Obtained	Date Published	Particulates ($g/m^2/mth$)	Comments
Monthly	29/12/2020	18/02/2021	20/02/2021	0.97	
Monthly	28/01/2021	11/03/2021	20/03/2021	1.65	
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Number of Samples Collected				2	
Lowest Value				1.0	
Mean of Sample				1.3	
Highest Sample Value				1.7	
Median				1.3	

Monitoring Point: 3 <DG06>
Dust monitoring, Dust gauge located on private property to the east of ML1535 boundary

Frequency	Date Deployed	Date Obtained	Date Published	Particulates ($g/m^2/mth$)	Comments
Monthly	29/12/2020	18/02/2021	20/02/2021	1.22	
Monthly	28/01/2021	11/03/2021	20/03/2021	1.49	
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Number of Samples Collected				2	
Lowest Value				1.2	
Mean of Sample				1.4	
Highest Sample Value				1.5	
Median				1.4	

Monitoring Point: 4 <DG09>
Dust monitoring, Dust gauge located on private property to the south of ML1535 boundary

Frequency	Date Deployed	Date Obtained	Date Published	Particulates ($g/m^2/mth$)	Comments
Monthly	29/12/2020	18/02/2021	20/02/2021	0.30	
Monthly	28/01/2021	11/03/2021	20/03/2021	3.33	
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Number of Samples Collected				2	
Lowest Value				0.3	
Mean of Sample				1.8	
Highest Sample Value				3.3	
Median				1.8	

Monitoring Point: 5 <Site 52>
Dust monitoring, Dust gauge located within ML1535 and north of the open pit

Frequency	Date Deployed	Date Obtained	Date Published	Particulates ($g/m^2/mth$)	Comments
Monthly	29/12/2020	19/02/2021	20/03/2021	0.41	Results obtained late from laboratory
Monthly	28/01/2021	11/03/2021	20/03/2021	0.79	
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Number of Samples Collected				2	
Lowest Value				0.4	
Mean of Sample				0.6	
Highest Sample Value				0.8	
Median				0.6	

Dust

Monitoring Point: 6 <DG01>
Dust monitoring, Dust gauge located on private property to the north of ML1535 boundary

Frequency	Date Deployed	Date Obtained	Date Published	Particulates (g/m^2/mth)	Comments
Monthly	29/12/2020	18/02/2021	20/02/2021	0.21	
Monthly	28/01/2021	11/03/2021	20/03/2021	0.20	
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Monthly					
Number of Samples Collected				2	
Lowest Value				0.2	
Mean of Sample				0.2	
Highest Sample Value				0.2	
Median				0.2	

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	06/01/2021	18/02/2021	20/02/2021	34.4	
Every 7 days	13/01/2021	18/02/2021	20/02/2021	31.5	
Every 7 days	20/01/2021	18/02/2021	20/02/2021	51.5	
Every 7 days	27/01/2021	18/02/2021	20/02/2021	56.2	
Every 7 days	3/02/2021				Waiting for laboratory results
Every 7 days	10/02/2021				Waiting for laboratory results
Every 7 days	17/02/2021				Waiting for laboratory results
Every 7 days	24/02/2021				Waiting for laboratory results
Every 7 days					
Every 7 days					
Every 7 days					
Every 7 days					
Every 7 days					
Every 7 days					
Every 7 days					
Every 7 days					
Every 7 days					
Every 7 days					
Every 7 days					
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Every 7 days					
Every 7 days					
Every 7 days					
Every 7 days					
Every 7 days					
Every 7 days					
Every 7 days					
Every 7 days					
Every 7 days					
Every 7 days					
Number of Samples Collected				4	
Lowest Value				31.5	
Mean of Sample				43.4	
Highest Sample Value				56.2	
Median				43.0	

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							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Number of Samples Collected				3.00	3	3	
Lowest Value				4.36	15478	52	
Mean of Sample				5.92	17071	133	
Highest Sample Value				8.40	18146	184	
Median				4.99	17589	164	

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							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Number of Samples Collected				3.00	3	3	
Lowest Value				5.21	1027	35	
Mean of Sample				6.59	1255	108	
Highest Sample Value				8.51	1514	178	
Median				6.06	1224	112	

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
Weekly							
Weekly							
Weekly							
Weekly							
Weekly							
Weekly							
Weekly							
Weekly							
Weekly							
Weekly							
Number of Samples Collected				0	0	0	
Lowest Value				0.0	0.0	0.0	
Mean of Sample				0.0	0.0	0.0	
Highest Sample Value				0.0	0.0	0.0	
Median				0.0	0.0	0.0	

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															
Quarterly															
Quarterly															

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						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Number of Samples Collected				0	0	
Lowest Value				0.0	0.0	
Mean of Sample				0.0	0.0	
Highest Sample Value				0.0	0.0	
Median				0.0	0.0	

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															
Quarterly															
Quarterly															

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
Weekly							
Weekly							
Weekly							
Weekly							
Weekly							
Weekly							
Weekly							
Weekly							
Weekly							
Weekly							
Number of Samples Collected				0	0	0	
Lowest Value				0.0	0.0	0.0	
Mean of Sample				0.0	0.0	0.0	
Highest Sample Value				0.0	0.0	0.0	
Median				0.0	0.0	0.0	

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															
Quarterly															
Quarterly															

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						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Number of Samples Collected				0	0	
Lowest Value				0.0	0.0	
Mean of Sample				0.0	0.0	
Highest Sample Value				0.0	0.0	
Median				0.0	0.0	

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															
Quarterly															
Quarterly															

Monitoring Point: 18 <B6>
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	-	-	-	-	Lake Level below 204.5 AHD, monitoring no longer required
Monthly	February, 2021	-	-	-	-	Lake Level below 204.5 AHD, monitoring no longer required
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Number of Samples Collected				0	0	
Lowest Value				0.0	0.0	
Mean of Sample				0.0	0.0	
Highest Sample Value				0.0	0.0	
Median				0.0	0.0	

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															
Quarterly															
Quarterly															

Groundwater

Monitoring Point: 19 <PS55A-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
	1	1		1	1	1	
Monthly	13/01/2021	13/01/2021	20/01/2021	6.67	32318	20.818	
Monthly	03/02/2021	03/02/2021	20/03/2021	6.73	32139	20.765	
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Number of Samples Collected				2	2	2	
Lowest Value				6.7	32139	20.765	
Mean of Sample				6.7	32229	20.792	
Highest Sample Value				6.7	32318	20.818	
Median				6.7	32229	20.792	

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	20/01/2021	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	21930	4120	0.007	
Quarterly																									
Quarterly																									
Quarterly																									

Monitoring Point: 26 <PP01>
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	20/01/2021	6.56	47645	17.64	
Monthly	02/02/2021	02/02/2021	20/03/2021	7.09	46929	17.69	
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Number of Samples Collected				2	2	2	
Lowest Value				6.6	46929	17.640	
Mean of Sample				6.8	47287	17.665	
Highest Sample Value				7.1	47645	17.690	
Median				6.8	47287	17.665	

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	20/01/2021	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																									
Quarterly																									
Quarterly																									

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	20/01/2021	6.59	47708	15.64	
Monthly	02/02/2021	02/02/2021	20/03/2021	6.97	47915	15.94	
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Number of Samples Collected				2	2	2	
Lowest Value				6.6	47708	15.640	
Mean of Sample				6.8	47812	15.890	
Highest Sample Value				7.0	47915	15.940	
Median				6.6	47812	15.890	

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	19/01/2021	28/01/2021	20/01/2021	496	<0.0005	<0.0005	<0.0002	761	16400	<0.001	<0.004	0.01	<0.0002	1520	<0.0005	0.0004	0.0011	50	0.01	8820	3180	35800	8160	<0.005	
Quarterly																									
Quarterly																									
Quarterly																									

Monitoring Point: 30 <PH17A>
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	20/01/2021	6.54	46533	12.014	
Monthly	24/02/2021	24/02/2021	20/03/2021	6.64	46337	12.011	
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Number of Samples Collected				2	2	2	
Lowest Value				6.5	46337	12.011	
Mean of Sample				6.6	46435	12.013	
Highest Sample Value				6.6	46533	12.014	
Median				6.6	46435	12.013	

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	20/01/2021	514	<0.0005	<0.0005	0.0009	611	18400	0.001	<0.004	0.006	0.0006	1550	0.0457	0.0008	0.0044	35	0.008	8680	3180	34300	7910	<0.005	
Quarterly																									
Quarterly																									
Quarterly																									

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	20/01/2021	6.55	41451	11.970	
Monthly	24/01/2021	24/01/2021	20/01/2021	6.98	42478	11.975	
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Number of Samples Collected				2	2	2	
Lowest Value				6.6	41451	11.970	
Mean of Sample				6.8	41965	11.973	
Highest Sample Value				6.7	42478	11.975	
Median				6.8	41965	11.973	

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	300	16900	0.001	<0.004	0.006	0.0002	1370	0.0006	0.0002	0.0012	22	0.010	7940	2770	36400	6890	0.007	
Quarterly																									
Quarterly																									
Quarterly																									

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	48127	8.305	
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Number of Samples Collected				2	2	2	
Lowest Value				6.6	48127	8.305	
Mean of Sample				6.6	48449	8.352	
Highest Sample Value				6.7	48770	8.398	
Median				6.6	48449	8.352	

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	0.885	<0.0002	1490	0.394	0.0004	0.0008	22	<0.002	10200	4880	35800	7370	<0.005	
Quarterly																									
Quarterly																									
Quarterly																									

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							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Number of Samples Collected				2	2	2	
Lowest Value				6.4	45270	8.324	
Mean of Sample				6.5	45505	8.366	
Highest Sample Value				6.6	45739	8.407	
Median				6.5	45505	8.366	

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	<0.0002	1270	0.0362	0.0191	0.2690	12	0.005	9810	4250	33800	6120	0.08	
Quarterly																									
Quarterly																									
Quarterly																									

Groundwater

Monitoring Point: 36 -<PGB1A>
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	18.015	
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Number of Samples Collected				2	2	2	
Lowest Value				6.42	53871	17.935	
Mean of Sample				6.5	54087	17.978	
Highest Sample Value				6.5	54303	18.015	
Median				6.5	54087	17.978	

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																							
Quarterly																							
Quarterly																							

Monitoring Point: 38 -<PGB3A>
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	82.421	
Monthly	25/02/2021	25/02/2021	20/03/2021	6.65	52588	82.429	
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Number of Samples Collected				2	2	2	
Lowest Value				6.6	48221	82.421	
Mean of Sample				6.6	50405	82.422	
Highest Sample Value				6.7	52588	82.429	
Median				6.6	50405	82.422	

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	0.0065	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																							
Quarterly																							
Quarterly																							

Monitoring Point: 40 -<PGB5A>
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	11/01/2021	12/01/2021	20/02/2021	6.39	52568	36.320	
Monthly	24/02/2021	24/02/2021	20/03/2021	6.47	48722	36.545	
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Number of Samples Collected				2	2	2	
Lowest Value				6.4	48722	36.320	
Mean of Sample				6.4	51145	36.433	
Highest Sample Value				6.5	52568	36.545	
Median				6.4	51145	36.433	

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	11/01/2021	22/01/2021	20/02/2021	<0.0005	0.0075	0.0054	762	22600	0.001	0.022	<0.0002	1960	0.0197	0.0003	0.0214	42	0.004	9820	3430	41900	9970	0.045	
Quarterly																							
Quarterly																							
Quarterly																							

Monitoring Point: 52 -<PGB1B>
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							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Number of Samples Collected				2	2	2	
Lowest Value				6.3	39058	7.323	
Mean of Sample				6.4	43640	7.452	
Highest Sample Value				6.6	48221	7.580	
Median				6.4	43640	7.452	

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	0.0003	0.0078	20	<0.002	8470	3550	35600	8420	0.01	
Quarterly																							
Quarterly																							
Quarterly																							

Groundwater

Monitoring Point: S5 -PDB3B-
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	20/01/2021	5.97	51310	32.468	
Monthly	25/02/2021	25/02/2021	20/03/2021	6.17	52032	32.532	
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Number of Samples Collected				2	2	2	
Lowest Value				6.0	51310	32.468	
Mean of Sample				6.1	51671	32.500	
Highest Sample Value				6.2	52032	32.532	
Median				6.1	51671	32.500	

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	0.0007	0.0009	1130	21100	<0.001	0.011	<0.0002	2170	0.0667	0.0006	0.004	49	0.016	9140	6710	41400	11800	<0.005	
Quarterly																							
Quarterly																							
Quarterly																							

Monitoring Point: S4 -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	11/01/2021	11/01/2021	20/02/2021	5.91	49754	21.970	
Monthly	24/02/2021	24/02/2021	20/03/2021	6.05	49515	22.056	
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Number of Samples Collected				2	2	2	
Lowest Value				5.9	49515	21.970	
Mean of Sample				6.0	49635	22.013	
Highest Sample Value				6.1	49754	22.056	
Median				6.0	49635	22.013	

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	11/01/2021	22/01/2021	20/02/2021	<0.0005	0.0024	0.0015	803	20600	0.003	0.028	<0.0002	1810	0.0172	0.0026	0.0247	46	<0.002	9130	3480	36800	9460	<0.005	
Quarterly																							
Quarterly																							
Quarterly																							

Monitoring Point: S7 -IWL08A-
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	6.46	44219	8.375	
Monthly	25/02/2021	25/02/2021	20/03/2021	6.83	44727	8.320	
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Number of Samples Collected				2	2	2	
Lowest Value				6.4	44219	8.320	
Mean of Sample				6.7	44473	8.348	
Highest Sample Value				6.8	44727	8.375	
Median				6.7	44473	8.348	

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	419	<0.0005	<0.0005	0.0003	890	14700	<0.001	<0.004	0.03	<0.0002	1310	0.0828	0.0006	0.0214	53	0.006	8040	2900	31000	7620	<0.005	
Quarterly																									
Quarterly																									
Quarterly																									

Monitoring Point: S8 -IWL36B-
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	6.58	42615	8.193	
Monthly	01/02/2021	01/02/2021	20/03/2021	6.82	42355	8.080	
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Number of Samples Collected				2	2	2	
Lowest Value				6.6	42615	8.080	
Mean of Sample				6.7	42485	8.137	
Highest Sample Value				6.8	42355	8.193	
Median				6.7	42485	8.137	

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	683	<0.0005	<0.0005	<0.0003	817	14200	0.006	<0.004	0.511	<0.0002	1420	0.138	0.0004	0.773	44	0.007	7600	2870	30500	7490	0.008	
Quarterly																									
Quarterly																									
Quarterly																									

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							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Number of Samples Collected				2	2	2	
Lowest Value				6.6	40757	4.655	
Mean of Sample				6.6	40799	4.808	
Highest Sample Value				6.6	40841	4.960	
Median				6.6	40799	4.808	

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	18/01/2021	20/02/2021	740	<0.0005	<0.0005	<0.0002	320	11300	0.003	<0.004	0.019	<0.0002	1380	0.0775	0.0006	0.144	57	0.013	7800	2950	19300	5990	0.007	
Quarterly																									
Quarterly																									
Quarterly																									
Quarterly																									

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	6.6	42065	4.585	
Monthly	01/02/2021	01/02/2021	20/03/2021	6.64	41507	4.590	
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Number of Samples Collected				2	2	2	
Lowest Value				6.6	41507	4.585	
Mean of Sample				6.6	41786	4.588	
Highest Sample Value				6.6	42065	4.590	
Median				6.6	41786	4.588	

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	628	<0.0005	<0.0005	<0.0002	133	13900	0.032	<0.004	1.02	<0.0002	1340	0.105	0.0076	0.148	47	<0.002	8020	2640	18700	5850	<0.005	
Quarterly																									
Quarterly																									
Quarterly																									

Monitoring Point: 61 -IWL04A-
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	35215	29.756	
Monthly	03/02/2021	03/02/2021	20/03/2021	6.77	35161	29.730	
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Number of Samples Collected				2	2	2	
Lowest Value				6.8	35161	29.730	
Mean of Sample				6.8	35193	29.743	
Highest Sample Value				6.8	35215	29.756	
Median				6.8	35193	29.743	

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																									
Quarterly																									
Quarterly																									

Groundwater

Monitoring Point: 62 -IWL048>
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	-	-	-	Dry
Monthly	19/02/2021	19/02/2021	20/03/2021	-	-	-	Dry
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
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	
Median				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	13/01/2021	22/01/2021	20/02/2021																						Dry
Quarterly																									Dry
Quarterly																									Dry
Quarterly																									Dry

Monitoring Point: 63 -IWL034>
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	6.88	38857	23.877	
Monthly	18/02/2021	18/02/2021	20/03/2021	6.88	38506	23.804	
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Number of Samples Collected				2	2	2	
Lowest Value				6.9	38506	23.804	
Mean of Sample				6.9	38682	23.841	
Highest Sample Value				6.9	38857	23.877	
Median				6.9	38682	23.841	

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	726	<0.0005	<0.0005	0.0002	371	14500	<0.001	<0.004	0.008	<0.0002	832	0.0126	0.0008	0.005	24	0.006	7000	3340	23000	4350	<0.005	
Quarterly																									
Quarterly																									
Quarterly																									

Monitoring Point: 64 -IWL028>
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	-	-	-	Dry
Monthly	18/02/2021	18/02/2021	20/03/2021	-	-	-	Dry
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
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	
Median				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	13/01/2021	22/01/2021	20/02/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	Dry
Quarterly																									Dry
Quarterly																									Dry
Quarterly																									Dry

Monitoring Point: 65 -IWL024>
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	6.86	46050	15.690	
Monthly	18/02/2021	18/02/2021	20/03/2021	6.88	45821	15.575	
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Number of Samples Collected				2	2	2	
Lowest Value				6.9	45821	15.575	
Mean of Sample				6.9	45936	15.633	
Highest Sample Value				6.9	46050	15.690	
Median				6.9	45936	15.633	

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	818	<0.0005	<0.0005	0.0004	384	14500	<0.001	<0.004	0.019	<0.0002	978	0.0163	0.0003	0.0048	35	0.015	3740	4450	32700	4990	<0.005	
Quarterly																									
Quarterly																									
Quarterly																									

Groundwater

Monitoring Point: 66 <IW1028>
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	20/01/2021	-	-	-	Dry
Monthly	18/02/2021	18/02/2021	20/03/2021	-	-	-	Dry
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
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	
Median				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																									
Quarterly																									
Quarterly																									

Monitoring Point: 67 <IW1014>
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							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Number of Samples Collected				2	2	2	
Lowest Value				6.8	45993	4.975	
Mean of Sample				6.8	46149	4.990	
Highest Sample Value				6.8	46304	5.005	
Median				6.8	46149	4.990	

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	14000	<0.001	<0.004	0.006	<0.0002	1160	0.0217	0.0009	0.0417	27	0.031	9460	4350	32800	5930	<0.005	
Quarterly																									
Quarterly																									
Quarterly																									

Monitoring Point: 68 <IW1018>
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	37328	5.498	
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Monthly							
Number of Samples Collected				2	2	2	
Lowest Value				6.4	36719	5.450	
Mean of Sample				6.5	36974	5.474	
Highest Sample Value				6.6	37328	5.498	
Median				6.5	36974	5.474	

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																									
Quarterly																									
Quarterly																									

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	-	-	-	-	-	No water present in toe drain
Monthly	-	-	-	-	-	No water present in toe drain
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Number of Samples Collected				0	0	
Lowest Value				0.0	0	
Mean of Sample				0.0	0	
Highest Sample Value				0.0	0	
Median				0.0	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No water present in toe drain
Quarterly																									
Quarterly																									
Quarterly																									

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	16499	
Monthly	03/02/2021	03/02/2021	20/03/2021	5.25	12418	
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Number of Samples Collected				2	2	
Lowest Value				5.3	12418	
Mean of Sample				6.6	14459	
Highest Sample Value				8.0	16499	
Median				6.6	14459	

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																									
Quarterly																									
Quarterly																									

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	-	-	-	-	-	No water present in toe drain
Monthly	-	-	-	-	-	No water present in toe drain
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Monthly						
Number of Samples Collected				0	0	
Lowest Value				0.0	0	
Mean of Sample				0.0	0	
Highest Sample Value				0.0	0	
Median				0.0	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No water present in toe drain
Quarterly																									
Quarterly																									
Quarterly																									

Ambient Noise

Q1 Noise Monitoring

Daytime Mine Operating Intrusive Noise Levels (dBA re 20 µPa)				Mine Contributed $LA_{eq(15minute)}$ - dBA			
Location	**Date Sampled**	**Date Obtained**	**Date Published**	**Survey 1**	**Survey 2**	**Noise Criteria $LA_{eq(15minute)}$ - dBA**	**Comments**
N01							
N11							
N09							
N10							
N12							
N15							
N17							
N16							

Evening Mine Operating Intrusive Noise Levels (dBA re 20 µPa)				Mine Contributed $LA_{eq(15minute)}$ - dBA			
Location	**Date Sampled**	**Date Obtained**	**Date Published**	**Survey 1**	**Survey 2**	**Noise Criteria $LA_{eq(15minute)}$ - dBA**	**Comments**
N01							
N11							
N09							
N10							
N12							
N15							
N17							
N16							

Night time Mine Operating Intrusive Noise Levels (dBA re 20 µPa)				Mine Contributed $LA_{eq(15minute)}$ - dBA			
Location	**Date Sampled**	**Date Obtained**	**Date Published**	**Survey 1**	**Survey 2**	**Noise Criteria $LA_{eq(15minute)}$ - dBA**	**Comments**
N01							
N11							
N09							
N10							
N12							
N15							
N17							
N16							

n/a - Mine noise emission not discernible

Q2 Noise Monitoring

Daytime Mine Operating Intrusive Noise Levels (dBA re 20 µPa)				Mine Contributed $LA_{eq(15minute)}$ - dBA			
Location	**Date Sampled**	**Date Obtained**	**Date Published**	**Survey 1**	**Survey 2**	**Noise Criteria $LA_{eq(15minute)}$ - dBA**	**Comments**
N01							
N11							
N09							
N10							
N12							
N15							
N17							Assessed to be non-related to blasting practices
N16							

Evening Mine Operating Intrusive Noise Levels (dBA re 20 µPa)				Mine Contributed $LA_{eq(15minute)}$ - dBA			
Location	**Date Sampled**	**Date Obtained**	**Date Published**	**Survey 1**	**Survey 2**	**Noise Criteria $LA_{eq(15minute)}$ - dBA**	**Comments**
N01							
N11							
N09							
N10							
N12							
N15							
N17							
N16							

Night time Mine Operating Intrusive Noise Levels (dBA re 20 µPa)				Mine Contributed $LA_{eq(15minute)}$ - dBA			
Location	**Date Sampled**	**Date Obtained**	**Date Published**	**Survey 1**	**Survey 2**	**Noise Criteria $LA_{eq(15minute)}$ - dBA**	**Comments**
N01							
N11							
N09							
N10							
N12							
N15							
N17							
N16							

N/A - Mine noise emission not discernible

Ambient Noise

Q3 Noise Monitoring

Daytime Mine Operating Intrusive Noise Levels (dBA re 20 µPa)

Location	Date Sampled	Date Obtained	Date Published	Mine Contributed $LA_{eq(15minute)}$ - dBA		Noise Criteria $LA_{eq(15minute)}$ - dBA	Comments
				Survey 1	Survey 2		
N01							
N11							
N09							
N10							
N12							
N15							
N17							
N16							

Evening Mine Operating Intrusive Noise Levels (dBA re 20 µPa)

Location	Date Sampled	Date Obtained	Date Published	Mine Contributed $LA_{eq(15minute)}$ - dBA		Noise Criteria $LA_{eq(15minute)}$ - dBA	Comments
				Survey 1	Survey 2		
N01							
N11							
N09							
N10							
N12							
N15							
N17							
N16							

Night time Mine Operating Intrusive Noise Levels (dBA re 20 µPa)

Location	Date Sampled	Date Obtained	Date Published	Mine Contributed $LA_{eq(15minute)}$ - dBA		Noise Criteria $LA_{eq(15minute)}$ - dBA	Comments
				Survey 1	Survey 2		
N01							
N11							
N09							
N10							
N12							
N15							
N17							
N16							

N/A - Mine noise emission not discernible

Q4 Noise Monitoring

Daytime Mine Operating Intrusive Noise Levels (dBA re 20 µPa)

Location	Date Sampled	Date Obtained	Date Published	Mine Contributed $LA_{eq(15minute)}$ - dBA		Noise Criteria $LA_{eq(15minute)}$ - dBA	Comments
				Survey 1	Survey 2		
N01							
N11							
N09							
N10							
N12							
N15							
N17							
N16							

Evening Mine Operating Intrusive Noise Levels (dBA re 20 µPa)

Location	Date Sampled	Date Obtained	Date Published	Mine Contributed $LA_{eq(15minute)}$ - dBA		Noise Criteria $LA_{eq(15minute)}$ - dBA	Comments
				Survey 1	Survey 2		
N01							
N11							
N09							
N10							
N12							
N15							
N17							
N16							

Night time Mine Operating Intrusive Noise Levels (dBA re 20 µPa)

Location	Date Sampled	Date Obtained	Date Published	Mine Contributed $LA_{eq(15minute)}$ - dBA		Noise Criteria $LA_{eq(15minute)}$ - dBA	Comments
				Survey 1	Survey 2		
N01							
N11							
N09							
N10							
N12							
N15							
N17							
N16							

Blasting & Ground Vibration

Monitoring Point: BM01
Blast monitoring, Airblast overpressure and ground vibration peak particle velocity recorded at private residence to the south-east of ML1535 boundary

					Trigger Threshold		BM01 at Blast Time		
Blast Number	**Day/Date**	**Time**	**Date Obtained**	**Date Published**	**Ground Vibration (mm/s)**	**Airblast Overpressure (dB(L))**	**Ground Vibration (mm/s)**	**Airblast Overpressure (dB(L))**	**Comments**
JANUARY									
1020-216 & 1011-552	Saturday, 02/01/2021	12:35:19	10/02/2021	20/02/2021	5	115	0.10	88.0	
1020-205 Preliminary	Sunday, 03/01/2021	12:42:27	10/02/2021	20/02/2021	1	95	0.10	81.9	
1029-574 Preliminary	Sunday,03/01/2021	12:46:01	10/02/2021	20/02/2021	1	95	0.10	88.0	
1029-575 Preliminary	Monday,04/01/2021	09:13:50	10/02/2021	20/02/2021	5	115	0.12	81.9	
1011-902, 1011-554 &	Tuesday, 05/01/2021	12:38:59	10/02/2021	20/02/2021	5	115	0.10	94.0	
1029-114 Preliminary	Thursday, 07/01/2021	13:22:34	10/02/2021	20/02/2021	5	115	0.09	91.5	
1029-115 Preliminary	Saturday, 09/01/2021	15:03:40	10/02/2021	20/02/2021	5	115	0.09	88.0	
1029-116 1011-557 Pr	Monday, 11/01/2021	12:41:16	10/02/2021	20/02/2021	5	115	0.11	81.9	
1020-208, 1020-217 Pr	Thursday, 14/01/2021	12:45:18	10/02/2021	20/02/2021	5	115	0.09	88.0	
1011-557B & 1101-556	Thursday, 14/01/2021	12:48:11	10/02/2021	20/02/2021	5	115	0.09	81.9	
1020-207 & Large Roc	Sunday, 17/01/2021	12:34:46	10/02/2021	20/02/2021	1	95	0.10	88.0	
1020-209 Preliminary	Tuesday, 19/01/2021	12:20:28	10/02/2021	20/02/2021	5	115	0.10	91.5	
1029-101 Preliminary	Wednesday, 20/01/2021	12:31:44	10/02/2021	20/02/2021	5	115	0.09	88.0	
1020-204 Preliminary	Saturday, 23/01/2021	12:38:23	10/02/2021	20/02/2021	5	115	0.09	91.5	
1020-210A & 1020-203	Wednesday, 27/01/2021	14:18:03	10/02/2021	20/02/2021	5	115	0.09	95.9	
1020-201 & 1029 Toe	Saturday, 30/01/2021	12:38:43	10/02/2021	20/02/2021	5	115	0.10	88.0	
FEBRUARY									
1011-307	Wednesday, 3 February 2021	12:30:57	08/03/2021	20/03/2021	5	115	0.10	88.0	
1020-203B	Wednesday, 10 February 2021	13:33:10	08/03/2021	20/03/2021	5	115	0.10	88.0	
1011-306	Friday, 12 February 2021	12:24:09	08/03/2021	20/03/2021	5	115	0.10	95.9	
1020-211	Sunday, 14 February 2021	12:36:45	08/03/2021	20/03/2021	1	95	0.09	81.9	
1011-561	Sunday, 14 February 2021	12:38:40	08/03/2021	20/03/2021	1	95	0.09	81.9	
1020-202	Tuesday, 16 February 2021	12:29:29	08/03/2021	20/03/2021	5	115	0.10	95.9	
1011-558 & 1020 Large	Tuesday, 16 February 2021	12:31:19	08/03/2021	20/03/2021	5	115	0.10	91.5	
1020 -Toe	Wednesday, 17 February 2021	12:38:18	08/03/2021	20/03/2021	5	115	0.11	88.0	
1011-559	Wednesday, 17 February 2021	12:38:18	08/03/2021	20/03/2021	5	115	0.11	88.0	
1020-212A	Monday, 22 February 2021	12:40:02	08/03/2021	20/03/2021	5	115	0.09	101.0	
1020-214	Wednesday, 24 February 2021	13:24:18	08/03/2021	20/03/2021	5	115	0.09	81.9	
1011-305	Saturday, 27 February 2021	16:25:43	08/03/2021	20/03/2021	5	115	0.08	95.9	

Monitoring Point: BM02

Blast monitoring, Airblast overpressure and ground vibration peak particle velocity recorded to the south of ML1535 boundary

					Trigger Threshold		BM02 at Blast Time		
Blast Number	**Day/Date**	**Time**	**Date Obtained**	**Date Published**	**Ground Vibration (mm/s)**	**Airblast Overpressure (dB(L))**	**Ground Vibration (mm/s)**	**Airblast Overpressure (dB(L))**	**Comments**
JANUARY									
1020-216 & 1011-552	Saturday, 02/01/2021	12:35:19	10/02/2021	20/02/2021	5	115	0.14	88.0	
1020-205 Preliminary	Sunday, 03/01/2021	12:42:27	10/02/2021	20/02/2021	1	95	0.14	91.5	
1029-574 Preliminary	Sunday,03/01/2021	12:46:01	10/02/2021	20/02/2021	1	95	0.14	88.0	
1029-575 Preliminary	Monday,04/01/2021	09:13:50	10/02/2021	20/02/2021	5	115	0.13	88.0	
1011-902, 1011-554 &	Tuesday, 05/01/2021	12:38:59	10/02/2021	20/02/2021	5	115	0.13	102.8	
1029-114 Preliminary	Thursday, 07/01/2021	13:22:34	10/02/2021	20/02/2021	5	115	0.14	94.0	
1029-115 Preliminary	Saturday, 09/01/2021	15:03:40	10/02/2021	20/02/2021	5	115	0.13	88.0	
1029-116 1011-557 Pr	Monday, 11/01/2021	12:41:16	10/02/2021	20/02/2021	5	115	0.16	95.9	
1020-208, 1020-217 Pr	Thursday, 14/01/2021	12:45:18	10/02/2021	20/02/2021	5	115	0.14	97.5	
1011-557B & 1101-556	Thursday, 14/01/2021	12:48:11	10/02/2021	20/02/2021	5	115	0.13	97.5	
1020-207 & Large Roc	Sunday, 17/01/2021	12:34:46	10/02/2021	20/02/2021	1	95	0.14	98.8	Assessed to be non-related to blasting practices
1020-209 Preliminary	Tuesday, 19/01/2021	12:20:28	10/02/2021	20/02/2021	5	115	0.14	95.9	
1029-101 Preliminary	Wednesday, 20/01/2021	12:31:44	10/02/2021	20/02/2021	5	115	0.14	91.5	
1020-204 Preliminary	Saturday, 23/01/2021	12:38:23	10/02/2021	20/02/2021	5	115	0.15	98.8	
1020-210A & 1020-203	Wednesday, 27/01/2021	14:18:03	10/02/2021	20/02/2021	5	115	0.14	91.5	
1020-201 & 1029 Toe	Saturday, 30/01/2021	12:38:43	10/02/2021	20/02/2021	5	115	0.14	91.5	
FEBRUARY									
1011-307	Wednesday, 3 February 2021	12:30:57	08/03/2021	20/03/2021	5	115	0.15	97.5	
1020-203B	Wednesday, 10 February 2021	13:33:10	08/03/2021	20/03/2021	5	115	0.21	91.5	
1011-306	Friday, 12 February 2021	12:24:09	08/03/2021	20/03/2021	5	115	0.14	97.5	
1020-211	Sunday, 14 February 2021	12:36:45	08/03/2021	20/03/2021	1	95	0.14	91.5	
1011-561	Sunday, 14 February 2021	12:38:40	08/03/2021	20/03/2021	1	95	0.14	91.5	
1020-202	Tuesday, 16 February 2021	12:29:29	08/03/2021	20/03/2021	5	115	0.15	91.5	
1011-558 & 1020 Large	Tuesday, 16 February 2021	12:31:19	08/03/2021	20/03/2021	5	115	0.13	94.0	
1020 -Toe	Wednesday, 17 February 2021	12:38:18	08/03/2021	20/03/2021	5	115	0.14	95.9	
1011-559	Wednesday, 17 February 2021	12:38:18	08/03/2021	20/03/2021	5	115	0.14	95.9	
1020-212A	Monday, 22 February 2021	12:40:02	08/03/2021	20/03/2021	5	115	0.15	101.9	
1020-214	Wednesday, 24 February 2021	13:24:18	08/03/2021	20/03/2021	5	115	0.18	88.0	
1011-305	Saturday, 27 February 2021	16:25:43	08/03/2021	20/03/2021	5	115	0.17	88.0	

Monitoring Point: BM03

Blast monitoring, Airblast overpressure and ground vibration peak particle velocity recorded at private residence to the north of ML1535 boundary

					Trigger Threshold		BM03 at Blast Time		
Blast Number	**Day/Date**	**Time**	**Date Obtained**	**Date Published**	**Ground Vibration (mm/s)**	**Airblast Overpressure (dB(L))**	**Ground Vibration (mm/s)**	**Airblast Overpressure (dB(L))**	**Comments**
JANUARY									
1020-216 & 1011-552	Saturday, 02/01/2021	12:35:19	10/02/2021	20/02/2021	5	115	0.08	88.0	
1020-205 Preliminary	Sunday, 03/01/2021	12:42:27	10/02/2021	20/02/2021	1	95	0.08	88.0	
1029-574 Preliminary	Sunday,03/01/2021	12:46:01	10/02/2021	20/02/2021	1	95	0.07	88.0	
1029-575 Preliminary	Monday,04/01/2021	09:13:50	10/02/2021	20/02/2021	5	115	0.10	88.0	
1011-902, 1011-554 &	Tuesday, 05/01/2021	12:38:59	10/02/2021	20/02/2021	5	115	0.11	88.0	
1029-114 Preliminary	Thursday, 07/01/2021	13:22:34	10/02/2021	20/02/2021	5	115	0.09	91.5	
1029-115 Preliminary	Saturday, 09/01/2021	15:03:40	10/02/2021	20/02/2021	5	115	0.09	91.5	
1029-116 1011-557 Pr	Monday, 11/01/2021	12:41:16	10/02/2021	20/02/2021	5	115	0.10	88.0	
1020-208, 1020-217 Pr	Thursday, 14/01/2021	12:45:18	10/02/2021	20/02/2021	5	115	0.12	88.0	
1011-557B & 1101-556	Thursday, 14/01/2021	12:48:11	10/02/2021	20/02/2021	5	115	0.10	88.0	
1020-207 & Large Roc	Sunday, 17/01/2021	12:34:46	10/02/2021	20/02/2021	1	95	0.08	88.0	
1020-209 Preliminary	Tuesday, 19/01/2021	12:20:28	10/02/2021	20/02/2021	5	115	0.09	88.0	
1029-101 Preliminary	Wednesday, 20/01/2021	12:31:44	10/02/2021	20/02/2021	5	115	0.09	91.5	
1020-204 Preliminary	Saturday, 23/01/2021	12:38:23	10/02/2021	20/02/2021	5	115	0.11	98.8	
1020-210A & 1020-203	Wednesday, 27/01/2021	14:18:03	10/02/2021	20/02/2021	5	115	0.09	95.9	
1020-201 & 1029 Toe	Saturday, 30/01/2021	12:38:43	10/02/2021	20/02/2021	5	115	0.07	91.5	
FEBRUARY									
1011-307	Wednesday, 3 February 2021	12:30:57	08/03/2021	20/03/2021	5	115	0.13	88.0	
1020-203B	Wednesday, 10 February 2021	13:33:10	08/03/2021	20/03/2021	5	115	0.14	91.5	
1011-306	Friday, 12 February 2021	12:24:09	08/03/2021	20/03/2021	5	115	0.12	94.0	
1020-211	Sunday, 14 February 2021	12:36:45	08/03/2021	20/03/2021	1	95	0.09	91.5	
1011-561	Sunday, 14 February 2021	12:38:40	08/03/2021	20/03/2021	1	95	0.07	88.0	
1020-202	Tuesday, 16 February 2021	12:29:29	08/03/2021	20/03/2021	5	115	0.08	97.5	
1011-558 & 1020 Large	Tuesday, 16 February 2021	12:31:19	08/03/2021	20/03/2021	5	115	0.07	98.8	
1020 -Toe	Wednesday, 17 February 2021	12:38:18	08/03/2021	20/03/2021	5	115	0.07	94.0	
1011-559	Wednesday, 17 February 2021	12:38:18	08/03/2021	20/03/2021	5	115	0.07	94.0	
1020-212A	Monday, 22 February 2021	12:40:02	08/03/2021	20/03/2021	5	115	0.09	97.5	
1020-214	Wednesday, 24 February 2021	13:24:18	08/03/2021	20/03/2021	5	115	0.09	91.5	
1011-305	Saturday, 27 February 2021	16:25:43	08/03/2021	20/03/2021	5	115	0.14	88.0	

Monitoring Point: BM08.1 <Cowal North>
Blast monitoring, Airblast overpressure and ground vibration peak particle velocity recorded at private residence to the north, north east of ML1535 boundary

					Trigger Threshold		BM08.1 at Blast Time		
Blast Number	**Day/Date**	**Time**	**Date Obtained**	**Date Published**	**Ground Vibration (mm/s)**	**Airblast Overpressure (dB(L))**	**Ground Vibration (mm/s)**	**Airblast Overpressure (dB(L))**	**Comments**
JANUARY									
1020-216 & 1011-552	Saturday, 02/01/2021	12:35:19	10/02/2021	20/02/2021	5	115	0.01	88.0	
1020-205 Preliminary	Sunday, 03/01/2021	12:42:27	10/02/2021	20/02/2021	1	95	0.01	88.0	
1029-574 Preliminary	Sunday,03/01/2021	12:46:01	10/02/2021	20/02/2021	1	95	0.01	81.9	
1029-575 Preliminary	Monday,04/01/2021	09:13:50	10/02/2021	20/02/2021	5	115	0.01	88.0	
1011-902, 1011-554 &	Tuesday, 05/01/2021	12:38:59	10/02/2021	20/02/2021	5	115	0.01	94.0	
1029-114 Preliminary	Thursday, 07/01/2021	13:22:34	10/02/2021	20/02/2021	5	115	0.01	88.0	
1029-115 Preliminary	Saturday, 09/01/2021	15:03:40	10/02/2021	20/02/2021	5	115	0.01	88.0	
1029-116 1011-557 Pr	Monday, 11/01/2021	12:41:16	10/02/2021	20/02/2021	5	115	0.01	88.0	
1020-208, 1020-217 Pr	Thursday, 14/01/2021	12:45:18	10/02/2021	20/02/2021	5	115	0.02	98.8	
1011-557B & 1101-556	Thursday, 14/01/2021	12:48:11	10/02/2021	20/02/2021	5	115	0.02	102.8	
1020-207 & Large Roc	Sunday, 17/01/2021	12:34:46	10/02/2021	20/02/2021	1	95	0.01	88.0	
1020-209 Preliminary	Tuesday, 19/01/2021	12:20:28	10/02/2021	20/02/2021	5	115	0.01	88.0	
1029-101 Preliminary	Wednesday, 20/01/2021	12:31:44	10/02/2021	20/02/2021	5	115	0.01	94.0	
1020-204 Preliminary	Saturday, 23/01/2021	12:38:23	10/02/2021	20/02/2021	5	115	0.01	88.0	
1020-210A & 1020-203	Wednesday, 27/01/2021	14:18:03	10/02/2021	20/02/2021	5	115	0.41	95.9	
1020-201 & 1029 Toe	Saturday, 30/01/2021	12:38:43	10/02/2021	20/02/2021	5	115	0.11	88.0	
FEBRUARY									
1011-307	Wednesday, 3 February 2021	12:30:57	08/03/2021	20/03/2021	5	115	0.08	88.0	
1020-203B	Wednesday, 10 February 2021	13:33:10	08/03/2021	20/03/2021	5	115	0.06	88.0	
1011-306	Friday, 12 February 2021	12:24:09	08/03/2021	20/03/2021	5	115	0.07	107.0	
1020-211	Sunday, 14 February 2021	12:36:45	08/03/2021	20/03/2021	1	95	0.54	91.5	
1011-561	Sunday, 14 February 2021	12:38:40	08/03/2021	20/03/2021	1	95	0.01	88.0	
1020-202	Tuesday, 16 February 2021	12:29:29	08/03/2021	20/03/2021	5	115	0.02	95.9	
1011-558 & 1020 Large	Tuesday, 16 February 2021	12:31:19	08/03/2021	20/03/2021	5	115	0.01	91.5	
1020 -Toe	Wednesday, 17 February 2021	12:38:18	08/03/2021	20/03/2021	5	115	0.02	95.9	
1011-559	Wednesday, 17 February 2021	12:38:18	08/03/2021	20/03/2021	5	115	0.02	95.9	
1020-212A	Monday, 22 February 2021	12:40:02	08/03/2021	20/03/2021	5	115	0.02	97.5	
1020-214	Wednesday, 24 February 2021	13:24:18	08/03/2021	20/03/2021	5	115	0.02	88.0	
1011-305	Saturday, 27 February 2021	16:25:43	08/03/2021	20/03/2021	5	115	0.03	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%	3.0%	

Cyanide

Monitoring Point: 48
Water quality monitoring, automated sampler located at the processing plant

			Total Cyanide (mg/L)				
Frequency	**Month**	**No Sampled during Month**	**Minimum**	**Mean**	**Median**	**Maximum**	**Comments**
Weekly	January	5	7.49	15.34	12.81	26.05	
Weekly	February	4	3.08	13.60	12.95	25.43	
Weekly							
Weekly							
Weekly							
Weekly							
Weekly							
Weekly							
Weekly							
Weekly							
Weekly							
Weekly							

			WAD Cyanide (mg/L)		Concentration Limits		
Frequency	**Month**	**No Sampled during Month**	**Minimum**	**Maximum**	**90th Percentile**	**100th Percentile**	**Comments**
Twice daily	January	62	0.00	7.96	20.00	30.00	
Twice daily	February	48	0.00	9.15	20.00	30.00	

EPL Exceedances

EPL Correction Log

Monitoring Point	Monitoring Point Type	Date Sampled	Date Obtained	Date Originally Published	Parameter	Original	Correction	Comments