

## Vales Point Power Station Monthly Environmental Data Summary



LICENCE NO	761 <a href="http://www.epa.nsw.gov.au/prpoeoapp/">http://www.epa.nsw.gov.au/prpoeoapp/</a>
LICENCE HOLDER	SUNSET POWER INTERNATIONAL PTY LTD
REPORTING PERIOD	September 2021
ADDRESS	VALES ROAD, MANNERING PARK NSW

POINT 2 Combined air emissions from boiler 5 via Points 4 to 7 to Point 1 marked and shown as EPA ID 2 on The Plans ("VX837351-1 AND "VX837351-2" 03/06/2020 EPA REFERENCE DOC20/476695 AND DOC20/476695-1).												
Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	99 Percentile Concentration Limit	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Sep-21	Cadmium	(mg/m3)	Every 6 months							0.2		
Sep-21	Chlorine	(mg/m3)	Every 6 months							20		
Sep-21	Fluorine	(mg/m3)	Every 6 months							30		
Sep-21	Hydrogen chloride	(mg/m3)	Every 6 months							50		
Sep-21	Mercury	(mg/m3)	Every 6 months							0.05		
Sep-21	Nitrogen Oxides	(mg/m3)	Continuous	100.0%	Sep-21	461	672	852	1100	1500	No	
Sep-21	Solid Particles	(mg/m3)	Quarterly							50	No	
Sep-21	Sulfur dioxide	(mg/m3)	Continuous	100.0%	Sep-21	461	677	883	1400	1700	No	
Sep-21	Sulfuric acid mist and sulfur trioxide (as SO3)	(mg/m3)	Every 6 months							100		
Sep-21	Type 1 and Type 2 substances in aggregate	(mg/m3)	Every 6 months							0.75		
Sep-21	VOC's as n-propane equivalent	(mg/m3)	Every 6 months							10		

POINT 3 Combined air emissions from boiler 6 via Points 8 to 11 to Point 1 marked and shown as EPA ID 3 on The Plans ("VX837351-1 AND "VX837351-2" 03/06/2020 EPA REFERENCE DOC20/476695 AND DOC20/476695-1).												
Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	99 Percentile Concentration Limit	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Sep-21	Cadmium	(mg/m3)	Every 6 months							0.2		
Sep-21	Chlorine	(mg/m3)	Every 6 months							20		
Sep-21	Fluorine	(mg/m3)	Every 6 months							30		
Sep-21	Hydrogen chloride	(mg/m3)	Every 6 months							50		
Sep-21	Mercury	(mg/m3)	Every 6 months							0.05		
Sep-21	Nitrogen Oxides	(mg/m3)	Continuous	98.4%	Sep-21	383	602	909	1100	1500	No	
Sep-21	Solid Particles	(mg/m3)	Quarterly							50		
Sep-21	Sulfur dioxide	(mg/m3)	Continuous	98.4%	Sep-21	464	643	832	1400	1700	No	
Sep-21	Sulfuric acid mist and sulfur trioxide (as SO3)	(mg/m3)	Every 6 months							100		
Sep-21	Type 1 and Type 2 substances in aggregate	(mg/m3)	Every 6 months							0.75		
Sep-21	VOC's as n-propane equivalent	(mg/m3)	Every 6 months							10		

POINT 4 Boiler number 5 exhaust - duct A marked and shown as EPA ID 4 on The Plans ("VX837351-1 AND "VX837351-2" 03/06/2020 EPA REFERENCE DOC20/476695 AND DOC20/476695-1).												
Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	99 Percentile Concentration Limit	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Sep-21	Cadmium	(mg/m3)	Every 6 months									
Sep-21	Carbon dioxide	(%)	Every 6 months									
Sep-21	Chlorine	(mg/m3)	Every 6 months									
Sep-21	Flow rate	(m3/s)	Continuous									Not required until 31 October 2021
Sep-21	Fluorine	(mg/m3)	Every 6 months									
Sep-21	Hydrogen chloride	(mg/m3)	Every 6 months									
Sep-21	Mercury	(mg/m3)	Every 6 months									
Sep-21	Moisture	(%)	Continuous									Not required until 31 October 2021
Sep-21	Oxygen (O2)	(%)	Continuous									Not required until 31 October 2021
Sep-21	Solid Particles	(mg/m3)	Quarterly									
Sep-21	Sulfuric acid mist and sulfur trioxide (as SO3)	(mg/m3)	Every 6 months									
Sep-21	Temperature	(°C)	Continuous									Not required until 31 October 2021
Sep-21	Type 1 and Type 2 substances in aggregate	(mg/m3)	Every 6 months									
Sep-21	VOC's as n-propane equivalent	(mg/m3)	Every 6 months									

**POINT 5 Boiler number 5 exhaust - duct B marked and shown as EPA ID 5 on The Plans ("VX837351-1 AND "VX837351-2" 03/06/2020 EPA REFERENCE DOC20/476695 AND DOC20/476695-1).**

Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	99 Percentile Concentration Limit	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Sep-21	Cadmium	(mg/m3)	Every 6 months									
Sep-21	Flow rate	(m3/s)	Continuous									Not required until 31 October 2021
Sep-21	Mercury	(mg/m3)	Every 6 months									
Sep-21	Moisture	(%)	Continuous									Not required until 31 October 2021
Sep-21	Oxygen (O2)	(%)	Continuous									Not required until 31 October 2021
Sep-21	Solid Particles	(mg/m3)	Quarterly									
Sep-21	Temperature	(°C)	Continuous									Not required until 31 October 2021
Sep-21	Type 1 and Type 2 substances in aggregate	(mg/m3)	Every 6 months									

**POINT 6 Boiler number 5 exhaust - duct C marked and shown as EPA ID 6 on The Plans ("VX837351-1 AND "VX837351-2" 03/06/2020 EPA REFERENCE DOC20/476695 AND DOC20/476695-1).**

Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	99 Percentile Concentration Limit	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Sep-21	Cadmium	(mg/m3)	Every 6 months									
Sep-21	Carbon dioxide	(%)	Every 6 months									
Sep-21	Chlorine	(mg/m3)	Every 6 months									
Sep-21	Flow rate	(m3/s)	Continuous									Not required until 31 October 2021
Sep-21	Fluorine	(mg/m3)	Every 6 months									
Sep-21	Hydrogen chloride	(mg/m3)	Every 6 months									
Sep-21	Mercury	(mg/m3)	Every 6 months									
Sep-21	Moisture	(%)	Continuous									Not required until 31 October 2021
Sep-21	Oxygen (O2)	(%)	Continuous									Not required until 31 October 2021
Sep-21	Solid Particles	(mg/m3)	Quarterly									
Sep-21	Sulfuric acid mist and sulfur trioxide (as SO3)	(mg/m3)	Every 6 months									
Sep-21	Temperature	(°C)	Continuous									Not required until 31 October 2021
Sep-21	Type 1 and Type 2 substances in aggregate	(mg/m3)	Every 6 months									
Sep-21	VOC's as n-propane equivalent	(mg/m3)	Every 6 months									

**POINT 7 Boiler number 5 exhaust - duct D marked and shown as EPA ID 7 on The Plans ("VX837351-1 AND "VX837351-2" 03/06/2020 EPA REFERENCE DOC20/476695 AND DOC20/476695-1).**

Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	99 Percentile Concentration Limit	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Sep-21	Cadmium	(mg/m3)	Every 6 months									
Sep-21	Flow rate	(m3/s)	Continuous									Not required until 31 October 2021
Sep-21	Mercury	(mg/m3)	Every 6 months									
Sep-21	Moisture	(%)	Continuous									Not required until 31 October 2021
Sep-21	Oxygen (O2)	(%)	Continuous									Not required until 31 October 2021
Sep-21	Solid Particles	(mg/m3)	Quarterly									
Sep-21	Temperature	(°C)	Continuous									Not required until 31 October 2021
Sep-21	Type 1 and Type 2 substances in aggregate	(mg/m3)	Every 6 months									

**POINT 8 Boiler number 6 exhaust - duct A marked and shown as EPA ID 8 on The Plans ("VX837351-1 AND "VX837351-2" 03/06/2020 EPA REFERENCE DOC20/476695 AND DOC20/476695-1).**

Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	99 Percentile Concentration Limit	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Sep-21	Cadmium	(mg/m3)	Every 6 months									
Sep-21	Carbon dioxide	(%)	Every 6 months									
Sep-21	Chlorine	(mg/m3)	Every 6 months									
Sep-21	Flow rate	(m3/s)	Continuous									Not required until 31 October 2021
Sep-21	Fluorine	(mg/m3)	Every 6 months									
Sep-21	Hydrogen chloride	(mg/m3)	Every 6 months									
Sep-21	Mercury	(mg/m3)	Every 6 months									
Sep-21	Moisture	(%)	Continuous									Not required until 31 October 2021
Sep-21	Oxygen (O2)	(%)	Continuous									Not required until 31 October 2021
Sep-21	Solid Particles	(mg/m3)	Quarterly									
Sep-21	Sulfuric acid mist and sulfur trioxide (as SO3)	(mg/m3)	Every 6 months									
Sep-21	Temperature	(°C)	Continuous									Not required until 31 October 2021
Sep-21	Type 1 and Type 2 substances in aggregate	(mg/m3)	Every 6 months									
Sep-21	VOC's as n-propane equivalent	(mg/m3)	Every 6 months									

**POINT 9 Boiler number 6 exhaust - duct B marked and shown as EPA ID 9 on The Plans ("VX837351-1 AND "VX837351-2" 03/06/2020 EPA REFERENCE DOC20/476695 AND DOC20/476695-1).**

Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	99 Percentile Concentration Limit	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Sep-21	Cadmium	(mg/m3)	Every 6 months									
Sep-21	Flow rate	(m3/s)	Continuous									Not required until 31 October 2021
Sep-21	Mercury	(mg/m3)	Every 6 months									
Sep-21	Moisture	(%)	Continuous									Not required until 31 October 2021
Sep-21	Oxygen (O2)	(%)	Continuous									Not required until 31 October 2021
Sep-21	Solid Particles	(mg/m3)	Quarterly									
Sep-21	Temperature	(°C)	Continuous									Not required until 31 October 2021
Sep-21	Type 1 and Type 2 substances in aggregate	(mg/m3)	Every 6 months									

**POINT 10 Boiler number 6 exhaust - duct C marked and shown as EPA ID 10 on The Plans ("VX837351-1 AND "VX837351-2" 03/06/2020 EPA REFERENCE DOC20/476695 AND DOC20/476695-1).**

Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	99 Percentile Concentration Limit	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Sep-21	Cadmium	(mg/m3)	Every 6 months									
Sep-21	Carbon dioxide	(%)	Every 6 months									
Sep-21	Chlorine	(mg/m3)	Every 6 months									
Sep-21	Flow rate	(m3/s)	Continuous									Not required until 31 October 2021
Sep-21	Fluorine	(mg/m3)	Every 6 months									
Sep-21	Hydrogen chloride	(mg/m3)	Every 6 months									
Sep-21	Mercury	(mg/m3)	Every 6 months									
Sep-21	Moisture	(%)	Continuous									Not required until 31 October 2021
Sep-21	Oxygen (O2)	(%)	Continuous									Not required until 31 October 2021
Sep-21	Solid Particles	(mg/m3)	Quarterly									
Sep-21	Sulfuric acid mist and sulfur trioxide (as SO3)	(mg/m3)	Every 6 months									
Sep-21	Temperature	(°C)	Continuous									Not required until 31 October 2021
Sep-21	Type 1 and Type 2 substances in aggregate	(mg/m3)	Every 6 months									
Sep-21	VOC's as n-propane equivalent	(mg/m3)	Every 6 months									

**POINT 11 Boiler number 6 exhaust - duct D marked and shown as EPA ID 11 on The Plans ("VX837351-1 AND "VX837351-2" 03/06/2020 EPA REFERENCE DOC20/476695 AND DOC20/476695-1).**

Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	99 Percentile Concentration Limit	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Sep-21	Cadmium	(mg/m3)	Every 6 months									
Sep-21	Flow rate	(m3/s)	Continuous									Not required until 31 October 2021
Sep-21	Mercury	(mg/m3)	Every 6 months									
Sep-21	Moisture	(%)	Continuous									Not required until 31 October 2021
Sep-21	Oxygen (O2)	(%)	Continuous									Not required until 31 October 2021
Sep-21	Solid Particles	(mg/m3)	Quarterly									
Sep-21	Temperature	(°C)	Continuous									Not required until 31 October 2021
Sep-21	Type 1 and Type 2 substances in aggregate	(mg/m3)	Every 6 months									

**POINT 12 Boiler number 5 combined exhaust - duct A and B (points 4 and 5) marked and shown as EPA ID 12 on The Plans ("VX837351-1 AND "VX837351-2" 03/06/2020 EPA REFERENCE DOC20/476695 AND DOC20/476695-1).**

Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	99 Percentile Concentration Limit	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Sep-21	Nitrogen Oxides	(mg/m3)	Continuous	100.0%	Sep-21	369	622	789			No	
Sep-21	Sulfur dioxide	(mg/m3)	Continuous	100.0%	Sep-21	376	631	860			No	

**POINT 13 Boiler number 5 combined exhaust - duct C and D (points 6 and 7) marked and shown as EPA ID 13 on The Plans ("VX837351-1 AND "VX837351-2" 03/06/2020 EPA REFERENCE DOC20/476695 AND DOC20/476695-1).**

Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	99 Percentile Concentration Limit	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Sep-21	Nitrogen Oxides	(mg/m3)	Continuous	100.0%	Sep-21	522	722	915			No	
Sep-21	Sulfur dioxide	(mg/m3)	Continuous	100.0%	Sep-21	511	722	926			No	

**POINT 14 Boiler number 6 combined exhaust - duct A and B (points 8 and 9) marked and shown as EPA ID 14 on The Plans ("VX837351-1 AND "VX837351-2" 03/06/2020 EPA REFERENCE DOC20/476695 AND DOC20/476695-1).**

Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	99 Percentile Concentration Limit	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Sep-21	Nitrogen Oxides	(mg/m3)	Continuous	97.6%	Sep-21	348	554	769			No	
Sep-21	Sulfur dioxide	(mg/m3)	Continuous	97.6%	Sep-21	438	671	870			No	

**POINT 15 Boiler number 6 combined exhaust - duct C and D (points 10 and 11) marked and shown as EPA ID 12 on The Plans ("VX837351-1 AND "VX837351-2" 03/06/2020 EPA REFERENCE DOC20/476695 AND DOC20/476695-1).**

Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	99 Percentile Concentration Limit	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Sep-21	Nitrogen Oxides	(mg/m3)	Continuous	99.1%	Sep-21	300	649	1080			No	
Sep-21	Sulfur dioxide	(mg/m3)	Continuous	99.1%	Sep-21	375	616	795			No	

**POINT 22 Discharge of cooling water from the cooling water outlet canal to Wyee Bay marked and shown as EPA ID 22 on The Plans ("VX837351-1 AND "VX837351-2" 03/06/2020 EPA REFERENCE DOC20/476695 AND DOC20/476695-1).**

Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	97 Percentile Concentration Limit	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Sep-21	Chlorine (free residual)	(mg/L)	Monthly during discharge	1	28/09/2021	<0.1	<0.1	<0.1		0.2	No	
Sep-21	Copper	(mg/L)	Monthly during discharge	1	28/09/2021	0.004	0.004	0.004		0.005	No	
Sep-21	Iron	(mg/L)	Monthly during discharge	1	28/09/2021	0.177	0.177	0.177		0.3	No	
Sep-21	Oil and Grease	Visible	Continuous during discharge	100%	Sep-21	NIL	NIL	NIL				
Sep-21	Selenium	(mg/L)	Monthly during discharge	1	28/09/2021	<0.002	<0.002	<0.002		0.005	No	
Sep-21	Temperature	(°C)	Continuous during discharge	100%	Sep-21	19.8	23.1	28.1	35	37.5	No	

**POINT 23 Discharge of supernatant water from the ash dam to the cooling water outlet canal to Wyee Bay marked and shown as EPA ID 23 on The Plans ("VX837351-1 AND "VX837351-2" 03/06/2020 EPA REFERENCE DOC20/476695 AND DOC20/476695-1).**

Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	99 Percentile Concentration Limit	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Sep-21	Aluminium	(mg/L)	Monthly during discharge	1	28/09/2021	0.028	0.028	0.028				
Sep-21	Ammonia	(mg/L)	Monthly during discharge	1	28/09/2021	0.10	0.10	0.10				
Sep-21	Arsenic (III)	(mg/L)	Monthly during discharge	1	28/09/2021	<0.005	<0.005	<0.005				
Sep-21	Arsenic (V)	(mg/L)	Monthly during discharge	1	28/09/2021	<0.005	<0.005	<0.005				
Sep-21	Cadmium	(mg/L)	Monthly during discharge	1	28/09/2021	<0.0002	<0.0002	<0.0002				
Sep-21	Chromium (trivalent)	(mg/L)	Monthly during discharge	1	28/09/2021	<0.001	<0.001	<0.001				
Sep-21	Chromium (VI) Compounds	(mg/L)	Monthly during discharge	1	28/09/2021	0.026	0.026	0.026				
Sep-21	Copper	(mg/L)	Monthly during discharge	1	28/09/2021	<0.001	<0.001	<0.001				
Sep-21	Iron	(mg/L)	Monthly during discharge	1	28/09/2021	0.05	0.05	0.05				
Sep-21	Lead	(mg/L)	Monthly during discharge	1	28/09/2021	<0.0002	<0.0002	<0.0002				
Sep-21	Manganese	(mg/L)	Monthly during discharge	1	28/09/2021	0.0046	0.0046	0.0046				
Sep-21	Nickel	(mg/L)	Monthly during discharge	1	28/09/2021	<0.0005	<0.0005	<0.0005				
Sep-21	Nitrate + nitrite (oxidised nitrogen)	(mg/L)	Monthly during discharge	1	28/09/2021	0.23	0.23	0.23				
Sep-21	Nitrogen	(mg/L)	Monthly during discharge	1	28/09/2021	<0.1	<0.1	<0.1				
Sep-21	pH	pH	Monthly during discharge	1	28/09/2021	7.40	7.40	7.40		6.5 - 9.5	No	
Sep-21	Phosphorus	(mg/L)	Monthly during discharge	1	28/09/2021	<0.10	<0.10	<0.10				
Sep-21	Reactive Phosphorus	(mg/L)	Monthly during discharge	1	28/09/2021	0.02	0.02	0.02				
Sep-21	Selenium	(mg/L)	Monthly during discharge	1	28/09/2021	0.092	0.092	0.092				
Sep-21	Total Kjeldahl Nitrogen	(mg/L)	Monthly during discharge	1	28/09/2021	<0.1	<0.1	<0.1				
Sep-21	Total Suspended Solids	(mg/L)	Monthly during discharge	1	28/09/2021	1	1	1		50	No	
Sep-21	Vanadium	(mg/L)	Monthly during discharge	1	28/09/2021	0.0763	0.0763	0.0763				
Sep-21	Zinc	(mg/L)	Monthly during discharge	1	28/09/2021	<0.005	<0.005	<0.005				

**POINT 24 Discharge of seepage water from the ash dam rehabilitation area to Mannering Bay marked and shown as EPA ID 24 on The Plans ("VX837351-1 AND "VX837351-2" 03/06/2020 EPA REFERENCE DOC20/476695 AND DOC20/476695-1).**

Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	Discharge (yes/no)	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Sep-21	Aluminium	(mg/L)	Monthly during discharge	1	28/09/2021				No			
Sep-21	Ammonia	(mg/L)	Monthly during discharge	1	28/09/2021				No			
Sep-21	Arsenic (III)	(mg/L)	Monthly during discharge	1	28/09/2021				No			
Sep-21	Arsenic (V)	(mg/L)	Monthly during discharge	1	28/09/2021				No			
Sep-21	Cadmium	(mg/L)	Monthly during discharge	1	28/09/2021				No			
Sep-21	Chromium (trivalent)	(mg/L)	Monthly during discharge	1	28/09/2021				No			
Sep-21	Chromium (VI) Compounds	(mg/L)	Monthly during discharge	1	28/09/2021				No			
Sep-21	Copper	(mg/L)	Monthly during discharge	1	28/09/2021				No			
Sep-21	Iron	(mg/L)	Monthly during discharge	1	28/09/2021				No			
Sep-21	Lead	(mg/L)	Monthly during discharge	1	28/09/2021				No			No discharge from EPA Point 24 during September 2021
Sep-21	Manganese	(mg/L)	Monthly during discharge	1	28/09/2021				No			
Sep-21	Nickel	(mg/L)	Monthly during discharge	1	28/09/2021				No			
Sep-21	Nitrate + nitrite (oxidised nitrogen)	(mg/L)	Monthly during discharge	1	28/09/2021				No			
Sep-21	Nitrogen	(mg/L)	Monthly during discharge	1	28/09/2021				No			
Sep-21	pH	pH	Monthly during discharge	1	28/09/2021				No	6.5 - 9.5	No	
Sep-21	Phosphorus	(mg/L)	Monthly during discharge	1	28/09/2021				No			
Sep-21	Reactive Phosphorus	(mg/L)	Monthly during discharge	1	28/09/2021				No			
Sep-21	Selenium	(mg/L)	Monthly during discharge	1	28/09/2021				No			
Sep-21	Total Kjeldahl Nitrogen	(mg/L)	Monthly during discharge	1	28/09/2021				No			
Sep-21	Total Suspended Solids	(mg/L)	Monthly during discharge	1	28/09/2021				No	50	No	
Sep-21	Vanadium	(mg/L)	Monthly during discharge	1	28/09/2021				No			
Sep-21	Zinc	(mg/L)	Monthly during discharge	1	28/09/2021				No			

**POINT 25 Discharge of over boarded water from the ash dam to Mannering Bay marked and shown as EPA ID 25 on The Plans ("VX837351-1 AND "VX837351-2" 03/06/2020 EPA REFERENCE DOC20/476695 AND DOC20/476695-1).**

Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	Discharge (yes/no)	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Sep-21	Aluminium	(mg/L)	Daily for any discharge >2 hrs						No			
Sep-21	Ammonia	(mg/L)	Daily for any discharge >2 hrs						No			
Sep-21	Arsenic (III)	(mg/L)	Daily for any discharge >2 hrs						No			
Sep-21	Arsenic (V)	(mg/L)	Daily for any discharge >2 hrs						No			
Sep-21	Cadmium	(mg/L)	Daily for any discharge >2 hrs						No			
Sep-21	Chromium (trivalent)	(mg/L)	Daily for any discharge >2 hrs						No			
Sep-21	Chromium (VI) Compounds	(mg/L)	Daily for any discharge >2 hrs						No			
Sep-21	Copper	(mg/L)	Daily for any discharge >2 hrs						No			
Sep-21	Iron	(mg/L)	Daily for any discharge >2 hrs						No			
Sep-21	Lead	(mg/L)	Daily for any discharge >2 hrs						No			
Sep-21	Manganese	(mg/L)	Daily for any discharge >2 hrs						No			
Sep-21	Nickel	(mg/L)	Daily for any discharge >2 hrs						No			No discharge from EPA Point 25 during September 2021
Sep-21	Nitrate + nitrite (oxidised nitrogen)	(mg/L)	Daily for any discharge >2 hrs						No			
Sep-21	Nitrogen	(mg/L)	Daily for any discharge >2 hrs						No			
Sep-21	pH	pH	Daily for any discharge >2 hrs						No	6.5 - 9.5	No	
Sep-21	Phosphorus	(mg/L)	Daily for any discharge >2 hrs						No			
Sep-21	Reactive Phosphorus	(mg/L)	Daily for any discharge >2 hrs						No			
Sep-21	Selenium	(mg/L)	Daily for any discharge >2 hrs						No			
Sep-21	Total Kjeldahl Nitrogen	(mg/L)	Daily for any discharge >2 hrs						No			
Sep-21	Total Suspended Solids	(mg/L)	Daily for any discharge >2 hrs						No	50	No	
Sep-21	Vanadium	(mg/L)	Daily for any discharge >2 hrs						No			
Sep-21	Zinc	(mg/L)	Daily for any discharge >2 hrs						No			

**POINT 30** Groundwater quality monitoring bore marked and shown as EPA ID 30 on The Plans ("VX837351-1 AND "VX837351-2" 03/06/2020 EPA REFERENCE DOC20/476695 AND DOC20/476695-1).

Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	99 Percentile Concentration Limit	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Sep-21	Aluminium	(mg/L)	Quarterly	1	28/09/2021	0.018	0.018	0.018				
Sep-21	Ammonia	(mg/L)	Quarterly	1	28/09/2021	1.07	1.07	1.07				
Sep-21	Arsenic (III)	(mg/L)	Quarterly	1	28/09/2021	<0.0005	<0.0005	<0.0005				
Sep-21	Arsenic (V)	(mg/L)	Quarterly	1	28/09/2021	<0.0005	<0.0005	<0.0005				
Sep-21	Cadmium	(mg/L)	Quarterly	1	28/09/2021	<0.0002	<0.0002	<0.0002				
Sep-21	Chromium (trivalent)	(mg/L)	Quarterly	1	28/09/2021	<0.001	<0.001	<0.001				
Sep-21	Chromium (VI) Compounds	(mg/L)	Quarterly	1	28/09/2021	<0.01	<0.01	<0.01				
Sep-21	Copper	(mg/L)	Quarterly	1	28/09/2021	0.005	0.005	0.005				
Sep-21	Electrical Conductivity	(us/cm)	Quarterly	1	28/09/2021	35600	35600	35600				
Sep-21	Iron	(mg/L)	Quarterly	1	28/09/2021	69.1	69.1	69.1				
Sep-21	Lead	(mg/L)	Quarterly	1	28/09/2021	0.0003	0.0003	0.0003				
Sep-21	Magnesium	(mg/L)	Quarterly	1	28/09/2021	789	789	789				
Sep-21	Manganese	(mg/L)	Quarterly	1	28/09/2021	4.29	4.29	4.29				
Sep-21	Nickel	(mg/L)	Quarterly	1	28/09/2021	0.0206	0.0206	0.0206				
Sep-21	pH	pH	Quarterly	1	28/09/2021	5.88	5.88	5.88				
Sep-21	Potassium	(mg/L)	Quarterly	1	28/09/2021	104	104	104				
Sep-21	Selenium	(mg/L)	Quarterly	1	28/09/2021	<0.002	<0.002	<0.002				
Sep-21	Sodium	(mg/L)	Quarterly	1	28/09/2021	5750	5750	5750				
Sep-21	Standing Water Level	(m)	Quarterly	1	28/09/2021	3.85	3.85	3.85				
Sep-21	Vanadium	(mg/L)	Quarterly	1	28/09/2021	<0.0005	<0.0005	<0.0005				
Sep-21	Zinc	(mg/L)	Quarterly	1	28/09/2021	0.006	0.006	0.006				

**POINT 31** Groundwater quality monitoring bore marked and shown as EPA ID 31 on The Plans ("VX837351-1 AND "VX837351-2" 03/06/2020 EPA REFERENCE DOC20/476695 AND DOC20/476695-1).

Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	99 Percentile Concentration Limit	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Sep-21	Aluminium	(mg/L)	Quarterly	1	28/09/2021	0.49	0.49	0.49				
Sep-21	Ammonia	(mg/L)	Quarterly	1	28/09/2021	0.13	0.13	0.13				
Sep-21	Arsenic (III)	(mg/L)	Quarterly	1	28/09/2021	<0.005	<0.005	<0.005				
Sep-21	Arsenic (V)	(mg/L)	Quarterly	1	28/09/2021	<0.005	<0.005	<0.005				
Sep-21	Cadmium	(mg/L)	Quarterly	1	28/09/2021	0.00024	0.00024	0.00024				
Sep-21	Chromium (trivalent)	(mg/L)	Quarterly	1	28/09/2021	<0.001	<0.001	<0.001				
Sep-21	Chromium (VI) Compounds	(mg/L)	Quarterly	1	28/09/2021	<0.001	<0.001	<0.001				
Sep-21	Copper	(mg/L)	Quarterly	1	28/09/2021	0.0104	0.0104	0.0104				
Sep-21	Electrical Conductivity	(us/cm)	Quarterly	1	28/09/2021	3650	3650	3650				
Sep-21	Iron	(mg/L)	Quarterly	1	28/09/2021	4.47	4.47	4.47				
Sep-21	Lead	(mg/L)	Quarterly	1	28/09/2021	0.0026	0.0026	0.0026				
Sep-21	Magnesium	(mg/L)	Quarterly	1	28/09/2021	60	60	60				
Sep-21	Manganese	(mg/L)	Quarterly	1	28/09/2021	0.437	0.437	0.437				
Sep-21	Nickel	(mg/L)	Quarterly	1	28/09/2021	0.0114	0.0114	0.0114				
Sep-21	pH	pH	Quarterly	1	28/09/2021	5.89	5.89	5.89				
Sep-21	Potassium	(mg/L)	Quarterly	1	28/09/2021	8	8	8				
Sep-21	Selenium	(mg/L)	Quarterly	1	28/09/2021	0.0006	0.0006	0.0006				
Sep-21	Sodium	(mg/L)	Quarterly	1	28/09/2021	556	556	556				
Sep-21	Standing Water Level	(m)	Quarterly	1	28/09/2021	0.73	0.73	0.73				
Sep-21	Vanadium	(mg/L)	Quarterly	1	28/09/2021	0.001	0.001	0.001				
Sep-21	Zinc	(mg/L)	Quarterly	1	28/09/2021	3.12	3.12	3.12				

**POINT 32** Groundwater quality monitoring bore marked and shown as EPA ID 32 on The Plans ("VX837351-1 AND "VX837351-2" 03/06/2020 EPA REFERENCE DOC20/476695 AND DOC20/476695-1).

Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analyzed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	99 Percentile Concentration Limit	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Sep-21	Aluminium	(mg/L)	Quarterly	1	28/09/2021	1.42	1.42	1.42				
Sep-21	Ammonia	(mg/L)	Quarterly	1	28/09/2021	0.04	0.04	0.04				
Sep-21	Arsenic (III)	(mg/L)	Quarterly	1	28/09/2021	<0.0005	<0.0005	<0.0005				
Sep-21	Arsenic (V)	(mg/L)	Quarterly	1	28/09/2021	0.0010	0.0010	0.0010				
Sep-21	Cadmium	(mg/L)	Quarterly	1	28/09/2021	<0.00005	<0.00005	<0.00005				
Sep-21	Chromium (trivalent)	(mg/L)	Quarterly	1	28/09/2021	<0.001	<0.001	<0.001				
Sep-21	Chromium (VI) Compounds	(mg/L)	Quarterly	1	28/09/2021	0.008	0.008	0.008				
Sep-21	Copper	(mg/L)	Quarterly	1	28/09/2021	0.0046	0.0046	0.0046				
Sep-21	Electrical Conductivity	(us/cm)	Quarterly	1	28/09/2021	408	408	408				
Sep-21	Iron	(mg/L)	Quarterly	1	28/09/2021	5.92	5.92	5.92				
Sep-21	Lead	(mg/L)	Quarterly	1	28/09/2021	0.0012	0.0012	0.0012				
Sep-21	Magnesium	(mg/L)	Quarterly	1	28/09/2021	10	10	10				
Sep-21	Manganese	(mg/L)	Quarterly	1	28/09/2021	0.0878	0.0878	0.0878				
Sep-21	Nickel	(mg/L)	Quarterly	1	28/09/2021	0.003	0.003	0.003				
Sep-21	pH	pH	Quarterly	1	28/09/2021	6.33	6.33	6.33				
Sep-21	Potassium	(mg/L)	Quarterly	1	28/09/2021	2	2	2				
Sep-21	Selenium	(mg/L)	Quarterly	1	28/09/2021	0.0002	0.0002	0.0002				
Sep-21	Sodium	(mg/L)	Quarterly	1	28/09/2021	60	60	60				
Sep-21	Standing Water Level	(m)	Quarterly	1	28/09/2021	2.64	2.64	2.64				
Sep-21	Vanadium	(mg/L)	Quarterly	1	28/09/2021	0.0018	0.0018	0.0018				
Sep-21	Zinc	(mg/L)	Quarterly	1	28/09/2021	0.006	0.006	0.006				

**POINT 33** Groundwater quality monitoring bore marked and shown as EPA ID 33 on The Plans ("VX837351-1 AND "VX837351-2" 03/06/2020 EPA REFERENCE DOC20/476695 AND DOC20/476695-1).

Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analyzed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	99 Percentile Concentration Limit	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Sep-21	Aluminium	(mg/L)	Quarterly	1	28/09/2021	0.12	0.12	0.12				
Sep-21	Ammonia	(mg/L)	Quarterly	1	28/09/2021	0.58	0.58	0.58				
Sep-21	Arsenic (III)	(mg/L)	Quarterly	1	28/09/2021	<0.005	<0.005	<0.005				
Sep-21	Arsenic (V)	(mg/L)	Quarterly	1	28/09/2021	<0.005	<0.005	<0.005				
Sep-21	Cadmium	(mg/L)	Quarterly	1	28/09/2021	<0.0002	<0.0002	<0.0002				
Sep-21	Chromium (trivalent)	(mg/L)	Quarterly	1	28/09/2021	<0.001	<0.001	<0.001				
Sep-21	Chromium (VI) Compounds	(mg/L)	Quarterly	1	28/09/2021	0.002	0.002	0.002				
Sep-21	Copper	(mg/L)	Quarterly	1	28/09/2021	0.004	0.004	0.004				
Sep-21	Electrical Conductivity	(us/cm)	Quarterly	1	28/09/2021	48100	48100	48100				
Sep-21	Iron	(mg/L)	Quarterly	1	28/09/2021	74	74	74				
Sep-21	Lead	(mg/L)	Quarterly	1	28/09/2021	0.0004	0.0004	0.0004				
Sep-21	Magnesium	(mg/L)	Quarterly	1	28/09/2021	1120	1120	1120				
Sep-21	Manganese	(mg/L)	Quarterly	1	28/09/2021	0.308	0.308	0.308				
Sep-21	Nickel	(mg/L)	Quarterly	1	28/09/2021	0.0035	0.0035	0.0035				
Sep-21	pH	pH	Quarterly	1	28/09/2021	6.06	6.06	6.06				
Sep-21	Potassium	(mg/L)	Quarterly	1	28/09/2021	275	275	275				
Sep-21	Selenium	(mg/L)	Quarterly	1	28/09/2021	<0.002	<0.002	<0.002				
Sep-21	Sodium	(mg/L)	Quarterly	1	28/09/2021	9040	9040	9040				
Sep-21	Standing Water Level	(m)	Quarterly	1	28/09/2021	0.06	0.06	0.06				
Sep-21	Vanadium	(mg/L)	Quarterly	1	28/09/2021	0.0034	0.0034	0.0034				
Sep-21	Zinc	(mg/L)	Quarterly	1	28/09/2021	0.016	0.016	0.016				

POINT 34 Groundwater quality monitoring bore marked and shown as EPA ID 33 on The Plans ("VX837351-1 AND "VX837351-2" 03/06/2020 EPA REFERENCE DOC20/476695 AND DOC20/476695-1).

Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	99 Percentile Concentration Limit	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Sep-21	Aluminium	(mg/L)	Quarterly	1	28/09/2021	0.23	0.23	0.23				
Sep-21	Ammonia	(mg/L)	Quarterly	1	28/09/2021	<0.01	<0.01	<0.01				
Sep-21	Arsenic (III)	(mg/L)	Quarterly	1	28/09/2021	<0.0005	<0.0005	<0.0005				
Sep-21	Arsenic (V)	(mg/L)	Quarterly	1	28/09/2021	<0.0005	<0.0005	<0.0005				
Sep-21	Cadmium	(mg/L)	Quarterly	1	28/09/2021	<0.00005	<0.00005	<0.00005				
Sep-21	Chromium (trivalent)	(mg/L)	Quarterly	1	28/09/2021	<0.001	<0.001	<0.001				
Sep-21	Chromium (VI) Compounds	(mg/L)	Quarterly	1	28/09/2021	<0.001	<0.001	<0.001				
Sep-21	Copper	(mg/L)	Quarterly	1	28/09/2021	0.0032	0.0032	0.0032				
Sep-21	Electrical Conductivity	(us/cm)	Quarterly	1	28/09/2021	801	801	801				
Sep-21	Iron	(mg/L)	Quarterly	1	28/09/2021	1.45	1.45	1.45				
Sep-21	Lead	(mg/L)	Quarterly	1	28/09/2021	0.0006	0.0006	0.0006				
Sep-21	Magnesium	(mg/L)	Quarterly	1	28/09/2021	12	12	12				
Sep-21	Manganese	(mg/L)	Quarterly	1	28/09/2021	0.0756	0.0756	0.0756				
Sep-21	Nickel	(mg/L)	Quarterly	1	28/09/2021	0.0053	0.0053	0.0053				
Sep-21	pH	pH	Quarterly	1	28/09/2021	5.95	5.95	5.95				
Sep-21	Potassium	(mg/L)	Quarterly	1	28/09/2021	3	3	3				
Sep-21	Selenium	(mg/L)	Quarterly	1	28/09/2021	<0.0002	<0.0002	<0.0002				
Sep-21	Sodium	(mg/L)	Quarterly	1	28/09/2021	130	130	130				
Sep-21	Standing Water Level	(m)	Quarterly	1	28/09/2021	-0.02	-0.02	-0.02				
Sep-21	Vanadium	(mg/L)	Quarterly	1	28/09/2021	0.0009	0.0009	0.0009				
Sep-21	Zinc	(mg/L)	Quarterly	1	28/09/2021	0.024	0.024	0.024				

GENERAL COMMENTS