

Vales Point Power Station Monthly Environmental Data Summary



LICENCE NO	761	http://www.epa.nsw.gov.au/prpoeoapp/
LICENCE HOLDER	SUNSET POWER INTERNATIONAL PTY LTD	
REPORTING PERIOD	December 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	Exceed 100% Limit (yes/no)	Comments
Dec-21	Cadmium	(mg/m3)	Every 6 months							0.2		
Dec-21	Chlorine	(mg/m3)	Every 6 months							20		
Dec-21	Fluorine	(mg/m3)	Every 6 months							30		
Dec-21	Hydrogen chloride	(mg/m3)	Every 6 months							50		
Dec-21	Mercury	(mg/m3)	Every 6 months							0.05		
Dec-21	Nitrogen Oxides	(mg/m3)	Continuous	98.5%	Dec-21	246	690	893	850	980	No	99% and 100% NOx limits changed on 15 December 2021
Dec-21	Solid Particles	(mg/m3)	Quarterly							50		
Dec-21	Sulfur dioxide	(mg/m3)	Continuous	98.5%	Dec-21	486	798	1008	1400	1700	No	
Dec-21	Sulfuric acid mist and sulfur trioxide (as SO3)	(mg/m3)	Every 6 months							100		
Dec-21	Type 1 and Type 2 substances in aggregate	(mg/m3)	Every 6 months							0.75		
Dec-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	Exceed 100% Limit (yes/no)	Comments
Dec-21	Cadmium	(mg/m3)	Every 6 months							0.2		
Dec-21	Chlorine	(mg/m3)	Every 6 months							20		
Dec-21	Fluorine	(mg/m3)	Every 6 months							30		
Dec-21	Hydrogen chloride	(mg/m3)	Every 6 months							50		
Dec-21	Mercury	(mg/m3)	Every 6 months							0.05		
Dec-21	Nitrogen Oxides	(mg/m3)	Continuous	99.4%	Dec-21	272	567	950	850	980	No	99% and 100% NOx limits changed on 15 December 2021
Dec-21	Solid Particles	(mg/m3)	Quarterly							50		
Dec-21	Sulfur dioxide	(mg/m3)	Continuous	99.8%	Dec-21	567	771	1024	1400	1700	No	
Dec-21	Sulfuric acid mist and sulfur trioxide (as SO3)	(mg/m3)	Every 6 months							100		
Dec-21	Type 1 and Type 2 substances in aggregate	(mg/m3)	Every 6 months							0.75		
Dec-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
Dec-21	Cadmium	(mg/m3)	Every 6 months									
Dec-21	Carbon dioxide	(%)	Every 6 months									
Dec-21	Chlorine	(mg/m3)	Every 6 months									
Dec-21	Flow rate	(m3/s)	Continuous									
Dec-21	Fluorine	(mg/m3)	Every 6 months									
Dec-21	Hydrogen chloride	(mg/m3)	Every 6 months									
Dec-21	Mercury	(mg/m3)	Every 6 months									
Dec-21	Moisture	(%)	Continuous									
Dec-21	Oxygen (O2)	(%)	Continuous									
Dec-21	Solid Particles	(mg/m3)	Quarterly									
Dec-21	Sulfuric acid mist and sulfur trioxide (as SO3)	(mg/m3)	Every 6 months									
Dec-21	Temperature	(°C)	Continuous									
Dec-21	Type 1 and Type 2 substances in aggregate	(mg/m3)	Every 6 months									
Dec-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
Dec-21	Cadmium	(mg/m3)	Every 6 months									
Dec-21	Flow rate	(m3/s)	Continuous									
Dec-21	Mercury	(mg/m3)	Every 6 months									
Dec-21	Moisture	(%)	Continuous									
Dec-21	Oxygen (O2)	(%)	Continuous									
Dec-21	Solid Particles	(mg/m3)	Quarterly									
Dec-21	Temperature	(°C)	Continuous									
Dec-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
Dec-21	Cadmium	(mg/m3)	Every 6 months									
Dec-21	Carbon dioxide	(%)	Every 6 months									
Dec-21	Chlorine	(mg/m3)	Every 6 months									
Dec-21	Flow rate	(m3/s)	Continuous									
Dec-21	Fluorine	(mg/m3)	Every 6 months									
Dec-21	Hydrogen chloride	(mg/m3)	Every 6 months									
Dec-21	Mercury	(mg/m3)	Every 6 months									
Dec-21	Moisture	(%)	Continuous									
Dec-21	Oxygen (O2)	(%)	Continuous									
Dec-21	Solid Particles	(mg/m3)	Quarterly									
Dec-21	Sulfuric acid mist and sulfur trioxide (as SO3)	(mg/m3)	Every 6 months									
Dec-21	Temperature	(°C)	Continuous									
Dec-21	Type 1 and Type 2 substances in aggregate	(mg/m3)	Every 6 months									
Dec-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
Dec-21	Cadmium	(mg/m3)	Every 6 months									
Dec-21	Flow rate	(m3/s)	Continuous									
Dec-21	Mercury	(mg/m3)	Every 6 months									
Dec-21	Moisture	(%)	Continuous									
Dec-21	Oxygen (O2)	(%)	Continuous									
Dec-21	Solid Particles	(mg/m3)	Quarterly									
Dec-21	Temperature	(°C)	Continuous									
Dec-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
Dec-21	Cadmium	(mg/m3)	Every 6 months									
Dec-21	Carbon dioxide	(%)	Every 6 months									
Dec-21	Chlorine	(mg/m3)	Every 6 months									
Dec-21	Flow rate	(m3/s)	Continuous									
Dec-21	Fluorine	(mg/m3)	Every 6 months									
Dec-21	Hydrogen chloride	(mg/m3)	Every 6 months									
Dec-21	Mercury	(mg/m3)	Every 6 months									
Dec-21	Moisture	(%)	Continuous									
Dec-21	Oxygen (O2)	(%)	Continuous									
Dec-21	Solid Particles	(mg/m3)	Quarterly									
Dec-21	Sulfuric acid mist and sulfur trioxide (as SO3)	(mg/m3)	Every 6 months									
Dec-21	Temperature	(°C)	Continuous									
Dec-21	Type 1 and Type 2 substances in aggregate	(mg/m3)	Every 6 months									
Dec-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
Dec-21	Cadmium	(mg/m3)	Every 6 months									
Dec-21	Flow rate	(m3/s)	Continuous									
Dec-21	Mercury	(mg/m3)	Every 6 months									
Dec-21	Moisture	(%)	Continuous									See note at end of report regarding installation of continuous monitoring instrumentation.
Dec-21	Oxygen (O2)	(%)	Continuous									
Dec-21	Solid Particles	(mg/m3)	Quarterly									
Dec-21	Temperature	(°C)	Continuous									
Dec-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
Dec-21	Cadmium	(mg/m3)	Every 6 months									
Dec-21	Carbon dioxide	(%)	Every 6 months									
Dec-21	Chlorine	(mg/m3)	Every 6 months									
Dec-21	Flow rate	(m3/s)	Continuous									
Dec-21	Fluorine	(mg/m3)	Every 6 months									
Dec-21	Hydrogen chloride	(mg/m3)	Every 6 months									
Dec-21	Mercury	(mg/m3)	Every 6 months									See note at end of report regarding installation of continuous monitoring instrumentation.
Dec-21	Moisture	(%)	Continuous									
Dec-21	Oxygen (O2)	(%)	Continuous									
Dec-21	Solid Particles	(mg/m3)	Quarterly									
Dec-21	Sulfuric acid mist and sulfur trioxide (as SO3)	(mg/m3)	Every 6 months									
Dec-21	Temperature	(°C)	Continuous									
Dec-21	Type 1 and Type 2 substances in aggregate	(mg/m3)	Every 6 months									
Dec-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
Dec-21	Cadmium	(mg/m3)	Every 6 months									
Dec-21	Flow rate	(m3/s)	Continuous									
Dec-21	Mercury	(mg/m3)	Every 6 months									
Dec-21	Moisture	(%)	Continuous									See note at end of report regarding installation of continuous monitoring instrumentation.
Dec-21	Oxygen (O2)	(%)	Continuous									
Dec-21	Solid Particles	(mg/m3)	Quarterly									
Dec-21	Temperature	(°C)	Continuous									
Dec-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
Dec-21	Nitrogen Oxides	(mg/m3)	Continuous	98.7%	Dec-21	214	673	908				N/A
Dec-21	Sulfur dioxide	(mg/m3)	Continuous	98.7%	Dec-21	457	778	993				N/A

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
Dec-21	Nitrogen Oxides	(mg/m3)	Continuous	98.3%	Dec-21	277	708	981				N/A
Dec-21	Sulfur dioxide	(mg/m3)	Continuous	98.3%	Dec-21	515	819	1022				N/A

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
Dec-21	Nitrogen Oxides	(mg/m3)	Continuous	99.8%	Dec-21	331	553	764				N/A
Dec-21	Sulfur dioxide	(mg/m3)	Continuous	99.8%	Dec-21	551	802	1072				N/A

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/Masurement 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
Dec-21	Nitrogen Oxides	(mg/m3)	Continuous	99.0%	Dec-21	201	580	1137			N/A	
Dec-21	Sulfur dioxide	(mg/m3)	Continuous	99.8%	Dec-21	530	740	976			N/A	

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/Masurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	98.5 Percentile Concentration Limit	100 Percentile Concentration Limit	Exceed 100% Limit (yes/no)	Comments
Dec-21	Chlorine (free residual)	(mg/L)	Monthly during discharge	1	9/12/2021	<0.1	<0.1	<0.1		0.2	No	
Dec-21	Copper	(mg/L)	Monthly during discharge	1	9/12/2021	0.004	0.004	0.004		0.005	No	
Dec-21	Iron	(mg/L)	Monthly during discharge	1	9/12/2021	0.097	0.097	0.097		0.3	No	
Dec-21	Oil and Grease	Visible	Continuous during discharge	100%	Dec-21	NIL	NIL	NIL				
Dec-21	Selenium	(mg/L)	Monthly during discharge	1	9/12/2021	<0.002	<0.002	<0.002		0.005	No	
Dec-21	Temperature	(°C)	Continuous during discharge	100%	Dec-21	23.7	28.7	35.0	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/Masurement 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
Dec-21	Aluminium	(mg/L)	Monthly during discharge	1	9/12/2021	0.063	0.063	0.063				
Dec-21	Ammonia	(mg/L)	Monthly during discharge	1	9/12/2021	0.16	0.16	0.16				
Dec-21	Arsenic (III)	(mg/L)	Monthly during discharge	1	9/12/2021	<0.0050	<0.0050	<0.0050				
Dec-21	Arsenic (V)	(mg/L)	Monthly during discharge	1	9/12/2021	<0.0050	<0.0050	<0.0050				
Dec-21	Cadmium	(mg/L)	Monthly during discharge	1	9/12/2021	<0.0002	<0.0002	<0.0002				
Dec-21	Chromium (trivalent)	(mg/L)	Monthly during discharge	1	9/12/2021	0.006	0.006	0.006				
Dec-21	Chromium (VI) Compounds	(mg/L)	Monthly during discharge	1	9/12/2021	0.023	0.023	0.023				
Dec-21	Copper	(mg/L)	Monthly during discharge	1	9/12/2021	<0.001	<0.001	<0.001				
Dec-21	Iron	(mg/L)	Monthly during discharge	1	9/12/2021	0.10	0.10	0.10				
Dec-21	Lead	(mg/L)	Monthly during discharge	1	9/12/2021	<0.0002	<0.0002	<0.0002				
Dec-21	Manganese	(mg/L)	Monthly during discharge	1	9/12/2021	0.0087	0.0087	0.0087				
Dec-21	Nickel	(mg/L)	Monthly during discharge	1	9/12/2021	<0.0005	<0.0005	<0.0005				
Dec-21	Nitrate + nitrite (oxidised nitrogen)	(mg/L)	Monthly during discharge	1	9/12/2021	0.28	0.28	0.28				
Dec-21	Nitrogen	(mg/L)	Monthly during discharge	1	9/12/2021	<0.5	<0.5	<0.5				
Dec-21	pH	pH	Monthly during discharge	1	9/12/2021	7.94	7.94	7.94		6.5 - 9.5	No	
Dec-21	Phosphorus	(mg/L)	Monthly during discharge	1	9/12/2021	0.07	0.07	0.07				
Dec-21	Reactive Phosphorus	(mg/L)	Monthly during discharge	1	9/12/2021	0.03	0.03	0.03				
Dec-21	Selenium	(mg/L)	Monthly during discharge	1	9/12/2021	0.094	0.094	0.094				
Dec-21	Total Kjeldahl Nitrogen	(mg/L)	Monthly during discharge	1	9/12/2021	<0.5	<0.5	<0.5				
Dec-21	Total Suspended Solids	(mg/L)	Monthly during discharge	1	9/12/2021	2	2	2		50	No	
Dec-21	Vanadium	(mg/L)	Monthly during discharge	1	9/12/2021	0.0839	0.0839	0.0839				
Dec-21	Zinc	(mg/L)	Monthly during discharge	1	9/12/2021	<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
Dec-21	Aluminium	(mg/L)	Monthly during discharge	1	9/12/2021				No			
Dec-21	Ammonia	(mg/L)	Monthly during discharge	1	9/12/2021				No			
Dec-21	Arsenic (III)	(mg/L)	Monthly during discharge	1	9/12/2021				No			
Dec-21	Arsenic (V)	(mg/L)	Monthly during discharge	1	9/12/2021				No			
Dec-21	Cadmium	(mg/L)	Monthly during discharge	1	9/12/2021				No			
Dec-21	Chromium (trivalent)	(mg/L)	Monthly during discharge	1	9/12/2021				No			
Dec-21	Chromium (VI) Compounds	(mg/L)	Monthly during discharge	1	9/12/2021				No			
Dec-21	Copper	(mg/L)	Monthly during discharge	1	9/12/2021				No			
Dec-21	Iron	(mg/L)	Monthly during discharge	1	9/12/2021				No			
Dec-21	Lead	(mg/L)	Monthly during discharge	1	9/12/2021				No			
Dec-21	Manganese	(mg/L)	Monthly during discharge	1	9/12/2021				No			
Dec-21	Nickel	(mg/L)	Monthly during discharge	1	9/12/2021				No			No discharge from EPA Point 24 during December 2021
Dec-21	Nitrate + nitrite (oxidised nitrogen)	(mg/L)	Monthly during discharge	1	9/12/2021				No			
Dec-21	Nitrogen	(mg/L)	Monthly during discharge	1	9/12/2021				No			
Dec-21	pH	pH	Monthly during discharge	1	9/12/2021				No	6.5 - 9.5	No	
Dec-21	Phosphorus	(mg/L)	Monthly during discharge	1	9/12/2021				No			
Dec-21	Reactive Phosphorus	(mg/L)	Monthly during discharge	1	9/12/2021				No			
Dec-21	Selenium	(mg/L)	Monthly during discharge	1	9/12/2021				No			
Dec-21	Total Kjeldahl Nitrogen	(mg/L)	Monthly during discharge	1	9/12/2021				No			
Dec-21	Total Suspended Solids	(mg/L)	Monthly during discharge	1	9/12/2021				No	50	No	
Dec-21	Vanadium	(mg/L)	Monthly during discharge	1	9/12/2021				No			
Dec-21	Zinc	(mg/L)	Monthly during discharge	1	9/12/2021				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
Dec-21	Aluminium	(mg/L)	Daily for any discharge >2 hrs						No			
Dec-21	Ammonia	(mg/L)	Daily for any discharge >2 hrs						No			
Dec-21	Arsenic (III)	(mg/L)	Daily for any discharge >2 hrs						No			
Dec-21	Arsenic (V)	(mg/L)	Daily for any discharge >2 hrs						No			
Dec-21	Cadmium	(mg/L)	Daily for any discharge >2 hrs						No			
Dec-21	Chromium (trivalent)	(mg/L)	Daily for any discharge >2 hrs						No			
Dec-21	Chromium (VI) Compounds	(mg/L)	Daily for any discharge >2 hrs						No			
Dec-21	Copper	(mg/L)	Daily for any discharge >2 hrs						No			
Dec-21	Iron	(mg/L)	Daily for any discharge >2 hrs						No			
Dec-21	Lead	(mg/L)	Daily for any discharge >2 hrs						No			
Dec-21	Manganese	(mg/L)	Daily for any discharge >2 hrs						No			No discharge from EPA Point 25 during December 2021
Dec-21	Nickel	(mg/L)	Daily for any discharge >2 hrs						No			
Dec-21	Nitrate + nitrite (oxidised nitrogen)	(mg/L)	Daily for any discharge >2 hrs						No			
Dec-21	Nitrogen	(mg/L)	Daily for any discharge >2 hrs						No			
Dec-21	pH	pH	Daily for any discharge >2 hrs						No	6.5 - 9.5	No	
Dec-21	Phosphorus	(mg/L)	Daily for any discharge >2 hrs						No			
Dec-21	Reactive Phosphorus	(mg/L)	Daily for any discharge >2 hrs						No			
Dec-21	Selenium	(mg/L)	Daily for any discharge >2 hrs						No			
Dec-21	Total Kjeldahl Nitrogen	(mg/L)	Daily for any discharge >2 hrs						No			
Dec-21	Total Suspended Solids	(mg/L)	Daily for any discharge >2 hrs						No	50	No	
Dec-21	Vanadium	(mg/L)	Daily for any discharge >2 hrs						No			
Dec-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
Dec-21	Aluminium	(mg/L)	Quarterly									
Dec-21	Ammonia	(mg/L)	Quarterly									
Dec-21	Arsenic (III)	(mg/L)	Quarterly									
Dec-21	Arsenic (V)	(mg/L)	Quarterly									
Dec-21	Cadmium	(mg/L)	Quarterly									
Dec-21	Chromium (trivalent)	(mg/L)	Quarterly									
Dec-21	Chromium (VI) Compounds	(mg/L)	Quarterly									
Dec-21	Copper	(mg/L)	Quarterly									
Dec-21	Electrical Conductivity	(us/cm)	Quarterly									
Dec-21	Iron	(mg/L)	Quarterly									
Dec-21	Lead	(mg/L)	Quarterly									
Dec-21	Magnesium	(mg/L)	Quarterly									
Dec-21	Manganese	(mg/L)	Quarterly									
Dec-21	Nickel	(mg/L)	Quarterly									
Dec-21	pH	pH	Quarterly									
Dec-21	Potassium	(mg/L)	Quarterly									
Dec-21	Selenium	(mg/L)	Quarterly									
Dec-21	Sodium	(mg/L)	Quarterly									
Dec-21	Standing Water Level	(m)	Quarterly									
Dec-21	Vanadium	(mg/L)	Quarterly									
Dec-21	Zinc	(mg/L)	Quarterly									

Next sample scheduled for January 2022

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
Dec-21	Aluminium	(mg/L)	Quarterly									
Dec-21	Ammonia	(mg/L)	Quarterly									
Dec-21	Arsenic (III)	(mg/L)	Quarterly									
Dec-21	Arsenic (V)	(mg/L)	Quarterly									
Dec-21	Cadmium	(mg/L)	Quarterly									
Dec-21	Chromium (trivalent)	(mg/L)	Quarterly									
Dec-21	Chromium (VI) Compounds	(mg/L)	Quarterly									
Dec-21	Copper	(mg/L)	Quarterly									
Dec-21	Electrical Conductivity	(us/cm)	Quarterly									
Dec-21	Iron	(mg/L)	Quarterly									
Dec-21	Lead	(mg/L)	Quarterly									
Dec-21	Magnesium	(mg/L)	Quarterly									
Dec-21	Manganese	(mg/L)	Quarterly									
Dec-21	Nickel	(mg/L)	Quarterly									
Dec-21	pH	pH	Quarterly									
Dec-21	Potassium	(mg/L)	Quarterly									
Dec-21	Selenium	(mg/L)	Quarterly									
Dec-21	Sodium	(mg/L)	Quarterly									
Dec-21	Standing Water Level	(m)	Quarterly									
Dec-21	Vanadium	(mg/L)	Quarterly									
Dec-21	Zinc	(mg/L)	Quarterly									

Next sample scheduled for January 2022

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/Masurement 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
Dec-21	Aluminium	(mg/L)	Quarterly									
Dec-21	Ammonia	(mg/L)	Quarterly									
Dec-21	Arsenic (III)	(mg/L)	Quarterly									
Dec-21	Arsenic (V)	(mg/L)	Quarterly									
Dec-21	Cadmium	(mg/L)	Quarterly									
Dec-21	Chromium (trivalent)	(mg/L)	Quarterly									
Dec-21	Chromium (VI) Compounds	(mg/L)	Quarterly									
Dec-21	Copper	(mg/L)	Quarterly									
Dec-21	Electrical Conductivity	(us/cm)	Quarterly									
Dec-21	Iron	(mg/L)	Quarterly									
Dec-21	Lead	(mg/L)	Quarterly									
Dec-21	Magnesium	(mg/L)	Quarterly									
Dec-21	Manganese	(mg/L)	Quarterly									
Dec-21	Nickel	(mg/L)	Quarterly									
Dec-21	pH	pH	Quarterly									
Dec-21	Potassium	(mg/L)	Quarterly									
Dec-21	Selenium	(mg/L)	Quarterly									
Dec-21	Sodium	(mg/L)	Quarterly									
Dec-21	Standing Water Level	(m)	Quarterly									
Dec-21	Vanadium	(mg/L)	Quarterly									
Dec-21	Zinc	(mg/L)	Quarterly									

Next sample scheduled for January 2022

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/Masurement 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
Dec-21	Aluminium	(mg/L)	Quarterly									
Dec-21	Ammonia	(mg/L)	Quarterly									
Dec-21	Arsenic (III)	(mg/L)	Quarterly									
Dec-21	Arsenic (V)	(mg/L)	Quarterly									
Dec-21	Cadmium	(mg/L)	Quarterly									
Dec-21	Chromium (trivalent)	(mg/L)	Quarterly									
Dec-21	Chromium (VI) Compounds	(mg/L)	Quarterly									
Dec-21	Copper	(mg/L)	Quarterly									
Dec-21	Electrical Conductivity	(us/cm)	Quarterly									
Dec-21	Iron	(mg/L)	Quarterly									
Dec-21	Lead	(mg/L)	Quarterly									
Dec-21	Magnesium	(mg/L)	Quarterly									
Dec-21	Manganese	(mg/L)	Quarterly									
Dec-21	Nickel	(mg/L)	Quarterly									
Dec-21	pH	pH	Quarterly									
Dec-21	Potassium	(mg/L)	Quarterly									
Dec-21	Selenium	(mg/L)	Quarterly									
Dec-21	Sodium	(mg/L)	Quarterly									
Dec-21	Standing Water Level	(m)	Quarterly									
Dec-21	Vanadium	(mg/L)	Quarterly									
Dec-21	Zinc	(mg/L)	Quarterly									

Next sample scheduled for January 2022

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
Dec-21	Aluminium	(mg/L)	Quarterly									
Dec-21	Ammonia	(mg/L)	Quarterly									
Dec-21	Arsenic (III)	(mg/L)	Quarterly									
Dec-21	Arsenic (V)	(mg/L)	Quarterly									
Dec-21	Cadmium	(mg/L)	Quarterly									
Dec-21	Chromium (trivalent)	(mg/L)	Quarterly									
Dec-21	Chromium (VI) Compounds	(mg/L)	Quarterly									
Dec-21	Copper	(mg/L)	Quarterly									
Dec-21	Electrical Conductivity	(us/cm)	Quarterly									
Dec-21	Iron	(mg/L)	Quarterly									
Dec-21	Lead	(mg/L)	Quarterly									
Dec-21	Magnesium	(mg/L)	Quarterly									
Dec-21	Manganese	(mg/L)	Quarterly									
Dec-21	Nickel	(mg/L)	Quarterly									
Dec-21	pH	pH	Quarterly									
Dec-21	Potassium	(mg/L)	Quarterly									
Dec-21	Selenium	(mg/L)	Quarterly									
Dec-21	Sodium	(mg/L)	Quarterly									
Dec-21	Standing Water Level	(m)	Quarterly									
Dec-21	Vanadium	(mg/L)	Quarterly									
Dec-21	Zinc	(mg/L)	Quarterly									

Next sample scheduled for January 2022

GENERAL COMMENTS

Delta has requested amendment of the required date for installation of continuous monitoring instrumentation (temperature, oxygen, moisture) as permissible under Condition M2.4 of EPL761. Delta has also provided the EPA with a proposal for utilisation of a gas flowrate calculation at monitoring points 4 to 11 as an alternative to in-line instrumentation. Instrument suppliers advise that there are currently no flow instruments capable of accurately measuring gas flowrate at monitoring locations 4 to 11.